The arts and sciences encompass the entire range of human knowledge, from the earliest records to the latest laboratory results. All that human beings have observed about themselves, about their societies, and about the natural world around them is of concern to one or another of the arts and sciences.

The curriculum of the College of Liberal Arts reflects this wide-ranging concern with the life of the mind. It emphasizes the breadth of human knowledge, perceived not only in terms of the traditional categories of the humanities and the natural and social sciences, but also in broader perspectives which extend across academic fields and reach beyond the boundaries of a college of liberal arts. It also stresses depth of learning, thereby seeking to acquaint the student with the rigors of the intellectual process. Through a study of the liberal arts one thus learns to participate in an intellectual tradition which is independent of particular teachers and which guides one in the choice of subjects for investigation and in the interpretation of those subjects. With time the individual begins to apprehend the great outlines of knowledge, the principles upon which they rest, the scale of their parts, and their lights and shadows.

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

The college is committed to educating men and women to lead socially useful and personally meaningful lives. It endeavors to accomplish this mission by:

1. offering a comprehensive liberal studies program for liberal arts majors and for students in the other colleges of the university;
2. providing appropriate professional and graduate study in the arts and sciences;
3. conducting research and engaging in creative activity; and
4. serving the public interest in ways commensurate with the land-grant status of the University.

Through the programs which embody these activities, the college strives to encourage the intellectual, social, and personal development of each student in an academic community of students, faculty, and staff.

Association with the College
(See page 16.)

Programs of Study

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

Degrees Offered

(1) BACHELOR OF ARTS

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

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

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

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

(d) Pre-Professional Program—The Pre-Professional Program is offered for those who wish to participate in one of the cooperative 3-1 curricula in the health sciences (medicine, dentistry, pharmacy, veterinary medicine, or medical technology). The student proceeds directly to specialized training in the chosen area after the third year of liberal arts study and offers the first year of professional study in lieu of a major concentration in the college in satisfying the requirements for the B.A. degree.

(2) BACHELOR OF SCIENCE

The Bachelor of Science degree, offered in selected departments and programs, is designed for those students who wish to pursue a more scientifically or professionally oriented program of study. Three programs leading to this degree are open to the student:
(a) Basic Program—The Basic Program for the B.S. degree contains basic skills and distribution requirements similar to the Basic Program for the B.A. as well as a unique set of requirements for the major including additional study in mathematics, statistics, or laboratory sciences.

(b) Bachelor of Science in Chemistry—The Bachelor of Science in Chemistry is a professional degree designed in accordance with standards set by the American Chemical Society to train students to go directly into positions in the chemical industry or to enter graduate study. Students may elect either the four year resident program or a five year cooperative program in which they alternate a quarter of study with a quarter of work. A chemical engineering student gains seven quarters on the job experience while earning the degree.

(c) Bachelor of Science in Social Work—The program leading to the Bachelor of Science in Social Work conforms to Council on Social Work Education Accreditation Standards.

(3) BACHELOR OF FINE ARTS
The Bachelor of Fine Arts degree represents intensive study preparing students for graduate study and professional positions in art. The degree is offered with a major in studio art. Recommended course combinations for those who desire to concentrate in ceramics, graphic design/illustration, drawing, fiber-fibers, inter-area, painting, printmaking, sculpture, or watercolor are available in the art department office.

(4) BACHELOR OF MUSIC
The program leading to the Bachelor of Music degree represents intensive study preparing students for graduate study and professional positions in music. The degree is offered with a major in studio art. Recommended course combinations for those who desire to concentrate in ceramics, graphic design/illustration, drawing, fiber-fibers, inter-area, painting, printmaking, sculpture, or watercolor are available in the art department office.

Program Planning
Each student's academic program is highly individualistic, reflecting that person's special interests, goals, and aspirations. Usually it will reveal a growing intellectual sophistication and the development of particular motivations. On occasion, unfortunately, it gives indication of frustration and lack of clear direction. Viewed as a whole it may appear to be a miscellany of unrelated courses which were chosen almost capriciously; or it may be a carefully selected curriculum which the student brought together in a way which represented for that individual the most appropriate and effective way of attaining educational goals.

The importance of program planning can hardly be overstressed. A few students enter the college with firm educational objectives in mind and their programs develop quite readily around these predetermined goals. Many, however, do not reach that stage of certainty until their academic careers are relatively far advanced. For these persons the exploration of possible directions and programs, in consultation with faculty advisors, is an important part of the educational process. It is essential for these students to develop their programs carefully and creatively in order that maximum flexibility in their ultimate decision making may be assured.

A basic decision, of course, is the degree to be sought. If it is one of the four professional degrees (Bachelor of Fine Arts, Bachelor of Music, or Bachelor of Science in Chemistry, Bachelor of Science in Social Work), the student's program will be somewhat circumscribed, for these degrees are necessarily more prescriptive than the general liberal arts degree. If the student chooses to work for the Bachelor of Arts degree or the Bachelor of Science degree, all the elements which make up the curricula leading to that degree will need to be kept in balance: the broad requirements in the Basic Skills and Distribution requirements, the major area, and the elective courses which support and supplement the work in the first two categories. Most students find it desirable to lay a broad foundation by taking courses which will satisfy the Basic Skills and Distribution requirements in the first two years, thus reserving most of the final years for in-depth study in the area of concentration. Elective courses may be taken at any time.

Advisors in the Liberal Arts Advising Center (220 Ayres Hall), in the various major departments, in the University Counseling Center, and elsewhere on campus are available to assist students with their program planning. In the final analysis, however, only the student can determine the program which will best satisfy particular needs.

Requirements for Degrees

GENERAL REQUIREMENTS: Bachelor of Arts and Bachelor of Science Basic Programs
Each student seeking a Bachelor of Arts or Bachelor of Science (excluding the Bachelor of Science in Chemistry and the Bachelor of Science in Social Work) must develop a program which includes the following:

(1) All University degree requirements as stated in the front section of this catalog; (2) A minimum of 190 credit hours; (3) At least 60 credit hours in courses numbered 3000 or above; (4) Appropriate work to satisfy the basic skills requirements and the distribution requirements, counting no course in more than one area (not required in the College Scholars Program); (5) Completion of at least one major concentration (see below). Up to 8 hours in the major may also be used, where listed, to satisfy basic skills or distribution area requirements; (6) Students may take up to 30 hours of courses Satisfactory/No Credit in any area outside the major and minor, basic skills and distribution requirements; (7) Beginning in fall 1987, no credits earned for removal of association deficiencies may be used to satisfy requirements for graduation.

I. PROGRAMS LEADING TO BACHELOR OF ARTS AND BACHELOR OF SCIENCE DEGREES
(excluding the Bachelor of Science in Chemistry and the Bachelor of Science in Social Work)

The B.A. and B.S. degrees share the same program of Basic Skills and Distribution requirements, except where noted on pages 148 and 149.

Basic Skills

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

Requirement: Students may meet this requirement in one of the following ways:
1. By completing nine credit hours in English writing courses in one of the following series: (a) English 1010 or 1011, 1020, and three additional credits drawn from 1031, 1032, or 1033 (English Composition). Students who complete 1020 with a grade of A have the additional option to satisfy the remaining three credits in any 3000-level or 4000-level writing course offered by the department.
(b) English 1018-28-38 (Honors: English Composition). Students who obtain a grade of A or B in 1028 have the additional option, with permission, to satisfy the remaining three credits in any 3000-level or 4000-level writing course offered by the department.
(c) English 1431-41-51 (English Composition for Foreign Students).
2. By earning a score of 4 or 5 on the College Board Advanced Placement Test in English; or, with special permission, by earning a score of 3 on that examination and completing one 2000-level course in English at The University of Tennessee, Knoxville with a grade of B or better.
3. By completing three hours of freshman English followed by a minimum of six hours in courses which require substantial writing emphasis and are identified by the Committee on Writing Standards; a list of approved courses may be obtained in the office of the Department of English or the Liberal Arts Advising Center.
4. By earning a score of 25 or above on the English ACT exam and a composite ACT score of 25 or above and by passing a proficiency examination in writing administered by the Department of English in cooperation with the Committee on Writing Standards.
5. By obtaining CLEP credit for English composition (as described on page 22 of this catalog).

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

Requirement: Completion of the intermediate level (for most languages, the 2000-level) sequence of a foreign language, or demonstration of competence on a waiver or proficiency examination. A student who has taken two or more years of a foreign language in high school and makes the introduction level sequence in the same language (usually the 1000-level sequence) may not use such credit to satisfy requirements for graduation. However, if students elect to take a foreign language in which they have had no previous training, both the elementary and intermediate level sequence may be counted for graduation. Students whose native language is not English may meet this requirement by passing English 1431-41-51 and by passing two English language literature courses at the 2000-level. These literature courses may also be counted toward the Humanities distribution requirement. (Beginning Fall 1987, no credit for coursework completed in order to remove an association deficiency in foreign language may be used to satisfy graduation requirements.)

Under the conditions stated above, the following courses may be used to satisfy the foreign language requirement:

- Asian Studies 2431-32-33 Elementary Modern Standard Arabic I, II, III;
- Asian Studies 2531-32-33 Elementary Chinese I, II, III;
- Asian Studies 2531-32-33 Intermediate Chinese I, II, III;
- Asian Studies 2631-32-33 Elementary Japanese I, II, III;
- Asian Studies 2731-32-33 Elementary Persian I, II, III;
- Asian Studies 2731-32-33 Intermediate Persian I, II, III;
- Asian Studies 3731-32-33 Intermediate Persian I, II, III;
- Asian Studies 3831-32-33 Elementary Modern Hebrew;
- Classics 1110-20-30 Elementary Latin;
- Classics 2511-15-21 Intermediate Latin;
- Classics 2120-20-30 Elementary Greek;
- Classics 2610-20-30 Intermediate Greek.

Spanish 2110-20-30 Intermediate Spanish;
Spanish 2510-20 (2518-28) Intermediate Spanish (Honors).

(3) Mathematics, Computer Science, or Logic

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

Requirement: One course chosen from those listed below (total: 3 to 4 hours). Students with a Math ACT score of 24 or above, or those who pass a waiver or proficiency examination on material equivalent to courses, are exempted from this requirement. Standards for waiver or proficiency examination will be set by the appropriate department. Exemption from this requirement will also be granted to students who complete a three-course mathematics package under Divisional Distribution.

Under the conditions stated above the following courses fulfill this requirement:

- Philosophy 1010-20 Introduction to Symbolic Logic;
- Mathematics 1140 Basic Mathematical Skills, 1700 Pre-calculus Mathematics.

Distribution

(1) Divisional Distribution

Non-U.S. History

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

Requirement: Completion of a two-course, writing emphasis, lower-division sequence in Non-U.S. History (total: 8 hours). International students may fulfill this requirement with a U.S. History sequence. The following sequences satisfy this requirement:

- Asian Studies 2510-20 Rise of Classical Civilizations - Traditional Culture and Their Modern Developments.
- History 1510-20 Western Civilization, History 1518-28 16th Century, History 1610-20 World Civilization.
- Latin American Studies 2510-20 Introduction to Latin American Studies.

Natural Science

Purpose:
1. To know and understand the basic terminology of at least one scientific discipline;
2. To learn the basic discoveries and their importance in one scientific discipline;
3. To be able to use the tools (i.e., mathematics, laboratory equipment, computers, etc.) of at least one scientific discipline;
4. To understand how to devise hypotheses and how to devise and perform experiments to test them;
5. To learn to apply methods of at least one scientific discipline in a "hands on" laboratory experience;
6. To be able to analyze a situation on a college level from one particular scientific perspective.

NOTE: All Bachelor of Arts and Bachelor of Science students must satisfy Part I and Part II of the Natural Science requirement. All Bachelor of Science Programs incorporate an additional requirement of a three-quarter mathematics or statistics package that includes at least two calculus courses. Also required in the B.S. major description is an additional three quarter lab science sequence. Courses taken to satisfy the additional B.S. specifications may not be used also to meet Natural Science distribution requirements. See major requirements in this catalog.

Requirement:
Part I: A three-course physical or biological science sequence that includes at least two quarters of laboratory experience (total: 12 hours). The following courses satisfy Part I of this requirement:

- Astronomy 1610-20-30 (2118-28-38) Introduction to Astronomy with Lab (Honors);
- Biology 1210-20-30 General Biology;
- Botany 1110-20-30 (1118-28-38) Fundamentals of Botany (Honors);
- Chemistry 1110-20-30 (1118-28-38) General Chemistry (Honors); Chemistry 1310-20-30 General Chemistry; Chemistry 1510-20-30 Introductory General, Organic and Biochemistry;
- Geography 1810-20-30 Geographic Natural Environment.
- Geology 1010-20-30 General Geology I, II, III;
- Physics 1310-20-30 (1318-28-38) Fundamentals of Physics; Mechanics and Heat (Honors); Physics 2210-20-30 Elements of Physics.

Part II: A three-course package in science, mathematics, and/or computer science (total 9 to 12 hours). The following course packages or any sequence listed in Part I will satisfy this requirement:

- Anthropology 2510-2930-3070 Human Origins - Bio. of Human Races - Genetics and Society (Same as Botany 3070);
- Astronomy 1510-20-30 Introductory Astronomy.
- Geology 2920-30-Biochemistry 3110 Human Physiology - Introduction to Biochemistry, Zoology 2920-30-Microbiology 2910 Human Physiology - General Microbiology, Botany 3011-Zoology 3060 (Same as Botany 3060) Zoology 3410 Plants and People - Biology and Human Affairs - Bioethics.
- Botany 3010-20-30 Plants in Evolution - Field Botany; Botany 3010-20-31 Plants in Evolution Field Botany; Botany 3010-20-32 Plants in Evolution - Field Botany.
Geography 3510-20-30 Meteorology - Climatology - Land Surface Systems.
Physics 1210-20-30 Introductory Physics; Physics 1410-20-30 Nature of the Physical World.
Zoology 2510-20-30 Human Biology.

Social Science

Purpose:
1. To promote understanding of society and individual relationships.
2. To develop a critical understanding of one or more approaches, perspectives, or methodologies used in the social sciences.
3. To develop analytical skills relevant to current social, economic, or political problems, their origins in society and individuals, and possible perspectives for their resolution.

Requirements: Four or five courses (total: 15-16 hours) selected from at least two departments or programmatic areas. The following courses satisfy this requirement:
- Afro-American Studies 2010 Introduction to Afro-American Studies
- Afro-American Studies 2020 Introduction to Afro-American Studies
- Anthropology 2520 Prehistoric Archaeology; Anthropology 3420 Linguistic Anthropology (Same as Linguistics 3420); Anthropology 3670 Principles of Archaeology.
- Botany 3050 Socio-economic Impact of Plants.
- Economics 2510 Principles of Economics; Economics 2520 Principles of Economics.
- Geography 1610 Introduction to Geography; Geography 3000 Man, Location, and Behavior; Geography 3660 Cultural Geography.
- Human Services 2590 Introduction to Human Services.
- Music 3361 Introduction to Ethnomusicology; Music 3371 Introduction to Ethnomusicology.
- Political Science 2020 Introduction to Political Science; Political Science 2510 U.S. Government and Politics; Political Science 2520 U.S. Government and Politics; Political Science 3110 Political Community.
- Psychology 2500 (2518, 2528) General Psychology (Honors); Psychology 2520 Biological Foundations of Behavior; Psychology 2530 Psychology as a Social Science; Psychology 2540 Psychology of the Individual.
- Sociology 1510 (1518) General Sociology (Honors); Sociology 1520 (1528) Sociology of Social Problems (Honors); Sociology 1530 Contemporary Social Change; Sociology 3130 Social Psychology.
- Speech 1211 Introduction to Communication; Speech 1221 Introduction to Speech Communication; Speech 3031 Non-verbal Communication.
- Women's Studies 2520 Women in Society; Women's Studies 3150 Gender in Society (Same as Sociology 3150).

Humanities

Purpose:
1. To learn to appreciate and interpret significant literary, philosophical, or religious texts by study and application of selected methods or traditions of thought;
2. To develop further abilities to reason critically, to connect arguments, to think creatively, to analyze objectively, to assess evidence, to perceive assumptions, and to respond to and appreciate values;
3. To further develop writing skills;
4. To learn to manipulate symbols (i.e., words, sounds, images, body movements) in a variety of ways and to employ these symbols critically, affectively, and effectively;
5. To develop abilities to participate as an enlightened observer or as an artist in a discipline within the visual, spatial, musical, theatrical, rhetorical, or written arts.

Requirements:
Part I: Literature or Philosophical Perspectives. A two- or three-course package in either literature or a philosophical perspective (total: 8-9 hours).
Part II: Arts, Literature or Philosophical Perspectives. Either two courses in the study or practice of the arts; or a two-course package in literature if a philosophical perspectives package is chosen to meet Part I; or two-course package in philosophical perspectives if a literature package is chosen for Part I (total: 6-8 hours).
Part III and IV will be satisfied by selecting packages/courses from the following four lists in accordance with the instructions above.

The following course packages are designated as literature packages:
- English 2510-20 English Masterpieces; English 2531 and either 2532 or 2533 American Masterpieces; English 2560-70-80 (2 out of 3 in chronological order) Literature of the Western World: English 2660-70-80 (2 out of 3) Introduction to Literary Genres.
- French 2910-20-30 French Literature in English Translation.
- German 2210-20-30 German Literature in English Translation.
- Medieval Studies 2601-02 Literature of the Dark Ages (5th-10th centuries) - Literature of the Later Middle Ages (11th-15th centuries).
- Religious Studies 3232-33 Themes in Classic Works; Religion and Literature: 20th century.
- Russian 2210-20-30 Russian Literature in English Translation.

The following courses are designated as philosophical perspectives packages:
- Classics 2520-30-40 Greek and Roman Mythology.
- Philosophy 1511-21 Value and Reality - Consciousness and Reality; 1611-21 Philosophy Antiquity to 1500-1500 to Early 20th Century.
- Political Science 3801-02 Studies in Ancient Political Thought-Studies in Medieval Political Thought; Political Science 3803-04 Studies in Early Modern Political Thought-Studies in 19th and 20th Century Political Thought.
- Religious Studies 2210-20 Founders of Religion; Religious Studies 2310-20 Criticism of Religion; Religious Studies 3370-80 The Christian Tradition; Religious Studies 3605-06 Professional Responsibility-Responsible Professionalism (Same as Phil. 3605-06).
- Women's Studies 3430-35 The Concept of Woman-Philosophy of Feminism (Same as Phil. 3430-35).

The following are designated practice of the arts courses:
- Art 1105 Introduction to Studio Art.
- Music 2410 Creative Writing: Fiction and Poetry.
- Music 1416 Music Performance.
- Speech & Theater 2031 Introduction to Oral Interpretation; Speech & Theater 3851 Oral Interpretation and Performance.
- Theater 3611 Literature and Oral Interpretation of Poetry.

The following courses are designated study of the arts courses:
- Art 1815 World Art I; Art 1825 World Art II.
- Classics 2320 Art and Archaeology of Ancient Greece; Classics 2330 Art and Archaeology of Etruria and Rome.
- Music 1000 Fundamentals of Music Theory; Music 1210 Orientation in Music Appreciation; Music 1220 Orientation in Music Appreciation; Music 1230 History of Rock.
- Theater 1320 Introduction to Theatre; Theater 1330 Introduction to Theatre; Theater 1340 Introduction to Theatre.

(2) Upper Level Distribution

Bachelor of Arts students must satisfy two of the following three options. Bachelor of Science students must satisfy one of the following three options. It is recommended that these requirements be fulfilled after the student has achieved upper-division standing (completion of 96 hours).

U.S. Studies Option
Purpose:
1. To develop an appreciation and knowledge of U.S. culture and civilization;
2. To provide a basis from which to compare foreign cultures and civilization;
3. To develop a critical understanding of the sources of values and traditions that constitute contemporary U.S. civilization;
4. To develop an understanding of the relationship between individual and societal behavior;
5. To further develop writing skills.

Requirement: This option will be satisfied by taking any two of the following courses (total: 6-8 hours).
- Afro-American Studies 4292 History and Philosophy of Afro-American Education (Same as History 4292 and Ed. C&I 4292);
- Afro-American Studies 3640 Contemporary Issues in Afro-American Education (Same as Ed. C&I 3640); Afro-American Studies 4810 The Afro-American Family (Same as Child & Family Studies 4810); Afro-American Studies
4830 Black Women in American Society
(Same as Women's Studies 4830).
Anthropology 3575 Afro-American Anthropology; Anthropology 3611 Archaeology of U.S. and Canada II; Anthropology 4740 Southern Appalachian Folk Culture.
English 3311 Women in American Literature; English 3320 Regional Identities in American Literature; English 3445 Film and American Culture; English 4640 Black American Literature and Aesthetics.
Geography 3910 Geography of the U.S. and Canada; Geography 3920 Geography of the American South; Geography 3940 Geography of Africa; Geography 4240 Historical Geography of the U.S.
Music 3950 Evolution of Jazz; Music 4241 Music of the United States.
Philosophy 3311 American Philosophy (Colonial Period-19th Century); Philosophy 3312 American Philosophy (19th-20th Century); Philosophy 3440 Ethics and American Society; Philosophy 3570 Philosophical Foundations of Democratic Societies.
Political Science 3130 Popular Culture & American Politics; Political Science 3390 Contemporary Issues in American Public Policy; Political Science 3415 Law in American Society; Political Science 3880 American Political Thought.
Religious Studies 3510 Religion in America (Colonial Period-19th Century); Religious Studies 3520 Religion in America (20th Century); Religious Studies 3550 Religion and Race in America (Same as Afro-American Studies 3550); Religious Studies 3560 Religion in the United States (Same as Afro-American Studies 3560).
Sociology 3420 Urban Problems; Sociology 3780 American Society; Sociology 4030 Society and Law; Sociology 4820 American Minority Groups.
Speech 4300 Studies in American Public Address.
Theater 3282 History of American Theater; Theater 3263 History of American Theater.
Women's Studies 3010 Emergence of the Modern American Woman; Women's Studies 4290 Women in American History (Same as History 4290); Women's Studies 4560 Rhetoric of the Women's Rights Movement (Same as Speech 4560).
Foreign Studies Option
Purpose:
1. To develop an appreciation and knowledge of a foreign culture and civilization;
2. To provide a basis from which a student can analyze his or her own culture;
3. To develop a critical understanding of the sources of values and traditions that constitute a foreign culture and civilization;
4. To develop an understanding of the relationship between individual and societal behavior in a highly interdependent world system;
5. To further develop writing skills.
Requirement: This option will be satisfied by taking two upper-division courses in one of the following areas: Africa, Asia, Europe, Latin America, the Middle East, or Critical Issues in Foreign Studies (total: 6-8 hours).
If Western Civilization is taken to satisfy the history requirement, the European concentration may not be elected here. This option may also be satisfied by Literature courses in Arabic, Chinese, French, German, Greek, Hebrew, Italian, Japanese, Latin, Portuguese, Russian, Sanskrit, or Spanish.
(Literature courses in English translation will not meet this requirement.)
African Studies
Anthropology 3530 Peoples and Cultures of Africa; Anthropology 4610 African Prehistory.
Geography 3830 Geography of Africa.
Political Science 3615 Dynamics of Black African Politics; Political Science 3618 Dynamics of Black African Politics.
Asia
Art 3775 Art of India; Art 3776 Art of China; Art 3777 Art of Japan.
Asian Studies 3320 Chinese Culture; Asian Studies 3330 Japanese Culture; Asian Studies 3610 The Literature of India in English Translation.
Economics 4323 The Political Economy of Asian Development.
History 3810 East Asia: History & Culture to 1600; History 3820 East Asia Since 1600.
Religious Studies 3650 Philosophy and Religion in India (Same as Phil. 3650); Religious Studies 3660 Buddhist Philosophy and Religion (Same as Phil. 3660); Religious Studies 3671 Religion and Philosophy in China (Same as Phil. 3671); Religious Studies 3672 Religion in Japan (Same as Sociology 3672).
Economics 3310 Art and Archaeology of the Aegean Bronze Age & Early Greece (Europe and the Middle East); Classics 3340 Cities of the Greek and Roman World (Europe-Asia-Africa); Classics 3810 Greek Civilization; Classics 3820 Roman Civilization.
English 3050 English Culture (Up to 1660); English 3051 English Culture (1660-Present); English 3820 Comparative European Literature; English 3830 Comparative European Literature.
Geography 3880 Geography and the Soviet Union.
German 3610 Culture of the German-Speaking Peoples; German 3620 Culture of the German-Speaking Peoples; German 3630 Culture of the German-Speaking Peoples.
History 3124 Modern Europe 1750-1900; History 3125 Contemporary Europe 1900-Present.
Medieval Studies 4010 Seminar in Medieval Studies.
Philosophy 3311 Ancient Western Philosophy; Philosophy 3412 Medieval Western Philosophy; Philosophy 3415 17th & 18th Century Philosophy; Philosophy 3415 19th Century Philosophy.
Political Science 3631 Government & Politics in the Soviet Union; Political Science 3632 Government & Politics in the Soviet Union; Political Science 3635 Politics of Western Democracies; Political Science 3636 Politics of Western Democracies.
Russian 3710 Background and Main Currents of Russian Culture; Russian 3720 Background and Main Currents of Russian Culture.
Women's Studies 3240 Women in French Culture (Same as French 3240); Women's Studies 3830 Women in the Greek and Roman World (Same as Classics 3830).
Latin America
Anthropology 3580 Peoples and Cultures of Mesoamerica (Same as Latin American Studies 3580).
Economics 4231 The Political Economy of Latin America (Same as Latin American Studies 4231).
Geography 3790 Geography of Middle America (Same as Latin American Studies 3790); Geography 3880 Geography of South America (Same as Latin American Studies 3880).
History 3870 History of Latin America (to 1825) (Same as Latin American Studies 3870); History 3880 History of Latin America (1825-Present) (Same as Latin American Studies 3880).
Latin American Studies 4001 Cultural Plurality in Latin America; Latin American Studies 4002 Institutional Changes in Latin America.
Political Science 3625 Latin American Government; Political Science 3626 Latin American Government.
Middle East
Asian Studies 3340 Islamic Culture; Asian Studies 3670 Islamic Literature in Translation.
History 3780 The Traditional Middle East; History 3780 The Modern Middle East.
Religious Studies 3110 Ancient Israel's Historical & Religious Traditions; Religious Studies 3120 The Rise of Judaism; Religious Studies 3680 Islam.
Critical Issues in Foreign Studies
Economics 3310 Comparative Economic Systems; Economics 3220 Principles of Economic Development.
History 3050 The West and the Third World Since 1870; History 3051 Revolutions in Historical Perspective.
Political Science 3905 Political Change in the Developing Areas; Political Science 3701 Introduction to International Relations; Political Science 3796 Contemporary Problems of Soviet Foreign Policy.
Sociology 3340 Comparative Poverty and Inequality (Same as Afro-American Studies 3340); Sociology 4540 Development and Underdevelopment (Same as Religious Studies 4540).
Capstone Experience Option
Purpose:
1. To offer an intensive integrative experience which will substantially broaden the student's comprehension of the major;
2. To significantly increase an understanding of the ways in which the ideas, methods, and achievements in a major area of study have affected modern society;
3. To examine a major field of study from a value-oriented perspective;
4. To enhance student's mastery of prose communication within the professional context of their major.
Requirement: This option will be satisfied by taking six to eight upper-division hours chosen from the courses listed below. Con-
suit with major department for additional approved courses. Course credits should be taken in the major area unless otherwise approved by the department. It is recommended that this option be satisfied during the senior year (within 45 credit hours of graduation).

Chemistry 4000 Topics in the Development of Chemistry; Chemistry 4811 Senior Seminar; Chemistry 4821 Senior Seminar; Chemistry 4831 Senior Seminar.

Classics 4220 Seminar in Classical Studies.

History 4000 Reflections on History; History 4010 Colloquium in History.

Human Services 4300 Working within the System.

Mathematics 4910 Senior Topics; Mathematics 4940 Mathematical Modelling.

Physics 4010 Background of Physics; Physics 4020 Forefront of Physics.

Psychology 4910 Senior Seminar on Great Ideas in Psychology.

Areas of Concentration

(1) Required Major

In many ways the most important part of each student’s program is the major; for it is in this restricted study of one or less limited field of knowledge that the individual begins to find a niche in the world of intellectual endeavor. The major may be drawn from the offerings of a single department or it may bring together related concerns of two or more departments. In either case the student should work out a program of study which has a definite design and aims at some overall objective. Guidelines are published by each major department or interdepartmental committee to assist the student in ascertaining goals and to provide a framework within which to develop a particular program. Additional assistance in the form of personal counseling is available in the Liberal Arts Advising Center and from designated faculty advisors in each major department or area.

Requirements for specific majors vary by program and are discussed under each department or program. A major consists of at least 20 credit hours in courses numbered 2000 or above as specified by the department or program. Up to 8 credit hours taken in the major may also be used to satisfy basic skills or distribution requirements where listed. A minimum grade of C must be earned in every course counted as part of a major. Students transferring from other institutions must complete at least 12 credit hours at UTK in each major awarded on this campus. Students may elect as many courses as desired in any department or program. In lieu of a major, students may develop an Individual Program (described below). Majors available in the Basic Program for a B.A. or B.S. include: Anthropology, Art, Art History, Audiology, Biology, Botany, Chemistry1, Classics, Computer Science1, Cultural Studies, Economics, English, French, Geography, Geology1, German, History, Human Services, Italian, Mathematics1, Microbiology, Music, Philosophy, Physics1, Political Science, Psychology, Religious Studies, Russian, Sociological, Spanish, Speech Pathology, Speech and Theatre, Statistics, and Zoology.

(2) Optional Multiple Majors

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

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

(3) Optional Minors

At the time of application for graduation, single or multiple minors may be recorded on the academic record without regard to course overlap among minors and majors or among minors and Basic Skills and Distribution requirements.

The minimum requirement for a minor is 24 credit hours in courses numbered 2000 or above. Minors are available in most departments or programs in which majors are offered and also in: Biochemistry, Physical Sciences,Pre-Medicine, and Women’s Studies. Minors may be developed in other colleges or schools of the University, but must be approved by the department head in which the minor is proposed and by the Associate Dean for Student Academic Affairs in Liberal Arts. At least 6 of the 24 credit hours required for a minor must be completed at The University of Tennessee, Knoxville.

A business minor is available to students who successfully complete the following required courses: Accounting 2110-20-30; Economics 2510-20; and Statistics 2100. Also, 16 hours of upper-division electives must be taken, which must be more than six upper-division hours of accounting, economics, or statistics may be used for the minor. Students are responsible for meeting prerequisites for any upper-division courses taken in a particular concentration.

(4) Supplementary Elective Courses

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

Some of the choices which the student might make in selecting the elective courses are:

(1) Additional courses in the major field;
(2) A related minor;
(3) An area in the arts;
(4) An off-campus quarter.
requirements, either as general requirements or in order to have such majors or minors officially recognized.

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

IV. Preparation for the Health Professions

Pre-Dental
Pre-Dental Hygiene
Pre-Medical
Pre-Medical Record Administration
Pre-Medical Technology
Pre-Nursing
Pre-Pharmacy
Pre-Physical Therapy
Pre-Veterinary Medicine

Over 350 courses are available for students who plan a career in one of the health professions. The programs preparing students for the study of medicine, dentistry, and pharmacy include the specified courses required for admission to the respective colleges of The University of Tennessee Center for the Health Sciences at Memphis (UTCHS), as well as those required for the Bachelor of Arts or Science degree in the College of Liberal Arts at The University of Tennessee, Knoxville.1 The two year pre-medical technology program prepares students to undertake professional training during the third year of study at UTCHS. The Science Medical Technology Program prepares students to undertake professional training during the fourth year of study at the University of Tennessee-Memphis School of Dentistry. Other pre-health professional programs—dental hygiene, medical record administration, cytotechnology, nursing, and physical therapy—are offered for those students who are planning to pursue professional training in health professional areas which lead to an undergraduate degree from UTCHS but not to a degree from UTK.

Admission to any program at UTCHS or Knoxville is at the discretion of that program's admissions committee. Admission to the University of Tennessee and completion of a pre-health professional program in the College of Liberal Arts does not assure admission to any professional training program.

Because the competition for admission to most programs in the health professions is keen, pre-health professional students are encouraged to work towards the completion of a degree program in a major which will enable the individual to adapt to an alternative program in the event admission to the desired program is not achieved. The preparatory courses necessary for professional study can be incorporated into the chosen major program.

Students in a pre-health professional program should consult with a health professions advisor in the Liberal Arts Advising Center (220 Ayres Hall) for more information about the programs outlined below. Specific requirements often change in the health professions programs. Bulletins describing the various pre-health professional programs, including a detailed statement on requirements, may be obtained from the Health Professions Office, 220 Ayres Hall.

PRE-DENTAL PROGRAM

The college offers both a three-year program leading to a Bachelor of Arts degree and a four-year program leading to a Bachelor of Arts or Science degree for students preparing for the study of dentistry. Both programs are based upon the curriculum outlined below. In the three-year program the student must complete at least 138 credit hours while enrolled in the college, and the B.A. degree is granted upon satisfactory completion of the first year of study at UTCHS. In the four-year program the degree is granted upon completion of 190 or more credit hours while enrolled in the college, including a major of 36 or more hours in addition to the courses listed below. The requirement for a major is waived for those completing their fourth year at UTCHS. Students in either the three- or four-year program must complete the last 45 hours of credit in residence at The University of Tennessee, Knoxville, before entering UTCHS.

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

Freshman  
1English 1010-11; 1020; 1031 or 1032 or 1033 or equivalent  
1Mathematics  
1Chemistry  
1Biology 1210-20-30 or Zoology 1118-28-38  
1Intermediate Level Sequence  

Sophomore  
1Chemistry 3211-21-31 and 3219-29-39  
1English Literature  
1Advanced Biology or Advanced Zoology  
Divisional Distribution (A) Non-U.S. History  
Divisional Distribution (B) Social Sciences  

Junior  
1Physics 2210-29-30  
1Speech 2311  
1Divisional Distribution (C) Social Science  
1Divisional Distribution (D) Humanities  
U.S. Studies  
Foreign Studies  

Total: 138-147 hours

Senior  
1Completion of major program and B.A./B.S. requirements or completion of the three-year program at UT Center for the Health Sciences.  

1Total Minimum Required: 190 hours

1Equivalent honors courses
2Any student who has had two years of biology or one very good year in high school should take the proficiency tests for Biology 1110-20-30 to determine eligibility for going directly into Biology 3111 or 3120.
3Math placement depends on high school courses and grades, ACT scores, and B.A./B.S. requirements. Math is a prerequisite for Physics. A math placement handout is available in the Liberal Arts Advising Center, 220 Ayres Hall. Chemistry 1110-20-30 is a prerequisite to Biology 3110-20.
4This requirement assumes a student has had enough language background in high school to begin an intermediate language sequence at UT.
5Recommended courses in biology and zoology are genetics, cell biology, and comparative vertebrate anatomy.

PRE-DENTAL HYGIENE PROGRAM

A Bachelor of Science in Dental Hygiene is granted to UTCHS students upon completion of the program which includes 96 hours of prescribed courses in the College of Liberal Arts and six quarters of study at UTCHS. Students interested in the pre-dental hygiene program are encouraged to consult with a health professions advisor in the Liberal Arts Advising Center or the Coordinator of the Health Professions Office for more information. Bulletins describing the pre-dental hygiene program and requirements in detail may be obtained from the Health Professions Office, 220 Ayres Hall.

PRE-MEDICAL PROGRAM

The college offers a three-year program leading to a B.A. degree and a four-year program leading to a Bachelor of Arts or Science degree for students preparing for the study of medicine. Both programs are based upon the program outlined below. In the three-year program the student must complete at least 139 credit hours while enrolled in the college, and the B.A. degree is granted upon satisfactory completion of the first year of study at UTCHS. In the four-year program the degree is granted upon completion of 190 or more credit hours while enrolled in the college, including a major of 36 or more hours in addition to the courses outlined below. The requirements for a major are waived for those taking their fourth year at UTCHS. Students in either the three- or four-year program must complete the last 45 hours of credit in residence at UTK before entering UTCHS.

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

Freshman  
1English 1010-11; 1020; 1031 or 1032 or 1033 or equivalent  
1Chemistry  
1Biology 1210-20-30 or Zoology 1118-28-38  
1Intermediate Level Sequence  

Sophomore  
1Chemistry 3211-21-31 & 3219-29-39 
1English Literature 
1Advanced Biology or Advanced Zoology 
Divisional Distribution (A) Non. U.S. History 
Divisional Distribution (B) Social Sciences 

Junior  
1Physics 2210-20-30 
1Speech 2311 
1Divisional Distribution (C) Social Science 
1Divisional Distribution (D) Humanities 
U.S. Studies 
Foreign Studies 

Total: 138-147 hours

Senior  
1Completion of major program and B.A./B.S. requirements or completion of the three-year program at UT Center for the Health Sciences.  

1Total Minimum Required: 190 hours

1Equivalent honors courses
2Any student who has had two years of biology or one very good year in high school should take the proficiency tests for Biology 1110-20-30 to determine eligibility for going directly into Biology 3111 or 3120.
3Math placement depends on high school courses and grades, ACT scores, and B.A./B.S. requirements. Math is a prerequisite for Physics. A math placement handout is available in the Liberal Arts Advising Center, 220 Ayres Hall. Chemistry 1110-20-30 is a prerequisite to Biology 3110-20.
4This requirement assumes a student has had enough language background in high school to begin an intermediate language sequence at UT.
5Recommended courses in biology and zoology are genetics, cell biology, and comparative vertebrate anatomy.
Senior
Completion of major program and B.A./B.S. requirements in the pre-medical year at UT Center for the Health Sciences.

Total Minimum Required: 190 hours

Bulletins describing the pre-medical program and requirements in detail may be obtained from the Health Professions Office, 220 Ayres Hall.

1Or equivalent honors courses.
2Mathematics 1500-50 may be substituted.
3ACT scores, and B.A./B.S. requirements. Math is a prerequisite for physics. A math placement handout is available in the Liberal Arts Advising Center, 220 Ayres Hall.
3The College of Medicine at E.T.S.U. requires two quarters of literature.
4Although not specifically required by the College of Medicine, the Health Professions Advisory Committee strongly recommends that students include additional work in Chemistry 2140-49 or 4910-20-30, in Zoology 3950 and 3960, and in Microbiology 3750-3751.

PRE-MEDICAL RECORD ADMINISTRATION PROGRAM

Admission to the medical record administration program at UTCHS, leading to a Bachelor of Science in Medical Record Administration, requires completion of 135 hours of prescribed courses. Classes are admitted in September; applications must be filed by May 15. The Admissions process usually includes interviews with members of the faculty.

Students interested in the pre-medical record administration program are encouraged to consult with a health professions advisor in the Liberal Arts Advising Center, or the Coordinator of the Health Professions Office for more information. Bulletins describing the medical record administration requirements and program in detail may be obtained from the Health Professions Office, 220 Ayres Hall.

PRE-MEDICAL TECHNOLOGY PROGRAMS

The college offers two programs leading to study of medical technology:

(1) The Science-Medical Technology Curriculum leading to the degree of Bachelor of Science in medical technology from The University of Tennessee, Knoxville.

(2) The Pre-Medical Technology Program leading to a degree of Bachelor of Science in medical technology from UTCHS.

Science-Medical Technology Curriculum

The Science-Medical Technology Curriculum is a three-year program consisting of a minimum of 140 credit hours in college. Students who complete this curriculum satisfactorily may apply for admission to the pre-medical program in medical technology at the University of Tennessee Memorial Research Center and Hospital in Knoxville (UTMRC). Successful completion of this course, which results in the granting of 50 credit hours, makes the student eligible for a Bachelor of Arts degree with a major in medical technology from The University of Tennessee, Knoxville. In addition, a Certificate of Laboratory Training will be awarded by UTMRC. Students will then be eligible for examination by the Board of Registry of the American Society of Clinical Pathologists in order to be certified as registered medical technologists.

Freshman

<table>
<thead>
<tr>
<th>Hours Credit</th>
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<tbody>
<tr>
<td>1English 1010-11; 1020; 1031 or 1032 or 1033 . . . 9</td>
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<tr>
<td>2Biology 1210-20 or Zoology 1118-28-38 . . . 12</td>
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</tr>
<tr>
<td>Chemistry 1110-20-30 . . . 12</td>
<td></td>
</tr>
<tr>
<td>2Basic Skills: Foreign Language (Intermediate Level Sequence) . . . 9</td>
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<tr>
<td>Mathematics . . . 4</td>
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Sophomore

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<thead>
<tr>
<th>Hours Credit</th>
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<tbody>
<tr>
<td>1Biochemistry 3110 . . . 4</td>
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<td>Zoology 2920-30 . . . 8</td>
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<tr>
<td>Biology 3110-20 . . . 8</td>
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<tr>
<td>Divisional Social Science . . . 8</td>
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<tr>
<td>Microbiology 3200 and 3519 . . . 5</td>
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<tr>
<td>Divisional Distribution (D) Humanities (1) . . . 6-9</td>
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<tr>
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Junior

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<tbody>
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<td>Microbiology 4320-20 . . . 5</td>
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</tr>
<tr>
<td>Chemistry 2140-49 . . . 4</td>
<td></td>
</tr>
<tr>
<td>Microbiology 4270 . . . 3</td>
<td></td>
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<td>Divisional Distribution (C) Social Science . . . 7-8</td>
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<tr>
<td>Divisional Distribution (D) Humanities (2) . . . 6-8</td>
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</tr>
<tr>
<td>Upper Level Distribution (A) U.S. Studies . . . 6-8</td>
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<tr>
<td>Upper Level Distribution (A) Foreign Studies . . . 6-8</td>
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Senior

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<tr>
<th>Hours Credit</th>
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</thead>
<tbody>
<tr>
<td>Medical technology course of study at UTMCRC . . . 190</td>
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</table>

Total Minimum Required: 190 hours

1Or equivalent honors courses.
2Students 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 3110 or 3120. 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 admission to the medical technology course of study.
3This requires a second student who has had enough language background in high school to begin an intermediate language sequence at UT.

PRE-MEDICAL TECHNOLOGY PROGRAM

Students planning to seek admission to the medical technology course of study at UTCHS must complete 90 credit hours of prescribed courses while enrolled in the College of Liberal Arts. The program at Memphis is 7 quarters in length and leads to the degree of Bachelor of Science in Medical Technology from UTCHS. Classes are admitted in September and application must be made one year in advance.

Students interested in the medical technology program of study at UTCHS are encouraged to consult with a health professions advisor in the Liberal Arts Advising Center, or the Coordinator of the Health Professions Office for the specific requirements for admission.

Bulletins describing both pre-medical technology programs and requirements in detail may be obtained from the Health Professions Office, 220 Ayres Hall.

PRE-NURSING PROGRAM

The minimum requirements for admission to the College of Nursing at UTCHS is 90 hours of prescribed courses in the College of Liberal Arts. The program in Memphis, which leads to the Bachelor of Science in Nursing from UTCHS, is two years in length.

Registered nurses who wish to work for a degree of Bachelor of Science in nursing must complete 54 hours of prescribed courses to qualify for admission with advanced standing.

Students interested in the pre-nursing program are encouraged to consult with a health professions advisor in the Liberal Arts Advising Center or the Coordinator of the Health Professions Office for more information. Bulletins describing the pre-nursing program in the Health Professions Office, 220 Ayres Hall.

Note: A degree program in nursing is also available at The University of Tennessee, Knoxville. Information may be obtained from the dean of the College of Nursing.

PRE-PHARMACY PROGRAMS

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

The two-year program prepares students to be admitted to the College of Pharmacy upon completion of 90 hours of a prescribed course of study. Further information may be obtained from the Health Professions Office, 220 Ayres Hall.

The three-year program leading to a B.A. degree and the four-year program leading to either a B.A. or B.S. degree from The University of Tennessee, Knoxville, as well as to the professional degree in pharmacy from UTCHS, are based upon the program outlined below. In the three-year program, the student must complete at least 134 credit hours while enrolled in the College of Liberal Arts, and the B.A. degree is granted upon satisfactory completion of the first year of study at Memphis. In the four-year program the B.A. or B.S. degree is granted upon completion of 190 or more credit hours while enrolled in the college, including a major of 36 or more hours in addition to the courses outlined below. The requirement for a major is waived for those taking their fourth year at UTCHS. Students in either the three- or four-year program must complete the last 45 hours of credit in residence at The University of Tennessee, Knoxville, before enrolling in the College of Pharmacy.

Freshman

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<tr>
<td>2Mathematics . . . 8</td>
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<tr>
<td>3Psychology 2500 . . . 4</td>
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<td>2Basic Skills: Foreign Language (Intermediate Level Sequence) . . . 9</td>
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<td>Divisional Distribution (C) Social Sciences . . . 5-6</td>
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<tr>
<td>Divisional Distribution (D) Humanities (1) . . . 8-9</td>
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Sophomore

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<tr>
<th>Hours Credit</th>
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<tbody>
<tr>
<td>Biology 1210-20-30 or Zoology 1118-28-38 . . . 12</td>
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</tr>
<tr>
<td>Chemistry 3211-21-31 &amp; 3219-29-39 . . . 12</td>
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<tr>
<td>Speech 2311 . . . 3</td>
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Freshman

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<th>Course</th>
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Sophomore

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<td>Chemistry 3211-21-31 and 3219-29-39</td>
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<td>Divisional Distribution (D) Humanities (1) and (2)</td>
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<td>Upper Level Distribution (B) Foreign Studies</td>
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Total: 153-163 hours

Sophomores

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<tr>
<td>Chemistry 4110-20-29</td>
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<td>Microbiology 3700-3519</td>
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<td>Speech 2311 or 2361 or 2351</td>
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<tr>
<td>Divisional Distribution (C) Social Science 8-9</td>
<td>8</td>
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<tr>
<td>Divisional Distribution (D) Humanities (1) and (2)</td>
<td>14-17</td>
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<tr>
<td>Upper Level Distribution (B) Foreign Studies</td>
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Total: 51-59 hours

Senior

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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>Completion of major program and B.A./B.S. requirements or Completion of one year at UT College of Veterinary Medicine</td>
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</tbody>
</table>

Total Minimum Required: 190 hours

*Or equivalent honors courses.

**Math placement depends on high school courses and grades. ACT scores, and B.A./B.S. requirements. Math is a prerequisite for Physics. A math placement handout is available in the Liberal Arts Advising Center, 229 Ayres Hall.

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

**The College of Pharmacy requires a minimum of six hours of English or foreign language in addition to English 1010-20-30.

**The College of Pharmacy requires a minimum of six hours in social science in addition to Psychology 2500. The remaining hours may include courses chosen from economics, history, political science, psychology, or sociology.

**Recommended electives include Classics 2710 and 2720 and courses in business administration, particularly accounting, economics, and marketing.

NOTE: Minimum keyboard skills of 40 w.p.m. will be required of students during the second year of the professional curriculum. A formal course in keyboard skills will not be offered by the College of Pharmacy.

PRE-PHYSICAL THERAPY PROGRAM

Admission to the physical therapy program at UTCHS, leading to the degree of Bachelor of Science in Physical Therapy from UTCHS, requires completion of 127 hours of prescribed courses while enrolled in the College of Liberal Arts. The program in Memphis is 15 months in length.

Students interested in the pre-physical therapy program are encouraged to consult with a health professions advisor in the Liberal Arts Advising Center or the Coordinator of the Health Professions Office for more information. Bulletins describing the physical therapy program and its requirements may be obtained from the Health Professions Office, 220 Ayres Hall.

OTHER HEALTH Professions

Cytotechnology

Optometry

A library of materials about career opportunities in the health professions, including most allied health areas, has been developed and is located in the Health Professions Office, 220 Ayres Hall. Academic Advisors are available to assist students in planning their programs in order to meet the requirements for admission to other programs.

Bachelor of Fine Arts

Two majors in the B.F.A. degree are available: B.F.A. in Studio Arts and B.F.A. in Graphic Design/Illustration. Both majors require a similar prerequisite introductory art core. Majors must pass a portfolio review, usually by the end of the sophomore year, in order to be admitted into upper-division courses and concentrations. All studio courses require 3 hours per week attendance for each credit hour earned. Completing the B.F.A. program may take more than 12 quarters. Students are urged to seek departmental advisement each quarter to ensure proper scheduling.

Transfer students are advised that a minimum of 25 hours in studio courses, and eight upper-division hours in art history must be earned at UT. No grade below C in art courses may be applied to the B.F.A. major. A minimum of 40 credit hours, 3000-level or above, must be earned prior to graduation.

STUDIO ART MAJOR

The B.F.A. in Studio Art is a professionally oriented degree especially intended for those students planning careers or graduate study in the visual arts.

Students may be accepted into advanced media concentration in (1) Ceramics, (2) Drawing, (3) Painting, (4) Printmaking, (5) Sculpture, (6) Watercolor, (7) approved Inter-Area combinations, after passing the appropriate portfolio course.

CORE CURRICULUM

The Studio Art core is required of all B.F.A. candidates. It is designed to give a broad art background, in both studio and art history, at the earliest possible time. This background, during the freshman and sophomore years, gives a foundation upon which the student may build, and provides an opportunity to become acquainted with the various artistic disciplines. This gives each student the understanding to plan a better program during the remaining two years. Unless otherwise stated the art core courses are non-sequential.

Art Core

<table>
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<tr>
<th>Course</th>
<th>Hours Credit</th>
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<tbody>
<tr>
<td>A. Art 1000</td>
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</tr>
<tr>
<td>B. Art History</td>
<td></td>
</tr>
<tr>
<td>Art 1815, 1825, 1850</td>
<td>12</td>
</tr>
<tr>
<td>Additional hours</td>
<td>12</td>
</tr>
<tr>
<td>C. Studio</td>
<td></td>
</tr>
<tr>
<td>A. Fundamentals 1115, 1125, 1135</td>
<td>6</td>
</tr>
<tr>
<td>Fundamentals</td>
<td></td>
</tr>
<tr>
<td>2. 2117 Intermediate Design &amp; Color</td>
<td>3</td>
</tr>
<tr>
<td>3. 2105 Drawing; 2205 Painting</td>
<td>12</td>
</tr>
<tr>
<td>(or 2305 Watercolor), Sculpture</td>
<td>12</td>
</tr>
<tr>
<td>(2405 or 2407 or 2408 or 2450)</td>
<td>2605</td>
</tr>
<tr>
<td>Printmaking</td>
<td>12</td>
</tr>
<tr>
<td>4. 12 hours from the following:</td>
<td></td>
</tr>
<tr>
<td>Fiber-Fabric (2260 or 2265 or 2270)</td>
<td>12</td>
</tr>
<tr>
<td>or 2275 or 2280 or 2285; 2416 Life Modeling</td>
<td>12</td>
</tr>
<tr>
<td>2560 Metal Design; 2595 Photography</td>
<td>12</td>
</tr>
<tr>
<td>2935 Film Design; 2950 Ceramics</td>
<td>12</td>
</tr>
</tbody>
</table>

Subtotal: 59 hours

II. Concentration

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

A. 2000-Level                         | 6           |
| B. Portfolio                         | 1           |
| C. 3000-Level                        | 12          |
| D. 4000-Level                        | 12          |
| E. Approved Studio Electives for Concentration | 15 |

Subtotal: 55 hours

III. Studio Electives

Additional hours in studio course electives to be completed in the Art Department or our affiliated facility, Arrowmont School of Arts and Crafts. Students may also apply a maximum of 12 credit hours of approved studio courses from the following: Architecture, Art Education, Broadcast Journalism, Computer Science, Vocational-Technical Education, Interior Design or Theatre.

Subtotal: 27 hours

IV. General Curriculum

A. English Composition                 | 9           |
| B. Non-U.S. History/Social Science   | 8           |
| C. Natural Science/Mathematics       | 8           |
| D. Philosophy 3910                   | 4           |
| E. Liberal Arts Non-art Electives    | 20          |

Subtotal: 49 hours

Total: 190 hours

*Approved Concentration Electives (maximum credit hours)
The Graphic Design/Illustration major is specifically designed to provide the basic visual education for those persons who wish to pursue careers in the commercial application of art in fields such as advertising, art direction, package design, publications, television, etc.

A minimum of 190 credit hours are required for graduation. Two options are available: graphic design or illustration. Students are advised that courses in Graphic Design/Illustration are to be taken in sequence, and that successful completion of Art 3500 (Portfolio Review, S/NC) is required for admittance to upper-division courses.

### I. Art Core

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Art 1000</td>
<td>2</td>
</tr>
<tr>
<td>B. Art History</td>
<td></td>
</tr>
<tr>
<td>1. Art 1815, 1825, 1850</td>
<td>12</td>
</tr>
<tr>
<td>2. Electives</td>
<td>8</td>
</tr>
<tr>
<td>C. Studio</td>
<td></td>
</tr>
<tr>
<td>1. Art 1115, 1125, 1135</td>
<td>6</td>
</tr>
<tr>
<td>2. Art 2105, 2117, 2205 (or 2305)</td>
<td>9</td>
</tr>
</tbody>
</table>

Subtotal: 37 hours

### II. Graphic Design

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Art 3500 (S/NC)</td>
<td>1</td>
</tr>
<tr>
<td>B. Drawing: Art 2115 (6 hrs.), 4 hrs. electives</td>
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</tr>
<tr>
<td>C. Photography: Art 2905</td>
<td></td>
</tr>
<tr>
<td>D. Art 1501, 2505, 2515, 2525, 3515, 3535, 3545, 4505, 4525, 4516 in sequence</td>
<td>38</td>
</tr>
<tr>
<td>E. Art 3555</td>
<td>2</td>
</tr>
<tr>
<td>F. Art 4502</td>
<td>16</td>
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</tbody>
</table>

Subtotal: 70 hours

### III. Design Electives

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>Art 2506, 3516, 3517, 3525, 4506</td>
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</tbody>
</table>

Subtotal: 12 hours

### IV. Studio Electives

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Fiber-Fabric</td>
<td>3</td>
</tr>
<tr>
<td>B. Painting</td>
<td>3</td>
</tr>
<tr>
<td>C. Printmaking</td>
<td>3</td>
</tr>
<tr>
<td>D. Sculpture</td>
<td></td>
</tr>
<tr>
<td>E. Watercolor</td>
<td></td>
</tr>
</tbody>
</table>

Subtotal: 9 hours

### V. Professional Electives

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertising 3000, 3630, 4000, Broadcasting 4030, Marketing 3110</td>
<td>7-8</td>
</tr>
</tbody>
</table>

### VI. General Curriculum

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. English Composition</td>
<td>9</td>
</tr>
<tr>
<td>B. Non-U.S. History/Social Sciences</td>
<td>8</td>
</tr>
<tr>
<td>C. Natural Science/Mathematics</td>
<td>8</td>
</tr>
<tr>
<td>D. Philosophy 3910</td>
<td>4</td>
</tr>
<tr>
<td>E. Liberal Arts Non-art electives</td>
<td>20</td>
</tr>
</tbody>
</table>

Subtotal: 49 hours

### VII. General Electives

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>Liberal arts electives (not in music)</td>
<td>13</td>
</tr>
<tr>
<td>Non-music electives</td>
<td></td>
</tr>
</tbody>
</table>

### II. Illustration

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Art 3500 (S/NC)</td>
<td>1</td>
</tr>
<tr>
<td>B. Drawing: Art 2115 (6 hrs.), 12 hrs. electives</td>
<td>18</td>
</tr>
<tr>
<td>C. Photography: Art 2905</td>
<td>3</td>
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<tr>
<td>D. Graphic Design: Art 1501, 2505, 2515, 2525, 3515, 3525, 4516 in sequence</td>
<td>26</td>
</tr>
<tr>
<td>E. Art 3509</td>
<td>2</td>
</tr>
<tr>
<td>F. Art 3509, 3519, 3529, 4509, 4519 in sequence</td>
<td>20</td>
</tr>
</tbody>
</table>

### III. Studio Electives

A minimum of 34 hours divided evenly from two of the following areas:

- A. Fiber-Fabric
- B. Painting
- C. Printmaking
- D. Sculpture
- E. Watercolor

### IV. General Curriculum

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. English Composition</td>
<td>9</td>
</tr>
<tr>
<td>B. Non-U.S. History/Social Sciences</td>
<td>8</td>
</tr>
<tr>
<td>C. Natural Science/Mathematics</td>
<td>8</td>
</tr>
<tr>
<td>D. Philosophy 3910</td>
<td>4</td>
</tr>
<tr>
<td>E. Liberal Arts Non-art electives</td>
<td>20</td>
</tr>
</tbody>
</table>

Subtotal: 34 hours

### TOTAL: 190 hours

### COLLEGE ARTISTS PROGRAM

A program of 189 hours is to be determined by the student and approved by the Department of Art honors committee. This program allows the gifted student greater opportunity for establishing a unique education in studio art, which may include independent study, off-campus study, or foreign study in addition to formal class work. Participation and graduation in the College Artists Program will be noted on the student's transcript.

Students may apply for the program upon completion of 45 credit hours, but will not normally be considered after the completion of 90 hours. Admittance to the College Artists Program is based on four criteria: (1) an overall grade-point average of at least 3.0, (2) a portfolio of work, (3) the proposed course of study, and (4) a personal interview. A minimum grade-point average of 3.25, at least 12 hours per quarter, and evidence of continuing motivation and interest must be maintained to remain in the program.

Each College Artist will normally enroll in one or more general or departmental honors course each quarter and must participate in an honors exhibition prior to graduation.

### STUDIO HONORS COURSES

Courses are designed for the exceptional student. Honors courses may be taken in any of the areas of studio instruction, and admittance is based on the following criteria:

- A. Grade-point average of 3.2 in studio art courses
- B. Portfolio of class and/or outside work
- C. Recommendation of the studio faculty, and/or approval of the instructor
- Continued participation is subject to periodic review by the faculty. Students qualified for honors courses will enroll in course numbers which most closely parallel their present level, i.e., sophomores in 2008, juniors in 3008, seniors in 4008. Each course number may be repeated for a maximum of 24 hours credit.

### Bachelor of Music

The Department of Music offers the degree of Bachelor of Music with concentrations in music theory, composition, electronic music, music history and literature, and applied music (voice; piano; organ; church music—organ or piano; church music—voice; piano—literature; strings; woodwind, brass, and percussion instruments; multiple keyboard instruments; multiple woodwind instruments; studio music and jazz; String pedagogy). The study is designed to prepare students for graduate study or for positions in music for which a professional degree is required.

Students who plan to work for this degree are assigned an advisor in the Department of Music at the time they enter the program. Continuation in the program at the 3000 level requires the achievement of an average of 2.5 or better in all music courses taken. The minimum requirement for the degree is 180 credit hours, including the specified courses outlined below.

Note: In addition to the concentrations offered in the Bachelor of Music curriculum, a major in music with a concentration in either music history and literature or applied music is available in the Bachelor of Arts curriculum. (See page 193.)

### MUSIC THEORY

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman English 1010 or 1011; 1020; 1031 or 32 or 33</td>
<td>9</td>
</tr>
<tr>
<td>Music 1111-21-31</td>
<td>3</td>
</tr>
<tr>
<td>Music 1113-23-33</td>
<td>3</td>
</tr>
<tr>
<td>Music 1199</td>
<td>3</td>
</tr>
<tr>
<td>Music 2200</td>
<td>3</td>
</tr>
<tr>
<td>Applied music</td>
<td>3</td>
</tr>
<tr>
<td>Ensemble</td>
<td>3</td>
</tr>
<tr>
<td>Liberal arts elective (not in music)</td>
<td>12</td>
</tr>
<tr>
<td>Music 2000</td>
<td>0</td>
</tr>
<tr>
<td>Sophomore</td>
<td></td>
</tr>
<tr>
<td>Music 2111-21-31</td>
<td>9</td>
</tr>
<tr>
<td>Music 2113-23-33</td>
<td>9</td>
</tr>
<tr>
<td>Music 2300-30-40</td>
<td>3</td>
</tr>
<tr>
<td>Music 2599</td>
<td>6</td>
</tr>
<tr>
<td>Applied music</td>
<td>3</td>
</tr>
<tr>
<td>Ensemble</td>
<td>3</td>
</tr>
<tr>
<td>Liberal arts elective (not in music)</td>
<td>12</td>
</tr>
<tr>
<td>Music 2000</td>
<td>0</td>
</tr>
<tr>
<td>Junior</td>
<td></td>
</tr>
<tr>
<td>Music 2310</td>
<td>3</td>
</tr>
<tr>
<td>Music 3111-21-31</td>
<td>9</td>
</tr>
<tr>
<td>Music 3113-22</td>
<td>9</td>
</tr>
<tr>
<td>Music 3113-23</td>
<td>6</td>
</tr>
<tr>
<td>Music 4121 or 4131</td>
<td>3</td>
</tr>
<tr>
<td>Applied music</td>
<td>3</td>
</tr>
<tr>
<td>Ensemble</td>
<td>3</td>
</tr>
<tr>
<td>Music electives</td>
<td>3</td>
</tr>
<tr>
<td>Music history/literature (3000 level and above)</td>
<td>6</td>
</tr>
<tr>
<td>Liberal arts elective (not in music)</td>
<td>12</td>
</tr>
<tr>
<td>Music 2000</td>
<td>0</td>
</tr>
</tbody>
</table>

### Senior

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Music 4100</td>
<td>3</td>
</tr>
<tr>
<td>Music 4111-41</td>
<td>6</td>
</tr>
<tr>
<td>Music 4121 or 4131</td>
<td>3</td>
</tr>
<tr>
<td>Music 3199</td>
<td>3</td>
</tr>
<tr>
<td>Applied music</td>
<td>3</td>
</tr>
<tr>
<td>Ensemble</td>
<td>3</td>
</tr>
<tr>
<td>Music electives</td>
<td>3</td>
</tr>
<tr>
<td>Liberal arts elective (not in music)</td>
<td>12</td>
</tr>
<tr>
<td>Electives</td>
<td>12</td>
</tr>
<tr>
<td>Music 2000</td>
<td>0</td>
</tr>
</tbody>
</table>

### COMPOSITION

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman English 1010 or 1011; 1020; 1031 or 32 or 33</td>
<td>9</td>
</tr>
<tr>
<td>Music 1111-21-31</td>
<td>3</td>
</tr>
<tr>
<td>Music 1113-23-33</td>
<td>3</td>
</tr>
<tr>
<td>Music 1199</td>
<td>3</td>
</tr>
<tr>
<td>Music 2200</td>
<td>3</td>
</tr>
<tr>
<td>Applied music</td>
<td>3</td>
</tr>
<tr>
<td>Ensemble</td>
<td>3</td>
</tr>
<tr>
<td>Liberal arts elective (not in music)</td>
<td>13</td>
</tr>
</tbody>
</table>

### TOTAL: 180 hours

---

Note: Information specific to the College of Liberal Arts 155

---
Music 2000: 0

Sophomore
Music 2111-21-31: 9
Music 2113-23-33: 3
Music 2310-20-30: 9
Music 2599: 6
Applied music: 3
Ensemble: 3
Liberal arts electives (not in music): 12
Music 2000: 0

Junior
Music 2340: 3
Music 3111-23-33: 3
Music 4012-22-32: 3
Music 3012-22-32: 6
Liberal arts electives (not in music): 6
Music 2000: 0

Senior
Music 4035: 6
Music 4036-37-38: 6
Music 4111: 3
Senior recital 4000: 0

Total: 180 hours

MUSIC HISTORICAL LITERATURE
Freshman Hours Credit
English 1010 or 1011; 1020; 1031 or 32 or 33: 9
Music 1111-21-31: 9
Music 1113-23-33: 3
Music 2300: 3
Applied music: 6
Ensemble: 3
Physics 1810: 4
Foreign language (French or German): 9
Music 2000: 0

Sophomore
Music 2111-21-31: 9
Music 2113-23-33: 3
Music 2310-20-30: 9
Applied music: 6
Ensemble: 3
Art 1815-25: 3
Foreign language (French or German): 9
Music 2000: 0

Junior
Music 2340: 3
Music 3111: 3
Music 3113-23: 6
Music 3361: 3
Music history/literature (3000 level or above): 12
Ensemble: 3
Music theory (3000 level or above): 3
Applied music: 6
Philosophy elective: 6
Electives: 6

Music 2000: 0

Senior
Music 4200: 3
Music history/literature (3000 level or above): 12
Ensemble: 3
Comparative literature or religious studies: 3
Electives: 6
Music history/literature or theory electives (3000 level or above): 12
Applied music: 6
Music 2000: 0

Total: 180 hours

PIANO PEDAGOGY AND LITERATURE
Freshman Hours Credit
English 1010 or 1011; 1020; 1031 or 32 or 33: 9
Music 1111-21-31: 9
Music 1113-23-33: 3
Music 2300: 3
Principal applied study: 9
Music 3699: 3
Applied Music: 3

Electives: 6

Music 2000: 0

Sophomore
Music 2111-21-31: 9
Music 2113-23-33: 3
Music 2310-20-30: 9
Principal applied study: 9
Music 3699: 3
Music electives: 6
Liberal arts electives (not in music): 9
Music 2000: 0

Junior
Music 2340: 3
Music 3111-23: 6
Music 4012-22-32: 3
Music 3012-22-32: 6
Psychology 3550-40: 3
Psychology 3560: 4
Junior recital 3000: 0

Electives: 9
Music 2000: 0

Senior
Music 4055-55-57: 6
Music 3012-22-32: 6
Music 3041: 2
Music Education 4441-42-43: 3
Principal applied study: 9
Music 3899: 3
Educational Psychology 3810: 3
Senior recital 4000: 0

Electives: 9
Music 2000: 0

Total: 180 hours

PIANO
Freshman Hours Credit
English 1010 or 1011; 1020; 1031 or 32 or 33: 9
Music 1111-21-31: 9
Music 1113-23-33: 3
Music 2300: 3
Applied music: 6
Ensemble: 3
Physics 1810: 4
Foreign language (French or German): 9
Music 2000: 0

Sophomore
Music 2111-21-31: 9
Music 2113-23-33: 3
Music 2310-20-30: 9
Applied music: 6
Ensemble: 3
Music 4012-22-32: 3
Music 3012-22-32: 6
Liberal arts electives (not in music): 6
Music 2000: 0

Junior
Music 2340: 3
Music 3111-23: 6
Music 4012-22-32: 3
Music 3012-22-32: 6
Psychology 3550-40: 3
Psychology 3560: 4
Senior recital 3000: 0

Electives: 9
Music 2000: 0

Senior
Music 4035: 6
Music 4036-37-38: 6
Music 4111: 3
Senior recital 4000: 0

Electives: 9
Music 2000: 0

Total: 180 hours

MULTIPLE KEYBOARD INSTRUMENTS
(Piano, Organ, Harpsichord)
Freshman Hours Credit
English 1010 or 1011; 1020; 1031 or 32 or 33: 9
Music 1111-21-31: 9
Music 1113-23-33: 3
Music 2300: 3
Principal applied study: 9
Music 3699: 3
Applied Music: 3

Electives: 6

Music 2000: 0

Sophomore
Music 2111-21-31: 9
Music 2113-23-33: 3
Music 2310-20-30: 9
Principal applied study: 9
Music 3699: 3
Music electives: 6
Liberal arts electives (not in music): 9
Music 2000: 0

Junior
Music 2340: 3
Music 3111-23-33: 3
Music 4012-22-32: 3
Music 3012-22-32: 6
Psychology 3550-40: 3
Psychology 3560: 4
Junior recital 3000: 0

Electives: 9
Music 2000: 0

Senior
Music 4035: 6
Music 4036-37-38: 6
Music 4111: 3
Senior recital 4000: 0

Electives: 9
Music 2000: 0

Total: 180 hours

ORGAN
Freshman Hours Credit
English 1010 or 1011; 1020; 1031 or 32 or 33: 9
Music 1111-21-31: 9
Music 1113-23-33: 3
Music 2300: 3
Principal applied study: 9

Music 2000: 0

Junior
Music 2340: 3
Music 3111-23-33: 3
Music 2310-20-30: 9

Applied Music: 3
Principal: 9

Senior
Music 4035: 6
Music 4036-37-38: 6
Music 4111: 3
Senior recital 4000: 0

Electives: 9
Music 2000: 0

Total: 180 hours
<table>
<thead>
<tr>
<th>Year</th>
<th>Level</th>
<th>Courses</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td>Music 1111-21-31</td>
<td>English 1010 or 1011; 1020; 1031 or 32 or 33</td>
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</tr>
<tr>
<td></td>
<td>Music 2000</td>
<td>Liberal arts electives (not in music)</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Sophomore</td>
<td>Music 2111-21-31</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Music 2113-23-33</td>
<td>Music 2320-30-40</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Music 2330-31</td>
<td>Principal applied study</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Music 2300</td>
<td>Music 1010-20-30 or Music 1590</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Music 2000</td>
<td>psychology or philosophy electives</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Senior</td>
<td>Music 2310</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Music 2313-23</td>
<td>Music 2013-23-33</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Music 2320-30-40</td>
<td>Music 2320-30-40</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Music 2331-33</td>
<td>Principal applied study</td>
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<td></td>
<td>Music 2000</td>
<td>Music 2040-50-60 or Music 1590</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Junior</td>
<td>Music 2310</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Music 2313-23</td>
<td>Music 2013-23-33</td>
<td>3</td>
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<tr>
<td></td>
<td>Music 2320-30-40</td>
<td>Music 2320-30-40</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Music 2331-33</td>
<td>Principal applied study</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Music 2000</td>
<td>Music 2040-50-60 or Music 1590</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Senior</td>
<td>Music 2340</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Music 2312</td>
<td>Music 2333</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Music 3113-23</td>
<td>Applied area literature</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Applied area literature</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Principal applied study</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Liberal arts electives (not in music)</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Junior recital 3000</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Liberal arts electives (not in music)</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Senior</td>
<td>Music 2300</td>
<td>0</td>
</tr>
</tbody>
</table>

**Total: 180 hours**
STUDIO MUSIC AND JAZZ

Freshman  Hours Credit
English 1010 or 1011; 1020; 1031 or 1032 or 1033  9
Music 1111-21-31  9
Music 1112 or 23-33  9
Psychology 2540  6
Psychology 3550  4
Psychology 4000-19-29  6
Practical applied study  6
Ensemble  3
Junior recital  3
Electives (not in music)  3
Music 2000.  0

Sophomore  0

Junior  0

Senior  0

Total: 180 hours

ELECTRONIC MUSIC

Freshman  Hours Credit
English 1010 or 1011; 1020; 1031 or 1032 or 1033  9
Music 1111-21-31  9
Music 1112 or 23-33  9
Music 2130-20-30  9
Music 3052-23  9
Music 2820.  1
Music 1030-40  1
Electives  29
Principal applied study  9
Ensemble  3
Liberal arts elective  3
Music 2000.  0

Sophomore  0

Junior  0

Senior  0

Total: 190 hours

BACHELOR OF SCIENCE IN CHEMISTRY

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

A minimum average of C must be made in each chemistry course applied to the Bachelor of Science in Chemistry degree.

COOPERATIVE PROGRAM IN CHEMISTRY

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

CURRICULUM REQUIREMENTS

Freshman  Hours Credit
Chemistry 3110-20-30 (or 1110-20-30) or 3120-20-30  12
Chemistry 1325-35  2
Mathematics 1840-50-60 or 1845-58-68  12
English Composition 3 (course sequence)  9
Divisional Distribution A, C, or D  4

Sophomore  0

Junior  0

Senior  0

Total: 180 hours

Note: The curricula in strings; woodwinds, brass, and percussion; multiple woodwinds; and voice allow 12 hours of ensemble credit to apply toward electives. This is in addition to the hours in ensemble listed in the tabular resumes.

BACHELOR OF SCIENCE IN SOCIAL WORK

The primary objective of the undergraduate social work program is to educate students for entry level positions in professional social work practice in traditional and innovative agency settings and to ensure growth in ability and knowledge as future practitioners and as citizens. The social work curriculum builds on a strong liberal
eral arts base of humanities and the social and behavioral sciences in order to help students understand human diversity and the transactions between people and their environment. The curriculum contains classroom theory and agency-based field placements. Educationally directed field placements, which consist of over 400 clock hours of supervised field instruction in agency settings throughout greater Knoxville, provide extensive and challenging opportunities for students to apply the lessons of the classroom to the problems of society and to prepare for employment.

Students interested in pursuing the Bachelor of Science in Social Work should confer with the Director of the Social Work Program during their first academic year. Those completing this course of study will be prepared to engage in beginning professional social work practice and enter many graduate schools of social work with advanced standing. This program is accredited by the national accreditation agency, the Council on Social Work Education.

**Freshman**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 1010 or 1011; 1020; 1031 or 1032; 1033</td>
<td>6</td>
</tr>
<tr>
<td>Foreign Language (Intermediate level sequence)</td>
<td>2</td>
</tr>
<tr>
<td>History (Non-U.S.)</td>
<td>3</td>
</tr>
<tr>
<td>Physical Science Sequence</td>
<td>12</td>
</tr>
<tr>
<td>Zoology 2510-20-30 (Human Biology)</td>
<td>12</td>
</tr>
<tr>
<td>Sociology</td>
<td>3</td>
</tr>
<tr>
<td>Social Work 2000-2500</td>
<td>7</td>
</tr>
<tr>
<td>Computer Science 1510</td>
<td>3</td>
</tr>
<tr>
<td>Social Sciences (Anthropology 2530, Political Science 2520, Psychology 2540, Women's Studies 2010)</td>
<td>18</td>
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<tr>
<td>Humanities</td>
<td>17 (14)</td>
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<td>U.S. Studies</td>
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**Junior**

<table>
<thead>
<tr>
<th>Course</th>
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</tr>
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<tbody>
<tr>
<td>Social Work 3400-10</td>
<td>6</td>
</tr>
<tr>
<td>Social Work 3110</td>
<td>4</td>
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<tr>
<td>Social Work 3500-10</td>
<td>8</td>
</tr>
<tr>
<td>Child &amp; Family Studies 3515</td>
<td>3</td>
</tr>
<tr>
<td>Economics Electives</td>
<td>3</td>
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<td>Foreign Studies</td>
<td>4</td>
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<tr>
<td>Sociology 3910-20</td>
<td>8</td>
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<tr>
<td>Human Services 3200</td>
<td>4</td>
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<tr>
<td>Social Work 4103</td>
<td>6</td>
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<tr>
<td>Social Work 4120-30</td>
<td>8</td>
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<tr>
<td>Social Work 4200</td>
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<tr>
<td>Social Work 4520-20</td>
<td>8</td>
</tr>
<tr>
<td>Electives</td>
<td>11 (15)</td>
</tr>
</tbody>
</table>

Total: 190 hours

*Courses selected with faculty advisor from approved list.

**Preparation for Other Professions**

**Law**

Students who plan to study law should consult the statement regarding admission to the College of Law in the Graduate Catalog and discuss their programs with advisors in the Legal Arts Advising Center.

**Library Science**

Certain courses in the Graduate School of Library and Information Science are open to students in the College of Liberal Arts interested in beginning positions in a library or in pursuing graduate study in professional librarianship. For further information, see page 53 or consult the Director of 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 the program of the Graduate School of Planning on page 53. Students are accepted into planning from a broad variety of undergraduate backgrounds. Detailed information on the planning profession, admission requirements, and the program of study may be obtained from the Graduate School of Planning.

**Public Administration**

Students majoring in political science who wish to prepare for an administrative career in the public service may select courses to fit that objective. The concentration appearing below is suggested for students with public service career interests. The degree to be awarded is a Bachelor of Arts with a major in political science, augmented by supportive work in related disciplines.

**Sophomore**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Political Science 2510-20-50</td>
<td>12</td>
</tr>
<tr>
<td>Political Science 4410-20</td>
<td>8</td>
</tr>
<tr>
<td>Political Science 4520-60</td>
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<tr>
<td>Political Science 4560-50</td>
<td>6</td>
</tr>
<tr>
<td>Economics 4750-20</td>
<td>8</td>
</tr>
<tr>
<td>Economics 4760-50</td>
<td>8</td>
</tr>
<tr>
<td>Accounting 2510-30</td>
<td>8</td>
</tr>
<tr>
<td>Accounting 3510</td>
<td>8</td>
</tr>
<tr>
<td>Economics 3410</td>
<td>4</td>
</tr>
<tr>
<td>Economics 3565-66</td>
<td>8</td>
</tr>
<tr>
<td>Political Science 4345-46 or 3801-03-03</td>
<td>8</td>
</tr>
<tr>
<td>Economics 3340</td>
<td>3</td>
</tr>
</tbody>
</table>

**Senior**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Political Science 4610-20</td>
<td>8</td>
</tr>
<tr>
<td>Political Science 4410</td>
<td>8</td>
</tr>
<tr>
<td>Accounting 3510</td>
<td>8</td>
</tr>
<tr>
<td>Economics 4750-60</td>
<td>6</td>
</tr>
</tbody>
</table>

In addition, sufficient electives in political science must be taken to meet the number of hours and the distribution requirements for a major in political science. Further information may be obtained in the Department of Political Science.

*Or equivalent honors courses.

**Social Work**

Students who wish to prepare for graduate professional training in social work will find a brief description of the program of the School of Social Work on page 54. Detailed information about courses and curricula, as well as requirements for admission, will be found in the catalog of the School of Social Work.

**Teaching**

Students in the College of Liberal Arts who wish to be certified for secondary school teaching must satisfy state certification requirements as well as all degree requirements of the College of Liberal Arts and must be recommended for certification by the College of Education. The College of Education is approved by the National Council for Accreditation of Teacher Education (NCATE); recommendation for certification by the college, therefore, in effect certifies the student in 30 states.

Application for admission to the Teacher Education Program should be made during the second or third quarter of the sophomore year in the office of the dean of the College of Education, 212 Claxton Education Building. Criteria for admission are: (1) a 2.2 cumulative grade point average; (2) satisfactory ratings in a speech and hearing exam as determined by tests administered by the Speech and Hearing Center; (3) a personal inventory; (4) satisfactory student conduct records; (5) successful field experience.

One quarter during the senior year must be reserved for student teaching (Education C & I 4710-20). Application for student teaching must be filed not later than January 1 of the year preceding the academic year in which the student teaching will be undertaken. Those planning to student teach during the 1986-87 academic year must apply by January 1, 1986.

For additional information contact Teacher Certification Office, Room 212 Claxton Education Building.

**Theology**

Students planning to study theology should follow one of the Bachelor of Arts curricula. Any liberal arts major is acceptable for admission to most theological schools; strong preparation in literature, philosophy, history, religious studies, and social science is desirable. Students may wish to consult with faculty members in the Department of Religious Studies in planning their programs.

**General Information**

**Association with the College**

For information regarding association with the College of Liberal Arts, see page 16.

**Course Load**

The average course load in the college for any quarter is 14-16 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 Associate Dean for Student Academic Affairs (218 Ayres Hall).

**Lower Division—Upper Division**

Courses numbered at the 1000 and 2000 levels are considered lower division and are normally taken by students in the freshman and sophomore years. Courses numbered 3000 and above are upper division and are designed for students at the junior and senior levels.

**Satisfactory/No Credit Courses**

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
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 quarter will vary from 1-16 hours. Up to 24 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-quarter or summer terms basis. A second avenue is through group programs conducted abroad by other academic institutions to which 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 4101. 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 1-16 hours in any one department. Up to 24 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.

Liberal Arts Advising Center

Academic advising for students of the college is offered through the Liberal Arts Advising Center, 220 Ayres Hall, as well as through the several major departments. The Advising Center is staffed on a regularly scheduled basis by members of the college faculty, each of whom has been trained for this specialized work. Students in their first quarter of residence are assigned to the Advising Center where they may relate themselves to a particular advisor of their choice or consult the person on duty at the time they need assistance. Most students continue in this relationship to the Advising Center until they have determined their major, normally by the beginning of the junior year, at which time they may be transferred for advising to a faculty member in the major department.

Student Academic Affairs Office

Academic assistance for students is also provided through the Student Academic Affairs Office, 218 Ayres Hall. This office serves students not assigned to the Liberal Arts Advising Center, helping them meet a variety of academic needs relating to the development of their academic programs, satisfying graduation requirements, etc. For those who are planning careers in the health sciences it provides a liaison with the Center for the Health Sciences.

Office of African and Afro-American Studies

The Office of African and Afro-American Studies, 802 Volunteer Blvd., Suite 416, cooperates with the various departments and colleges of the University with respect to the development of curricular changes and innovations which incorporate the Black experience into academic and extracurricular programs of the institutions supplies information on financial assistance for Black students, and serves as the focal point for the coordination and development of an improved and expanded African and Afro-American Studies Program at the University.

Bureau of Public Administration

The University has established in the college a Bureau of Public Administration for the purpose of promoting sound governmental administration through research, publication, and consultation. Offices and staff are maintained in both Knoxville and Nashville. The head of the Department of Political Science serves as director of the Bureau of Public Administration.

Psychological Clinic

The Psychological Clinic is an outpatient psychodiagnostic and treatment center established by the University within the Department of Psychology. It provides advanced graduate training for students in clinical psychology and also serves as a training facility for graduate students in the School of Social Work. Referrals for treatment come from many sources, including self-referrals and referrals by relatives and friends and by various social and mental health agencies. Treatment services are available to anyone regardless of residence, sex, age, race, or citizenship.

University Theatres

The Department of Speech and Theatre offers a full schedule of dramatic presentations through three different theatres. The Clarence Brown Theatre has outstanding facilities for prosenium and open stage and for film productions, and, in a separate Studio Theatre, for laboratory productions. Carousel Theatre is designed for arena staging and can be converted for open-air performances in the summer.

Instructional Facilities

The college carries out its varied teaching and research activities in more than two dozen principal buildings in two areas of the campus, as well as in a number of converted residences which provide office, studio, or clinical space. The older of the two clusters of buildings is on "The Hill," and includes Ayres Hall (mathematics and computer science), Austin Peay (psychology), Hesler (botany), Walters Life Science (biochemistry, biology, microbiology, and zoology), The Nielson Physics Building (physics and
hours are required in each of these subfields: (a) Cultural; (b) Physical; and (c) Archaeology.

(a) Cultural: 3410, 3420, 3440, 3450, 3530, 3540, 3550, 3570, 3700, 4200, 4240, 4250, 4400, 4420, 4440, 4550, 4560, 4740, 4741; (b) Physical: 2910, 2920, 2930, 3070, 3900, 4930, 4940, 4950, 4960; (c) Archaeology: 3610, 3611, 3620, 3630, 3660, 3670, 4100, 4610, 4610, 4640. At least 24 of these hours must be at the 3000-level or above. Students with senior standing may also substitute appropriate 5000-level courses with permission of the appropriate Instructor. A minor in anthropology consists of 27 hours including the 2510, 2520, 2530 introductory courses.

2510 Human Orgins (4) Non-technical survey of man's primate background, fossil primates, fossil man, and living races of mankind.

2520 Prehistoric Archaeology (4) Survey of prehistoric culture with specific emphasis on method and theory in archaeology; prehistory of western Europe and Africa. archeology in Americas.

2530 Human Culture (4) Introduction to ethology, survey of nature of culture and cultural interaction in primates and human evolution. Recommended prereq: 2510.

2910 Human Paleontology (3) Examination of the human fossil record with emphasis on the analysis and explanation for the emergence and subsequent evolution of human races from the perspective of the biological sciences. Prereq: 2510.

2920 Human Identification (3) Analysis of basic techniques applicable to the study of human skeletal biology and the identification of human skeletal material in forensic medicine. Prereq: 2510.

2930 The Biology of Human Races (3) Processes of racial differentiation with emphasis on genetic and adaptive factors; influence of interaction between biology and culture in race formation; analysis of studies concerning blood groups, constitution, growth, and nutrition in humans. Prereq: 2510. (Same as Afro-American Studies 2930.)

3010 Prehistoric Humans and Their Lifeways (3) A survey of the development of humans and their cultural behavior from earliest evidence of humans until the end of the Pleistocene. Emphasis on the interaction between cultural and biological development and adaptation. Prereq: 2510 or 2520 recommended.

3070 Genetics and Society (3) (Same as Botany 3070.)

3330 Visiting Lecture Program (3) Developed around lectures by visiting scholars in physical anthropology, cultural anthropology, or archaeology. Offered fall quarter with subsequides repeated on rotating basis. May be repeated. Maximum credit 9 hours.

3410 Principles of Cultural Anthropology (3) Basic concepts and objectives in study of culture. Range of cultural phenomena and approaches to its study. 2530 recommended.

3420 Linguistic Anthropology (3) Basic linguistic concepts and their application in cultural anthropology. Relationship between language and culture. Prereq: 2530 or Linguistics 2000. (Same as Linguistics 3420.)

3440 Religion of Primitive Peoples (3) Religions of non-literate peoples. Place of religion in their social and cultural systems. 2530 recommended. (Same as Religious Studies 3440.)

3450 Community Studies in Complex Culture (3) Review of cross-cultural comparative urban and village communities and methods. U.S. and foreign cultural case studies used in community studies. 2530 recommended.

3460 Alcohol, Health, and Culture (3) Socio-cultural perspectives and consequences of alcohol use/abuse in various cultural groups.

3490 African Religions (4) (Same as Religious Studies 3490 and Afro-American Studies 3490.)

3530 Peoples and Cultures of Africa (3) Ethnographic survey of aboriginal cultures of sub-Saharan Africa. Cultural diversity and human ecology in a real perspective. 2530 recommended. (Same as Afro-American Studies 3530.)

3540 North American Indians (3) Ethnographic survey of cultures of Arctie, Southwest, Plains, and Eastern areas. Emphasis on cultural differences of people occupying these areas during pre-colonial period. 2530 recommended.


3555 Cherokee Ethnography (3) Survey of sociopolitical aspects of internal affairs and external relationships from first European contact to present. Emphasis on 18th and 19th centuries.

3575 Afro-American Anthropology (3) Anthropological perspectives on Blacks in New World; examination of Afro-American via anthropological theories and methodology. (Same as Afro-American Studies 3575.)

3580 Peoples and Cultures of Mesoameria (3) Ethnographic survey of aboriginal peoples and post-conquest changes in Indian culture. Emphasis upon analysis of small rural communities using modern statistical methods as tool of analysis. Prereq: 2510 or 2530 recommended. (Same as Latin American Studies 3580.)

3591 Archaeology of United States and Canada I (3) Survey of prehistoric peoples north of Mexico from initial occupation to European contact. 2520 recommended.

3591 Archaeology of United States and Canada II (3) Survey of prehistoric peoples north of Mexico from initial occupation to European contact. 2520 recommended.

3620 European Prehistory I (3) Cultural developments during Paleolithic, Mesolithic, and Neolithic periods. 2520 recommended.

3630 European Prehistory II (3) Cultural development during Metal Ages. From close of Neolithic through Iron Age. 2520 recommended. 3620 and 3850 should be taken in sequence.

3660 Prehistory of Tennessee (3) History of archaeological research in Tennessee and survey of prehistoric American Indian cultures identified through research.

3670 Principles of Archaeology (3) Research strategies in archaeological excavation, interpretation, and explanation. Prereq: 2520 or consent of instructor.

3670 Foms of Folklore (3) Introduction to anthropological study of folklore.

3811 Introduction to Museology (3) (Same as Art 3811.)

3900 Human Osteology (4) Intensive examination of the human skeleton. Prereq. 2510 or consent of instructor. 3 hrs. and 1 lab.

4101 Foreign Study (1-16) See page 160.

4162 Off-Campus Study (1-16) See page 160.

4103 Independent Study (1-16) See page 160.

4111 Non-Western Education: Anthropological Approaches (3) Analysis of traditional educational practices among non-western peoples and problems encountered from application of western models of education among those peoples. Particular attention is paid to American Indians, African tribal groups, and Asian cultures. (Same as Education C & 1411.)

4200 Contemporary North American Indians (3) Survey of Indian cultures from initial Euro-American contact to present; emphasis on current and emergent Indian policy, reservation life. Prereq: 2530 or consent of instructor.

4240 Applied Cultural Anthropology (3) Applications of anthropological theory, methods, and findings in programs of community and national development.
**Consent of instructor.**

**4740 Southern Appalachian Folk Culture (3)**
A survey of the settlement history and economic development of southern Appalachia in relation to its traditional culture: technology and economics, social organization, beliefs and values, oral traditions, and customs. Consent of instructor.

**4770 Italian Folklore (3)**
(Same as Romance Languages 4760.)

**4930 Physical Growth and Constitution (3)**
Comparative growth patterns throughout the life cycle of skeletal and dental maturation; sex differences in growth; human constitutional types.

**4940 Biology of Native Americans (3)**
American Indian origins and evolution from standpoint of skeletal remains and morphology and morphology and cultural anthropology. Emphasis on North American Indians.

**4950 Primate Studies (3)**
Survey of field and laboratory investigations of comparative anatomy and non-human primate behavior. Consent of instructor.

**4960 Primate Paleontology (3)**
Survey of fossil primate forms; origin and evolution of major primate lineages, emphasizing the earliest Hominids and related forms. Consent of instructor.

The general requirements for the master's and doctoral degrees, as well as the course description, are given in the Graduate Catalog. See Cultural Studies.

### Art (140)

**Art History Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>1705</td>
<td>Experiencing Art (4)</td>
</tr>
<tr>
<td>1815</td>
<td>World Art I (4)</td>
</tr>
<tr>
<td>1825</td>
<td>World Art II (4)</td>
</tr>
<tr>
<td>1850</td>
<td>Survey of Contemporary Art (4)</td>
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</table>

**Undergraduate Courses**

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<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000</td>
<td>The Visual Artist (2)</td>
</tr>
<tr>
<td>1105</td>
<td>Introduction to Studio Art: Various Media (3)</td>
</tr>
<tr>
<td>1125</td>
<td>Studio Fundamentals (2)</td>
</tr>
<tr>
<td>1135</td>
<td>Studio Fundamentals (2)</td>
</tr>
<tr>
<td>1815, 1825</td>
<td>Prerequisite to a minor of 24 hours which includes a minimum of 8 additional upper-division hours. Concentration in Ceramics, Drawing, Fiber-Fabric, Painting-Watercolor, Printmaking, Sculpture or a combination from these areas.</td>
</tr>
</tbody>
</table>

**Art History**

- **B.A. Minor:** Art History-Prerequisites include Art 1815 and 1825, or a combination from these areas.
- **B.A. Major:** Art (Concentration in Studio)-Art 1000, 1115, 1125, 1135, 1850, and eight additional hours of art history are prerequisites to a major of 36 hours. On-campus courses numbered 2000 and above, including a minimum of 21 hours in upper-division courses.

- **B.A. Minor:** Art (Concentration in Studio)-Art 1115, 1125, 1135, and 1815, 1825 are prerequisite to a minor of 24 hours which includes a minimum of 8 additional upper-division hours. Concentration may be in Ceramics, Drawing, Fiber-Fabric, Painting-Watercolor, Printmaking, Sculpture or a combination from these areas.

**B.A. Major:**

<table>
<thead>
<tr>
<th>B.A. Major</th>
<th>Concentration in Studio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art 1000, 1115, 1125, 1135, 1850, and eight additional hours of art history are prerequisites to a major of 36 hours. On-campus courses numbered 2000 and above, including a minimum of 21 hours in upper-division courses. Concentration may be in Ceramics, Drawing, Fiber-Fabric, Painting-Watercolor, Printmaking, Sculpture or a combination from these areas.</td>
<td></td>
</tr>
</tbody>
</table>

- **B.A. Minor:** Art History-Consists of 24 hours in art history: courses numbered 2000 and above. Art 1815 and 1825 are prerequisite to a minor of 24 hours which includes a minimum of 8 additional upper-division hours. Concentration in Ceramics, Drawing, Fiber-Fabric, Painting-Watercolor, Printmaking, Sculpture or a combination from these areas.

**B.A. Major:** Art (Concentration in Studio)-Art 1115, 1125, 1135, and 1815, 1825 are prerequisite to a minor of 24 hours which includes a minimum of 8 additional upper-division hours. Concentration in Ceramics, Drawing, Fiber-Fabric, Painting-Watercolor, Printmaking, Sculpture or a combination from these areas.

**B.F.A. Majors:**

<table>
<thead>
<tr>
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<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>3450</td>
<td>Social Analysis of Urban Settlements (3)</td>
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<tr>
<td>3460</td>
<td>Sociology of Urban Areas (3)</td>
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</tbody>
</table>

**Graduate Courses**

- **B.F.A. Major:** Art History-Prerequisites include Art 1815 and 1825, or a combination from these areas.

**B.A. Major:** Art (Concentration in Studio)-Art 1000, 1115, 1125, 1135, 1850, and eight additional hours of art history are prerequisites to a major of 36 hours. On-campus courses numbered 2000 and above, including a minimum of 21 hours in upper-division courses.

2004 Special Topics (1-4) Student or instructor initiated course offered at convenience of Department. May be repeated.

2006 Special Topics (2-4) Student or instructor initiated course offered at convenience of department. Prereq: Determined by department. May be repeated. Maximum credit 16 hours.

2008 Honors: Art (3) Intensified study for the exceptional student. May be repeated for a maximum of 18 credit hours.

2105 Survey of Drawing (3) Further exploration and refinement of fundamental aspects of drawing with more emphasis on composition and techniques. Prereq: 1115.

2106 Special Topics in Drawing (3) Student or instructor initiated course offered at convenience of department. Prereq: Determined by department. May be repeated. Maximum credit 12 hours.

2115 Life Drawing (3) Further development of drawing and observational skills with special emphasis on structure and dynamics of human figure and surfaces. Prereq: 2105. May be repeated. Maximum 6 credit hours.


2205 Introduction to Painting (3) Capacities of oil and acrylic painting on canvas. Prereq: 1115, 1125, 1135 for art majors, none for non-art majors.

2206 Special Topics in Painting (3) Student or instructor initiated course offered at convenience of department to enhance and expand the painting curriculum. Prereq: to be determined by department. May be repeated. Maximum 12 credit hours.

2215 Painting II (3) Techniques of expression in oil and/or acrylic. May be repeated. Maximum credit 8 hours. Prereq: 2205 for art majors, none for non-art majors.

2256 Special Topics in Fiber and Fabrics (3) Student or instructor initiated course offered at convenience of department. Prereq: Determined by department. May be repeated. Maximum 12 credit hours.

2260 Fabric: Painting and Dyeing (3) Survey of painting and dyeing techniques and non-traditional approaches. Prereq: 8 hours. May be repeated. Maximum 8 credit hours.

2265 Fiber: Three-Dimensional Non-woven Structures (3) Development of three-dimensional structures through non-woven fiber techniques. Crochet, half-stitch knotting, and/or coiling.


2275 Fiber: Woven Structures (3) The woven structure as a two-dimensional pictorial surface. Tapestry, knotted pile, woven weave techniques in the development of imagery, color structures and textural surface.


2285 Fiber: Fabricated Structure (3) Fabricating techniques for two and three dimensional fiber structures. Experimental approaches to weaving, wrapping and/or knotless netting. Traditional and non-traditional materials.

2305 Introduction to Watercolor (3) Capacities of transparent watercolor. Prereq: 1115, 1125, 1135 for art majors, none for non-art majors.

2315 Watercolor II (3) Further study of the capacities of transparent watercolor with attention to individual exploration of surface, space and color. Prereq: 2305. May be repeated. Maximum 6 credit hours.

2405 Sculpture: Clay and Plaster (3) Problems in clay modeling, construction, and basic plaster casting techniques.

2406 Special Topics in Sculpture (3) Student or instructor initiated course offered at convenience of department. Prereq: Determined by department. May be repeated. Maximum 12 credit hours.

2407 Sculpture: Mixed Media (3) The use of two or more media in the development of sculptural techniques, joined to create dimensional form. Possibilities include carving, molding, modeling, construction and found objects. May be repeated. Maximum 12 credit hours.

2408 Sculpture: Metal Casting (3) Introductory metal casting methods in bronze or aluminum. May include lost wax, styrofoam sand, ceramic shell casting methods. May be repeated. Maximum 6 credit hours.

2409 Sculpture: Welding and Metal Fabrication (3) Introduction to metal fabrication/arc and oxyacetylene welding and other joining techniques in steel sculpture. May be repeated. Maximum 6 credit hours.

2415 Sculpture: Plaster and Clay I (3) Development and extension of skills and technique begun in 2450. May be repeated. Maximum 6 credit hours.

2450 Introduction to Wood Sculpture (3) Exploration of wood as sculptural medium. Possibilities include use of hand and power tools, sawing and construction. Prereq: 1115-25-33 for art majors, none for non-art majors.

2460 Wood Sculpture II (3) Development and extension of skills and techniques begun in 2450. May be repeated. Maximum 6 credit hours.

2500 Introduction to Photography (3) Introduction to the art of black and white photography. Field and studio shooting, history of photography, basic developing and enlarging techniques.

2505 Introduction to Printmaking (3) Introduction to three of the basic printmaking techniques.

2515 Survey of Drawing (3) Further exploration and refinement of fundamental aspects of drawing with more emphasis on composition and techniques. Prereq: 2115.

2525 Production (4) Theory and practice of mechanical preparation of art work for various printing processes.

2535 Film Design (3) Introductory theory and practice of film making. Emphasis on graphic elements through use of motion picture camera.

2550 Introduction to Ceramics (3) Exploration of ceramics. Designing and constructing pottery forms using pinch, coil, slab, and wheel techniques. Prereq: 1115-25-35 for art majors, none for non-art majors.

2556 Special Topics in Ceramics (3) Student or instructor initiated course offered at convenience of department. Prereq: Determined by department. May be repeated. Maximum 12 credit hours.

2560 Ceramics II: Handbuilding Techniques (3) Prereq: 2550.

2570 Ceramics II: Wheel Techniques (3) Prereq: 2560.

3000 Inter-Area Portfolio Review (1) A review of prior work in painting. Successful completion required prior to registration for junior and senior courses. Prereq: consent of department. S/NC only.

3008 Honors: Intermediate Art (4) Intensified study for the exceptional student. May be repeated for a maximum of 24 credit hours.

3100 Drawing Portfolio Review (1) A review of prior work in drawing. Successful completion required prior to registration for junior and senior courses. Prereq: consent of department. S/NC only.

3115 Drawing III (4) Development of personal drawing techniques and concepts through class problems. May be repeated. Maximum credit 12 hours. Prereq: 2115.

3200 Painting Portfolio Review (1) A review of prior work in painting. Successful completion required prior to registration for junior and senior courses. Prereq: consent of department. S/NC only.

3215 Painting III (4) Individual expression with varied media on canvas. May be repeated. Maximum credit 12 hours. Prereq: 8 hours of credit in 2215 for art majors; consent of instructor for non-art majors.

3270 Fabric: Individual Class Projects (4) Prereq: 8 hours from 2260, 2270, 2290 or consent of instructor. May be repeated. Maximum 12 hrs.

3275 Fiber: Individual Class Projects (4) Prereq: 8 hours from 2265, 2275, 2285 or consent of instructor. May be repeated. Maximum 12 hrs.

3300 Watercolor Portfolio Review (1) A review of prior work in watercolor. Successful completion required prior to registration for junior and senior courses. Prereq: consent of department. S/NC only.

3315 Watercolor III (4) Individual expression with varied materials.
3616 Lithography III (4) Color lithography from stone or plates, extra techniques—stone engraving, acid-tinting, reverses. May be repeated. Maximum credit 12 hours.

3817 Screen Printing II (4) Stencils; making of hand-made negatives; printing on fabric. May be repeated. Maximum credit 12 hours.

3655 Metal Design III: Individual Class Projects (4) Prereq: 2655 or 2675 or consent of instructor. May be repeated. Maximum credit 12 hours.

3704 Medieval Art I (Byzantine) and western art of Middle Ages: manuscript illumination, mosaic, Romanesque pilgrimage art, Gothic cathedral. Prereq: Consent of department. S/NC only.

3705 Northern European Painting: 1350-1600 (4) From courtly art of late Middle Ages to Northern Renaissance, Van eyck, Roger van der Weyden, Bosch, and Durer: early printmakers.


3895 Film Design (4) Theory and practice of film making. Prereq: 2935.

3941 Photographic Technical Workshop I (4) Investigation of the theories and practices of film exposure and development. Introduction to the zone system. Prereq: 2905.


3949 Ceramics Portfolio Review (1) A review of prior work in Ceramics. For students wishing to enroll in Honors Ceramics. S/N/C only.

3950 Glazes (4) Prereq: 2970.

3965 Ceramics III: Individual Class Projects (4) Prereq: 3950. May be repeated. Maximum 8 credit hours.

3968 Honors Ceramics III: Individual Class Projects (4) Prereq: 3950, 3959 and consent of instructor. May be repeated. Maximum 8 credit hours.

4004 Special Topics (1-4) Student or instructor initiated course offered at convenience of Department. May be repeated.

4006 Special Topics (2-4) Student or instructor initiated course offered at convenience of Department. Prereq: Determined by department. May be repeated. Maximum credit 16 hours.

4008 Honors: Advanced Art (4-6) Intensive study for the exceptional student. May be repeated for a maximum of 24 credit hours.

4015 Individual Problems (4) May be repeated for a maximum of 12 credit hours. Prereq: Consent of Instructor.

4101 Foreign Study (1-16) See page 160.

4102 Off-Campus Study (1-16) See page 160.

4103 Independent Study (1-16) See page 160.

4106 Special Topics in Drawing (3) Student or instructor initiated course offered at convenience of department. Prereq: Determined by department. May be repeated. Maximum credit 16 hours.

4115 Drawing IV (6) Individualized pursuit of personal drawing techniques and concepts, supplemented by individual and group critiques as well as weekly life drawing sessions. May be repeated. Maximum 18 credit hours. Prereq: 12 hours of 3115.

4206 Special Topics in Painting (3) Student or instructor initiated course offered at convenience of department to enhance and expand the painting curriculum. Does not substitute for basic program. Prereq: to be determined by department. May be repeated. Maximum 12 credit hours.
4215 Painting IV (6) Advanced painting stressing individual concepts and personal expression with varied media. Prereq: 12 hours in 2315. May be repeated. Maximum 18 credit hours.

4256 Special Topics in Fiber and Fabrics (3) Student or instructor initiated course to be offered at convenience of department. Prereq: determined by department. May be repeated. Maximum 12 credit hours.

4270 Fabric: Advanced Projects (4-6) Prereq: 8 hours of 3270 or consent of instructor. May be repeated. Maximum 12 hrs.

4275 Fiber: Advanced Projects (4-6) Prereq: 8 hours of 3275 or consent of instructor. May be repeated. Maximum 12 hrs.

4315 Watercolor IV (6) Advanced painting with water-based media on paper stressing individual concepts and personal approaches. Prereq: 12 hours in 3315. May be repeated. Maximum 18 credit hours.

4406 Special Topics in Sculpture (3) Student or instructor initiated course to be offered at convenience of department. Prereq: determined by department. May be repeated. Maximum 12 credit hours.

4415 Advanced Sculpture IV (4-6) Individual development of sculptural problems and techniques. May be repeated. Maximum 18 credit hours. Prereq: Permission of instructor.

4470 Advanced Wood Sculpture (4-6) Application of lathing, chiseling, and carving techniques in design and construction of contemporary forms. Prereq: 2450 or consent of instructor. May be repeated. Maximum 18 credit hours.

4502 Graphic Design/Illustration Practicum (1-16) Practical work experience in the design or illustration field only by prearrangement with the department. Prereq: Senior standing and consent of instructor. May be repeated. Maximum 16 credit hours.

4505 Advanced Graphic Design (4) Advanced projects in conceptual and applied design for printed materials; publications, posters, advertisements. Prereq: 3525.

4506 Special Topics in Graphic Design/Illustration (3) Student or instructor initiated course offered at convenience of department. Prereq: Determined by department. May be repeated. Maximum 12 credit hours.

4509 Product Illustration (4) Advanced media, techniques, styles and concepts as applied to the illustration of products for printed reproduction. Prereq: 3529 or consent of instructor.

4515 Corporate Design (4) Concepts of corporate graphic problems. Includes all areas of graphic design and illustration. Prereq: 3535. May be repeated. Maximum credit 12 hours.

4516 Portfolio and Exhibition Techniques (4) Application of design principles as they relate to promotion, construction, display, and evaluation for two- and three-dimensional artists. Prereq: Senior or graduate standing or consent of instructor.

4519 Editorial Illustration (4) Advanced study of conceptual approaches in Editorial illustration for printed reproduction. Prereq: 4509 or consent of instructor.

4506 Special Topics in Printmaking (3) Student or instructor initiated course offered at convenience of department. Prereq: Determined by department. May be repeated. Maximum 12 credit hours.

4615 Intaglio IV (4-6) Photographic, collage techniques; combine printing with other print media. May be repeated. Maximum 18 credit hours.

4616 Lithography IV (4-6) Extensive use of aluminum plates, color combine printing, photographic techniques. May be repeated. Maximum 18 credit hours.

4617 Screen Printing IV (4-6) Traditional hand cut and photographic stencils, combine printing on paper and other surfaces. May be repeated. Maximum 18 credit hours.

4605 Metal Design IV: Advanced Projects (4-6) Prereq: 3665. May be repeated. Maximum 18 credit hours.

4706 Special Topics in Art History (3) Student or instructor initiated course offered at convenience of department. Prereq: determined by department. May be repeated. Maximum 16 credit hours.

4811 Museum Internship (1-16) Prereq: 8 hours from 3811-21-31 and consent of instructor. May be repeated. Maximum 16 credit hours.

4855 Studies in Art History (3) Concentration in selected areas. Prereq: 16 hours of art history and consent, Department of Art. Prereq: determined by department. May be repeated. Maximum 16 credit hours.

4905 Advanced Photography (4) Individual development of photographic problems and techniques. Prereq: 3905, 3915, 3925. May be repeated. Maximum 12 credit hours.

4906 Special Topics in Photography (3) Student or instructor initiated course offered at convenience of department. Prereq: determined by department. May be repeated. Maximum 16 credit hours.

4556 Special Topics in Ceramics (3) Student or instructor initiated course offered at convenience of department. Prereq: determined by department. May be repeated. Maximum 12 credit hours.

4960 Ceramics IV: Advanced Projects (4-6) Prereq: 3960. May be repeated. Maximum 18 credit hours.

4968 Honors Ceramics IV: Advanced Projects (4-6) Prereq: 3960 and consent of instructor. May be repeated. Maximum 18 credit hours.

4975 History of Ceramics Seminar (4) A survey of historical and contemporary ceramics, dealing with clay sculpture, architecture, and pottery. Oriental, Ancient Greek, Pre-Columbian, and American ceramics. Will not apply to art history requirements. Prereq: 2950, 2960, and 2970.

PI BETA PHI ARROWMONT SCHOOL OF ARTS AND CRAFTS

Lecturers, spring/summer 1984:
R. Adams, D. Bailey; P. Baldwin; J. Bassler; W. Bates; L. Bjorklund; B. Bobick; K. Borgeson; T. Carson; N. Crow; R. Dahnert; P. Dufour; E. Eagle; H. Eastwood; D. Ellsworth; C. Evans; F. Fenster; W. Fiorini; M. Ford; J. Franos; R. George; M. Goldenstein; L. Goldsmith; P. Grayson; D. Hall; S. Hobg; W. Hylec; E. Iverson; F. Jacobs; E. Kalke; E. Koschansky; L. Koscielanski; M. Kodani; G. Kraft; S. Kristoferson; C. Kumata; E. Lambert; T. Lang; R. Laskin; R. Nash Law; B. Lee; M. Landerman; J. & D. Liles; M. Lloyd; R. Lockhart; S. Lumsden; T. Malone; P. Marion; T. & G. Marsh; R. Mawdley; T. & C. McCollery; D. Millard; M. Monroe; J. Myers; D. Nelson; D. Nish; W. Nottingham; J. Osgood; R. Osolnik; J. Otle; N. Putnam; N. Quagliata; Sr.; R. Rewor; T. Riesing; B. Roberson; H. Sadou; R. Smiler; D. Smith; S. Stephenson; E. Streetman; J. Troy; F. Woell; K. Woell; C. Yardborough.

Arrowmont, located 40 miles from the UK 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, 8:30-4:30 p.m. Arrowmont receives financial support from chapters of the Pi Beta Phi Fraternity, alumnae clubs, and individual members.

The following courses are offered periodically ONLY 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.

2104 Drawing (1-4) Beginning to intermediate. May be repeated.
2204 Painting (1-4) Beginning to intermediate. May be repeated.
2254 Fiber Processes (1-4) Beginning to intermediate. May be repeated.
2264 Fiber Constructions (1-4) Beginning to intermediate. May be repeated.
2274 Fabric Surface Design (1-4) Beginning to intermediate. May be repeated.
2284 Fabric Construction (1-4) Beginning to intermediate. May be repeated.
2304 Watercolor (1-4) Beginning to intermediate. May be repeated.
2404 Sculpture (1-4) Beginning to intermediate. May be repeated.
2504 Graphic Design/Illustration (1-4) Beginning to intermediate. May be repeated.
2604 Printing (1-4) Beginning to intermediate. May be repeated.
2654 Metal Design (1-4) Beginning to intermediate. May be repeated.
2664 Enameling (1-4) Beginning to intermediate. May be repeated.
2904 Photography (1-4) Beginning to intermediate. May be repeated.
2954 Ceramics (1-4) Beginning to intermediate. May be repeated.
4104 Drawing (1-4) Intermediate to advanced. May be repeated.
4204 Painting (1-4) Intermediate to advanced. May be repeated.
4254 Fiber Processes (1-4) Intermediate to advanced. May be repeated.
4264 Fiber Construction (1-4) Intermediate to advanced. May be repeated.
4304 Watercolor (1-4) Intermediate to advanced. May be repeated.
4404 Sculpture (1-4) Intermediate to advanced. May be repeated.
4504 Communication Design (1-4) Intermediate to advanced. May be repeated.
4604 Printmaking (1-4) Intermediate to advanced. May be repeated.
4654 Metal Design (1-4) Intermediate to advanced. May be repeated.
4664 Enameling (1-4) Intermediate to advanced. May be repeated.
4904 Photography (1-4) Intermediate to advanced. May be repeated.
4954 Ceramics (1-4) Intermediate to advanced. May be repeated.

GRADUATE

The degree of Master of Fine Arts is offered with concentrations in ceramics, drawing, fiber-fabric, painting, printmaking.
sculpture, watercolor and inter-area. In addition to meeting the requirements of the Graduate School, applicants must have an undergraduate major in art or outstanding proficiency. Examples of work will be requested. For additional information regarding these programs, write to the head of the department.

The department reserves the right to acquire student studio work. Consult the Graduate Catalog for listing of graduate level courses.

Asian Studies
See Cultural Studies.

Astronomy
See Physics and Astronomy.

Audiology and Speech Pathology (160)

Professors:
H. L. Luper (Head), Ph.D. Ohio State; S. Adler, Ph.D. Ohio State; C. W. Asp, Ph.D. Ohio State; P. J. Dierdorf, Ph.D. University of Iowa; J. G. Luscomb, Ph.D. Washington; I. V. Nabelek, Ph.D. Czech Technical (Prague); H. A. Peterson, Ph.D. Illinois; B. Silverstein, Ph.D. Purdue.

Assistant Professors:
Belinda S. Burchfield, Ph.D. Michigan State; C. G. Maisel, M.Ed. Texas.

Assistant Professors:
Assistant Professors:
A. O. Diefendorf, Ph.D. Washington; C. J. Ferrell, M.A. Tennessee; E. I. Hamby, Ph.D. Iowa.

Instructors:

Undergraduate
General Information. 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 pre-professional; that is, they are preparatory to graduate work and to professional certification in some aspect of speech, language and hearing disorders. The master's degree is required for most professional certifications and employment positions. Information about the audiology and speech pathology programs may be obtained from the departmental office, 457 So. Stadium Hall, and students are strongly encouraged to consult with the undergraduate advisors in the department as early as possible in their programs. Suggested electives for non-departmental majors include 3010, 3040, 3050, 3200, 3710, 4070, and 4720.

A B.A. major in speech pathology consists of Audiology and Speech Pathology 3010, 3040, 3050, 3065, 3200, 3310, 3710, 4040, 4290, 4320, 4330, 4550, 4720. Prerequisite: Consent of instructor. F. S.

A B.S. major in audiology consists of Audiology and Speech Pathology 3010, 3040, 3050, 3065, 3200, 3310, 3710, 4040, 4290, 4320, 4330, 4450, 4550, 4720. Prerequisite: Consent of instructor. F. S.

Additional recommended courses for audiology students are: Psychology 2500, 2520, 2530, 3150, 3550, Special Education 3333, 4030, 4341, 4342, 4610 and Child and Family Studies 4810.

A B.A. major in audiologic studies consists of Audiology and Speech Pathology 3010, 3040, 3050, 3065, 3200, 3310, 3710, 4040, 4290, 4320, 4330, 4450, 4720. Prerequisite: Consent of instructor. F. S.

A B.A. major in audiology consists of Audiology and Speech Pathology 3010, 3040, 3050, 3065, 3200, 3310, 3710, 4040, 4290, 4320, 4330, 4450, 4550, 4720. Prerequisite: Consent of instructor. F. S.

Additional recommended courses for audiology students include: Psychology 2500, 2520, 2530, 3150, and Special Education 3333, 4230, 4231, 4250.

1261 English Pronunciation for Foreign Students (3) (Same as English 1261.) E.

3010 Basic Acoustics in Speech and Hearing (3) Fundamental aspects of acoustics in speech and hearing including principles of sound. Prerequisite: Consent of instructor. F. S.

3040 Introduction to Speech Pathology and Audiology (3) Nature, etiology, and incidence of speech, hearing, and language disorders. F. S.

3050 Speech Science I: Phonetics (3) Basic phonetics including recognition and production of spoken English sounds. F. S.

3065 Speech Science II (4) Anatomy and physiology of speech production mechanism. Prerequisite: 3050. W. S.

3200 Speech and Language Development (4) Speech and language development in the normal child including development of distinctive features and implications of this process for diagnosis of speech and language development. Prerequisite: Psychology 3550 or Educational Psychology 2430 recommended. F. W.

3310 Articulation Disorders (4) Etiology, diagnosis, and treatment of articulatory defects. Prerequisite: 3040, 3050, or consent of instructor. (Same as Speech Education 3310.) F. W.

3710 Audiology I (3) Fundamental aspects of auditory anatomy and physiology. Introduction to disorders of hearing and their remediation. (Same as Speech Education 3710.) F. W.

4040 Appraisal of Speech and Language Disorders (4) Diagnostic procedures for children and adults with speech and language problems including observation and practice with diagnostic tests. Prerequisite: 3040, 3050, or consent of instructor. (Same as Speech Education 4040.) F.

4070 Free Association (4) Oral and written free association as process for diagnosing and treating communication disorders. Includes didactic self analysis. W. SU.

4103 Independent Study (1-16) See page 160.

4190 Speech Development of the Hearing Impaired (3) Prerequisite: 3050. (Same as Special Education 4190.)

4200 Practicum in Speech Development of the Hearing Impaired (3) (Same as Special Education 4200.)

4210 Language Development of the Hearing Impaired I (3) (Same as Special Education 4210.)

4220 Language Development of the Hearing Impaired II (3) (Same as Special Education 4220.)

4250 Introduction to the Psychology and Education of the Hearing Impaired (3) (Same as Special Education 4250.)

4310 Stuttering (3) Nature and treatment. Review and integration of various theories. Prerequisite: 3040 or consent of instructor. (Same as Special Education 4310.) F.

4320 Introduction to Clinical Practice in Speech Pathology (3) Prerequisite: 3040, 3050, 3310, 4040, and consent of instructor. (Same as Special Education 4320.) E.

4330 Clinical Practice in Speech Pathology I (3) Prerequisite: 4320 and consent of instructor. S./NC. (Same as Special Education 4330.) E.

4340 Clinical Practice in Speech Pathology II (3) Prerequisite: 4330 and consent of instructor. S./NC. (Same as Special Education 4340.) E.

4400 Voice Disorders (4) Etiology, diagnosis, and treatment of organic and functional voice disorders. Prerequisite: 3040, 3065, or consent of instructor. (Same as Speech Education 4400.) S.

4450 Clinical Practice in Audiology I (4) Prerequisites: 4720 and 4930. (Same as Special Education 4450.) E.

4460 Clinical Practice in Audiology II (4) Prerequisites: 4460, 4720, and 4930. May be repeated. Maximum credit 9 hours. (Same as Special Education 4460.) E.

4470 Clinical Practice in Audiology II (4) Prerequisites: 4460, 4720, and 4930. May be repeated. Maximum credit 9 hours. (Same as Special Education 4470.) E.

520 Speech Pathology (3) Independent study of special problems in speech pathology. Prerequisite: Consent of instructor. E.

550 Problems in Speech Pathology (3) Prerequisite: Consent of instructor. E.

610 Introduction to Language Pathology in Children (4) Nature, etiology, and treatment of language retardation. Observation of clinic prior to the initial practicum. Prerequisite: 3040, 3200, or consent of instructor. F. S.

620 Birth Defect Syndromes and Language Retardation (3) Examination of research literature relevant to birth defects and language retardation including neurological, educational, and socio-emotional implications of such disorders. Prerequisite: 4610 or consent of instructor. S.

630 Practical Applications of Language Habilitation Techniques (3) Discussion and demonstration of various methods and procedures used in treating language retarded children. Prerequisite: 4610 or consent of instructor. F.

6491 Parent Participation in Language Habilitation Program (3) Nature of counseling and educational relationships with parents of exceptional children including emotional support for families, behavior management strategies, home training methods. Prerequisite: 4610 or consent of instructor. S.

6500 Speech and Language of the Culturally Different Child (3) Discussion of speech and language differences of children of various minority groups, and historical and geographic regions; their causes and the effects upon educational programs. F., W., SU.

6600 Topics in Language Retardation and Its Habilitation (3) Lectures on selected topics by representatives of special fields as special education, early childhood education, educational psychology, genetics, and psycholinguistics. Prerequisite: 4610 or consent of instructor. S.

720 Audiology II (4) Basic principles of clinical audiology; pure-tone, masking, and otoacoustic emissions. W., SU.

740 Introduction to Hearing Conservation (4) Flies 1 ADMISSION TO CLINICAL TRAINING IN SPEECH PATHOLOGY AND AUDIOLOGY Students who wish to enroll in clinical practice courses in audiology and speech pathology must apply for admission at the Hearing and Speech Center prior to the initial practicum. Clinical admissions may be limited due to the availability of supervisory staff, clinic facilities and caseloads. A grade of C or better in each prerequisite course is required for clinical practice enrollment. Once admitted to clinical training, students will be continued in the program so long as they are clinically and academically successful. Academic success is defined as a grade of C or better in each course taken in the Department of Audiology and Speech Pathology. Clinical success is defined as performance judged as "adequate" on at least 75 percent of the clinical contact hours assigned during each quarter's enrollment. Failure to meet either the clinical or academic success criteria for any successive quarters automatically removes the student from clinical practice enrollments.
of noise-hazard evaluation, medical monitoring, health education, hearing protective devices, administrative controls, and acoustical engineering controls in hearing conservation. Prereq: 4110, or equivalent. F, SU.

4930 Aural Rehabilitation: Speechreading and Auditory Training (3) Discussion of rehabilitation of acoustically impaired by maximizing use of residual hearing and utilization of speechreading as a receptive communicative process. Prereq: 4720. (Same as Special Education 4930.) F, W. SU.

4940 Introduction to the Verbo-Tonal System (4) Prereq: 3710; 4930 and 3050 recommended. (Same as Special Education 4940.) F, W. SU.

GRADUATE
Consult the Graduate Catalog for listing of graduate level courses.

Bacteriology
See Microbiology.

Biochemistry (188)

Professors:
W. D. Wicks, Ph.D. Harvard (Head); J. E. Churcich, Ph.D. Sheffield (England); J. G. Joshi, Ph.D. Poona (India); K. J. Monty, Ph.D. Rochester.

Associate Professors:
L. Huang, Chancellor’s Research Scholar, Ph.D. Michigan State.

Assistant Professors:
R. H. Feinberg, Ph.D. California (Berkeley); E. Freis, Ph.D. Virginia; J. Koontz, Ph.D. Kentucky.

UNDERGRADUATE
A B.S. major in biochemistry consists of Biology 3110-20, Chemistry 3211-21-31, 3219-29-39, Physics 2210-20-30, Biochemistry 4110-20-30, 4119-29, 4210-20-30, and four hours chosen from: Biochemistry 4500; Botany 3210; Microbiology 3519, 3700, 4140, 4270, 4279; Zoology 3050, 3060, 3080, 4210, 4270, 4279. Prerequisites to this major are Biology 1210-20-30, Chemistry 1110-20-31 and 3219-29-39, and an introductory course in biology.

4230 Introduction to Physical Biochemistry (3) Physical characterization of macromolecules; polarized light, absorption and fluorescence, sedimentation and transport, hydrodynamics of electrolyte, mobility, light scattering, and structural x-ray crystallography of proteins and nucleic acids. Prereq: 4220 or Chemistry 3450, or equivalent.

4500 Independent Research in Biochemistry (1-6) Special experiments under direction of department member. Limited to undergraduates and by consent only. May be repeated for credit. Prereq or coreq: 4110-20, 4119.

GRADUATE
Master’s and doctoral degree requirements, as well as course listings, are found in the Graduate Catalog. Master’s degree candidates usually should offer an undergraduate minor in biochemistry, biology, or chemistry. Doctoral degree candidates must present an undergraduate major in biochemistry, biology or chemistry.

Biology (190)

Chairperson: Dr. William T. Lange, Ph.D. Biology (Head); A. B. major in biology may be obtained by completing one of the three following concentrations:

A. Concentration in Cell Biology. Consists of Biology 3110-20-30, Chemistry 3211-21-31, 3219-29-39, Biochemistry 4110-20, and 12 hours of upper-division courses from: Biochemistry 4119, 4500; Botany, any 3000 or 4000-level courses (except 3050, 3070, 3090); Microbiology 3200, 3700, 3519, 4110-19, 4140-49, 4270-79, 4420, 4909; Zoology 3050, 3060, 3080, 3150, 3320, 4010, 4050, 4110-20, 4250, 4280, 4369, 4380, 4450, 4470, 4480, 4490, 4500. A student may be granted upper-division minimum requirement, not more than 8 hours may be credited from any one biological science department, and not more than 4 hours of research courses may be credited. Pre-requisites to this concentration are Biology 4110-20-30 or Botany 1110-20, or 1118-28 or Zoology 1118-28 and Chemistry 1110-20-30. Corequisites are Math 1841-51 (or 1840-50) plus one of the following: Computer Science 1510, 1520, 1530, 3050, 3060, 3861; Plant & Soil Science 3610; a year sequence in physics (except 1410-20-30); and Chemistry 2140-49.

B. Concentration in Molecular and Organismal Biology. Consists of Biology 3110, 3120, 3130, Chemistry 3211-21-31, 3219-29-39, and 18 hours of upper-division courses from: Biochemistry 3110, 4110-20, 4119, 4500; Botany, any 3000- or 4000-level courses including 3050, 3070, 3090; Microbiology, any 3000- or 4000-level courses; Zoology, any 3000- or 4000-level courses except 3010-20-30 and 3090. In meeting upper-division minimum requirement, not more than 12 hours may be credited from any one biological science department, and not more than 4 hours of research courses may be credited. Pre-requisites to this emphasis are Biology 1210-20-30 or Botany 1110-20 or 1118-28 or Zoology 1118-28 and Chemistry 1110-20-30. Corequisites are a 3-course math package described under Concentration A above, or 1550-60 plus 3000; a year sequence in physics (except 1410-20-30) or Geology 1410-20-30.

C. Concentration in Ecology. Consists of Biology 3110-20-30, Chemistry 3211-21-31, and 3219-29-39, Environmental Engineering 3300, either Geology 3200 or 3530, and 17 hours of upper-division courses from: Botany 3030, 3210, 4030, 4310; Forestry 3020, 3550, 3730, 4020; Geography 3520-30; Microbiology 4110, 4150, 4170, 5200, 4600, 4640, 4650, 4670, 4720-29. In meeting the upper-division minimum requirement, at least 8 hours must be chosen from the group Botany, Microbiology, and Zoology. Prerequisites to this emphasis are Biology 1210-20-30 or Botany 1110-20 or 1118-28 or Zoology 1118-28 and Chemistry 1110-20-30. Corequisites are a 3-course math package as described under Concentration A above, or 1550-60 plus 3000; Physics 1210-20 or 2210-20.

Minor: Consists of Biology 3110-20-30 and 12 hours of upper-division courses chosen from the list below. Biochemistry 4110-20, 4119, 5010; Botany, any 3000- or 4000-level courses; Microbiology, any 3000- or 4000-level courses; Zoology, any 3000- or 4000-level courses except 3010-20-30. (In meeting the upper-division minimum requirement, not more than 4 hours of research courses may be credited.) Prerequisites to the minor are introductory biology courses (Biology 1210-20-30 or Botany 1110-20 or 1118-28 or Zoology 1118-28 and Chemistry 1110-20-30. Note: Certain upper-division courses require organic chemistry or other prerequisites; consult the catalog description in each case.

1210-20-30 General Biology (4,4,4) 1210—Biology of cells: chemical basis of life, cell structure and function, energy metabolism, cell division, DNA, RNA, and protein synthesis, monera, prokarya, and fungi. 1220—Biology of plants and animals; survey of plant kingdom, structure and function of plant tissues, plant growth and reproduction; survey of the animal kingdom, reproduction and development in animals, animal tissue and organ systems. 1230—Genetics, evolution, populations and ecology. May be taken in any sequence. Students who receive credit for 1210-20-30 may not also receive credit for Botany 1110-20, 1118-28 or Zoology 1118-28-29. 1219-F, W, SU; 1220- W, S, SU; 1230-S, SU.

3110 General Genetics (4) Classical and modern principles of heredity. Prereq: 1210-20-30 or Botany 1110-20 or equivalent of 2 years of high school biology and
satisfactory ACT scores; Chemistry 1110-20-30. 3 hours allowed from additional class meeting. May be taken in any sequence or combination with 3120 and 3130.

3120 Cell Biology (4) Organization and function of the cell. Prereq: Same as 3110. 3 hours and 1 additional class meeting. May be taken in any sequence or combination with 3110 and 3130.

3130 General Ecology (4) Relations between organisms and their environment, including human environmental problems. 3 hours and 1 additional class meeting. Prereq: Same as 3110. May be taken in any sequence or combination with 3110 and 3120.

4510 Scientific Illustration (3) Introduction to design and production of graphs, charts, for scientific illustration; planning of poster presentations and displays. No artistic talent assumed. Prereq: Advanced standing in a science curriculum; consent of instructor.

Botany (198)

Professors:
R. W. Holton (Head), Ph.D. Michigan; J. D. Caponetti, Ph.D. Harvard; E.C. Clebsch, Ph.D. Duke; H. B. DeSelm, Ph.D. Ohio State; A. M. Evans, Ph.D. Michigan; W. R. Hendon, Ph.D. Vanderbilt; K. W. Hughes, Ph.D. Utah; L. W. Jones, Ph.D. Texas; J. F. McCormick (Director of Ecology Program), Ph.D. Emory; F. H. Norris (Emeritus), Ph.D. Ohio State; R. H. Petersen, Ph.D. Columbia; M. S. Sharp (Emeritus), Ph.D. Ohio State; P. L. Wainel, Ph.D. Texas.

Associate Professors:
C. C. Amundsen, Ph.D. Colorado; A. S. Heilman, Ph.D. Ohio State; R. R. Henke, Ph.D. Miami (Ohio); L. G. Hickok, Ph.D. Massachusetts; B. C. Mullin, Ph.D. North Carolina State; O. S. Suckling, Ph.D. North Carolina State; W. O. Smith, Ph.D. Duke.

Assistant Professors:
E. E. Schilling, Ph.D. Indiana; D. K. Smith, Ph.D. Tennessee; B. E. Wolford (Curator), Ph.D. Tennessee.

Instructor:
K. D. McFarland, M.S. Ohio University.

*Alumni Distinguished Service Professor

UNDERGRADUATE

The undergraduate program offers a basic liberal arts degree with optional concentrations in cellular and molecular, and organismal botany. The curriculum design emphasizes students learning in the sciences with primary emphasis in Botany. A minimum of 39 credit hours is required to fulfill the major, 25 credit hours for a minor. The undergraduate degree in Botany is designed to furnish necessary experience in academic and practical skills to prepare graduates for immediate entry into the job market or for continuing graduate education in pure or applied biological sciences.

A B.A. major consists of Biology 3110-20-30; Botany 3010-20-30, 3210, 1 hour from Botany 3710-20-30, 2 hours from Botany 4000 or 4110-20-30, 4 additional hours of upper-division Botany (not more than 3 hours allowed from Botany 3050-70-90) and 4 hours of upper-division courses related to selected biological sciences (zoology, microbiology, genetics, entomology, botany, and plant pathology, forestry, ornamental horticulture and landscape design, plant and soil science, or other with approval of under-graduate coordinator and department head).

Prerequisite: Prerequisites to this major are Botany 1110-20-30 or 1118-28-38 or Biology 1210-20-30 and Chemistry 1110-20-30.

Corequisites: Math 1550-60, 1840-50 or 1841-51; Chemistry 3211-21-31, 3218-29-39; and Physics 1210-20 (or 2210-20), or Geology 1410-20. (See Note.)

Options for Concentrations consists of Organismal or Cellular and Molecular Botany. Concentration requirements will be individualized and must be approved in writing by the undergraduate coordinator. Consult the departmental lists of recommended courses for areas of concentration.

A. Organismal Botany—At least 8 hours beyond the major of 3000-level or above from Botany or related Biological Sciences.

B. Cellular and Molecular Botany—At least 8 hours beyond the major of 3000-level or above from Botany or related Biological Sciences.

Note: Students who anticipate continuing beyond the Bachelor's level into graduate studies in Botany or related sciences should consult a Botany advisor for direction and design of coursework.

1110-20 Fundamentals of Botany (4.4) Nature and development of plants, including processes, structure, life histories, inheritance, ecology, and importance to man. Enrollment in sequence is desirable. Two 1-hour discussions and approximately 3 hours audio-tutorial laboratory per week. Students may not receive credit for both Botany 1110-20 and Biology 1210-20-30. 1110-F, SU; 1120-W, SU.

1118-28-38 Honors: Fundamentals of Botany (4,4,4) Honors course designed for superior students in beginning botany. Open to freshmen with a score of 27 or better on natural science section of ACT, and sophomores who have a cumulative GPA of 3.25 or 3.5 in the sciences or who are approved through an interview with a member of botany faculty. Students receiving a grade of C or D in 1118 will transfer to 1120. Three 2-hour lecture-lab-discussion period Must be taken in sequence. Students may not receive credit for both Botany 1118-28-38 and Biology 1210-20-30. F, W.

1119-29 Laboratory in Fundamentals of Botany (0,0)

1130 Selected Topics in General Botany (4) Areas will include plant growth, population genetics, environmental interactions, and impact of human activities on biological systems. Lectures, laboratory, field trips, and individual projects. Two hours lecture-discussion and 4 hours laboratory per week. Occasional lab trips.

1139 Laboratory In Selected Topics in General Botany (0) Students must also register for 1130.

3010-20 Plants in Evolution (4,4) Monera to angiosperms; emphasis on evolutionary relationships, morphology, life histories, and classification. Prereq: 6 hours in biology. Frequent field trips.

3011 Plants and People (3) Botany of domesticated food plants from prehistoric times to the present with consideration of their origin, spread and relationship to development of civilization and to present problems of hunger. Not open to botany majors.

3030 Field Botany (4) Study of plants in natural environments including plant identification, collection, preservation, and basic ecological concepts. Prereq: 6 hours in biological sciences. Not for botany graduate credit. S, SU.

3031-32 Field Botany (4,4) emphasis on fall and winter flora, respectively. Prereq: 3030. Need not be taken in sequence. F, W.

3050 Socio-Economic Impact of Plants (3) Significance of plants in origin and development of human culture, production of cultivated plants, and role of plants in present civilizations. Optional field trips. Not for botany graduate credit. S, SU.

3070 Genetics and Society (3) An introduction to genomics, anthropological implications of genetic research on their implications for human society. Not for botany graduate credit. (Same as Anthropology 3070.) W, A.

3090 Biology and Human Affairs (3) Basic biological principles involved in deterioration and preservation of an environment in which humans and their cultures may survive. Not for botany graduate credit. (Same as Zoology 3090.) F.

3130 Introductory Plant Pathology (4) (Same as Entomology and Plant Pathology 3130.)

3210 Introductory Plant Physiology (4) Organismal physiology of plants emphasizing the general and morphogenetic processes of metabolic processes, effects of age, light, natural rhythms, temperature, and other environmental factors. Lectures and laboratories.

3220 Genetics and Evolution (4) Not for botany graduate credit. Prereq: One year general chemistry and one year biological chemistry, F, SU.

3300 Biological Oceanography (3) Distribution of abiotic factors in the sea and their effect on plankton growth, composition of zoo- and phytoplankton and processes affecting each; food webs in the sea; role of hyperproductive regions (eustuaries, upwellings). Prereq: Chemistry 1110-20-30 and either Biology 1210-20-30 or Botany 1110-20 or Geology 2710. S.

3710-20 Junior Seminar (1,1,1) At least 1 hr. is required for a Botany major. Prereq: Junior standing.

4000 Tutorial in Botany (1-3) Individual, independent study under guidance of selected staff. By application only. May be repeated with consent of department. Maximum credit 8 hours. E.

4107 Field Mycology (3) Field experience on identification of higher fungi. Frequent field trips emphasizing field recognition of species and habitats. Laboratory sessions for discussion and practice with techniques and literature for accurate identification. Prereq: 6 hours of Botany. Recommended: Botany 3010-20. SU, A.

4021 Field Bryology (3) Field experience on identification of mosses and liverworts. Frequent field trips emphasizing field recognition of species and habitats. Laboratory sessions for discussion and practice with techniques and literature for accurate identification. Prereq: 6 hours of Botany. Recommended: Botany 3010-20. SU, A.

4022 Field Lichenology (3) Field experience on identification of lichens. Frequent field trips emphasizing field recognition of species and habitats. Laboratory sessions for discussion and practice with techniques and literature for accurate identification. Prereq: 6 hours of Botany. Recommended: Botany 3010-20. SU, A.

4023 Field Agrobiology (3) Field experience on identification of grasses. Frequent field trips emphasizing field recognition of species and habitats. Laboratory sessions for discussion and practice with techniques and literature for accurate identification. Prereq: 6 hours of Botany. Recommended: Botany 3010-20. SU, A.

4030 Mechanisms of Plant Speciation (3) Processes of plant speciation emphasizing population genetics, isolation, drift, variation, hybridization, speciation, establishment of population barriers, and other aspects of plant speciation. Prereq: 3010-20 and Botany 3110. W.

4045 Aquatic Vascular Plants (3) Field experience
on identification of aquatic vascular plants. Frequent field trips emphasizing field recognition of species and habitats. Laboratory sessions for discussion and practice with techniques and literature for accurate identification. Prereq: 6 hours of botany. Recommended: Botany 3010-20.


4061 Field Physiology (3) Field experience on identification of fresh water algae. Frequent field trips emphasizing field recognition of species and habitats. Laboratory sessions for discussion and practice with techniques and literature for accurate identification. Prereq: 6 hours of botany. Recommended: Botany 3010-20.

4075 Botanical Photography (3) Emphasis on photography of natural history subjects and achievement of technical and aesthetic skills and knowledge to produce illustrations for class, seminar, or public lecture. Landscape, habitat, close-up, and small object photography, in color, using 35 mm format emphasized. Limited shared equipment available. Student encouraged to use own equipment. Film and processing costs paid by student. Photos processed and critiqued in class. Prereq: 6 hours of botany. Recommended: Botany 3010-20.

4090 Field Pteridology (3) Field experience on identification of pteridophytes. Frequent field trips emphasizing field recognition of species and habitats. Laboratory sessions for discussion and practice with techniques and literature for accurate identification. Prereq: 6 hours of botany. Recommended: Botany 3010-20.

4120 Plant Anatomy (4) Comparative structure of vascular plants. Prereq: 1110-20. S.

4240 Paleobotany (4) (Same as Geology 4240.)

4310 Plant Ecology (4) Interactions between individuals, species, communities and their environments. Circulation of energy and matter in ecosystems. Weekly field trips or laboratory periods, and at least two weekend field trips. Prereq: 3030 or equivalent. S.

4410-20-30 Undergraduate Research Participation (3, 4, 5) Participation in active research programs under supervision of staff members. Prereq: junior or senior standing, minimum grade average 3.0, consent of instructor. E.

4510 Plant Tissue Culture (4) Methods for the culture of cells, tissues, and organs including media preparation and maintenance of cultures. Lecture and lab. Prereq: Botany 1110-20 or Biology 1210-20-30 or equivalent and Chemistry 1110-20-30 or equivalent. Recommended: Botany 3010-20, 3210, and 4120; Microbiology 3200 or 3760 and 3519; Ornamental Horticulture 3200 and Plant and Soil Science 3210.

4830 Field Measurements in Plant Ecology (3) Practices in the use of field and laboratory instruments for the measurement and assessment of factors, plant functions, and/or community characteristics. Data collection will be followed by analysis and interpretation of data. Visits to field sites will be scheduled. Prereq: 3030 or equivalent; 1 year of physics and chemistry recommended. F.

GRADUATE Consult the Graduate Catalog for listing of graduate level courses.

Chemistry (235)

Consult the Graduate Catalog for listing of graduate level courses.

work in chemistry (no more than 4 hours of Chemistry 4710 may be applied to this requirement). (Up to 4 hours of the following courses may be applied to the 6-hour requirement: Botany 4820-29-30, Geology 4610, Chemical Engineering 3610-20, Metallurgical Engineering 4510, Polymer Engineering 4910-20-30-40.) Appropriate honors courses may be substituted for the specified numbers. (Not required)

Although not required, certain courses are highly recommended for students planning careers as chemists: Mathematics 2860, Computer Science 3150, Chemistry 4310 and 4420; a knowledge of one of the biological sciences. This program, supplemented by appropriate courses from other areas, is suitable for students planning careers in these fields. The B.S./Concentration B degree is specifically designed to provide more elective hours for preparing for one of the above-mentioned careers; this course of study is not appropriate for students intending to become professional chemists.

Because of the more flexible requirements in the B.S./Concentration B degree, a student in one of the pre-health programs will not be able to combine it with a second major in one of the biological sciences. Prerequisites to the major are Chemistry 1110-20-30 or (preferably) 1310-20-30, Chemistry 1325-35 Mathematics 1840-50 or 1841-51, Mathematics 1860 or 3861 or Computer Science 1510 or 1610. Corequisites to the major are Physics 2210-20-30. The major consists of Chemistry 2140, 2149, 3211-21-31, 3219-25-39, 4910-20-30, 4920-30, and 10 hours of upper-division work in chemistry including at least one of the following courses: Chemistry 4210, 4220, 4310, 4510, 4550. (Up to 6 hours of Biochemistry 4110-20 or Geology 4610 may be applied to the 10-hour requirement.)

A minor in chemistry shall consist of the successful completion of 24 hours of chemistry courses numbered 2000 and above including Chemistry 2140-49 (4 hours) and at least one of the following sequences: Chemistry 3211-21-31, 3219-29-39 (12 hours) or Chemistry 3410-20-30 (8 hours) or Chemistry 4910-20-30 (9 hours).

Placement in Freshman Sequences: The sequences which meet all requirements of a year of general chemistry and which serve as prerequisite for upper-division courses are 1110-20-20 and 1310-20-30; chemistry majors are strongly encouraged to take the latter sequence and are required to elect 1325-35. The 1510-20-30 sequence has more limited applications; It emphasizes organic and biochemistry and may be used as prerequisite only for 2230 and 3810. It is possible to move from one sequence to another if permission for substitution is obtained in advance. For example, a student planning to take 1510-20-30 before
The text is a page from a college course catalog. It contains information on courses, requirements, and other academic details related to chemistry. The text is too extensive to reproduce here completely, but it includes details on course names, prerequisites, course contents, and enrollment requirements. The text is structured in a typical university catalog format, with courses listed alphabetically by their codes. The catalog page provides a snapshot of the academic offerings in chemistry, including introductory courses, specialized courses, and advanced courses for majors. It includes descriptions of course topics, credit hours, and corequisites, along with notes on prerequisites and credit limitations. This information is crucial for students planning their academic paths, ensuring they meet the requirements for advanced courses and minors. The catalog page is a key resource for students, faculty, and administrators, providing a comprehensive overview of the chemistry curriculum at the college.
3340, 3350, 4101 (maximum of 6 hours with language courses numbered above 2000); (b) 6 hours chosen from Classics 2210-20-30, 3310, 3340, 3350, History 3121. The student minoring in Classics is encouraged to take 3 hours of Classics 4220 (senior seminar).

1210-29-30 Beginning Greek (3,3,3) Must be taken in sequence. F, W, S.

2610 Intermediate Greek: Grammar Review and Selected Readings (3) F.

2620 Intermediate Greek: Homer (3) W.

2630 Homer: Iliad (4)

2640 Intermediate Greek: New Testament (3) Prereq: 2610 or consent of instructor. S.

2650 Readings in Hellenistic Greek (4) Reading and discussion in religious and secular literature of Hellenistic Greek. Prereq: Classics 2100. May be repeated. Maximum credit 8 hours. (Same as Relig. Studies 2650.) A.

3010 Plato (3) A.

3020 Herodotus (3) A.

3030 Euripides (2) A.

4020 Aeschylus, Sophocles (3)

4040 Aristophanes (3) A.

4050-60-70 Directed Readings in Greek (3,3,3) F, W, S.

Latin

UNDERGRADUATE

A B.A. major concentration in Latin consists of 39 hours distributed as follows: 30 hours of Latin language courses numbered above 2000, and including 6 hours of Classics 4220 (senior seminar) 9 hours chosen from Classics 2210-20-30, 3310, 3340, 3350, 4101 (maximum of 6 hours with approval of department), History 3121. The student minoring in Classics is strongly encouraged to have as background History 3121 before taking the senior seminar. The student concentrating in Latin is encouraged to begin the study of Greek.

The Latin minor consists of 24 hours distributed as follows: a) 18 hours of Latin language courses numbered above 2000; b) 6 hours chosen from Classics 2210-20-30, 3310, 3340, 3350, History 3121. The student minoring in Classics is encouraged to take 3 hours of classics 4220 (senior seminar).

Placement Examination: Students who transfer to UTK 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 the first week of the quarter 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 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.

Certification for Teaching Latin in Tennessee. Consult Certification Clerk, Room 212, Claxton Education Building.

1110-20-30 Beginning Latin (3,3,3) Must be taken in sequence. 1110-F, W; 1120-W, S; 1130-S.

2511 Intermediate Latin: Grammar Review and Prose Readings (3) For students who have had at least two years of high school Latin, or equivalent. F.

2515 Intermediate Latin: Prose Readings (3) Prereq: Classics 2511 or demonstration of proficiency at that level. W.

2521 Intermediate Latin: Vergil's Aeneid (3) Prereq: Three years of high school Latin (without Vergil) or Classics 2515 (or demonstration of proficiency at that level). S.

3140 Cicero (3) Prereq: 3 or 4 years of high school Latin or 2521, F.

3150 Plautus and Terence (3) Prereq: 3 or 4 years of high school Latin or 2521, S.

3160 Calpilius and Horace (3).

3440 Livy (3) A.

3460 Elegiac Poets (3) A.

4120 Horace, Satires and Epistles (3) A.

4160 Cicero and Techniques of Latin Prose Composition (4) Recommended for Latin majors and minors, especially those intending to teach or pursue graduate work. Works of Cicero studied as models for prose composition. A.

430 Selected Readings from Latin Literature (3) A.

4320-30 Selected Readings from Latin Literature (3,3) May be repeated for credit. A.

4340 Horace, Odes (3) A.

4350 Tacitus (3) A.

4360 Lucretius (3) A.

4370 Readings in Medieval Latin (3) A.

GRADUATE

Consult the Graduate Catalog for a listing of graduate level courses.

GENERAL COURSES

2210 Early Greek Mythology (3) Comprehensive study of Greek myths with an emphasis on how they reflect the ancient Greek vision of the universe and man's place in it. Origins and development of Greek myths and the concurrent rise of organized religion. The symbolic use in later cultures of Greek mythic figures and events will be a persistent emphasis. In time the course goes from Bronze Age to about 500 B.C.

2230 Greek Mythology in the Classical Period (3) The use of myth in history, religion, philosophy, and art of Greece from about 500 B.C. to the death of Alexander the Great, with emphasis on new myths and new uses for old myths that reflect the proud confidence of the Classical Greeks.

2230 Roman Mythology (3) Myths created by the Romans; the gods of the state and the gods of the home. Contribution of myth and ritual to the Roman perception of man's relationship to divinity. Although the first century B.C. is its temporal focus, the course ranges from the Etruscans to the Oriental relations of the Empire, including early Christianity.

2320 Art and Archaeology of Ancient Greece (3) A survey of the development of Greek art with emphasis on architecture, sculpture, and painting with some attention to the minor arts and relationship of art and archaeology. Illustrated lectures.

2330 Art and Archaeology of Etruria and Rome (3) A survey of Etruscan and Roman art, with some attention to the minor arts and urban planning. Classics 2220 is recommended for background. Illustrated lectures.

2510-20 Greek and Roman Literature in English Translation (4,4) 2510-Greek Literature. A survey of the major literature of ancient Greece from Homer to Menander, with emphasis on the sixth and fifth centuries B.C. 2520-Roman Literature. A survey of major literary works of the Romans from Plautus to Tacitus. How the Romans borrowed from the Greeks and then achieved their own artistic identity by the time of Vergil's Aeneid.
Comparative Literature

See Cultural Studies.

Computer Science (266)

A student must have a Computer Science grade point average (as described above) of 2.50 or better to graduate with a major in Computer Science. If a student's Computer Science average is described above, and is below 2.5, the student will be given a warning. If, after one more quarter's grades have been received the student's computer science average has not risen to 2.5, the student will not be allowed to graduate with a major in Computer Science.

A student who desires to be readmitted to the major after being withdrawn as described above must attain an average in computer science courses (computed as described above) of at least 2.7.

The policy applies to all computer science courses taken during or after Winter Quarter, 1992. This policy will be enforced by the Department of Computer Science. This policy will not change the present method of recording grades and grade point averages on the student's permanent academic record maintained in the records office.

Introductory and Service Courses

1410 Introduction to Business Oriented Programming (3) Current and potential uses of computers as tools in a business environment with emphasis on learning FORTRAN programming. Not for Computer Science majors. Students may not receive credit for both 1410 and 1510. Intended primarily for students in College of Business Administration.

1510 Introduction to Programming—FORTRAN (3) The computer as a tool of varied uses in modern world; emphasis on basic programming in FORTRAN. Problem-solving process; organization and characteristics of digital computers. Survey of applications of computers in various disciplines. Students may not receive credit for both 1410 and 1510.


1620 Intermediate Structured Programming (3) Continuation of 1610. Problem solving and algorithm development, including brief introduction to data structures. Emphasis on developing good programming style.

2215 Programming Structures (3) Introduction to discrete structures useful in computer science. Sets, set logic, functions, proof techniques, induction, logic. Graph representation. Preceding. Prereq 1620 and Math 1850. (Same as Math 2215.)

2860 Programming Techniques (3) Problem formulation and solution. External devices and direct access input and output. For students who have programming background in a higher level language. Prereq: 1610-20.

2710 Machine Organization (3) Elementary computer architecture. Introduction to machine and assembly language programming, representation of data, microprogramming. Prereq: one course in computer programming.

3010 Computers and Society (3) History of computing: computer and society; computer and civilization; applications in artificial intelligence, humanities, social sciences, sciences and engineering; computing in foreign countries; computer-assisted instruction; future advances in computing; careers in computing. Prereq: Consent of instructor.

3150 Introduction to Numerical Algorithms and Programming (3) Roots of equations, systems of linear equations, least-squares data fitting, numerical integration, numerical methods for ordinary differential equations. Introduction to programming in FORTRAN. Students may not receive credit for both 3155 and 3150. Prereq: 2860. (Same as Math 3150.)

Graduate courses in Computer Science are intended for students who have completed lower-division computer science courses with a minimum GPA of 3.0 and wish to progress to the major or minor program in Computer Science. Students must have a minimum grade point average of 3.0. Students who have not received credit for both 1410 and 1510 may not receive credit for both 1610 and 1510. Students who have not completed lower-division computer science courses with a minimum GPA of 3.0 may not receive credit for both 1610 and 1510. Students who have not completed lower-division computer science courses with a minimum GPA of 3.0 may not receive credit for both 1610 and 1510. Students who have not completed lower-division computer science courses with a minimum GPA of 3.0 may not receive credit for both 1610 and 1510.

Graduate courses in Computer Science are intended for students who have completed lower-division computer science courses with a minimum GPA of 3.0 and wish to progress to the major or minor program in Computer Science. Students must have a minimum grade point average of 3.0. Students who have not received credit for both 1410 and 1510 may not receive credit for both 1610 and 1510. Students who have not completed lower-division computer science courses with a minimum GPA of 3.0 may not receive credit for both 1610 and 1510. Students who have not completed lower-division computer science courses with a minimum GPA of 3.0 may not receive credit for both 1610 and 1510. Students who have not completed lower-division computer science courses with a minimum GPA of 3.0 may not receive credit for both 1610 and 1510.

Graduate courses in Computer Science are intended for students who have completed lower-division computer science courses with a minimum GPA of 3.0 and wish to progress to the major or minor program in Computer Science. Students must have a minimum grade point average of 3.0. Students who have not received credit for both 1410 and 1510 may not receive credit for both 1610 and 1510. Students who have not completed lower-division computer science courses with a minimum GPA of 3.0 may not receive credit for both 1610 and 1510. Students who have not completed lower-division computer science courses with a minimum GPA of 3.0 may not receive credit for both 1610 and 1510. Students who have not completed lower-division computer science courses with a minimum GPA of 3.0 may not receive credit for both 1610 and 1510.
3410 Computer Programming—COBOL (3) Computer programming in business-oriented language COBOL. Prereq: one course in computer programming.

3910 Commercial Computer Concepts and Control (3) Elements, operation and control of computers in a business environment. Topics include input, storage, data manipulation, output, flowcharting, and error control. Prereqs: 3410 and Accounting 3210.

4310 Statistical Data Processing (3) FORTRAN language for organization and analysis of scientific data. SIMULA; SECURED: Mathematical statistics and computer analyses such as frequency distributions, percentiles, data reduction correlation and regression, analysis of variance. Not for credit for computer science majors. Prereq: Statistics 2100 or equivalent.

4330 Independent Study in Computer Science (1-3) Special project in area of student's primary interest. To be directed by computer science faculty, perhaps jointly with student's faculty advisor. Prereq: Consent of instructor. May be repeated. Maximum credit 9 hours.

Intermediate and Advanced Courses

3155 Introduction to Numerical Algorithms (3) Roots of equations, systems of linear equations, least-squares data fitting, numerical integration, numerical methods for ordinary differential equations, 3150 and 3160 not more than 6 credit hours total. Prereq: no knowledge of FORTRAN should take 3150. Prereq: 1510 or 1010 or consent of instructor. Prereq or coreq: Math 2250. (Same as Math 3155.)

3160 Logic Design of Digital Systems (3) Introduction to Boolean algebra and design of combinational circuits. Presents gate and flip-flop characteristics. Design of clocked sequential circuits and other systems containing memory. Introduction to microcomputer architecture and system components to include basic structure and function of arithmetic, storage, input/output, and control systems. Instruction set capabilities and machine language programming. Prereq: EE 3010 or CS 3150, or CS 2710. 3 hours including tutorial. (Same as EE 3180.)


3520 Assembly Language Programming (3) Machine and assembly language programming, elementary computer architecture. Interpretation of memory dumps. Prereq: 2710.


4210 Introduction to Artificial Intelligence (3) Intelligent problem-solving programs for a computer. Computer representation of knowledge, problem solving and search, game playing, automated deductive systems, natural language understanding, computer vision and learning. Computer implementation of AI problems. Prereq: 4510. (Same as Electrical Engineering 4510.)

4225 Numerical Solution to Equations and Numerical Approximations (3) (Same as Math 4225.)

4235 Numerical Methods for Ordinary Differential Equations (3) (Same as Math 4235.)

4245 Numerical Linear Algebra (3) (Same as Math 4245.)

4470 Programming Languages (4) Comparison and analysis of programming languages, design, features, and implementation. Processors, operating systems, security, control, data control, and storage management. Detailed discussion and programming experience in the LISP dialect either SNOBOL, APL, or SIMULA. Prereq: 4510.

4510 Data Structures and Non-numeric Programming (3) Data structures and algorithms for their manipulation. Arrays and orthogonal lists; stacks, queues, rings, doubly-linked lists, trees, dynamic storage allocation; organization of files; programming languages for information structures. Prereq: 1620 and 2610.

4550 Systems Programming (3) Computer organization and design of computer language and design of computers, representation of information, microprogramming, software systems, input/output system control, computer assembler. Prereq: 3520 or equivalent.

4570 Introduction to Database Management Systems (3) Hierarchical, network, and relational models. Logical and physical views of data. Data definition and data manipulation languages. Data independence. Implementation and operational considerations such as performance, integrity, security, and reliability. Prereq: 4510 or equivalent.

4590 Advanced Systems Programming (3) Advanced programming in systems programming. Topics include multitasking, overlays, advanced I/O techniques, high-level language macros, interrupt handling, teleprocessing facilities, virtual systems (all in a high-level language), and OS utilities. Prereqs: 4510 and 4550.

4610 Operating Systems—Concepts and Facilities (3) Detailed examination of a major operating system. Memory, processor, device, and data management. Information on machine-level I/O, loaders and relocation device characteristics, data set organizations, SPOOLING. Prereqs: 4550 and 4610. Students may not receive credit for both 4620 and 4610.

4620 Operating Systems—Case Studies (2) Theories and their implementation in system design, dynamic relocation, paging, segmentation, time sharing, time slicing, protection, concurrency, real-time systems. Examples from personal computers or systems analyzed as appropriate. Prereq: 4610 or equivalent or consent of instructor. Students may not receive credit for both 4620 and 4620.

4660 Principles of Compiler Design (3) Techniques of compiler design, scanning and parsing of languages described by regular and context-free grammars. Prereq: 4510 and 4710.

4710 Formal Languages and Automata (3) Grammars of context-free languages, top-down and bottom-up parsing. Properties of languages and machines. Emphasis on regular and context-free languages. Introduction to computability and enumerability. Prereq: 2215.


4750 Interactive Computer Graphics (3) Point plotting, vector generation, interactive graphical techniques, two- and three-dimensional transformation, perspective depth, hidden line elimination, shading, software and hardware system design. Discussion of use of these techniques in design, problem solving, mapping, architecture, and many other areas. Prereq: Senior standing in computer science, electrical engineering, or geography and a knowledge of computer programming, or consent of instructor. (Same as Elec. Engr. 4750 and Geography 4750.)

4820 Introduction to Pattern Recognition (3) (Same as Elec. Engr. 4820.)

4830 Digital Image Processing (3) (Same as Elec. Engr. 4830.)

4850 Small Computer Systems (3) (Same as Elec. Engr. 4850.)

4910 Analysis and Management of Computer Installations (3) Analysis and design of computer systems; implementation, justification, personnel in systems; perspective on systems. Prereq: 3520 or equivalent.

4980 Special Topics in Computer Science (1-4) Maximum credit 9 hours. Prereq: consent of department. Prereq: recommendation of Comp. Sci. staff.

GRADUATE Consult the Graduate Catalog for listing of graduate level courses.

Cultural Studies

Director: Dr. Charles O. Jackson

Basic Faculty:

M. Anderson, Ph.D. Special Programs. Donald M. Fieno, Ph.D. Russian; C. Fleming, Ph.D. Special Programs; A. G. Jones, Ph.D. American; J. M. Heffner, Ph.D. English; J. Lekl, Ph.D. Special Programs; W. L. Humphreys, Ph.D. Religious Studies; C. O. Jackson, Ph.D. History; H. Kratz, Ph.D. German; I. Leki, Ph.D. Special Programs; C. J. Maland, Ph.D. English; D. M. Morrow, M.A. Special Programs; M. L. Osborne, Ph.D. Philosophy; M. E. Peek, M.A. Special Programs; H. C. Rutledge, Ph.D. Classics; S. E. Wallace, Ph.D. Sociology.

The ideal curriculum encourages not only proficiency in a given field of knowledge but also the creation of an overall theme and complementarity among areas of intellectual endeavor. One answer to the need for fusion and integration of knowledge is interdisciplinary program. The college has joined the resources of several departments to offer a cultural studies major with concentrations in Afro-American Studies, American studies, Ancient Mediterranean Civilizations, Asian studies, comparative literature, Latin American studies, linguistics, Medieval studies, Russian and East European studies, and urban studies. Minors are provided in Afro-American Studies, Asian studies, comparative literature, Latin American studies, linguistics, Medieval studies, urban studies, and women's studies.

Afro-American Studies (022)

The Afro-American Studies Program (AAS) offers both a concentration and a minor under the general Cultural Studies Program of which AAS is a part. Courses in the Program are located in several colleges and numerous departments as well as those offered by the AAS Program. The requirements are: Concentration: Afro-American Studies 2010-2020 plus 4103 and 4103 are required courses for B.A. majors. In addition to courses offered by AAS Program, courses from at least two other departments must be included in the 36 hours required for a major. Of the 24 hours which must represent upper-division hours. Minor: Afro-American Studies 2010-2020 are required courses, with 16 additional hours at the upper-division level needed to complete the major. Of the 24 hours which must represent upper-division hours. Minor: Afro-American Studies 2010-2020 are required courses, with 16 additional hours at the upper-division level needed to complete the major. Of the 24 hours which must represent upper-division hours. Minor: Afro-American Studies 2010-2020 are required courses, with 16 additional hours at the upper-division level needed to complete the major. Of the 24 hours which must represent upper-division hours.
Anthropology 3530 Peoples and Cultures of Africa (3)
Anthropology 3575 Afro-American Anthropology (3) (Same as Anthropology 3575.)
Political Science 3560 Afro-American Religion in the United States (3) (Same as Political Science 3555.)
History 1950-60 Afro-American History: An Introduction (4,4)
History 2725 Black Art (4)
CFS 4310 The Afro-American Family (3)
English 2540 The Literature of Black America (4)
Geography 3830 Geography of Africa (3)
History 1950-60 Afro-American History: An Introduction (4,4)
Psychology 4880 Afro-American Psychology (4)
Religious Studies 3550 Religion and Racism in America (4)
Religious Studies 3560 Black Religion in America (4)
Sociology 3330 Race, Class, and Power (4)
Sociology 3340 Sociology of Poverty and Inequality (4)
Sociology 4820 American Minority Ethnic Groups (4) Recommendations for the concentration and the minor:
(a) Those with a concentration in Afro-American Studies are encouraged to take a second major, with which an individual- designed program in Afro-American Studies can be correlated.
(b) Students should seek academic advising from the Chairperson of Afro-American Studies program for courses for the concentration or the minor which relate to career plans, preparation for graduate study, and relationship to the second major.
(c) Those with a concentration and a minor are strongly encouraged to combine classroom and experiential learning through a careful selection of courses, e.g. Afro-American Families 4810 and/or Afro-American Studies 4102.
American Studies (O99)
History 2510-20 (or equivalent honors courses) are prerequisite to a concentration in American studies which consists of 36 quarter hours: English 3010-20-30, American Studies 3010 and 4010, and 21 hours of upper-division electives dealing with the American experience. Nine hours of the elective group must be from one of the following disciplines: anthropology, economics, political science, or sociology. A list of acceptable elective courses is published annually by the American Studies Committee.

For further information consult the chairman of the American Studies Committee, Dr. Charles Jackson.

Asian Studies (145)
The Asian Studies concentration consists of 40 credit hours from the upper-division courses of Asian Studies and approved departmental offerings. 20 of the hours must be taken from courses listed within one of the four geographical-cultural areas (Islamic World; South Asia; China; Japan), and no more than 12 of those 20 hours can come from one sub-division. Sub-division A includes: Art, Asian Cultures, Literature, Music, Philosophy, and Religious Studies; Sub-division B includes: Anthropology, Economics, Geography, History, Political Science, and Sociology. Two of the Asian Studies culture courses (Asian Studies 3310-20-30-40) must be taken as part of the concentration. Prerequisite to the concentration is Asian Studies 2510-20. Corequisite to the concentration is competence in a major Asian language of the area of concentration (at the level attained by successful completion of the intermediate level sequence of that language or by demonstration of the equivalent competence.) The Asian Studies minor consists of Asian Studies 2510-20 and 16 credit hours taken from courses listed within one of the four geographical-cultural areas.
Asian Language and Literature

ARABIC (127)

3531-32-33 Intermediate Chinese (4,4,4) Taped language program. Prereq: 2531-32-33 or equivalent or consent of instructor. Must be taken in sequence.

3610 Islamic Literature in English Translation (4)

401 Foreign Study (1-12) See page 160.

5102 Off-Campus Study (1-12) See page 160.

5103 Independent Study (1-12) See page 160.

CHINESE (249)

Asian Studies 2531-32-33 Elementary Chinese I, II, III (4,4,4) Taped language program. Must be taken in sequence.

Asian Studies 3531-32-33 Intermediate Chinese I, II, III (4,4,4) Taped language program. Prereq: 2531-32-33 or equivalent or consent of instructor. Must be taken in sequence.

Asian Studies 4531-32-33 Advanced Chinese I, II, III (4,4,4) Taped language program. Prereq: 3531-32 or equivalent or consent of instructor. Must be taken in sequence.

HEBREW (458)

Asian Studies 2831-32-33 Elementary Modern Hebrew I, II, III (4,4,4) Taped language program. Must be taken in sequence.


JAPANESE (589)

Asian Studies 2631-32-33 Elementary Japanese I, II, III (4,4,4) Must be taken in sequence.

Asian Studies 3631-32-33 Intermediate Japanese I, II, III (4,4,4) Class will include conversation, drill, and composition practice with native speaker. Must be taken in sequence. Prereq: Asian Studies 2631-32-33 or equivalent.

PERSIAN (744)

Asian Studies 2731-32-33 Elementary Persian I, II, III (4,4,4) Taped language program. Must be taken in sequence.


SANSKRIT (895)

4740-50-60 Elementary Sanskrit (4,4,4) (Same as Religious Studies 4940-50-60.)

4770-80-90 Intermediate Sanskrit (4,4,4) (Same as Religious Studies 4770-80-90.)

Approved Area Courses

(a) Art, Asian Cultures, Literature, and Music

Art 3775 Art of Indian Asia (4)

Art 3776 Chinese Art (4)

Art 3777 Japanese Art (4)

Asian Studies 3310 Indian Culture (4)

Asian Studies 3320 Chinese Culture (4)

Asian Studies 3330 Japanese Culture (4)

Asian Studies 3340 Islamic Culture (4)

Asian Studies 3610 The Literature of India in English Translation (4,4)

Asian Studies 3650-60 Japanese Literature in English Translation (4,4)

Asian Studies 4010-20-30 Readings in Asian Literature (4,4,4)

Music 4260 Introduction to Ethnomusicology (3)

(b) Economics, Geography, History, and Political Science

Economics 4232 The Political Economy of Asian Development (3)

Geography 3870 Geography of Asia (4)

History 3780-90 History of the Middle East (3,3)

History 3795 Contemporary Middle East (4)

History 3800 North Africa since 1830 (3)

History 3810-20-30 History of East Asia (3,3,3)

History 4791 Modernization of the Middle East (3)

History 4792 Historical Writers in Islamic History (3)

History 4811-21 History of Japan (4,4)

History 4870 Cultural History of China (3)

History 4880 History of Modern China (3)

History 4890 History of Contemporary China (3)

Political Science 3621 Contemporary China and Japan (4,4)

Political Science 3641 Government and Politics of Middle East and North Africa (4)

Political Science 3795 Contemporary Middle East (4)

(c) Anthropology, Philosophy, Religious Studies, and Sociology

Philosophy 3650 Philosophy and Religion in India (4)

Philosophy 3660 Buddhist Philosophy and Religion (4)

Philosophy 3671 Religion and Philosophy in China (4)

Religious Studies 3650 Philosophy and Religion in India (4)

Religious Studies 3660 Buddhist Philosophy and Religion (4)

Religious Studies 3671 Religion and Philosophy in China (4)

Religious Studies 3672 Religion and Society in Japan (4)

Religious Studies 3680 Islam (4)

Religious Studies 3760 Eastern Religions and Western Thought (3)

Religious Studies 3770 Zen Buddhism (3)

Religious Studies 4670 Topics in Eastern Religions (4)

Religious Studies 4960 Tradition, Change and Modernity in Asia (4)

Sociology 3672 Religion and Society in Japan (4)

Cinema Studies

Minor: Consists of English 2690 and Art 2935 plus sixteen additional hours of approved area courses. It is strongly recommended that English 2690 and Art 2935 be taken before selection of electives provided for in the minor.

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

Approved Area Courses

Art 3935 Film Design (4)

Broadcasting 3670 TV Film News (3)

Broadcasting 4030-40 Television Production (3,3)
Comparative Literature (260)

A concentration in comparative literature consists of 39 hours including Comparative Literature 4010, 4012-22-32, 9 hours of literature in a foreign language in courses numbered 3000 and above, and Classics 4510. The remaining 12 hours should include literature courses, either in English or in a foreign language, numbered 3000 and above, from at least two of the following departments: Classics (4510), English, Germanic and Slavic Languages, Religious Studies, Romance Languages (certain courses in Philosophy and Speech and Theatre 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 24 hours including Comparative Literature 4010, two courses from Comparative Literature 4012-22-32, 6 hours of literature in a foreign language in courses numbered 3000 and above, and 9 hours of literature courses numbered 3000 and above, either in English or in a foreign language, from at least two of the following departments: Classics (4510), English, Germanic and Slavic Languages, Religious Studies, and Romance Languages (certain courses in Philosophy or Speech and Theatre may be substituted with the approval of the chairperson of the Comparative Literature Program). Minors in comparative literature are strongly encouraged to continue their study of a foreign language beyond the minimum requirement.

For further information, consult the chairman of the Comparative Literature Committee, Dr. Harry C. Rutherford.

2010 Introduction to Comparative Literature (4) Basic knowledge, techniques, and sources necessary to compare literatures of various cultures, ages, and nations.

3010 Computer Techniques for Literary Study (3) Introduces students to the growing field of computer research in literary study. Students will learn to write programs in BASIC which have literary research applications. Students will study the specific kinds of literary study for which a computer is a useful tool. Projects include the following: indexing and bibliography, concordances, syntactic analysis, content analysis, authorship attribution, textual editing, and stylistic analysis. No previous knowledge of computer science background is assumed or required.

3236-37 Special Themes in Literature (3,3) (Same as English 3236-37)

4100 Methodology of Comparative Literature (3) Research and writing of comparative literary studies. Major project will be preparation of seminar paper in comparative literature. Prereq: 2010 and one course from 4012-22-32 or consent of instructor.

4102-22-32 Special Topics in Comparative Literature (3,3,3) Content varies; may be repeated for credit.

5912 Comparative Theories of Literature (3)

5022 Approaches in Comparative Literature (3)

5032 Studies in Comparative Literature (3)

Approved Area Courses

Classics 2210-20-30 Greek and Roman Mythology (3,3,3)
Classics 4010 Greek Drama in English Translation (3)
Classics 4510 Selected Reading in Latin Literature in Translation (3)
English 3411-12-30 Modern Drama (3,3,3)
English 3710 Literature of the English Bible (3)
English 3910-20-30-40 Comparative Literature (3,3,3)
English 4720 Folklore (3)
English 4730 Popular Ballad (3)
English 4950 Approaches to Literature (3)
English 5560 Introduction to Literary Research (3)
German 3210-20-30 Masterpieces of German Literature in English Translation (3,3,3)
German 4030 German Drama in English Translation (3)
German 4040 The Modern German Novel in English Translation (3)
German 4050 The Faust Legend (3)
Russian 3210-20-30 Survey of Russian Literature in English Translation (3,3,3)
Romance Languages 4010 Masterpieces of French Literature in English Translation (3)
Romance Languages 4020 Masterpieces of French Drama in English Translation (3)
Romance Languages 4030 Masterpieces of Spanish Literature in English Translation (3)
Romance Languages 4040 Masterpieces of Spanish Drama in English Translation (3)
Romance Languages 4050-60-70 Dante and Medieval Culture (3,3,3)

Ancient Mediterranean Civilizations

The concentration in Ancient Mediterranean Civilizations consists of Classics 3810, Classics 3820, Religious Studies 2611, and 28 additional hours from the following list, distributed in such a way that no more than 20 hours are in any one of the three divisions:

(a) Ancient Near Eastern Cultures: History 3751, 3752; Religious Studies 3110, 3120, 4210.
(b) Greek Culture: Classics 2210, 2220, 3320, 3321, 3340, 3350, 4010, 4220 (where applicable), 4230 (where applicable), History 3760; Philosophy 3111, 4410, 4420; Political Science 3801.
(c) Roman Culture: Classics 2230, 2233, 3340, 4220 (where applicable), 4510; History 3770; Religious Studies 3311-12, 3340, 4310, 4640.

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 appropriate.

Students are encouraged to satisfy the Foreign Language requirement with Greek, Latin, or Hebrew.

For further information, consult Dr. H. C. Rutherford (Classics) or Dr. W. L. Humphreys (Religious Studies).

Latin American Studies (600)

Concentration consists of 36 hours including Spanish 3310-20-30 or Portuguese 3310-20, History 3870-80, Political Science 3825-26, and Geography 3800 or 3790 and 9-12 hours of acceptable elective courses in any of the participating departments or in the Latin American studies sequence 2510-20 (4,4) or Independent Research 4010, or Senior Seminar 4970.

Two years of Spanish or Portuguese or a practical working knowledge acquired independently are a prerequisite.

Minor. Consists of 24 quarter hours selected from Geography 3800 or 3790, History 3870-80-90, Political Science 3825-26, Spanish 3310-20-30 or Portuguese 3310-20-30, and the Latin American studies sequence 2510-20 or Independent Research 4010. For further information, consult the chairperson of the Latin American Studies Committee.

2510-20 Introduction to Latin American Studies (4,4) Introduction to societies of Latin America with special emphasis on dominant culture patterns, social changes, and impact of nationalization, 2510—Pre-Colonial and Colonial Latin America through independence era; 2520—Latter 19th century and the Modern period.

2510-20-30 Spanish and Spanish American Literature in English Translation (3,4,3,4-3) 2910—Masterpieces of classical Spanish literature; Cervantes, realism and the novel, religion and mystics, Golden Age Theatre; 3920—Masterpieces of 20th century Spanish literature: Ibarbourou, Lorca, Baraja, Ortega, 2930—Contemporary Spanish American fiction: Marquez, Borges, Fuentes, Asturias. No change in credit hours after add deadline. Option of 4 hrs. credit must present an appropriate amount of extra work above that required for 3 hrs. (Same as Romance Languages 2510-20-30).

3310-20-30 Aspects of Spanish American Literature (3,3,3) History of Latin America (not required in courses numbered 3000 and above) various periods of the literature; emphasis upon the genres (poetry, novel, drama) varies. May be taken in place of 3110-20-30 or 3610-20. Prereq: 2130, 2520 or equivalent (Same as Romance Languages 3310-20-30).

3510-20 Aspects of Portuguese Literature (4,4) Prereq: 2520 or equivalent. Recommended for literature majors. (Same as Romance Languages Portuguese 3510-20).

3590 Peoples and Cultures of Mesoamerica (3) Ethnographic survey of aboriginal peoples and post-contact changes in Indian culture. Emphasis upon analysis of small rural communities using modern village studies as source materials. Recommended prerequisite: 2530. (Same as Anthropology 3590).

3625-26 Latin American Government and Politics (4,4) (Same as Political Science 3825-26)

3790 Geography of Middle America (4) Covers Mexico, Central America, and the West Indies. Not open to students who have taken 3740, 3770, or 3780. (Same as Geography 3790).

3800 Geography of South America (4) Not open to students who have taken 3730, 3750, or 3760. (Same as Geography 3800).

3870-80 History of Latin America (3,3) 3870—Exploration, conquest, settlement, and colonial life to 1880. 3880—Major countries of South America, 1800—present. (Same as History 3870-80).

4001 Cultural Plurality in Latin America (3) Introduction to value systems and behavioral patterns based on Spanish—Mediterranean, Luso—Mediterranean, indigenous Indian and African heritage existing today in Latin America.

4002 Institutional Changes in Latin America (3) Introduction to government, political parties, the role of the military, the Church, educational institutions, democracy and dictatorship, nationalism, and the family.
Course focus will be on the evolution of the institutions in Luso and Hispanic America.

4010 Independent Research in Latin American Studies (3-9) Directed research in any topic fully related to Latin American Studies to be undertaken by a student off-campus, normally in a Latin American country. The research must be approved and evaluated by the Latin American Studies Committee and directed by a faculty member involved in the study of the Latin American area. Credit to vary according to the scope and length of the project.

4251 The Political Economy of Latin America (3) Description, analysis, and policy concerning major economic problems and policies of various Latin American countries. (Same as Economics 4231.)

4310-20-30 Directed Readings in Brazilian and Portuguese Literature (3,3,3) May be repeated with consent of instructor. (Same as Romance Languages Portuguese 4310-20-30.)

4420-30 Latin American Civilization (3, 3) Prereq: 2130, 2520, or equivalent. (Same as Romance Languages Spanish 4420-30.)

4461 Quantitative Analysis of Language (3) (Same as English 4461.)

4727 Politics of Inter-American Relations (4) Analysis of the theoretical and policy issues concerning international relations in the Americas with emphasis on imperialism, intervention, and the Cuban revolution's impact on the region and the world. (Same as Political Science 4727.)

4810-20-30 Topical Survey of Spanish American Literature (3,3,3) 4810—Prose fiction: major examples of the short story and novel. 4820—Poetry: landscape, the individual, and the present. 4830—Drama and essay: the modern period. (Same as Romance Languages Spanish 4810-20-30.)

4840 History of Mexico (3) (Same as History 4840.)

4850 History of the Caribbean (3) Caribbean region from discovery and colonization to contemporary times. (Same as History 4850.)

4970 Latin American Studies Seminar (3-4) Selected topics in Latin American studies. May be repeated. Maximum 8 credit hours.

Linguistics (623)

This concentration offers a broad exposure to the various fields of linguistics (including historical, descriptive, and theoretical linguistics) along with an opportunity to study areas where linguistics overlaps with other disciplines such as psycholinguistics, sociolinguistics, speech pathology, and the like. It 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. It provides the additional possibility of emphasizing the teaching of English as a second language for the student interested in employment at the B.A. level. The requirements of this concentration are:

Corequisites
(a) A 3000-level sequence or its equivalent of a foreign language. (The following languages offer sequences appropriate for this requirement: French, German, Italian, Portuguese, Russian, and Spanish.)
(b) Two quarters of a non-Indo-European language to be selected from the following:

Arabic 2431-32 (2433 is recommended); Asian Studies 2531-32 (Chinese, 2533 is recommended); Asian Studies 2631-32 (Japanese, 2633 is recommended); Religious Studies 3140-50-60 (Hebrew); other non-Indo-European languages offered in a sequence of at least two four hour courses and approved by the Linguistics Committee.

Concentration
The concentration shall consist of 38 hours distributed as follows:
(a) 32 hours composed of Audiology and Speech Pathology 3350; English 3330, 3332, 4440; French, German, Russian, or Spanish 4250-60-70; Speech 4811; Linguistics 4120-30.
(b) 6 hours of the following, selected in consultation with the Linguistics Committee:
- Anthropology 3420; Audiology and Speech Pathology 3290, 4650, 5651, 5790; Educational Curriculum and Instruction 3582-63; Special Education and Rehabilitation 5220, 5310-20-30; English 3331, 4450, 4455, 4460, 4461, 4471, 4481, 5150, 5170-90; French 4210-20-30, 5110-20-30; German 4310-20; 4810-20-30, 5710-20-30; Linguistics 4000; Philosophy 4830; Psychology 4650, 4660, 5960-70; Spanish 4210-20-30, 5110-20-30.
(c) Other hours may be substituted in (b) by approval of the Linguistics Committee.

Minor
A minor in linguistics shall consist of 27 credit hours composed of 9 from section (b) of the major, selected in consultation with the Linguistics Committee, and 18 hours as follows: Audiology and Speech Pathology 3050; Linguistics 4120-30; English 3332; French, German, Russian, Spanish 4250-60.

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.

For further information consult the chairman of the program, Dr. Bethany Dumas, or the program advisor, Dr. Chauncey Mellor.

2000 Language, Linguistics and Society (3) Introduction to linguistics with focus on language development and use of language by individuals and groups.

3330 Introduction to Study of English Language (4) (Same as English 3330.)

3331 Cultural History of the English Language (3) (Same as English 3331.)

3332 Modern English Grammar (3) (Same as English 3332.)

3420 Linguistic Anthropology (3) (Same as Anthropology 3420.)

4000 Topics in Linguistics (3) Content varies. May be repeated. Maximum credit 9 hours.

4120-30 Foundations of Linguistics Science, Development of Methodology, Contemporary Theory (3,3) Intellectual and methodological foundations of linguistics science. Changes in linguistic interest brought about by Saussure's Course and the growing impact of other disciplines on linguistics science. (Same as English 4120-30.)

4250 Introduction to Descriptive Linguistics (3) (Same as French, German, Russian, and Spanish 4250.)

4260 Introduction to Historical and Comparative Linguistics (3) (Same as French, German, Russian, and Spanish 4260.)

4270 Introduction to Romance Linguistics (3) (Same as French and Spanish 4270.)

4271 Introduction to Slavic Linguistics (3) (Same as Russian 4271.)

4440 Sociolinguistics (3) (Same as English 4440.)

4460 Special Topics in English Linguistics (3) (Same as English 4460.)

4461 Quantitative Analysis of Language (3) (Same as English 4461.)

4471-81 English as a Second or Foreign Language (3,3) (Same as English 4471-81.)

Medieval Studies (674)

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

A concentration in Medieval Studies consists of Medieval Studies 2010 and 4010 and 16 additional hours distributed among the categories listed above for the major. Each student's program, major or minor, must be approved in advance by the Medieval Studies Coordinating Committee, chairperson Dr. Thomas J. Hefferman.

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

2010 Medieval Civilization (4) Introduction to basic themes in medieval experience, approached from inter-disciplinary points of view and including philosophy and religion, art and architecture, language and literature, social and political history.

2651 Literature of the Dark Ages (5th-10th Centuries) (3-4) Critical analysis and interpretation of selected classical works from the medieval period. Focuses on tests representing the major genres of the early Middle Ages (e.g., monastic, historical, biographical). Readings include St. Gregory's Life of St. Benedict, Augustine's Confessions, the Tower of Charlemagne, etc. Students registering for four credit hour will be assigned additional work to satisfy the fourth credit hours.

2852 Literature of the Later Middle Ages (3-4) Critical analysis and interpretation of selected classical works from the medieval period. Focuses on romantic, allegorical and mystical writings from the high and late middle ages, and comparison of the Nibelungenlied, the Romance of the Rose, St. Bernard's Commentary on the Song of Songs, Peter Abelard's History of My Calamity, etc. Should be taken
in sequence with 2601. Students registering for 4 credit hrs. will be assigned additional work to satisfy the fourth credit.

4010 Seminar in Medieval Studies (4) Interdisciplinary treatment of selected topics.
Upper-division courses for the concentration in Medieval Studies may be chosen from the list of courses below.

Category #1 History, Philosophy, Political Science, and Religious Studies.

History 3060 History of Western Religious Thought and Institutions (4)
History 3411 Renaissance (3)
History 3710 History of Germany (3)
History 3780 History of Middle East (3)
History 4011 European History Colloquium (3) (when subject is part of medieval culture and society)
History 4500 History of Medieval England (3)
History 4710-20 Medieval History (3,3)
Philosophy 3121 Medieval Philosophy (4)
Political Science 3802 Studies in Political Thought (4)
Religious Studies 3070 History of Western Religious Thought and Institutions (4)
Religious Studies 3411 Renaissance and Reformation (4)
Religious Studies 4610 Topics in Western Religious Thought and Institutions (4) (when subject is part of medieval culture and society).

Category #2 Language and Literature

Classics 4310 Selected Reading from Latin Literature (3) (readings in Latin)
Classics 4370 Readings in Medieval Latin (3) (Same as Classics 4370)
Comparative Literature 4012-22-32 Special Topics in Comparative Literature (3,3,3) (when subject is part of medieval culture and society.)
Comparative Literature 4050-60-70 Dante and Medieval Culture (3,3,3)
English 3331 Cultural History of the English Language (3) (Same as English 3331)
English 4410 Introduction to Study of English Language (3) (no language requirement)
English 4420 History of English Language (3) (no prerequisites)
English 4930-40 Chaucer (3,3) 4930-The Canterbury Tales. 4940—Trolius and Crisesyde and early poems. (Same as English 4930-40)
French 3210 French Literature in English Translation (3)
French 4350-60-70 Medieval French Literature (3,3,3) (readings in French)
French 4410 French Civilization (3) (readings in French)
German 3210 German Literature in English Translation (3-4)
German 4310 History of German Language (3) (readings in German)
Italian 4010 Italian Drama in English Translation (3) (or in Italian)
Italian 4050-60-70 Dante and Medieval Culture (3,3,3) (readings in English or Italian)
Italian 4330 History of Italian Language (3) (readings in Italian)

Category #3 The Arts

Architecture 4130 Seminar in Medieval Architecture (4)
Art 3704 History of Medieval Art (4)
Art 3765 Northern European Painting, 1350-1600 (4)
Art 3715 Early Italian Renaissance Art, 1300-1500 (4)
Music 4200 Independent Study in Music History and Literature (1-3) (when subject is part of medieval culture and society)
Music 4280 The Mass to 1600 (3)
Music 4290 Gregoritan Chant (3)
Theatre 3252 History of the Theatre (4)

Russian and East European Studies (887)

Prerequisites to the major are the completion of Russian 2110-20-30 and Russian 3710-20. The major consists of 42 hours distributed as follows: Geography 3880; six hours from History 3470-80-90; Philosophy 3550; Political Science 3631 and four additional hours from Political Science 3832, 3796, 4815, and 5370; Russian 3110-20-30; Russian 4010 (Selected Topics in Russian and East European Studies); and any eight additional hours in courses numbered 3000 or above from the list: "Approved Area Courses" which can be obtained from the chairman of the Russian and East European Studies Committee, Dr. Donald Fiene.

4010 Selected Topics in Russian and East European Studies (3) An interdisciplinary seminar on a selected topic using a comparative approach.

Urban Studies (985)

A concentration in urban studies consists of 40 quarter hours, including Urban Studies 2500 and 3000, at least 4 hours of Urban Studies 4000, and 28 hours from the urban studies curriculum provided below. The urban studies minor consists of 24 quarter hours, including Urban Studies 2500 and 3000 plus 18 hours from the urban studies curriculum provided below. For further information consult the chairperson of the Urban Studies Committee, Dr. Samuel E. Wallace.

2500 Interdisciplinary Urban Studies (4) Fundamental perspectives of various disciplines toward the city, urbanism as a way of life, and urbanization as an ongoing process. Stresses the multidimensional nature of urban studies.
3000 Selected Topics in Urban Studies (4) May be repeated with consent of the committee. Maximum credit 12 hours.
3750 The Urban Policy (4) (Same as Political Science 3750).
4000 Directed Field Work (1-16) Participant observation and other directed field research in selected sites and organizations. May be done in a concentrated manner, such as a summer, or over the course of an academic year. Minimum of four credits required for a concentration in urban studies. May be repeated. Maximum credit 16 hours.
4100 Survey of Planning (3) (Same as Planning 4100).
4330 Urban Ecology (4) (Same as Sociology 4330).
4440 Urban Anthropology (3) (Same as Anthropology 4440.)
4670 Cities and Urbanization in American History (4) (Same as History 4670).

Urban Studies Curriculum:
For the concentration and minor, courses may be selected to fill the respective requirements from the following:

Anthropology:
3450 Community Studies in Complex Culture (3)
4440 Urban Anthropology (3)

Geography:
3000 Man, Location, and Behavior (4)
3430 Urban Geography (4)

History:
4670 Cities and Urbanization in American History (4)
4740 The City in Europe (3)

Planning:
4100 Survey of Planning (3)

Political Science:
3750 The Urban Polity (4)
3760 Urban Policy Process (4)

Real Estate and Urban Development:
3610 Principles of Real Estate and Urban Development (3)
4120 Urban Growth and Land Use (3)
4130 Problems of Urban Development (3)

Sociology:
3410 Urban Environment (4)
3420 Urban Problems (4)
4330 Urban Ecology (4)
4530 Community Organization (4)

Women's Studies (944)

Minor: Consists of Women's Studies 2010-20 and 16 hours of appropriate courses numbered 3000 or above. Courses approved for the Women's Studies minor are listed below. Students may petition the Women's Studies Committee for approval of courses other than those listed. For further information consult the chairperson of Women's Studies, Dr. Martha Lee Osborne, at the Women's Studies offices, 206 Alumni Hall, 974-2409, or in the Philosophy Department, 807 McClung Tower, 974-7212 or 974-3255.

2015 Images of Women in Literature: Fiction, Poetry, Drama (4) An introduction to the study of women through the roles and stereotypes portrayed in a variety of literary genres (fiction, poetry, and drama), including the works from diverse historical periods and cultures.
2020 Women in Society (4) An examination of the roles played by women in various societies during different historical periods, a study of the factors which have limited women's participation in society, and an assessment of social scientists' assumptions about women.
2120 Sex Roles and Marriages (3) (Same as Child and Family Studies 2129)
3010 Emergence of the Modern American Women
Economics (283)

See faculty list, page 82.

UNDERGRADUATE

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. See page 82 for description of the courses available.

Requirements for a B.A. major in economics consist of: (1) Economics 2510, 2520, or equivalent honors courses; and (2) a minimum of 33 additional hours in upper-division economics courses. Economics 3110 (or 3111 and 3112) and 3120 are required as part of the upper-division work and should be taken as early in the upper-division program as possible. A minor consists of (1) Economics 2510, 2520, and (2) 15 additional hours in economics at the upper-division level. Minors are encouraged to include Economics 3110 and 3120.

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

GRADUATE

See page 81 in the College of Business Administration. The department offers the following degrees: M.A. and Ph.D. Also, the MBA degree with a concentration in economics is offered.

English (339)


Associate Professors: L. S. Burghardt, Ph.D. Chicago; D. A. Carroll, Ph.D. North Carolina; D. R. Cox, Ph.D. Missouri; B. K. Dumais, Ph.D. Arkansas; J. E. Gill, Ph.D. North Carolina; D. F. Goslee, Ph.D. Yale; N. M. Goslee, Ph.D. Yale; T. J. A. Heffernan, Ph.D. Cambridge; M. Kallet, Ph.D. Rutgers; M. A. Lofaro, Ph.D. Maryland; C. J. McLain, Ph.D. Michigan; M. J. Lytle, Ph.D. Chicago; C. D. McCraw, Ph.D. Texas; R. B. Richards, Ph.D. Wisconsin; F. K. Robinson, Ph.D. Texas.

Assistant Professors: K. H. Adams, Ph.D. Florida; D. L. Denniston, Ph.D. Brown; P. G. Hammonette, M.A. Tennessee; G. B.

Economics (283)

See faculty list, page 82.

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Hutcheson, Ph.D. Indiana; M. L. Keene, Ph.D. Texas; G. J. Lei, Ph.D., Illinois; B. Stillman, Ph.D. Pennsylvania; S. M. Watt, Ph.D. Illinois.

Instructors:
E. Barker, M.A. Missouri; K. Benson, M.A. Tennessee; G. J. Lei, Ph.D., Illinois; E. D. Overby, M.A. Virginia; K. Pobo, Ph.D. Wisconsin (Milwaukee); M. Pratt, Ph.D. Oklahoma; M. H. Simpson, M.A. Pennsylvania; M. Waldvogel, M.A. Michigan.

\[1\] Young Professor
\[2\] Distinguished Service Professor

UNDERGRADUATE

General Prerequisites and Corequisites:
English 1010 or 1011; 1020; 1031 or 32 or 33 or the equivalents are prerequisites to all sophomore and upper-division courses in English. Two courses in English at the 2000 level are prerequisite to any of the three English concentrations. The equivalent of the second year (2000 level) of a foreign language is a corequisite for any of the three English concentrations.

English for Non-Majors: The department welcomes non-majors both in its sophomore introductions to literature (2510-2680) and also in its 3000-4000 level courses in language, literature, and creative writing. Of particular interest to students in other fields are Special Themes in Literature (3236-37), Forms of Popular Literature and Culture (3233-34), Literature and Other Fields (3230-31), and Technical Writing (4140-50).

For prerequisites and other advice, consult specific course descriptions below and departmental advisor.

B.A. Majors: A minimum of 36 quarter hours is required in 3000-4000 level courses as indicated for the concentration below.

Concentration in Literature: Thirteen English courses at the 3000-4000 level including:
(1) English 3042;
(2) at least five courses in periods or major figures before 1900, including at least the English 1900 two-course sequence;
(3) at least two courses concerned with approaches other than literary history, such as literary or modes, theories of criticism, or other unifying approaches of their own devising;
(4) a total of three courses in writing or the English language may be counted towards the literature concentration but may not be substituted for requirements 1, 2, or 3 above.

Concentration in Creative Writing: Thirteen English courses at the 3000-4000 level including:
(1) a two-course sequence in expository, creative, or technical writing;
(2) four other courses in creative writing at the 3000 or 4000 level;
(3) four courses in literature;
(4) three additional English courses selected in consultation with the advisor.

Concentration in the English Language: Twelve English courses at the 3000-4000 level including:
(1) English 3330, English 3331;
(2) four courses in linguistics and the English language selected from among those offered by the English department and, with English advisor approval, one of the following: Anthropology 3420, Psycholinguistics 4680, or Linguistics 4000;
(3) two additional courses in language, literature, or writing;
(4) four courses in literature.

Individualized Program: The Director of Undergraduate Studies is empowered to approve individualized programs developed by students with English advisors. These programs need not necessarily fulfill all of the requirements listed above.

Honor Programs: For students who qualify for this program, the English department offers individualized study in the senior year culminating in a senior thesis and a comprehensive examination based on the MA Reading List. If the thesis and examination both receive grades of B or better, the student will be graduated with Honors in English. Interested students should consult their advisors or the Director of Undergraduate Studies. Minor: An English minor consists of 24 hours at 2000 level or above, including at least 18 at the 3000-4000 level.

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

Departmental Course Information: In the English Office, 316 McClung Tower, students can obtain a booklet describing current English courses in detail and listing the courses to be offered each quarter throughout the academic year. The booklet is available in advance of University term-tales.


1411 English Composition for Foreign Students (3) Composition and reading for students whose native language is not English. Emphasis on paragraph and composition organization with attention to grammar and mechanics. English 1411 replaces English 1010 for undergraduate foreign students. Prereq: 1221 or recommendation based on English Proficiency Examination. A, B, C, I, NC, W grading. F, W, S.

1441 English Composition for Foreign Students (3) For students whose native language is not English, writing based on reading and discussion with attention to use of library and to basic skills of documentation. Practice and typical writing assignments encountered by college students. English 1441 replaces English 1020 for undergraduate foreign students. Prereq: 1431. A, B, C, I, NC, W grading. F, W, S.

1451 English Composition for Foreign Students (3) English for non-majors both in its sophomore introductions to literature (2510-2680) and also in its 3000-4000 level courses in language, literature, and creative writing. Of particular interest to students in other fields are Special Themes in Literature (3236-37), Forms of Popular Literature and Culture (3233-34), Literature and Other Fields (3230-31), and Technical Writing (4140-50).

For prerequisites and other advice, consult specific course descriptions below and departmental advisor.

B.A. Majors: A minimum of 36 quarter hours is required in 3000-4000 level courses as indicated for the concentration below.

Concentration in Literature: Thirteen English courses at the 3000-4000 level including:
(1) English 3042;
(2) at least five courses in periods or major figures before 1900, including at least the English 1900 two-course sequence;
(3) at least two courses concerned with approaches other than literary history, such as literary or modes, theories of criticism, or other unifying approaches of their own devising;
(4) a total of three courses in writing or the English language may be counted towards the literature concentration but may not be substituted for requirements 1, 2, or 3 above.

Concentration in Creative Writing: Thirteen English courses at the 3000-4000 level including:
(1) a two-course sequence in expository, creative, or technical writing;
(2) four other courses in creative writing at the 3000 or 4000 level;
(3) four courses in literature;
(4) three additional English courses selected in consultation with the advisor.

Concentration in the English Language: Twelve English courses at the 3000-4000 level including:
(1) English 3330, English 3331;
...varies. The city, the frontier, the sea, the American department. Maximum credit 6 hours each. (Same as American Studies 3331.)

3870 Writing the Screenplay and the Television Play (3) Advanced, specialized course in dramatic writing. Completion of English 3910-60-70 is desirable, but students with active interest in the medium are invited to seek consent to enroll.

3910 Comparative Literature (3) 3910—Ancient. 3920—Medieval and Renaissance. 3930—Modern.

3920 Comparative European Literature (3) Selected masterpieces of Continental literature, in translation, by such authors as Dante, Machiavelli, and their influence on English literature. English 3910 is not a prerequisite.

3930 Comparative European Literature (3) Selected masterpieces of Continental literature, in translation, and British literature from the Enlightenment to the present, with emphasis on the interdependence of national literatures and ideas. English 3910, 3920 are not prerequisites.

3940 Novel of the Contemporary Western World (3) Proust, Joyce, Mann, and others.

4010-20 Shakespeare (3,3) 4010—Early plays, c. 1590-1601, including I Henry IV, Twelfth Night, and Hamlet. 4020—Later plays, 1601-1613, with emphasis upon tragedies and dramatic romances.

4042-43 Topics in Mode and Genre (3,3) Content varies. Special topics in forms and modes of British and American literature, e.g., comedy, tragedy, epic, lyric, satire, etc. May be repeated with consent of department. Maximum credit 6 hours each.

4045 Topics in Literary Theory and Criticism (3) Content varies. Special topics in theoretical and practical approaches to British and American literature. May be repeated with consent of department. Maximum credit 6 hours.

4047 Special Topics in Literature: Major Authors (3) Content varies. Studies in major British and American Writers. May be repeated once with consent of department.

4050-60-70 American Novel (3,3,3) 4050—From earliest sentimental novels through Brown, Cooper, and Kennedy, and major figures to 1875. 4060—Henry James and Mark Twain through early works of Faulkner and Hemingway, 4070—Early thirties to present.

4060 Topics in Film Study (3) Content varies. In-depth study of particular director, film genres, national cinema movements, or other topics. May be repeated with consent of department. Maximum credit 6 hours.

4070 Foreign Study (1-16) See page 160.

4101 Foreign Study (1-16) See page 160.

4102 Off-Campus Study (3-12) See page 160.

4103 Independent Study (1-12) See page 160.

4118-28-38 Honors: Senior (0,0,9) Admission by consent of department. 4118-28 graded S.

4120-30 Foundations of Linguistics Science, Development of Methodology, Contemporary Theory (3,3) Intellectual and methodological foundations of linguistics science. Changes in linguistic interest brought about by Saussure's Course and the growing impact of other disciplines on linguistics science. (Same as Linguistics 4120-30.)

4140 Advanced Technical Writing (3) For students planning careers in business, industry, education, and government who need technical writing skills after they graduate. The writing of definitions, process descriptions, sets of instructions, descriptions of mechanisms, recommendation reports, abstracts, proposals, and technical reports. Prereq: Junior standing in student's major or consent of instructor. F, W, S.

4150 Professional Writing (3) The writing of articles, theses, and dissertations in which data are marshaled and analyzed. The writing of abstracts, varieties of documentation styles, preparation of visuals, guidelines and procedures for manuscript submission, and the process of editorial review. Prereq: 4140 or consent of instructor.
4250 Advanced Fiction-Writing (3) Further development of skills acquired in basic writing fiction course. Prereq: 3450 and consent of instructor.

4254 Writing the Detective and Mystery Story (3) Further development of writing in genres, in accordance with techniques learned in detective and mystery fiction. Prereq: 3450-60 or 70 consent of instructor.

4256 Wilting Science Fiction and Fantasy (3) Survey of general development and basic texts of science fiction, speculative fiction, and fantasy. Exercises in writing in genres, in accordance with techniques learned in basic fiction writing course.

4270 Advanced Poetry Writing (3) Further development of skills acquired in basic poetry writing course. Prereq: English 3470 or consent of instructor.


4320-30-40 Advanced Poetry Writing (3) Further development of writing in genres, in accordance with techniques learned in basic poetry genre courses. Prereq: English 3470 or consent of instructor.

4440 Sociolinguistics (3) The study of language in relation to society. Empirical and theoretical study. Emphasis both on individuals and on large-scale social units such as tribes, nations, and social classes. Prereq: 3330 or Linguistics 2000 or consent of instructor. (Same as Linguistics 4440.)

4450 Dialectology (3) Theories and methodologies of dialect research, fieldwork, and analysis. Prereq: 3340 or consent of instructor. (Same as Linguistics 4450.)

4455 American Dialects (3) Characteristics of the major dialects of American English. Their origins and functions. Implications for cultural pluralism. Prereq: 3330 or Linguistics 2000 or consent of instructor. (Same as Linguistics 4455.)

4460 Special Topics in English Linguistics (3) May be repeated for credit with consent of department. (Same as Linguistics 4460.)

4461 Quantitative Analysis of Language (3) Introduction to techniques of the study of variation in language both in spoken language and in written texts, including literature. Emphasis on identifying questions, collecting, analyzing, and interpreting data. Implications for linguistic and/or literary theory. Prereq: English/Linguistics 3330 or Linguistics 2000 or consent of instructor. (Same as Linguistics 4461.)

4471-81 English as a Second or Foreign Language (3,3,4,3,4) Applied linguistics in teaching and learning of English as second or foreign language. Phonological and grammatical structure of present-day English. Analysis of differences (phonological, grammatical, sociolinguistic) between English and another language. Prereq: Second year of a foreign language. 4481—Materials and methods of language teaching, with emphasis on preparation of materials and structured teaching situations. Theory of testing language competence and performance, with emphasis on construction of tests. Team taught with an experienced member of the staff. Prereq: 4471. (Same as Linguistics 4471-81.)

4610-20 Black Literature (3,3) Trends and developments.

4640 Black American Literature and Aesthetics (3) Evaluation of major texts in Black American Literature and Aesthetics since 1899, with emphasis on the more recent works.

4651 Southern Literature through the Nineteenth Century (3,3) Southern writing from colonial period to end of 19th century, including frontier humorists and local color writers.

4652 Southern Literature in the Twentieth Century (3) Modern Southern literary renaissance, Fugitives and the New Negro, other recent writers such as Welty, O'Connor, and Porter.

4660 Emerson and Thoreau (3)

4680 American Humor through Mark Twain (3)

4721-31-41 Ballad and Folktales (3,3,3) 4721—Study of traditional oral, epics, song, and animal fables; 4731-Study of Native American ballad and folktale; 4741—The folk narrative: functions, categories, and patterns of storytelling.

4850 Milton (3) Emphasis on major poems.

4860 Seventeenth-Century Prose and Poetry (3) Bacon and Donne to Dryden and Swift. 4930-40 Chaucer (3,3) 4930—The Canterbury Tales; 4940—Troilus and Criseyde and early poems.

GRADUATE Consult the Graduate Catalog for listing of graduate level courses.

French See Romance Languages.

Geography (415)

Professors: S. R. Jumper (Head), Ph.D. Tennessee; C. S. Aiken, Ph.D. Georgia; T. L. Bell (Assistant Dean for Research), Ph.D. Iowa; E. H. Hammond, Ph.D. California (Berkeley); R. G. Long (Emeritus), Ph.D. Northwestern; C. W. Minkel (Dean for Graduate Studies), Ph.D. Syracuse; C. T. Paikun, Ph.D. Colorado; T. H. Schmudde, Ph.D. Wisconsin; T. J. Wilbanks (adjunct), Ph.D. Syracuse.

Associate Professors: T. J. Blasing (Adjunct), Ph.D. Wisconsin; R. A. Foresta, Ph.D. Rutgers; L. M. Pulsipher, Ph.D. Southern Illinois.

UNDERGRADUATE

B.A. Major: A minimum of eight hours at the 1000 or 2000 level is required as an introduction to a major. Geography 3700, 4100, 4210, and 4990 are also required, along with an additional 28 hours selected from courses at the 3000 and 4000 levels. At least one course must be selected from each of groups A, B, C, D, and E below:

a. Physical Geography: 3510, 3520, 3530, 4550;
   b. Economic Geography: 3410, 3430, 3490, 4075;
   c. Cultural Geography: 3000, 3400, 3500, 3610, 3660, 4240;
   d. Regional Geography of the United States: 3910, 3920, 3930, 3940;
   e. Regional Geography of Foreign Areas: 3790, 3800, 3830, 3840, 3870, 3880.

Students in the 3/2 program are encouraged to take 12 of their 28 upper-division credit hours from group B.

For those pursuing a program leading to professional employment or graduate study in geography, 4210 and/or a senior project under 4103 are strongly recommended.

Minor: Eight hours in courses numbered at the 1000 or 2000 levels are recommended as an introduction to the minor which consists of 24 hours selected from courses at the 3000 and 4000 levels. Students wishing to major or minor in geography are strongly urged to consult with a departmental undergraduate advisor. Through choices available within the structure of the major and by appropriate selection of electives outside the department, each student may develop a coherent program in accordance with specific interests and needs. Such programs might emphasize particular aspects of geography itself or might develop inter-disciplinary themes such as natural environment and resources, urban and regional planning, or the culture, history, or economy of a particular area. A useful technical or vocational specialty program is available which emphasizes cartography and remote sensing.

1610-20 Introduction to Geography (4,4) Selected problems or situations of contemporary interest are studied in depth, illustrating geographical points of view and techniques. Need not be taken in sequence. 1610-E, 1620-W, S.

1610-20-30 Geography of the Natural Environment (4,4) Characteristics and processes of earth's surface and lower atmosphere; their interaction to produce world pattern of distinctive environments significant to man. Must be taken in sequence. 3 hr. lecture and 2 hrs. of lab per week. 1810-F, 1810-W, S.

1910 Introductory Cultural Geography (4) Basic concepts of culture. Patterns and distributions of cultural phenomena including geography of languages, religions, cultural regions, population, settlements, and forms of economy.

2110-20-30 Economic Geography (4,4) The significance of location, pattern, and environment in economic activities. Emphasizes: 2110—agriculture; 2120—energy, minerals, and manufacturing; 2130—transportation and trade. Need not be taken in sequence. 2110-E; 2120-30-W, S.

3000 Man, Location, and Behavior (4) Types of human spatial behavior, such as shopping patterns, commuting, residential mobility, trade, and regional consciousness, as they relate to distance, natural environment, and culture. Order and regularity in pattern of human use of earth's surface.


3430 Urban Geography (4) Concepts and theories concerning development and significance of systems of cities and internal morphology of cities.

3450 Rural Geography (4) Geographical appraisal of rural areas of the United States, including small towns and urban fringes. Problems and potentials of rural America.

3490 Geography of Resources (4) Study of factors relating to the variations in resource availability from time to time and from place to place, with particular emphasis upon energy and metallic resources.

3510 Meteorology (4) Introduction to dynamic systems and meteorological weather events. Nature of individual weather elements, their measurement, and analysis over time and space.

3520 Climatology (4) Overview of general circulation systems leading to world patterns of climate. Climatic change and modification, and interrelationship of climate and human activity.

3530 The Land-System Surface and Man (4) Nature and regional variations in relationships among surface form, water, vegetation, and surface materials. Man as an evaluator and agent of change.

3600 Geography of Population (4) World population patterns; regional socio-economic characteristics and demographic trends; relationship to resource base.

3610 Political Geography (4) Importance of geographic factors for understanding political relationships within and between nations; coastal implications of political decision-making processes; geography of administrative units.

3680 Cultural Geography (4) Basic concepts of culture; methods and techniques of cultural geography; world patterns of cultural phenomena.

3700 Maps and Aerial Photography (4) Introduction to scales, sources, uses, design, and production of maps, aerial photos, and other forms of spatial images.
4730 Advanced Cartography (4) Map production from design through color proofs. Prereq: 3700, 4710, and 4720 or consent of instructor.

4740 Remote Sensing: Types and Applications (4) Basic principles and uses of aerial photography, satellite and other remote sensing techniques. Emphasis upon value of various types of imagery for geographic interpretation and simple mapping. Prereq: Consent of instructor.

4750 Interactive Computer Graphics (3) (Same as Computer Science 4750 and Electrical Engineering 4750.)

4799 Practicum in Cartography/Remote Sensing (2-6) Supervised practice in design and production of maps and other graphic materials in Department of Geography's Cartographic Services Laboratory or a similar organization. Prereq: Written consent of instructor prior to registration.

4960 Seminar in Geography (4) Overview of major themes in geography, especially trends over past 20 years. Designed for undergraduate majors and minors; not open to graduate students. Prereq: Completion of at least 12 hours of major or minor requirements for geography.

GRADUATE

The general requirements for the master's and doctoral degrees as well as course descriptions are in the Graduate Catalog.

Geological Sciences

Professors:
K. R. Walker (Head), Ph.D. Yale; H. J. Klepper (Emeritus), Ph.D. Ohio State; O. C. Kopp, Ph.D. Columbia; K. C. Misra, Ph.D. Western Ontario; R. E. McLaughlin, Ph.D. Tennessee; L. A. Taylor, Ph.D. Lehig; J. G. Walls (Emeritus), Ph.D. North Carolina.

Associate Professors:
D. W. Byerly, Ph.D. Tennessee; T. W. Broadhead, Ph.D. Iowa; M. Clark, Ph.D. Pennsylvania State; H. Y. McSweney, Ph.D. Harvard.

Assistant Professors:

The Department of Geological Sciences provides training for (1) those who plan careers as professional geologists in industry, federal agencies, education, or other fields which utilize earth scientists; and (2) those who seek a general knowledge of geology and its relationship to other sciences, engineering, business, law, and other disciplines.

The requirements set forth below are designed to provide geography majors with a broad base from which qualified students may proceed into advanced study in one or more of the branches of geography or related minor fields. Because a wide range of elective courses is available, it is essential that each student be guided in planning the program by a departmental advisor. A list of advisors is available in the departmental office.

UNDERGRADUATE

B.S. Major: Prerequisites: Geography 1010, 1020, 1030. Students who have less than one year of high school biology must take Biology 1210, 1220; it is recommended that a student who has had one or more years of high school Biology should take any two of the following courses: Biology 1230; Botany 1110, 1120; Zoology 1118, 1128; Biology 3130. Chemistry 1110-20; Physics 1310-20 or 2210-20. In addition, one of the following must be taken: Chemistry 1130 or the third quarter of the physics sequence already taken by a student, Math 1840-50 or 1840-52, and one of the following: Math 1860, 1862 or 3000.

Geology Courses

The core: Geography 3180, 3190, 3260, 3310, 3360, 3370 (21 hours).

For breadth: 12 hours chosen from the following: Geography 4110, 4115, 4230, 4320, 4510, 4550, and 4610. In addition, all senior majors must take at least one quarter of 5310.

Student's Choice: 12 additional hours in any geology courses numbered 3000 or above.

Geology 4440 (Field camp), or an equivalent field camp elsewhere, is strongly recommended for students planning to enter graduate school in geology. Those students unable to take a field camp should take Geology 4310. A student may not receive credit for both Geology 4310 and 4440.

Minor: Geography 1010, 1020, 1030 are prerequisites to a minor which consists of at least 24 hours in courses numbered 2000 or above.

Geology (424)

1010 General Geology I (4) Introduction to materials of the earth; processes active within the earth and changes they produce. 3 hrs. and one 2 hr. lab or field period.

1020 General Geology II (4) The surface of the earth, including physical processes which shape it; the development of the oceans and sedimentary rocks; fossils and their relationship to geologic time. Prereq: 1010. 3 hrs. and one 2 hr. lab or field period.

1030 General Geology III (4) Reconstraining the history of the earth using both physical, geologic and fossil evidence; a review of important stages in earth history. Prereq: 1020. 3 hrs. and one 2 hr. lab or field period.

2210 History of Life on Earth (4) Chronological account of life on Earth, microorganism and societal patterns. Not intended for geography majors. 3 hours and 1 lab or field period.

2310 Resources Crises—Minerals and Energy (4) Evaluation and estimation of reserves and resources. Distinctive features, origin, status, and future trends of minerals industry. Appraisal of conventional and alternate energy resources. Resource crisis and possible solutions. National policies on minerals and energy. Not for geography majors. May be taken by geography majors, but credits will not count toward major requirements.


2510 Geochemical Cycles and the Global Environment (4) Introduction to the use of geochemical cycles for identifying pollution and environmental problems on a global scale. High school chemistry recommended. 3 lecs. and 1 problem session.

2610 Introductory Geology for Engineers (3) Materials and structures of the earth. For College of Engineering students only. 2 lectures and 1 lab or field period.

1 Math 1840-50 has prerequisites of 2 years high school algebra and one semester of trigonometry or equivalent. Students who are deficient in these subjects may need to take Math 1950 and/or 1500 prior to enrolling in Math 1840-50. Consult mathematics section of this catalog or the Department of Mathematics for details.
2710 Introductory Oceanography (4) Introduction to study of oceans including origin and development of oceanic basins and biological processes within ocean basins and their contained water and sediment masses. 1410 recommended.

3100 Mineralogy (4) Introduction to crystallography and study of minerals. Laboratory includes hand specimens, identification, X-ray methods of identification. Prereq: 1410, Chemistry 1110-20 or equivalent. 3 lectures and 1 lab.

3100 Introduction to the Petrographic Microscope (1) Introduction to the petrographic microscope and optical methods for minerals identification in thin section. To be taken concurrently with 3110. 1 lab per week. S/NC grading only.

3210-20 Invertebrate Paleontology (4,5) Systematic review of important metazoan invertebrate fossil groups. 3210—Porifera to Annelida, including cnidarians, echinoderms, brachiopods, and conodonts. 3220—Mollusca through lesser Chordata, including arthropods and echinoderms. May be taken separately or in sequence. Prereq: 3260, Biology 1210-20, or consent of instructor. 3 lectures and 1 lab or field period.

3260 Paleobiology (4) Introduction to principles and materials of paleontology as applied to interpretation of earth history. Prereq: 1420. 3 lectures and 1 lab or field period.

3270 Geological History of Land Organisms (4) Geologic history of terrestrial biota and ecosysyem with special emphasis on fossil record of land plants and vertebrates. Prereq: Biology 1210-20 or consent of instructor. 3 lectures and 1 lab or field period.

3310 Introductory Petrology (4) Introduction to classification and properties of igneous and metamorphic rocks, processes which produce them, and tectonic environments in which they form. Prereq: 3180. 3 lectures and 1 lab. Coreq: 3190.

3320 Geology of East Tennessee (4) Lectures and field excursions. Prereq: 12 hours of geology and consent of instructor.

3360 Stratigraphy-Sedimentation (4) Introductory study of stratigraphic principles and practices and of sedimentary processes and interpretation of depositional environments. Prereq: 1420 and 3180. 3 hours and 1 lab or field period.

3370 Structural Geology (4) Introductory discussion of structures such as folds, faults, joints, cleavage, and primary structures. Laboratory work includes depth and thickness problems. Structure sections, structure contour maps, etc. Prereq: 1420, Math 1840-50 or equivalent. 3 hours and 1 lab.

3610 Quaternary Geology for Engineers (3) Erosional and depositional processes, landforms, groundwater. 2 lectures and 1 lab or field period. Prereq: 2610 or equivalent.

3710 Origin and Evolution of the Continents and Ocean Basins (4) Introductory study of origins and changes that have occurred in earth's crust with emphasis on modern concepts of continental drift and plate tectonics. Prereq: 1420.

4110 Principles of Economic Geology (4) Ore-depositing processes, classification of mineral deposits, survey of different types of mineral deposits with examples. 3 hrs. and 1 lab. Prereq: 3180, 3180, 3310 or equivalent. Recommended: 4610.

4115 Elementary Applied Geophysics (4) Basic principles of electrical, seismic, gravity, and magnetic surveys. Crosslisted: 1420, Physics 2220 or 2320. 3 lectures and 1 lab.

4130 Sedimentology (4) Introduction to physical processes of sedimentation: transport of sediments and formation of sedimentary structures, river, flow, wave, and oceanic circulation. Prereq: 3515. 3 lectures and 1 lab.

4210 Glacial Geology (4) Principles of environmental analysis as applied to fossil assemblages and association of rocks. Prereq: 3260 or consent of instructor. 3 hours and 1 lab.

4220 Paleoecology (4) Survey of fossil record of plants and particular emphasis on (1) comparative morphology and evolutionary trends in major plant groups and (2) chronological succession and geographic distribution of past biotas on earth. Prereq: 1420 or 2210. Botany 3010-20 or consent of instructor. 3 hours and 1 lab or field period. (Same as Botany 4240.)

4250 Evolution of Higher Taxa (4) Discussion of current evolutionary patterns and paleobotanical, paleocological, patterns of evolution in fossil organisms at family level or higher. Prereq: 3260. 3210-20 also recommended. 2 lectures, one 2-hour seminar.

4260 Biostatistics (3) Principles of application of statistical methods to stratigraphic study, codification of the use of stratigraphic nomenclature, and recommended practice. Prereq: 3260 and 3360. 1 lecture plus one 2-hour seminar.

4270 Micropaleontology (4) A survey of geologically important microfossils and their biologic association if known. Special emphasis is given to fossil foraminifers, protists, and palynomorphs. Prereq: 3260 or consent of instructor.

4307 Introduction to X-Ray Methods (1) An introduction to the application of X-ray diffraction, X-ray fluorescence and Electron Microprobe Analysis. Prereq: 3180 or consent of instructor.

4310 Geologic Mapping (4) Interpretation of maps and methods of geologic mapping. 3 lectures and 1 lab or field period. Prereq: 12 hours of geology.

4320 Introductory Environmental Geology (4) Applications of the geological sciences toward a comprehension of the effects of geological processes on humans and the effects of human activities on the earth environments. Prereq: 1010-20-30. 3 lectures and one 2 hr. lab or field period.

4330 Regional Geology of the United States (3) Evolution of various geologic provinces within the U.S. with emphasis on the integration of several types of geologic data. Prereq: completion of 21 upper-division requirements for the major. 3 lectures.

4341 Quaternary Geology of North America (4) Quaternary geology of North America with emphasis on human populations and their biologic and morphologic relationships. Prereq: 1410 or consent of instructor. Two 2-hour lectures.

4342 Quaternary Paleoecology (4) Study of pollen and plant-macrofossils of plant vegetative and climate change during Quaternary. Prereq: Consent of Instructor. Two 2-hour lectures.

4333 Quaternary Field and Laboratory Techniques (4) Techniques for collecting and preparing samples, and laboratory descriptions are given in the Graduate Catalog.

4344 Field Geology (5) Five weeks/field course, first term summer quarter. Advanced undergraduates or first-year graduates in geology. Involves entire term of students. Field techniques are demonstrated, practiced and applied to the solution of geologic problems. Prereq: 12 upper-division hours of geology and consent of instructor.

4460 Geologic Photography, Photogrammetry and Remote Sensing (4) Principles of three-dimensional characterization and reconstructions, including pollen and plantmacrofossil identification, description of site stratigraphy, and sedimentology. Prereq: 1410 or consent of instructor. Two 2-hour lectures.

4470 Tectonic Styles (4) The tectonic evolution of structures and their associations with metamorphism, plate motions, and stratigraphic assemblies as determined through case study examination of different orogenic belts. 3 lectures and 1 seminar or lab. Prereq: 3370 or consent of instructor.

4440 Field Geology (5) Five weeks/field course, first term summer quarter. Advanced undergraduates or first-year graduates in geology. Involves entire term of students. Field techniques are demonstrated, practiced and applied to the solution of geologic problems. Prereq: 12 upper-division hours of geology and consent of instructor.

4460 Geologic Photography, Photogrammetry and Remote Sensing (4) Principles of three-dimensional characterization and reconstruction, including pollen and plant macrofossil identification, description of site stratigraphy, and sedimentology. Prereq: 1410 or consent of instructor. Two 2-hour lectures.

4500 Principles of Geomorphology (4) Gravitational processes active on earth's surface and landforms produced. Prereq: 1410-20-30. 3 hours and 1 lab.

4510 Process Geomorphology (4) Gravitational processes operating on and near the earth's surface, applied geomorphology, and field work in geomorphic processes. Prereq: 1430 and 4510. 3 hours and 1 lab or field period.

4550 Optical Mineralogy (4) Identification of minerals and determination of chemical-physical parameters using petrographic microscope.

4610 Principles of Geochemistry (4) Application of chemical principles to geologic problems. Emphasis on crystal chemistry and relation between basic atomic structure and distribution and behavior of elements in earth's crust. Prereq: Chemistry 1110-20 or equivalent required. Recommended 3310.

4650 Mineral Phase Equilibria (3) Principles of phase chemistry and application of phase equilibria studies in rock-forming mineral systems as aid to understanding conditions of formation and modification of rocks. Prereq: 4610 or consent of instructor.


4710 Petrophysics (3) Fluid, heat, electrical current, and ionic flow through rock masses in a potential field. Stress-strain behavior of rock as a function of temperature and pressure. 3 lectures per week. Prereq: 3310, Math 1830, Physics 1330. Recommended Math 2610 and 2820.

4810 Special Problems in Geology (1-4) Prereq: Consent of instructor. May be repeated. Maximum credit 4 hours.

GRADUATE

The general requirements for master's and doctoral degree as well as course descriptions are given in the Graduate Catalog.

Germanic and Slavic Languages

Professors: H. Krazt (Head), Ph.D. Ohio State; J. E. Falen, Ph.D. Pennsylvania; H. W. Fuller (Emeritus), Ph.D. Wisconsin; R. L. Hiller (Emeritus), Ph.D. Cornell; J. C. Osborne, Ph.D. Northwestern; M. P. Rice, Ph.D. Vanderbilt.

Associate Professors: D. M. Flane, Ph.D. Indiana; N. A. Lauckner, Ph.D. Wisconsin; D. E. Lee, Ph.D. Stanford; C. J. Mellor, Ph.D. Chicago; U. C. Rittenhoff, Ph.D. Connecticut.

Assistant Professor: C. Hodges, Ph.D. Chicago; J. Kolodziej, Ph.D. Indiana.

Instructor: M. H. Harris, M.A. Illinois.

UNDERGRADUATE

Placement Examination: Students who have had previous work in German or Russian either in high school or in another college should register for the course in which they would normally be placed. During the first week of the quarter 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 German or Russian through private study, tutoring, residence in foreign countries, or the like, should request a proficiency test. A student earning a grade of C or better on such a test will receive credit for a limited 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. The department is prepared to recommend summer study or year abroad programs for students who are interested in foreign study. Credits from recognized foreign study programs can readily be transferred to UTK. For qualified students, the department also offers an 1110-20 Foreign Study and Russian 4101 Foreign Study. See page 160. Students should consult the department before registering for the foreign study course.

German

B.A. Major: Majors or minors in German should carefully prepare their programs in consultation with a departmental faculty advisor. German 2110-20-30 or the equivalent is a prerequisite to the major. The major shall consist of at least 24 hours of German courses numbered above 3000, excluding courses in English translation, and usually including German 3110-20-30. It is recommended that German majors also take History 1510-20 or 3110-20-30 and 8 hours of sophomore English. Majors are also strongly urged to consider a minor in some other area of the humanities.

German 2110-20-30 or its equivalent is a prerequisite to the minor. The minor shall consist of at least 24 hours of German courses numbered above 3000, which normally include German 3110-20-30 (or 3410-20-30), and 15 additional hours of courses numbered above 3000, excluding German 3010-20-30 and courses in English translation.

Russian

B.A. Major: Russian majors should carefully prepare their programs in consultation with a departmental faculty advisor. The major in Russian shall consist of at least 45 hours of Russian courses, including Russian 3110-20-30; 3610-20-30; 9 hours from Russian 3210-20-30 and 3600-20-30, and 15 additional hours of courses numbered above 3000, excluding Russian 3210-20-30 and courses in English translation.

Minor: Russian 2110-20-30 is a prerequisite to the minor. The minor itself consists of 27 hours of Russian courses, including 9 hours from Russian 3710-20 and 4110-20-30, 2210-20-30, 2270, 3220, 3221, 3240, 3250, 3260, 3262, 3280, or 3281, or Russian 3110-20-30, and 9 hours of courses numbered above 4000. It is recommended that majors also take History 3470-80-90 and 9 hours of sophomore English. Majors are strongly urged to consider a minor in some other area of the humanities.

Russian 2110-20-30 is a prerequisite to the minor. The minor itself consists of 27 hours of Russian courses, including 9 hours from Russian 3710-20 and 4110-20-30, 2210-20-30, 2270, 3220, 3221, 3240, 3250, 3260, 3280 and 18 hours to be taken from Russian 3110-20-30, 3610-20-30, and courses numbered 4000 and above.

Russian and East European Studies. See Cultural Studies.

Certification for Teaching German and Russian in Tennessee

Consult Certification Clerk, Room 212 Claxton Education Building.

German (433)

1110-20-30 Elementary German (3,3,3) Must be taken in sequence.

1150-20 Elementary German (4,4) Must be taken in sequence.

1518-2518-28 Honors: Elementary and Intermediate German (6,6,6) Honors course for students of superior ability. Freshmen are admitted on the basis of high school average and performance on the American College Testing Program. Upperclass students must have a B average. A grade of C or above must be achieved in 1518 in order to continue with German 2518. A student obtaining a grade of D or better in 1518 may continue with German 1520. This sequence is equivalent to 1510-20 or 1110-20-30 and 2110-20-30 and consists of the student to enter all 3000-level German courses.

1530 Elementary German through Individualized Instruction (1-8) Same materials as in German 1510-20, but student may proceed at own pace, with a minimum of eight hours per quarter. With completion of four hours student has option of transferring to 1520. May be repeated. Maximum credit 8 hours.

2110-20-30 Intermediate German (3,3,3) Must be taken in sequence.

2210-20-30 German Literature in English Translation (3,3,3) Survey of German literature from earliest times to the present. No foreign language credit. Writing emphasis courses. The three-package course fulfills Divisional Distribution Requirement in the Humanities, Part 1 (or any two quarters fulfills the two-package requirement of Part 2 for students who choose philosophical perspectives for Part 1).

3010-20-30 Elements of German for Upper-Division and Graduate Students. Prerequisite to the minor. Elements of language, elementary and advanced readings. Open to graduate students preparing for language examination, and undergraduates who meet 120 hours of reading and knowledge of the language. Undergraduate credit only. No credit for students having completed 1510-20 or 1110-20-30.

3040 Elementary Dutch (3) Prereq: Reading knowledge of German. Primarily for graduate students in German. No graduate credit allowed.

3110-20-30 Introduction to German Literature (3,3,3) Prereq: 2130 or equivalent. Need not be taken in sequence.

3130 Readings in German (3) Selected topics in both literary and non-literary fields. Students or student groups are encouraged to suggest topics for future courses. May be repeated with approval of department. May be repeated with approval of department.

3210-30-30 Culture of the German—Speaking Peoples (3,3,3) Studies in the culture and life—style of German-speaking peoples from their first contact with the Romans to the present. Readings in English. No foreign language credit. A writing emphasis course. Fulfills Upper Level Distribution Requirement for Foreign Studies for those who have not satisfied the Two-course sequence. Fulfills Divisional Distribution Requirement in the Humanities, Part 1 (or any two quarters fulfills the two-course sequence).

3510-20-30 German Literature in English Translation (3) From 1900 to present; Remarque, Hesse, Mann, Kafka, Frisch, Bolt, Grass. No foreign language credit.

3806 Germano's Faust in English Translation (3) Intensive study of Faust I and II and survey of criticism and interpretation of the work. No foreign language credit.

4101 Foreign Study (1-16) See page 160.

4102 Off-Campus Study (1-16) See page 160.

4103 Independent Study (1-16) See page 160.

4110-20-30 Studies in Classical and Modern Writers (3,3,3) Content varies. May be repeated for credit with consent of department. Prereq: 9 hours of 3000 courses (exclusive of 3010-20-30, or courses in English translation) or equivalent.

4140-50 Selected Topics in German Literature from 1750 to the Present (3,3,3) Prereq: 9 hours of 3000 courses (exclusive of 3010-20-30, or courses in English translation) or equivalent.

4160 Studies in German Authors (3) Life and works of a single outstanding German literary figure. Content varies. May be repeated for credit. Prereq: 9 hours of 3000 courses (exclusive of 3010-20-30, or courses in English translation).

4170 Theatrical German (1-3) Performance in one or more German plays. May be repeated for credit with consent of department. Prereq: 2130 or equivalent or consent of instructor.


4260 Translation (1-4) Topics and credit hours vary and are announced in advance. Students suggestions for topics are welcome. No foreign language credit. May be repeated for credit.

GRADUATE

The Department of Germanic and Slavic Languages offers three advanced degrees. They are Master of Arts (M.A.) in German, Master of Arts in College Teaching (M.A.C.T.) in German, and Doctor of Philosophy (Ph.D.) in German Language and Literature. The requirements for these degrees as well as course descriptions are in the Graduate Catalog.
186 College of Liberal Arts

1630-40-50 Elementary Serbo-Croatian (4,4,4) Must be taken in sequence.
2110-20-30 Intermediate Russian (4,4,4) Must be taken in sequence.
2210-20-30 Russian Literature in English Translation (3,3,3) Survey of nineteenth and twentieth-century Russian literature. Writing emphasis courses. No foreign language credit. The three—package course fulfills the Divisional Requirement in Humanities, Part 1 (or any two quarters fulfills the two—package requirement of Part 2 for students who choose philosophical perspectives for Part 1).
2270 Russian Philosophical and Theological Thought (3) Survey of the development of philosophical and theological thought in Russia from the Middle Ages to the Revolution. Special emphasis on the expression of this thought in Russian literature and literary criticism. A writing emphasis course; no knowledge of Russian required.
3110-30-30 Russian Composition and Conversation (3,3,3) Practice in writing and speaking; grammar review and vocabulary building. Prereq: Completion of 2110-20-30.
3610-20-30 Introduction to Russian Literature (3,3,3) 3610-Russian poetry. 3620-Russian short stories. 3630-Russian novel. Prereq: 2130 or equivalent. Need not be taken in sequence.
ADVANCED UNDERGRADUATE AND GRADUATE
4010 Selected Topics in Russian and East European Studies (3-4) Interdisciplinary seminar on selected topics using comparative approach.
4101 Foreign Study (1-16) See page 160.
4103 Independent Study (1-16) See page 160.
4110-20-30 Studies in Major Russian Writers (3,3,3) Content varies. Prereq: 2130 or equivalent. May be repeated for credit.
4250 Introduction to Descriptive Linguistics (3) (Same as German, French, Spanish, and Linguistics 4250.)
4260 Introduction to Historical and Comparative Linguistics (3) (Same as German, French, Spanish, and Linguistics 4260.)
4271 Introduction to Slavic Linguistics (3) (Same as Linguistics 4271)
4510-20-30 Senior Seminar (3,3,3) A course for majors in Russian; minors admitted at the discretion of the instructor. Interdisciplinary and integrated study of language, culture, literature, and literary criticism based on selected texts.
GENERAL COURSES
3220 Works of Leo Tolstoy in English Translation (3-4) War and Peace, Anna Karenina, and other works.
3221 Works of M. Dostoevsky in English Translation (3-4) Crime and Punishment, Brothers Karamazov and other works.
3240 The Russian Drama in English Translation (3-4) Stasova, Nekrasov, Gorki, Griboedov, Pushkin, Gogol, Ostrovsky, Turgenev, Chekhov, and others.
3250 The Works of Ivan Turgenev and Anton Chekhov in English Translation (3-4)
3260 Russian Folklore in English Translation (3-4)
3280 Special Topics in Russian Literature in English Translation (4) Topics vary and are announced in advance. Student suggestions for topics are welcome. No foreign language credit. May be repeated.
3710-50 Background and Main Currents of Russian Culture (3,3) A broad interdisciplinary approach to the appreciation of the language, religion, literature, art, music, history, geography, and social problems of Russia. No knowledge of Russian required. A writing emphasis course. Fullfills upper level distribution requirement for Foreign Culture.
Greek
See Classics.
Hebrew
See Religious Studies.

History (462)

Professors:
J. H. Morrow, Jr. (Head), Ph.D. Pennsylvania; P. H. Bergeron, Ph.D. Vanderbilt; E. V. Chmelewski Ph.D. Harvard; R. E. Duncan, Ph.D. California (Berkeley); L. P. Graf*, Ph.D. Harvard; Y. P. Hao†, 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‡, Ph.D. Columbia; R. G. Landen (Dean, Liberal Arts College), Ph.D. Princeton.

Associate Professors:

Instructor:
D. B. Morrow, M.A. Tennessee

*Berwind Distinguished Professor
†Alumni Distinguished Service Professor
‡Lindsay Young Professor

UNDERGRADUATE
History is a rewarding subject for students seeking a general education. History majors traditionally have done well in a number of careers, such as law, business, journalism, public service, teaching and research, library and archival fields, and ministry. Many students majoring in other subjects take history courses: to develop their skills in thinking, writing, reading, and speaking; to assist them in their search for personal identity; and to help them in their lifelong effort to understand change, continuity, and the links between past, present, and future.

B.A. Major: Majors in history should prepare their programs in consultation with a department faculty advisor. History 1510-20 (or their honors equivalents), or 1610-20, are prerequisites to a major which consists of 41 hours, including: (1) 8 hours of History 2015; (2) 3 upper-division hours. The distribution of the upper-division courses shall be in such a way that they include at least: (1) one course dealing predominantly with a period prior to 1750; and (2) two courses in each of the following areas: 1) United States, 2) Europe-Latin America, and 3) Asia-Africa. It is highly recommended that majors take History 4010, and History Colloquium.

Minor: History 1510-20 (or honors equivalent) is prerequisite to a minor which consists of 24 hours of courses numbered 2000 or above, including at least: (1) 8 hours in United States history; and (2) 12 upper-division hours.

History for Non-Majors: The department welcomes non-majors in its courses. Few history courses have prerequisites. See course listings for information.

Honors Program: The Department of History offers honors sections of the Western Civilization and United States history survey course. Some entering freshmen are invited to participate; other interested students may apply. These survey courses are open to non-majors. An honors major requires successful completion of three special courses at the junior level (3008, 3038, 3048) and a senior thesis (4018-4026). The honors major consists of 50 hours, including 41 hours as outlined above, plus 3008-38-48. All rising juniors who are declared history majors with an overall GPA of at least 3.0 are invited to join the Junior-Senior Honors Program. Interested students interested in honors work should consult the department's honors coordinators.

DEPARTMENT COURSE INFORMATION: Students can obtain additional information about the content and availability of history courses in the departmental office, 1101 McClung Tower, or from any member of the history department. The department also prepares a course description brochure for each quarter.

American Studies. See Cultural Studies.
Asian Studies. See Cultural Studies.
Latin American Studies. See Cultural Studies.
Russian and East European Studies. See Cultural Studies.

1610-20 Development of Western Civilization (4,4) 1510—Ancient World to 1715. 1520—1715 to present. E.

1516-28 Honors: Development of Western Civilization (4,4) Consent of department required. 1516—F; 1528—W.

1610-20 A History of World Civilization since 1450 (4,4) Interaction of Western and non-Western peoples since the 16th century. 1450-1800. 1820—1800 to present. 1610—F; 1620—W.

1650-60 Afro-American History: An Introduction (4,4) Survey of the African-American experience to 1890. Traditional African societies from which Afro-Americans emerged; evolution of prejudice and racism in America; the institution of slavery; free Negroes; Civil War and Reconstruction. 1890—The Afro-American struggle for political, civil, and social equality; leaders of the struggle; their philosophies and programs, responses of Black community institutions to the challenges of the 20th Century; the rise of the urban ghetto; the Civil Rights and Black Power movements.

2020 The City in Europe. ca. 1200-1900 (3) Survey of European urban growth, with comparative analysis of major periods of urbanization of 13th and 19th centuries. Emphasis on relationship between demographic, economic and political foundations of cities and political and cultural development.

2015 Historical Issues (3) Introduction to broad, thematic issues in historical perspective. A lecture-discussion course in which the content will change from year to year. Especially suitable for non-majors; also open to majors. May be repeated. Maximum credit 9 hours.

2350 U.S. and World Crisis, 1859 to Present (4) Presents
international crises confronting the United States today in historical perspective. Emphasis varies to reflect recent developments in world affairs. Intended for non-history majors, not normally used to satisfy history major or minor requirements.

2510-20 History of the United States (4,4) 2510—Settlement of 1865. 2520—1865 to present. E.

2511-21 Readings in United States History (1,1) Directed readings in aspects of national past. Only for students who have not yet met Tennessee Legislature requirements in American history, or for transfers who enter liberal arts with credits, but fewer than equal to Developmental Sequence. Consent to Settlement of 1865. 2521—1865 to present. Prereq: Consent of department; prereq or coreq: 2510 or 2512. May not be taken more than once. Will not be offered during summer sessions. F, W, S.

2515-25 United States History for International Students (4-5) 2515—Settlement to 1865. 2525—1865 to present. F, W.

2518-28 Honors: History of the United States (4,4) Consent of department required. 2518—F; 2528—W.

3008 Honors: Introduction to Historical Analysis and Interpretation (3) Required of students working for honors in history.

3038 Honors: Philosophy and Methods (3) Principles and techniques of research and study of critical and secondary sources. Required of students working for honors in history. Admission with consent of department.

3048 Honors: Readings (3) Required of and open only to students working for honors in history.

3050 The West and the Third World Since 1870 (3) Examination of the relationships between the West and the third world. Considers such topics as the barbarian migrations, feudalism, classical, Christian, and Germanic roots. Considers such topics as the relationship between leaders and followers, patterns of dissent, mobilization for war, and post-war attitudes.

3210 History of Sports in United States (3) Analysis of development of sports and their significance in American life from colonial period to present. Emphasis on social, cultural, economic, and political impact of both spectator and participatory sports in 20th century.

3240 Law in American History (3) The law and economic development, law and slavery, law and civil liberties, the role of law in the Revolution and the Civil War, and the rise and development of the legal profession. Not for graduate credit.

3270 History of Human Services and Public Health (3,3) The development of welfare and social services in modern society, focusing on how and why public housing, health, and welfare services emerged in industrial life. The role of social work and social policy in shaping modern society. 3280-Modern East Asia since 1600. Introductory survey. Chiefly China and Japan; Korea and Vietnam also included. Confucianism, Buddhism, social structure, political tradition, and Japanese feudalism. Comparison and contrast with Western history and culture. 3920—The United States, 1914-1945 (4) American experience during World War I, the rise and fall of the Roman Empire, the origins of Judaism and Christianity.

3412-41 Renaissance (3) (Same as Religious Studies 3411.)

3421 The Reformation (3) (Same as Religious Studies 3412.)

3422-21 Early Modern Europe (3,3) 3421—17th century Europe. 3422—18th century Europe.

3431-32 Nineteenth Century Europe (3,3) 3431—French and industrial revolution to 1848. The impact of ferment for conflicting economic, social and political ideas, culminating in a massive revolutionary upheaval. 3432—Maturity and Challenge (1848-1890). Industrialization, nationalism, struggle for international power; the triumph of the bourgeoisie, the intellectual climate of realism, scientism, and materialism.

3445-46 History of France (4,4) 3445—Emergence of Modern France (1715-1875). Social, intellectual and economic pressures in the acien regime; era of experimentation as revolutionary and traditional France confront one another. 3446—Since 1871.

3470-80 History of Russia (3,3) 3470—To 1810. 3480—19th century. 3490—20th century.

3610-20 The American Colonies and the American Revolution (3,3) Emphasis is on major themes rather than chronological coverage of the years 1607-1783. Changing historical interpretations of European colonization; colonial society, economy, religion, culture and politics, the causes, character, and conse-

3951 African History Since 1940 (3) Examines the transformation from industrial to post-industrial society and the decline of the European nation-state. Considers such topics as the development of capitalism and the consequences of political and social instability; the Russian Revolution; fascism; nationalism; the impact of Freud and Einstein; welfare states; European reuniification. 3952 Modern West Africa (3,3) 3952—Post-emergence political and economic problems of the independent states of West Africa. 3955 Sub-Saharan Africa (3,3) 3955—Post-colonial problems and changes in political and economic landscapes of the region.

3956-57 The United States: Formation to Reunion, 1789-1867 (4,4) The American Revolution; the American Civil War; and Reconstruction, 1862-1877.

3959 Indian-White Relations in United States History (4) White man's relationship with the Indian since Colonial times. Emphasis on the social and cultural impact of the Indian on the West; the nature of the Indian's role in American history; and the changing nature of the Indian-White relationship.

3961 Indian-White Relations in United States History (4) White man's relationship with the Indian since Colonial times. Emphasis on the social and cultural impact of the Indian on the West; the nature of the Indian's role in American history; and the changing nature of the Indian-White relationship.

3970-76 The Ancient World (3,3) 3700—Greece. 3770—Rome.

3978-90 History of the Middle East (3,3) 3978—Rise and spread of Islamic civilization to the 16th century. 3979—The impact on the West of the Middle East from the 16th century to World War I.

3979 Contemporary Middle East (4) Background of current issues; development of the Arab-Israeli conflict; the role of the United States in the region; the nature of the current political situation in the Middle East.

3980-87 History of Western Religious Thought and Institutions (3,3,3) (Same as Religious Studies 3080-70-80.)


3992 The United States, 1914-1945 (4) American experience during World War I, the Great Depression, the New Deal, and World War II. Emphasizes domestic economy but includes military and foreign policy. 3993 The United States History, 1845 to the Present (3) Demobilization and Cold War after World War II followed by wars in Korea and Vietnam; attempts to find a new order, national prosperity, and full equality for all groups. From Truman's administration to the present.

3995 African History Since 1940 (3) Focuses on the ethnic groups of the southern African region, studying the consequences of political and social instability; the continuing impact of the slave trade on the development of modern African society.
of independence by west African nations and the failure of Africans in the south to achieve that goal. Also includes issues of urbanization, industrialization, and feminism and formation of a national identity within the twentieth-century African context. (Same as African Studies 3951)

4000 Reflections on History (3) Comprehensive approach to the study of history, focusing on the impact of history. Emphasis on such topics as history, the history of history, and their role in the modern world. Recommended for seniors. History 3900-3938 (Junior Honors) may substitute for History 4000 to fulfill the History Department's general education requirements. Required but not required that History 4000 and 4010 be taken in sequence.

4010 Colloquium in History (3) Examination of a historical theme or problem; emphasis on questions and skills, with special reference to historical writing, including critical analysis of both primary and secondary sources. Recommended for seniors. However, not required that History 4000 and 4010 be taken in sequence.

4015 Studies in History (3-4) Variable content course offered to offer subject matter not covered in an existing course. May be repeated for credit.

4018-28 Honors: Senior Paper (0-6) Required of students working for honors in history.

4040 History Behind the News (4) The contemporary analysis and the historical background of selected news events in North and South America, Europe, and the non-Western world are studied to acquire a fuller understanding of their significance. May satisfy history major requirements (except those of geographical distribution). Non-majors may repeat once for credit.

4101 Foreign Study (1-16) See page 160.

4102 Off-Campus Study (1-16) See page 160.

4103 Independent Study (1-16) See page 160.

4130 History of Colonialism and Imperialism (3) 19th century to the present.

4250-60-70 European Intellectual and Cultural History (3,3,3) 4250—From Reformation to Scientific Revolution (1500-1700). 4260—From Enlightenment to Age of Reason (1700-1870). 4270—From Subjectivism to Relativism (1870-present).

4280 Women in European History (4) Comparative analysis of role and image of women in Medieval, Renaissance, and Victorian periods. Attention given to role of women in church and family as well as relationship between Western culture and women's protest movements. (Same as Women's Studies 4280.)

4290 Women in American History (4) Approaches of 4280 modified to American society. (Same as Women's Studies 4290.)

4292 History and Philosophy of Afro-American Education (4) (Same as Afro-American Studies 4292 and Edu. C&l 4292.)


4360 The American Experience in World War II (4) A team-taught course. Diplomacy and warfare in Europe and Asia and the impact of the war on American society.

4370 U.S. Military History, 1754 to the Present (4) Examine the role of war in defining American society, and wars fought in Europe, Asia, and Latin America, the Middle East, and the Far East.

4380 Civilian-Military Relationships in the Modern Western World (3) Civilian-military affairs from about 1900 to 1980 in Western Europe, Russia, and America; emphasis on Western Europe: e.g. Dreyfus Affair, Army in Nazi Germany, and Truman-MacArthur controversy.

4410-20-30 Europe in the Twentieth Century (3,3,3) 4410—1890 to 1919. 4420—1919 to 1939. 4430—1939 to present.

4470 Poland and Its Neighbors (3) A survey of Polish history from its beginning to the present, with emphasis on the Polish question within the context of modern international affairs.

4480 Russian Intellectual History (3) Russian intellectual history from the 18th century to present, emphasizing problems of modernization, nationalism, and revolution.

4490 Soviet Foreign Policy (3)

4500 History of Medieval England (3) A survey from the Anglo-Saxons to the coming of the Tudors with emphasis upon the relationship between legal and constitutional developments and the structure of society.

4510-20 Tudor-Stuart England (3,3) 4510—Emphasis on such topics as the Renaissance and Reformation in England and on such figures as Thomas More, Elizabeth I, and Mary, Queen of Scots. 4520—Emphasis on such topics as Puritanism, the English Civil War, the Restoration, the Glorious Revolution and the Scientific Revolution, such figures as the Stuart kings, Oliver Cromwell, Milton, Hobbes, and Locke.

4551 Great Britain from Burke to Bright (1780-1848) (3)

4570 Twentieth-Century Britain (3) The emergence of the Welfare State, the impact of the First World War, World War Depressions, chaotic economic crisis, the persistence of class.

4610-20-30 The American Frontier and Westward Movement, I, II, III (3,3,3) Settlement and development of the "West" throughout American history.

4650—From the Atlantic to the Mississippi. 4670—The Trans-Mississippi West.

4661-51 America: Mind, Mood and Society (3,3) Survey social and cultural history and thought from mythology behind colonization to the major beliefs and values which form the foundation of present-day life in the United States. 4641—Colonial period to 1865. 4651—1865 to present.

4661 Studies in American Social and Cultural History and Thought (3) An intensive examination of specific themes, problems, or ideas.

4670 Cities and Urbanization in American History (4) Origins, growth, and influence of American cities throughout the development of the nation, from colonial to era to present. (Same as Urban Studies 4670.)

4680 History of Knoxville (3) Knoxville, Tennessee as a historical case study to analyze the interplay of tradition and change in urban America in general and urban South in particular. Economic growth and development, population changes, and political, social, and cultural conflicts over issues connected with change and modernization.

4710-20 Medieval History (3,3) 4710—Age of Heroes, 500-1000. The pattern of early medieval heroism, its social and intellectual assumptions, the individuals who exemplify it, and the continuing harsh environment of the early Middle Ages. 4720—Age of Chivalry: 1000-1300. The emergence of chivalry—from the heroes of the feudal epics of the 11th century to the quantum knights of the 13th century romances.

4741 Italian City-States, 1250-1600 (3) Evolution of urban civilization in northern and central Italy in mediev al and renaissance periods. Artistic and architectural and townscape forms studied in socioeconomic as well as cultural contexts. Florence is primary focus, but other prominent Italian cities are also included.

4770 Austria to 1850: Habsburgs and the Heartland (3) German and Catholic Austria's growth from a frontier to a great center of civilization, its imperial mission, its relation to the Holy Roman Empire, and its neighbors and assertive nationalities. Also includes Maria Theresa, Metternich, unity versus diversity, and Vienna's cultural contributions.

4780 Austria Since 1848: Trials and Transformations (6) The serach for identity during the drastic changes from a great multinational empire to a truncated monarchic, to an Allied occupation zone, and finally, to a free neutral nation at the crossroads of Europe.

4811-21 History of Japan (4,4)

4840 History of Mexico (3) (Same as Latin American Studies 4840)

4850 History of the Caribbean (3) Caribbean region from discovery and colonization to contemporary times. (Same as Afro-American Studies 4850.)

4870-80-90 History of China (3,3,3) 4870—Cultural History of China. Chinese high culture from Confucius to Mao-Tse-tung. Traditional religion, philosophy, fine arts, and literature (including a novel); cultural legacy under communism; similarities and differences between Chinese and Western cultures. 4880—To 1850. Emphasis on uniqueness of Chinese experience, its influence on Japan and the West, and its relevance in today's world. 4890—Modern China since 1850. The Chinese Revolution in context: imperial, reform, nationalism, communist movement, Mau-Tse-tung, and China in today's world. No previous knowledge of China required.

4910-20-30 History of the South (3,3,3) 4910—1607-1861. 4920—1861-1890. 4930—Since 1870.

4940 Local and Regional History (3) Investigates the history and culture of regional area. (Same as Urban Studies 4940.)

4950 The Afro-American Experience to 1865 (3) Examines the acculturation of blacks in early America, the legal, social, and cultural implications of slavery before the Civil War, and the plight of blacks in the context of the slave trade, the American Revolution, westward migration, and the genesis of regionalism. (Same as Afro-American Studies 4950.)

4960 The Afro-American Experience Since 1865 (3) Black attempts to realize the freedom and equality promised to them at the end of the Civil War are examined in the context of Reconstruction, the Harlem Renaissance, the Great Depression, and the civil rights movements. (Same as Afro-American Studies 4960.)

4970 Graduate: A student who enrolls in the Graduate School with intention of obtaining an advanced degree in history shall have completed an undergraduate major in history or its equivalent.

General requirements for the Master of Arts and doctoral degrees as well as course descriptions are found in the Graduate Catalog.

Non-Departmental

Director: Dr. Harry Jacobson

The following courses are restricted to students who have been selected to participate. 1118-25-36 are for first-year students invited on the basis of test scores, high school averages, and where appropriate, on University performance. Participation in the 2000-, 3000-, and 4000-level courses is based on cumulative averages. At present students with an average of 3.25 or greater are eligible.

Honors (509)

1118-28-38 Honors: First Year—Inquiry and Modes of Thought (2-4,2-4,2) 1118—The Humanities; 1128—The Natural Sciences; 1138—The Social Sciences. May be repeated.

1128-38 Honors: Sophomore—Special Problems Seminar (2-4,2-4,2) 2118—The Humanities; 2128—The Natural Sciences; 2138—The Social Sciences.
Human Services

Professor: R. F. Kronick (Head), Ph.D. Tennessee.
Associate Professor: P. A. McClam, Ph.D. South Carolina; M. R. Woodside, Ed.D. VPI & S.U.
Assistant Professors: T. McClam, Ph.D. South Carolina; J. D. McLean, Ph.D. Chicago.

Human Services (532)

The Program in Human Services was established in 1971 for the purpose of providing education, training, and experience, at the undergraduate level, for individuals interested in working to enhance and increase the well-being of our society. The course of study provided by the faculty is also appropriate for individuals who wish primarily to improve their understanding of themselves and of the society in which they live.

Graduates of the program are employed in a wide variety of settings, including child and family service agencies, community centers, school systems, mental health centers, hospitals, court systems, family planning clinics, extended care facilities, and state human service departments. Many of our graduates enter graduate and professional schools for advanced study in areas such as audiology, business administration, criminal justice, education, guidance, law, occupational therapy, psychology, public administration, special education, social work, and vocational rehabilitation. The program is approved by the Council for Standards in Human Service Education (CHSSE).

The curriculum of the program includes required courses, elective courses, advising, and supervised experiences in two human service agencies or organizations. A B.A. major in human services may be obtained by completing the following: H.S. 2590, 3100, 3300, 3900, 4220, 4221, 4400, 4401, and one course from each of the four lists of courses:

1. Psychology 3650 (4)
2. Political Science 3565 (4), Political Science 3656 (4), or Sociology 4565 (4)
3. Psychology 3120 (4) or Sociology 3130.

Total Credit Hours: 55-56

2690 Introduction to Human Services (4) General field of human services with focus on related societal values; contemporary issues in human services. E.

3100 Social Welfare as a Social Institution (4) Specific social welfare institutions examined in depth in relation to human needs, structure, program, and service approaches. 2690 recommended. W, S.

3200 Peoples and Problems of Appalachia (4) Course designed to provide better understanding of Appalachian peoples, by exploring their life style and institutions from contemporary human services point of view. Special emphasis placed on political and economic structures of region. Recommended: Anthropology 2690.

3300 Thinking about People (4) Intended to facilitate development of thoughtful, informed, and empathic attitudes toward human beings—those providing service as well as those receiving service. F, W.

3900 Information Assessment and Interpretation (4) The knowledge and skills of information gathering and assessment for human services are examined in depth in relation to human services practice. Emphasis is placed on formulating questions, identifying relevant data, using related resources, interpreting information and applying this information in a practical setting. F, S.

4101 Foreign Study (1-16) Foreign Study Application field not later than the first week of the quarter prior to the quarter of enrollment. For additional information, see page 160.

4202 Off-Campus Study (1-16) Application filed no later than the first week of the quarter prior to the quarter of enrollment. For additional information, see page 160.

4300 Human Service Methodologies I (4) A continuation of HS 4220 with emphasis on general helping skills essential to the administration and delivery of human services. Prereq: 4220. W, S.

4400 Human Service Methodologies II (4) A continuation of HS 4220 with emphasis on general helping skills essential to the administration and delivery of human services. Prereq: 4220. W, S.

4401 Human Services Field Work II (8) Practical field experiences in appropriately organized and directed human services settings. Designed to offer the student the opportunity to learn and develop specific helping skills and to become exposed to and involved in the roles and functions of social services; to provide some direct services in a supervised learning situation. For majors only. Must be taken for 8 hours Fall and Spring Quarters. S/NCR. Prereq: 4220, 4221. F, S.

4401 Human Services Field Work II (8) Practical field experiences in appropriately organized and directed human services settings. Designed to offer the student the opportunity to learn and develop specific helping skills and to become exposed to and involved in the roles and functions of social services; to provide some direct services in a supervised learning situation. For majors only. Must be taken for 8 hours Winter and Summer Quarters. S/NCR. Prereq: 4220, 4221, 4400. W, S.

Italian

See Romance Languages.

Japanese

See Cultural Studies (Asian Studies).

Latin

See Classics.

Latin American Studies

See Cultural Studies.

Linguistics

See Cultural Studies.

Mathematics (641)

Professors: J. S. Bradley (Head), Ph.D. Iowa; G. E. Albert (Emeritus), Ph.D. Wisconsin; C. E. Clark, Ph.D. Louisiana; C. E. Clark, Ph.D. Louisiana; R. E. Cline, Ph.D. Purdue; J. D. Devaner, Ph.D. Wisconsin; D. J. Dessert, Ph.D. Maryland; D. E. Dobbs, Ph.D. Cornell; E. D. Eaves (Emeritus), Ph.D. Texas; H. Fransen, Ph.D. Illinois; R. L. Gregory (Emeritus), Ph.D. Illinois; T. G. Hallam, Ph.D. Missouri; D. B. Hinton, Ph.D. Tennessee; A. S. Householder (Emeritus), Ph.D. Chicago; L. S. Husch, Ph.D. Florida State; S. B. Jordan, Ph.D. Wisconsin; H. T. Mathews, Ph.D. Tulane; R. M. McClellan, Ph.D. Duke; D. D. Miller (Emeritus), Ph.D. Michigan; B. S. Rajput, Ph.D. Illinois; K. C. Reddy, Ph.D. Indian Institute of Technology; P. W. Schaefer, Ph.D. Maryland; S. M. Serbin, Ph.D. Cornell; K. Soni, Ph.D. Oregon State; W. F. Stallmann, Ph.D. Giessen (Germany); E. Wachpress, Ph.D. Rensselaer Polytechnic Institute; W. R. Wads, Ph.D. California (Riverside); C. G. Wagner, Ph.D. Duke; J. W. Walsh, Ph.D. SUNY (Binghamton).

Associate Professors: V. Alexiades, Ph.D. Delaware; N. Aljikko, Ph.D. Brown; D. F. Anderson, Ph.D. Chicago; V. A. Douglas, Ph.D. Harvard; J. Dyjak, Ph.D. Warsaw (Poland); S. I. Hanahan, Ph.D. Carnegie-Mellon; K. R. Kimble, Ph.D. Ohio State; Y. Kuo, Ph.D. Columbia; B. A. Kuperschmidt, Ph.D. Massachusetts Institute of Technology; W. H. Row, Ph.D. Wisconsin; R. J. Rowlett, Ph.D. Virginia; J. Smith, Ph.D. California (Berkeley); G. A. Rodri, Ph.D. California (Berkeley); R. P. Soni, Ph.D. Oregon State; H. Simpson, Ph.D. California Institute of Technolo-
UNDERGRADUATE Removal of Entrance Deficiencies: Entrance deficiencies in mathematics can be removed by taking courses in the evening, or by correspondence. Additional fees are required. For details, contact the Evening School or, for correspondence courses, The Center for Extended Learning. The appropriate courses are as follows:

**Deficiency**

**Evening Correspondence Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Mathematics</th>
<th>Distance Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algebra I</td>
<td>Math 200</td>
<td>Math 1H 2H</td>
</tr>
<tr>
<td>Algebra II</td>
<td>Math 010-20</td>
<td>Math 3H-4H</td>
</tr>
<tr>
<td>Geometry</td>
<td>Math 0130-20</td>
<td>Math 5H-6H</td>
</tr>
<tr>
<td>Trigonometry</td>
<td>Math 0150</td>
<td></td>
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</tbody>
</table>

**Placement Information for Freshman Courses:** In selecting their first mathematics courses, students should bear the following points in mind:

1. Entrance deficiencies must be removed before the student takes the courses carrying college credit can be taken. (It is acceptable to take 0150 at the same time a 1700 or 1840, but it is preferable to take trigonometry in high school.)

2. The department reserves the right to exclude or remove from its courses students who do not meet the prerequisites listed.

3. Fewer than half of the students presenting mathematics ACT scores below 16 are able to complete Math 1540 successfully. Such students should take 0120 (in the Evening School) before attempting 1540. Fewer than half of the students presenting mathematics ACT scores below 22 are able to complete Math 1700 successfully. Such students should complete 1540 before attempting 1700. Fewer than half of the students presenting mathematics ACT scores below 26 are able to complete Math 1840 successfully. Such students should take 1700 before attempting 1840.

4. Due to the crowded conditions in most freshman-level courses, it is usually not possible to change courses after the start of the quarter. Therefore, courses should be chosen carefully, with attention to degree requirements, prerequisites, and ACT scores.

5. Math 1550-60 does not substitute for 1840-50-60 in curricula requiring the latter, nor is 1550 an appropriate preparation for 1840. Students who need to take a course preparatory to 1840 should take 1700 (preceded by 1540 if necessary). Placement of Well-Prepared Students: Students in curricula requiring 1540-50-60 should skip 1540 and begin with 1550 if they have a mathematics ACT score of 24 or above and grades of A or B in high school Algebra II.

Students in curricula requiring 1840-50-60 are urged to consider taking the Honors sequence 1848-58-68 if they have mathematics ACT scores of 32 or higher, and a high school grade of A or B.

Students who took calculus in high school may qualify for advanced placement in the 1840 sequence, and should consult an advisor in the Mathematics Department. Basic Skill Requirement for Liberal Arts Students: Many students are exempt from this requirement; see page 148 of this catalog for a complete description. Either 1140 or 1700 can be taken to satisfy the requirement. Students who plan to take 1840 (or 1841 or 1842), and who must satisfy the requirement, need to take 1700, not 1140. Note that 1540 does not satisfy the requirement. Credit Restrictions: No student who has earned a grade of C or better in any course numbered 1550 or higher may subsequently receive credit for 1140. No student who has earned a grade of C or better in 1540 may subsequently receive credit for 1540. No student who has earned a grade of C or better in 1850 may subsequently receive credit for 1550.

**Honors Courses:** The current practice of the department is to offer honors versions (1849-59-69 and 2848-58-68) of 1840-50-60 and 2840-50-60 in sequence, fall-winter, each year. In addition to these regularly offered honors courses, an honors version of any course in the department whose number has zero as the last digit may be offered in any quarter. In this case, the last digit will be changed to eight and the title will be preceded by the word "Honors," both in the Timetable and on the student's transcript. These honors courses may be offered upon the initiative of interested faculty or the department head (in all cases subject to the approval of the department head).

**Proficiency Examinations:** Students who have taken calculus in high school are encouraged to take the Mathematics Office, Ayres 121, about the possibility of taking a proficiency examination or CLEP examination for one or more courses from the calculus sequence 1840-50-60. If a satisfactory grade is made on the examination(s), credit will be awarded for the appropriate course(s).

**Advanced Mathematics Courses:** Include 3090 and all courses numbered 3140 or above, except 3220, 3510, and 3861.

**B.S. Major:** Before beginning a mathematics major, a B.S. candidate must complete 1840-50-60 (or honors versions) and have programming skill sufficient to take 3155. The major requirements are:

1. 2840-50-60 (or honors version) and 3155.
2. 3550-60. Students who complete 2848-58-68 may substitute six hours of advanced mathematics courses as defined above for this requirement.
4. Fifteen additional hours of advanced mathematics courses as defined above. In satisfying this requirement a student may substitute not more than six hours of courses from the following list, for advanced mathematics courses as defined above:
   - Computer Science 4510, 4710; Educational Curriculum 3751, 3752; Physics 3210-20, 4110-20, Statistics 3460.
5. 4910 (3) (These two courses constitute a capstone experience for mathematics majors.)

**Honors Program:** Mathematics majors who fulfill the preceding five requirements may qualify for an honors degree if their program includes at least 27 hours of 4000-level mathematics courses (except 4710), at least 6 hours of which are honors courses (course numbers with final digit is 8). The grade point average, computed on the aforementioned 27 hours, will determine the honors category as follows: G.P.A. at least 3.4—Honors; G.P.A. at least 3.6—High Honors; G.P.A. at least 3.8—Highest Honors. Honors in Mathematics, respectively.

In exceptional cases, other courses of similar level may replace the six hours of honors courses.

Candidates for an honors degree must apply to the Chair of the Departmental Honors Committee the quarter before they expect to graduate (in the spring, if graduation is to be in December). Their applications should list the courses required to complete the 27 hours, including the required honors courses, or proposed substitutes. Students with credit for more than 27 hours of qualifying courses may select 27 hours to be used in computing the G.P.A. which determines the honors category for which they qualify. A note of successful completion of honors program will be entered on the transcript.

**Minor:** Consists of 2840-50-60 (or 2848-58-68) and at least 12 hours of advanced mathematics courses, as defined under the heading, Advanced Mathematics Courses.

**Program Planning for Majors:**

Mathematics majors have considerable freedom in determining how they will meet the requirements of the major. This is necessary, since mathematics majors may select from a variety of possible careers. In order to meet the diversity of needs, the mathematics faculty has designed a variety of sample programs which majors may wish to follow. Programs are available to prepare students:

a. For employment in business or industry, whether in numerical mathematics and computer science, operations research, probability and statistics, business and applied statistics, or actuarial science;

b. For graduate work, in pure mathematics, applied mathematics, computer science, operations research, or statistics;

c. For teaching, at the school or college level;

d. For careers in business, law, medicine, or any other area requiring training in mathematics.

These programs, along with other useful information for majors, are published in a Program Planning Guide, which is available on request at the department office, room 121, Ayres Hall. Prospective students are invited to write for copies.

0150 Trigonometry (0) Plane trigonometry with emphasis on identities and other analytic aspects used in calculus. For students who enter with deficiency in high school trigonometry. 3 hours per week. No college credit.

1140 Basic Mathematical Skills (4) Sets, elementary deductive logic, problem solving, elementary probability and statistics. Satisfies the Basic Skills Requirement in Mathematics for B.A./B.S. candidates in the College of Liberal Arts. No student who enters the University with a grade of C or better in any Mathematics course numbered 1550 or higher, may receive credit for 1140. Association requirements in mathematics must be removed before taking 1140.

1540 College Algebra (4) Sets, real and complex number systems, exponents and radicals, fundamental algebraic operations, theory of equations, polynomial inequalities, relations, functions, graphs. No student who has earned a grade of C or better in either 1540 or 1840 may subsequently receive credit for Math
1540. Prereq: Two years of high school algebra or one year of algebra and one year of geometry.

1550-60 Introductory Calculus—General Mathematics (4,4) 1550—Equations of straight lines, conics, differential calculus, applications of derivatives, maxima and minima, related rates, antiderivatives, integration of algebraic functions, applications of integrals, elementary transcendental functions, number systems, sequences and series, and elementary differential equations. Prereq: 1540 or equivalent. Note: No student who has received a grade of C or better in Mathematics 1550 may subsequently receive credit for Mathematics 1550.

1700 Precalculus Mathematics (4) Function concept and use of functional notation. Properties of functions and their graphs. Polynomial, exponential, and logarithmic functions, applications of the derivatives and definite integrals. Prereq: Two years of high school algebra and the equivalent of one-half year of trigonometry or taking Mathematics 0150 concurrently.

1840-50-60 Single Variable Calculus (4,4,4) Functions, graphs, slope of a curve, definition of a derivative, limit operations, differentiation techniques, applications of derivatives, maxima and minima. Indefinite integrals and applications, techniques of integration, plane analytic geometry, polar coordinates. Must be taken in sequence. NOTE: No student has received credit for both 1840 and 1841. Prereq: Two years of high school algebra, one year of geometry, and one semester of trigonometry, or equivalent.

1841-51 Calculus for Biological Sciences (4,4) Course for students whose intended major is in an area of the life sciences. Functions, graphs, differentiation and integration of algebraic, logarithmic, exponential, and trigonometric functions, applications of derivatives and definite integrals, growth curves, Taylor polynomials, nonlinear scaling, first order linear differential equations, probability. Prereq: One year of college mathematics. Does not satisfy the requirements for a major or minor in mathematics. Must be taken in sequence. NOTE: Credit will not be given for both 1840 and 1841.

1842-52-62 Single Variable Calculus with Computer Support (3,3,3) Same coverage of calculus as 1840-50-60 supplemented with computer. Elementary FORTRAN is introduced and applied to problems from following areas: computer evaluation of functions and limits; limit operations; application of limits to definition of derivative; approximation via differentials; approximation of solutions by bisection; secant methods and Newton's method; rectangular, trapezoidal, and Simpson rules for numerical integration; Euler's method for initial value problems. Prereq: Two years of high school algebra, one year geometry, and one semester of trigonometry, or equivalent.

1848-58-68 Honors: Single Variable Calculus (4,4,4) Honors course for students who have had trigonometry, selected on basis of placement test scores and high school record. Students receiving a grade below B in this course will be given work in the areas of applications and taking 1850-60. Special sections of 1858 will be made available for students who perform well in 1840. Must be taken in sequence.

1900 Selected Topics (4) Applications of definite integrals to the fields of economics, probability, and statistics; simultaneous linear equations; matrix inversion; elementary linear programming; infinite series, descriptions of convergent and divergent series, tests of convergence, power series. Prereq: 1840-50 or equivalent. A student wishing to continue the study of calculus after taking 1900 should consult the mathematics department.

2110-20-30 Structure of the Number System (3,3,3) 2110—Set theory, whole numbers, integers, 2120—rational, real numbers, rational numbers, 2130—Elementary number theory, rational and irrational numbers. Euclidean geometry. Must be taken in sequence. Prereq: 1 year of high school algebra and at least sophomores standing in elementary education, College of Education, or consent of instructor.

2215 Discrete Structures I (3) Prereq: 1820 and Math 1850. (Same as Computer Science 2215.)

2540 Calculus (4) For students who have completed 1560 or students who have had a significant introduction to calculus in high school. Definition of a derivative; derivatives of algebraic functions, the chain rule, differentials, continuity; applications of derivatives; Rolle's Theorem, the Mean Value Theorem, maxima and minima; indefinite integrals and applications, the definite integrals and applications, Fundamental Theorem of integral calculus. Derivatives and integrals of transcendental functions, methods of integration, parametric equations, vectors, differentiation of parametric equations, arc length, first order linear differential equations, Taylor's series. Prereq: Math 1560 or at least one semester of high school calculus.


2848-58-68 Honors: Multivariable Calculus and Matrix Algebra (4,4,4) Honors course for selected students admitted on basis of performance in 1848-58 or 1840-50-60.

Prerequisites: If specific courses are listed below as prerequisites, they must be completed before taking advanced courses; application satisfactory to the instructor will be an acceptable substitute. Graduate standing is prerequisite to enrollment in courses numbered 2600 and above. Credit will not be given for both 1840 and 1841. Prereq: Two years of high school algebra, one year of geometry, and one semester of trigonometry, or equivalent.

3000 Elementary Quantitative Methods (4) Elements of college mathematics. Does not satisfy the requirements for a major or minor in mathematics. Prereq: 1 year of college mathematics.

3010 Logic and Sets (3) Elements of mathematical logic; elementary algebra of sets. Primarily for students in the College of Education; does not satisfy the requirements of a major or minor in mathematics.

3110 Real Number System (3) Laws of arithmetic; rational and irrational numbers; fields. Primarily for students in the College of Education; does not satisfy the requirements of a major or minor in mathematics.

3150 Introduction to Numerical Algorithms and Programming (3) (Same as Computer Science 3150.)

3155 Introduction to Numerical Algorithms (3) (Same as Computer Science 3155.)

3125 Discrete Structures II (3) (Same as Computer Science 3215.)

3220 History of Mathematics (3) Survey of development of mathematics, from ancient to modern times. Not acceptable for satisfying requirements for a major or minor in mathematics. Prereq: Math 1850 or 2560 or equivalent.

3310 Advanced Euclidean Geometry (3) Triangles and circles, constructions, modern concepts. Prereq: 1 year of college mathematics.

3320 Non-Euclidean Geometry (3) Foundations of geometry, Elliptic and hyperbolic plane geometry. Prereq: 1 year of college mathematics.

3390 Transformational Geometry (3) Fundamental transformations in planar geometry. Study of isometries and similarities; symmetries of a polygon; inversions. Prereq: One year of college mathematics.

3510 Intermediate Analysis for Teachers (3) Primarily for students in secondary mathematics education. Course covers elementary calculus from an advanced viewpoint, with emphasis on the axioms underlying calculus. Topics covered include limits of sequences and functions, continuous functions, derivatives, definite integrals and fundamentals of calculus. Prereq: Math 1550 or consent of instructor. Prereq: Math 1550-50 or 1860. Does not satisfy the requirements for a major or minor in mathematics.

3550-60 Intermediate Analysis (3,3) Real number system, functions, sequences, limits, continuity, uniform continuity, differentiation and Riemann integration. Must be taken in sequence. Prereq: 2840-50-60.


3780-90 Introduction to Combinatorial Theory (3,3) Introduction to problems of arrangement and selection within discrete systems. Enumerations by recurrence relations and generating functions, graph theory, finite geometries and finite fields, partitions, block designs. Prereq: Math 2860 or consent of instructor.

3910 How to Prove It (3) Course is designed to improve understanding of natural and methods of mathematical proof by means of practice and participation in seminar setting. Variable content will include certain standard topics such as elementary set theory, relations and functions, and mathematical induction. Coreq: 2850 or 2560.

3861 Mathematical Models in the Life Sciences (3) Introduction to different models of non-differential equations. Mathematical modeling techniques applied to biological phenomena. Prereq: Math 1841-51 or consent of instructor. Does not satisfy the requirements of a major or minor in mathematics.

3920-30 Topology of Euclidean Spaces (3,3) Topics will include topology of line and plane, separation properties, compactness, connectedness, completeness, continuous functions, homeomorphisms, closure, and topological invariants. Must be taken in sequence. Prereq: 3810 or 2868 or consent of instructor.

3990 Studies in Mathematics (1-4) Credit determined at registration. May be repeated for credit with
4640 Calculus of Finite Differences (3) Real difference equations; application to problems in engineering and physics. Prereq or coreq: 4610.

4650-60-70 Introduction to Mathematical Statistics (3,3,3) Introduction to probability; discrete and continuous distributions, correlation, regression, and statistical independence; foundations of sampling theory; significance tests. Must be taken in sequence. Prereq: 2860.

4610 Vector Analysis (3) Fundamental operations, basis vectors, dot and cross products, directional derivatives, divergence and curl of vector fields, line and surface integral divergence, theorem of Gauss, Stokes theorem. Credit will not be given for both 4530 and 4710.

4750-60-70 Introductory Probability Theory (3,3,3) 4750—Elementary combinatorial analysis, probability distributions, theorems, and Fourier transform methods. Prereq: 2860 or 4050. Must be taken in sequence.

4810 Elementary Number Theory (3) Divisibility; congruences; theorems of Fermat and Wilson, primitive roots; indices, quadratic reciprocity. Prereq: 2860 or consent of instructor.

4910 Senior Topics (3) Topics vary. Assignments will include library research and oral or written reports. May be repeated once for credit. Prereq: 3550-60, senior standing, and consent of instructor.


4980 Readings in Mathematics (1-3) Open to superior students with consent of department head. Independent study with faculty guidance. May be repeated. Maximum credit 9 hours.

4990 Studies in Mathematics (1-4) Credit determined at registration. May be repeated for credit with consent of department; maximum credit 9 hours. Prereq or coreq: 2840-50-60.

4914 Recommendation of member of mathematics professional staff and consent of department.

GRADUATE The Department of Mathematics offers four advanced degrees. In order to become a candidate for any one of these the student must first be admitted to the Graduate School. The Master of Arts and Master of Science degree programs presuppose a bachelor’s degree with a major in mathematics. The Master of Mathematics degree is intended primarily for teachers of high school mathematics. Applicants for admission to this program must take the Graduate Record Examination and must have either (a) certification for teaching secondary mathematics, or (b) successful elementary or secondary school teaching experience. The Doctor of Philosophy program presupposes a bachelor’s or master’s degree with a strong major in mathematics. This program is intended to train professional mathematicians for a career of teaching and scholarly work in colleges and universities or work in industry. Further details on all of these programs and course descriptions are available in the Graduate Catalog.

Medieval Studies
See Cultural Studies.

Microbiology

Professors: A. Brown (Head), Ph.D. Chicago; R. W. Beck, Ph.D. Wisconsin; J. M. Becker, Ph.D. Cincinnati; R. J. Cotten, Ph.D.; D. Jackson, T. C. Morrisey, Ph.D. Maryland; W. S. Riggs, Ph.D.; Yale; B. T. Roure, Ph.D. Guelph (Canada); B.V.Sc., Bristol (England); J. M. Woodward (Emeritus), Ph.D. Kansas; C. J. Wust, Ph.D. Indiana.

Associate Professors: A. Benis, Ph.D. Cornell; D. A. Brian, Ph.D., D.V.M. Ph.D. Michigan State; G. S. Seyler, Ph.D. Idaho.

Assistant Professors: R. N. Moore, Ph.D. Texas-Austin; K. M. Sirrotkin, Ph.D. Michigan State; G. Stacey, Ph.D. Texas-Austin.

UNDERGRADUATE

B.A. Major: Consists of Biology 3110, 3120, Biochemistry 4110, 4120, Microbiology 3200, 3519, 3700, and 16 hours of upper-division courses in Biology of which 4 hours must be laboratory courses. Prerequisite to the major are Biology 1210-20-30 and Chemistry 1110-20-30. Corequisites are Chemistry 3211-21, 3219-29-39; and Mathematics 1110-1210 or 1540-40-46. Students intending to do post-graduate work should take a calculus sequence and Physics 2210-20-30.

Microbiology (684)

2110 Microbiology for Student Nurses (4) Introductory course offered only to student nurses in diploma program of hospitals affiliated with The University of Tennessee. Microbiological principles as they apply to nursing care of the patient, epidemiology of infection, and principles of immunity and allergy. 3 hours and 1 lab.

2190 General Microbiology (3) General properties of bacteria, viruses, and fungi including study of pathogenesis, immunity, and applied bacteriology. The combination of 2190-2191 and 2190-2191 meets the needs of programs that require a one-quarter course in microbiology. Coreq: 2911 or 2919.

2911 Microbes in Action (1) Discussions, demonstrations, and films relating to the subject matter of 2910. Students do not receive credit for 2911 if 2919 has been taken. Prereq or coreq: 2910.

2919 Laboratory in General Microbiology (2) Laboratory exercises designed to accompany 2910. Open only to students in the College of Nursing, pre-veterinary medicine, food technology, food science, nutrition, or food systems administration. Others by consent of instructor. Students do not receive credit for 2919 if 2911 has been taken. Prereq or coreq: 2910.

3200 Medical Microbiology (3) Disease producing microorganisms including bacteria, viruses, and fungi; basic principles and mechanisms involved in resistance to infectious disease. Prereq: Chemistry 1110-20-30, Biology 3120; coreq: 3519, Biology 3110.

3519 Introductory Microbiology Laboratory (3) Basic techniques for examination, cultivation, and identification of microorganisms. Coreq: 3200 or 3700.


3810 Food Bacteriology (3) Standard methods for
lent and three quarters of applied music study at the 1500-1599 levels.

(b) Concentration in Music History and Literature—consists of 24 hours in courses numbered 2000 and above, distributed as follows: Music 2300, 12 hours in Music History and Literature courses and 9 hours in music electives. Prerequisites are Music 1000 or equivalent and three quarters of applied music study at the 1500-1599 levels. The Bachelor of Science in Music Education, designed for preparation for institutional teaching, is administered by the Department of Music Education. See page 98 for requirements.

GENERAL

1000 Fundamentals of Music Theory (3) Theory and practice of basic elements of music.

1010-30 Class Piano (1,1,1) For music and music education majors only. Must be taken in sequence. Course may be waived by successful completion of Piano Competency Examination. Waived courses must be substituted with an equivalent number of quarters of study in Music 1580 or above.

1015 Class Voice (1) Development of basic vocal skills. May be repeated for credit.

1025 Class Voice (1) Prereq: Consent of instructor. May be repeated for credit.

1080 Studio Guitar Styles (2) Introductory survey of guitar styles in jazz, rock, country, and blues idioms. Prereq: consent of instructor.

1085-95 Class Guitar (1,1) Must be taken in sequence. Prereq: Consent of instructor.

1416 Music Performance (3) An individualized course of study combining participation in a University musical ensemble with collateral study of an instrument or voice. One hour of applied study (Music 1500-1599) and ensemble rehearsals as scheduled. Prereq: consent of instructor.

2015 Fundamentals of Opera Acting (3) Stage technology unique to lyric stage.

2020 Vocal Techniques in Popular Music (1) Development of vocal technique in Broadway and other contemporary music styles. Prereq: Consent of instructor. May be repeated for credit.

2040-50-60 Class Piano (1,1,1) For music and music education majors only. Must be taken in sequence. Prereq: Music 1000 or equivalent and three quarters of applied music study combining participation in a University musical ensemble with collateral study of an instrument or voice. One hour of applied study (Music 1500-1599) and ensemble rehearsals as scheduled. Prereq: consent of instructor.

2055-65-75 Diction for Singers (2,2,2) Sounds by phonetic symbols, formulation for voice leading, and improvisation for right hand. Must be taken in sequence. Prereq: 1010-20.

3000 Junior Recital (0)

3012-23-32 Song Literature (2,2,2) Study of literature from 1750 to present with emphasis on performance practices. Prereq: Music 1111-21-31. May be repeated. Maximum credit 6 hrs. Prereq: Consent of instructor.

3014-24 Woodwind Literature (2,2) Prereq: Consent of instructor.

3015 Percussion Literature (1) Prereq: Consent of instructor.

3016 String Literature (2) May be repeated. Maximum credit 6 hrs. Prereq: Consent of instructor.

3070 Opera Production (1-3) Supervised work on opera productions. May be repeated for credit. Prereq: Consent of instructor.

3071-81-91 Church Service Playing II (1,1,1) Continuation of Music 2071-81-91, which is prerequisite.

3095 Women in Music (3) The history of women in music from the Middle Ages to present as composers, performers, educators and patrons. (Same as Women's Studies 3095).


4000 Senior Recital (0)

4002 Suzuki Piano Method (2) Study of the psychology, procedures, and literature of the Suzuki piano method. Prereq: Consent of instructor.

4009-19-29 Talent Education Program of S. Suzuki (2,2,2) May be repeated. Maximum credit 12 hours. Prereq: Consent of instructor.

4010-30 Piano Techniques (1,1,1) Problems of piano playing; development of piano technique; style and interpretation; program building. Prereq: Consent of instructor.

4012-33 Principles of Vocal Pedagogy (1,1,1) Examination and evaluation of concepts and approaches to teaching singing (past and present) and related teaching materials. Prereq: Laboratory experience in rehearsing university ensembles. Prereq: Consent of instructor.

4036-37-38 Advanced Piano Literature (2,2,2) Piano music from preclassical period to present. Prereq: Consent of instructor.

4041 Styles in Opera Acting (3) Study and practice of styles in opera acting based on historical and national characteristics. Prereq: Consent of instructor.

4045 Projects in Opera Theatre (1-3) May be repeated for credit. Consent of instructor.

4050 Advanced Instrumental Conducting (3) Development of knowledge and skills in instrumental conducting of contemporary idioms and composers and relationship of different styles to the conductor's art; musical analysis and practice in conducting. Prereq: Music Ed. 4430 or equivalent.

4056-57-58 Elementary and Intermediate Piano Pedagogy (2,2,2) Examination and study of piano methods and materials designed for teaching precollege level students. Prereq: Consent of instructor.

4060 Advanced Choral Conducting I (3) Development of refinement of conducting techniques; including chant and changing meters. Prereq: Music Ed. 4510 or equivalent.

4074 Music in Christian Worship (3) History and philosophy of church music; liturgies and liturgical music; music in non-liturgical worship. Prereq: Consent of instructor.

4084 Church Music Methods and Administration (3) Prereq: Consent of instructor.

4085 Harpsichord Techniques (1) Technique, literature, performance practice, continuo playing, and basic tuning and maintenance. Requires a thorough keyboard background. May be repeated. Maximum credit 3 hrs. Prereq: Consent of instructor.

4091 Special Topics in Performance (1-3) Prereq: Consent of department head. May be repeated. Maximum credit 6 hours.

4174 Hymnology (3) A survey of Christian hymns from Biblical times to the present.


4400 Jazz Directing (1) Rehearsal techniques of jazz ensembles: special conducting techniques, repertoire, library systems, programming, and supervised laboratory experience in rehearsing university jazz ensembles. Prereq: Enrollment in applied music with jazz emphasis or consent of instructor.

4409 Jazz Pedagogy (1) Methods and materials relating to teaching of jazz and applying jazz program. Prereq: Enrollment in applied music with jazz emphasis or consent of instructor.

4600 Advanced Improvisation (2) Emphasis on further development of individual skills and solving individual problems in jazz improvisation. Prereq: Music 3050-53.

MUSIC THEORY AND COMPOSITION

1111-21-31 Theory (3,3,3) Materials of music with emphasis on literature of Baroque, Classic, and Romantic periods. Exercises in writing and analysis. Must be taken in sequence.

1113-23-33 Sight-singing and Ear Training I (1,1,1) Should be taken concurrently with 1111-21-31. Must be taken in sequence. 2 hours per week.

1141 Jazz Theory (2) Fundamentals of the jazz language, including terminology, chord symbols, chord scales, and chord progressions. Prereq: 1111 or consent of instructor.

1199 Fundamentals of Music Composition (3) Melodic invention in simple forms. May be repeated. Maximum credit 4 hours. Prereq: Consent of instructor.

1400 Analysis of Jazz Styles (2) Individual improvisatory styles through analysis of their transcribed solos. Training and function of ear in music. Transcription of solos from recordings and preparation of analyses. Prereq: Music 1141.

2111-21-31 Theory II (3,3,3) Materials of music with emphasis on literature of Romantic and contemporary periods. Exercises in writing and analysis. Must be taken in sequence. Prereq: 1113 or 1138 or consent of instructor.

2113-23-33 Advanced Ear Training I (1,1,1) Should be taken concurrently with 2111-21-31. Must be taken in sequence. 2 hours per week.

3041 Keyboard Harmony (1) Melody harmonization, figured bass realization, and improvisation. Prereq: 1131-33 and keyboard proficiency at the 2000 level.

3062-63-64 Sight Reading at the Piano (1,1,1) Prereq: Consent of instructor.

3110 Modal Counterpoint (3) Contemplative techniques of 15th century with emphasis on the style of Palestrina. Prereq: 2131.

3112 Instrumentation (3) Basic techniques in scoring for voices; brass, woodwind, and string choirs; and percussion. Prereq: 2131.

3113 Analysis I (3) Study and practice in analysis of
structures of music from smallest structural units to large compound forms. Emphasis on macroanalytic techniques. Prereq: 2131.

3121 Tonal Counterpoint (3) Contrapuntal techniques of 18th century with emphasis on works of J. S. Bach. Prereq: 2131.

3122 Orchestration (3) Advanced techniques in instrumental writing with emphasis on scoring for the concert orchestra. Prereq: 3112 or consent of instructor.

3123 Analysis I (3) Continuation of Analysis I with emphasis on micro and linear analytic techniques. Prereq: 3113.

3131 Fugue (3) Contrapuntal techniques of 18th century with emphasis on the fugal works of J. S. Bach. Prereq: 3121.

4100 Independent Study in Music Theory (1-3) May be repeated for credit. Prereq: Consent of department head.

4101 Foreign Study (1-16) See page 160.

4113 Pedagogy of Music Theory (3) Techniques, methods and materials involved in college-level theory programs. Prereq: Consent of instructor.

4117 Choral Arranging (3) Analysis of scores and writing of arrangements for men’s, women’s and mixed choruses. Prereq: 3112 or consent of instructor.

4124 Marching Band Arranging (3) Study and application of techniques employed in scoring for marching band. Prereq: 3112 or equivalent.

4134 Concert Band Arranging (3) Study and application of techniques employed in scoring for concert band. Prereq: 3112 or equivalent.

4150 Survey of Music Theory (3) Theory of music with emphasis on the representative practice of Baroque, Classical, and Romantic periods. Exercises in writing and analysis. Recommended as review course for graduate students. Prereq: Consent of instructor.

4850 Jazz Composition (2) Prereq: Music 4870-75.

4870-75 Stage Band Arranging (2,3) Analysis of scores and scoring for the stage band. Prereq: 3112 and consent of instructor. Must be taken in sequence.

MUSIC HISTORY AND LITERATURE

1210-20 Orientation in Music Appreciation (3.3, 3.2) Developing perceptive listening skills through study of materials of music, musical styles, and musical aesthetics. Illustrative examples selected from 4th though the 20th centuries. 1220—Introduction to masterworks of music from 1600 to present. For non-music majors. Prereq: 1210 for 1220 or consent of instructor.

1220 Survey of Music History (3) History of music with emphasis on genres, style changes, and cultural forces. Covers the Western European tradition from 800 to 1800. Recommended as a review course for graduate students. Prereq: Consent of instructor.


1290 Gregorian Chant (3) Chants of Latin rite. Masses and Offices examined as functional music as well as by type.

1340-50 Works of Bach (3,3) Detailed examination of sonatas, chamber, keyboard, and orchestral works; cantatas, motets, Passions, and oratorios. 4340—instrumental works. 4350—vocal works.

APPLIED MUSIC

Applied study is classified as Principal or Secondary.

Students studying their principal (major) instrument register for credit appropriate to their program. 2-4 credit hours; students studying a secondary instrument register for 1 hour of credit. Study at the principal level receives one hour of private instruction per week or a one-hour class lesson plus a half-hour private lesson. Determination of the mode of instruction rests with the department. Study at the secondary level receives one-half hour private instruction per week or its equivalent in class instruction. Applied music courses do not permit non-credit registration nor may students elect non-conventional grading.

Non-music students will be accepted at the secondary level if they meet audition requirements established by area faculty (piano, voice, violin, etc.) and instruction time is available. Undergraduate students seeking entrance to applied music courses must be concurrently registered for no less than three credit hours in academic courses. Graduates must be concurrently registered for no less than six credit hours in academic courses. Exceptions to these requirements may be made with the approval of the department head if applied music registration is necessary to completion of degree requirements.

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

All students studying applied music at the principal level are required to register for Music 2000 Solo Class. The requirements for this course are to attend scheduled concerts, recitals, master, repertory, and solo classes, and to perform at least once each quarter as partial fulfillment of applied music credit requirements.

Applied Music Fees: $30 per quarter for half-hour lesson (1 credit hour) $60 per quarter for hour lesson (2-4 credit hours)

Computer registration and applied music fee payment must be verified in the Department of Music office no later than the end of the second day of classes of the fall, winter, and spring quarters and the first day of the summer terms in order to be accepted for applied music study.

Applied music fees are not refundable after lessons have been scheduled.

1500-2500-3500-4500-5500 Flute (1-4) May be repeated for credit.

1505-2505-3505-4505-5505 Oboe (1-4) May be repeated for credit.

1510-2510-3510-4510-5510 Bassoon (1-4) May be repeated for credit.

1515-2515-3515-4515-5515 Clarinet (1-4) May be repeated for credit.

1520-2520-3520-4520-5520 Saxophone (1-4) May be repeated for credit.

1525-2525-3525-4525-5525 Horn (1-4) May be repeated for credit.

1530-2530-3530-4530-5530 Trumpet (1-4) May be repeated for credit.

1535-2535-3535-4535-5535 Trombone (1-4) May be repeated for credit.

1540-2540-3540-4540-5540 Baritone (1-4) May be repeated for credit.

1545-2545-3545-4545-5545 Tuba (1-4) May be repeated for credit.

1550-2550-3550-4550-5550 Percussion (1-4) May be repeated for credit.

1555-2555-3555-4555-5555 Voice (1-4) May be repeated for credit.

1560-2560-3560-4560-5560 Violin (1-4) May be repeated for credit.

1565-2565-3565-4565-5565 Viola (1-4) May be repeated for credit.

1570-2570-3570-4570-5570 Cello (1-4) May be repeated for credit.

1575-2575-3575-4575-5575 String Bass (1-4) May be repeated for credit.

1577-2577-3577-4577 Electric Bass (1-4) May be repeated for credit.

1580-2580-3580-4580-5580 Piano (1-4) May be repeated for credit.

1585-2585-3585-4585-5585 Harpsichord (1-4) May be repeated for credit.
of philosophy, including at least one course in ancient philosophy, normally 3111, and at least one course in modern philosophy, normally 3131. Majors’ programs must include 36 hours in courses numbered 2000 and above. Majors should discuss their programs with a member of the Philosophy faculty.

Minor: 24 hours in courses numbered 2000 and above. It is suggested that minors discuss their programs with a member of the Philosophy faculty.

1510 Introduction to Philosophy: Human Nature and Values (4) E.

1511 The Human Condition: Value and Reality (4) The meaning of life, the existence of God, freedom of the will, human nature and value.

1520 Introduction to Philosophy: Consciousness and Reality (4) May be taken before 1519. E.

1521 The Human Condition: Consciousness and Reality (4) The place of mind in a material universe and the nature and possibilities of human knowledge. May be taken before 1511.

1600 Topics in Philosophy (4) May be repeated once for credit.

1611 Foundations of Western Thought: Antiquity through 1500 (4) Plato, Late Antiquity and the Medieval period.

1621 Foundations of Western Thought: 1500 through Early Twentieth Century (4) Development of Rationalist and Empiricist thought, Nineteenth Century and early Twentieth Century philosophy. May be taken before 1611.

1710 Informal Reasoning (4) Arguments, informal fallacies, uses of languages, definitions.

1810 Introduction to Symbolic Logic (4) Formal deductive reasoning: propositions, arguments in natural language, symbolization, truth and validity, propositional logic, predicate logic.

2310 Elementary Ethics (4) Theories of ethical values. E.

2410 Art and Experiences (4) Introduction to various understandings of art.

2510 Elementary Logic (4) Introduction to deductive logic, including truth tables and elementary formal proofs. E.

2520 Elementary Logic (4) Inductive reasoning, elements of scientific method, and statistical inference.

3000 Special Topics (4) May be repeated for credit one time.

3100 Socrates (4) An attempt to delineate the philosophical tenets of the historical Socrates on the basis of the views of the character Socrates depicted in Plato’s dialogues, in Xenophon’s Socratic works, and in Aristophanes’ The Clouds.

3111 Ancient Western Philosophy (4) E.

3121 Medieval Philosophy (4)

3131 Seventeenth- and Eighteenth-Century Philosophy (4)

3141 Nineteenth-Century Philosophy (4)

3151 Contemporary Philosophy (4) Survey of recent movements in philosophy.

3270 Russian Philosophical and Theological Thought (4) (Same as Russian 3270 and Religious Studies 3270.)

3311-12 American Philosophy (4,4) 3311—Colonial to late 19th century: 3312—Late 19th century to present.

3320 Philosophy of Law (4) Nature, sources, function of law.
4000 Special Topics (4) A student- or instructor-initiated course offered at convenience of department. Subject matter to be determined by mutual consent of students and instructor with approval of department. Prerequisites to be determined by department. May be repeated for credit.

4010 Foreign Study (1-16) See page 160.

4012 Off-Campus Study (1-16) See page 160.

4103 Independent Study (1-16) See page 160.


4210 Intermediate Ethics (4) Topics in meta-ethics or ethics.

4370 Theoretical Issues in Medical Ethics (4) 4370—Preq: 2310 or 3611 or consent of instructor. (Same as Religious Studies 4370.)

4410 Plato (4) Prereq: 8 hours of philosophy or consent of instructor.

4420 Aristotle (4) Prereq: 8 hours of philosophy or consent of instructor.

4450 Continental Rationalism (4) Prereq: 8 hours of philosophy or consent of instructor.

4630 Philosophy of Language (4) Prereq: 8 hours of philosophy or consent of instructor.

4700 Kant (4) Prereq: 8 hours of philosophy or consent of instructor.

4800 Advanced Topics in Existentialism and Phenomenology (4) Preq: 8 hours of philosophy or consent of instructor.

4511 Advanced Topics in Logic (4) Prereq: Consent of instructor. May be repeated for credit.

4820 Philosophy of Mind (4) Problems of mind and body in relation to consciousness and personal identity. Preq: 8 hours of philosophy or consent of instructor.

4830 Philosophy of Language (4) Preq: 8 hours of philosophy or consent of instructor.

4710 Philosophy of Natural Science (4) Consideration of standard topics pertinent to natural science, including reduction of theories and teleological explanation. Familiarity with symbolic logic is recommended. Preq: 3770 or two years of natural science.

4720 Philosophy of Social Science (4) Examination of methods of inquiry and modes of explanation of social sciences. Preq: 3770 or two years of social science.

4810 Metaphysics (4) Preq: 8 hours of philosophy or consent of instructor.

GRADUATE
Consult the Graduate Catalog for listing of graduate level courses.

Physical Sciences

Major: None offered.

Minor: Consists of the following courses:

- Physics 2210-20-30, Chemistry 2140-49, 3211-21-31, 3212-28-39, and six hours chosen from Biochemistry 4210-20-30, Chemistry 4310-20-30*, 4140-50, 4910-20-30, or Physics 4310-20-30, 3610-20-30*. Prerequisites to this minor are Mathematics 1840-50 and Chemistry 1110-20-30. The physical sciences minor is designed particularly for students majoring in one of the biological sciences and/or preparing for graduate studies in a biological science or medicine.

*Math 2840 is a prerequisite for these courses.
1610-20-30 Introductory Astronomy with Laboratory (4,4,4) Introduction to the scientific study of the universe, using laboratory, surveying composition, structure and dynamics of the universe. Members and components of solar system are introduced. Three terms of twentieh century: microscopic systems including atoms, molecules, nuclei and applications such as lasers and energy technologies; also; physics of particles moving at extremely high speeds. Offered in fall term. 4 hrs. lecture and demonstration.

1210-20-30 Fundamentals of Physics: Mechanics and Heat (4,4,4) First course in physics for engineers and liberal arts majors in mathematics and the physical sciences. Basic Engineering 1310-20 is equivalent for graduation purposes. Must be taken in sequence. Coreq: Math 1840-50. 3 hrs. lecture, 2 hrs. lab.

1312-28-38 Honors: Introductory Astronomy (4,4,4) Introduction to astronomy and astrophysics. Concepts of the origin of the universe and the evolution of the universe. Characters of galaxies and evolution of the universe are examined. Principles by which one interprets astronomical observations are reinforced by lab experience. Must be taken in sequence. 3 hrs. lecture, 2 hrs. lab. Offered in three sequences Astronomy 1510-20-30, 1610-20-30, 2118-28-38 may be taken for credit.

4110-20-30 Astrophysics (3,3,3) Physics of stars and interstellar matter, planets and interplanetary matter; atmospheres, interiors, and evolution; nebulae, quasars, pulsars, etc. Observational data and their development are covered. Emphasis will be interdisciplinary. Acceptable for major credit in physics. Prereq: Physics 2330 and consent of instructor.

1140-20-30 Mechanics (3,3,3) Required of all engineering students. Prereq: Math 1840-50. 4 hrs. lecture and 4 hrs. lab. Offered in fall term. 4110-20 may be taken to satisfy the upper-division distribution requirement for a capstone experience.

1310-20-30 and Basic Engineering 1310-20-30 may be substituted for 1318-28-38. Transfer students from other schools and Engineering 1310-30 may enroll in 1318-28. Students who do not expect to pursue graduate studies may substitute 3710-20-30 for 4110-20-30.

Minor: A minor in physics shall consist of Physics 2310-20-30 or 2318-28-38 and 15 hours of physics and astronomy courses numbered 3000 and above. Submission provisions in the major statement also apply to the minor.

1210-20-30 Introductory Physics (4,4,4) A general course for students in the liberal arts and physical sciences. Concepts of physics are developed by observation of phenomena and logic, using a minimal mathematical framework. Emphasis is on results of matter and motion, effects of forces on mechanical systems, use of conservation laws to solve physical problems; order and structure are described for energy in modern society. 1220—Electricity and magnetism, wave phenomena including sound and light, with applications to current technology.


3230 Heat and Thermodynamics (3) Concepts of temperature and heat; laws of thermodynamics; applications of laws to simple physical and chemical problems. Must be taken in sequence. Prereq: 2310-20-30 and calculus; 3110-20 or instructor's consent.


3110-29-30 Electronics (3,3,3) Electronic components and circuits of interest to physicists. Prereq: 2310-20-30 or 2219-29-30 and calculus. 3 lab.

3630 Nuclear Electronics Laboratory (3) Elementary circuits of interest in nuclear instrumentation are designed and built, and their characteristics are tested as a function of various parameters. Prereq: 3610-20.

3710-20-30 Introduction to Atomic and Nuclear Physics (3,3,3) 3710—Special relativity and early quantum theory; 3720—Atomic and molecular physics; 3730—Chemistry of nuclear reactions; 3740—Nuclear and Particle Physics. Prereq: Basic Physics 2320 for 3710, 2338 or 3710 for 3720-30.

3900 Junior Seminar (1-3) Topic of current interest. May be repeated for credit with consent of department.

4010 Background of Physics (3) Survey of historical development and philosophical foundations of natural science. Classical theories of gravitation, electromagnetism, and relativity. Unifying mathematical principles underlying physical applications. Assignments will include readings from original papers, thought—provoking problems and order—of—magnitude calculations combining different fields of classical physics, and written report on some independent study. Prereq: Senior standing in physics.

4020 Forefront of Physics (3) Survey of modern developments in physics, including various forms of quantum mechanics, quantum electrodynamics, and recent theories of particles, fields and their interactions. Discussions of unsolved questions in physics, experiments of current interest, readings in recent literature, and applications in other fields, with final oral report and term paper. Prereq: 4010.

4050 Foundations of Physics (3) Selected topics from history and philosophy of classical and modern physics, role of mathematics in formulation of physical ideas. Must be taken in sequence. Prereq: One year of general physics and consent of instructor. NOTE: No student who has received a grade of C or better in Physics 4010-20 may subsequently receive credit for 4050.


4140 Elementary Nuclear Physics (2) General properties of nuclei, two—nucleon systems, nuclear forces, nuclear models, nuclear reactions, nuclear distinctions and beta—decay, nuclear spin and magnetism. Prereq: 3730 or 4120.

4160 Physical Acoustics (4) Considerations fundamental to the investigation of any branch of acoustics; propagation of acoustic waves in the infrasonic, the audible, the ultrasonic, and the hypersonic frequency regions. 3 hours and 1 lab. Prereq: 3110-20, 3230.

4230-40 Modern Optics (4,4) 4230-40: Geometrical optics: reflection and transmission of light at a dielectric interface; paraxial theory of interfaces, lenses, and mirrors; polarization, lenses, wavefronts, and geometric imaging; laser light. 4240—Physical optics: mathe-
matics of wave motion, superposition of waves; interferences and Fresnel diffraction; Fourier optics; holography. Prereq: 3310 or consent of instructor. 3 hours of lecture and 3 hours of lab.

4510-30 Atomic Physics Laboratory (3,3,3) Experiments in fundamental particle properties, photo-electric, conduction of electricity through gases, atomic and molecular spectroscopy, X-ray. Prereq or coreq: 3710-20-30. 3 labs.

4540-50 Experimental Nuclear and Radiation Physics (4,4) Interaction of charged particles and electromagnetic radiation with matter; theory and characteristics of various detectors; statistics of counting, nuclear properties. Experiments illustrate recent techniques for investigating the nucleus and nuclear radiation. 1 hour of lecture, 6 hours of lab. Prereq: 2330.

4590 Principles of Non-Destructive Testing (3) Detection and characterization of discontinuities in materials by non-destructive physical measurements. Ultrasonic, electromagnetic, holographic, and penetrating radiation techniques. Prereq: 2310-20-30 or consent of instructor. (Same as Engineering Science and Mechanics 4560.)

4600 Kinetic Theory (3) Emphasis is placed on transport properties. Includes discussion of scattering theory and the classical distribution functions. Prereq: 3230 or equivalent.

4650 Statistical Mechanics (3) Elementary methods of statistical mechanics are applied to model systems to derive the thermodynamic relations. Classical and quantum distribution functions are discussed. It is recommended that 4640 and 4650 be taken in sequence. Prereq: 3230.

4660-70 Solid State Physics (3,3) 4670: Symmetry techniques for investigating the nucleus and nuclear properties. Includes discussion of scattering theory and non-destructive physical measurements. Ultrasonic, electromagnetic, holographic, and penetrating radiation techniques. Prereq: 2310-20-30 or consent of instructor. (Same as Engineering Science and Mechanics 4560.)

2. Forty-eight additional hours in political science courses including: (a) Political science focusing on the role of film, television, and the media in the political community. (b) The political community. (c) American politics focusing on the role of the press, television, film, music, drama, art, and sports.

3. Knowledge of political science. Prerequisite: 2518.

4. Knowledge of political science. Prerequisite: 2518.

5. Knowledge of political science. Prerequisite: 2518.

6. Knowledge of political science. Prerequisite: 2518.

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99. Knowledge of political science. Prerequisite: 2518.
and functions of the institutions of state government. State government's role in formulating, enacting, and implementing state policy.

3750 The Urban Policy (4) Analysis of political institutions and processes in metropolitan areas. (Same as Urban Studies 3750.)

3760 Urban Policy Process (4) Analysis of urban problems and policies in metropolitan areas.

3800 American Political Thought (4) Examination of role of selected political ideas, doctrines, and themes in America, emphasizing their development and relationships to diverse political interests.

4110 Law and the Administrative Process (4) Power of, procedures of, controls over administrators.

4535-38 Political Attitudes, Opinions, and Communication (4,4) Nature, development, formation, and distribution of politically relevant attitudes and opinions; role of leadership, persuasion, and communication in opinion-policy process.


4545 The Judicial Process (4) The study of courts as components of political systems, and public policy formulation through judicial decision making. 2510-20 desirable as preceding courses.

4550 Congress (4) Nature, functions, and processes of the U.S. Congress.

4575 Special Topics in United States Government and Politics (4) May be repeated to a maximum credit of 8 hours with consent of department.

4610 Budgetary Process (4) Fiscal planning, budget and expenditure processes in government, their policy and administrative implications.

4620 Public Personnel Administration (4) Development of the merit system in government, career systems, public personnel management functions, organization for personnel management.

4740 Political Parties and Elections (4) Analysis of party systems and electoral process.

4750 Political Campaigns (4) Coverage includes all aspects of campaign process.

Comparative Government and Politics

3390 Contemporary Issues in American Public Policy (4) Examination of selected public policy issues confronting the nation, including the background, nature, and effects of present policies, and options for the future.

3605 Political Change in Developing Areas (4) Characteristics and problems of political changes with primary focus on developing areas.

3615-16 Dynamics of Black African Politics (4,4) (Same as Afro-American Studies 3615-16.)

3821 Government and Politics of the People's Republic of China (4) Examination of the Chinese political setting, political structures, participation and selected policy areas.

3825-26 Latin American Government and Politics (4,4) (Same as Latin American Studies 3825-26.)

3831-32 Government and Politics of the Soviet Union (4,4)

3835-38 Politics in Western Democracies (4,4) Political culture, patterns, and institutions of Western democratic systems.

3841 Government and Politics of Middle East and North Africa (4)

3850 Contemporary Middle East (4) (Same as History 3850.)

4060 Revolution (4) Examination of characteristics, theories, and consequences of revolution, with particular focus on left-wing revolutions and movements.

4655-56 Policy Making in Democracies (4,4) Comparative approach to theory and process of making public policies.

4875 Special Topics in Comparative Government and Politics (4) May be repeated for a maximum credit of 8 hours with consent of department.

International Relations

3701-02 Introduction to International Relations (4,4)

3701 Analytic elements of international politics: major conflicts; problems of peace and security. 3702 - Impact of population, resources and economic problems on international politics, international law and organizations particularly the U.N.

3712-22 U.S. Foreign Policy Process (4,4) Processes whereby U.S. foreign policies are made and implemented, focusing on interaction within federal bureaucracy and roles of the President, Congress, the press, and public opinion.

3790 Contemporary Diplomatic and Military Problems (4) Analysis of current international events.

3796 Contemporary Problems of Soviet Foreign Policy (4)

4711 International Law (4)

4727 Politics of Inter-American Relations (4) Analysis of selected theoretical and policy issues concerning international relations in the Americas with emphasis upon imperialism, intervention, and the Cuban revolution, nationalism, foreign assistance, trade, and economic integration. (Same as Latin American Studies 4727.)

Political Theory and Methodology

3900 Introduction to Political Analysis (4) Introduction to nature, character, and functions of research design, data collection, and statistical techniques used in study of politics.

3801 Studies in Ancient Political Thought (4) Classical Greek and Roman political thought.

3802 Studies in Medieval Political Thought (4) From Augustine to Luther: Emphasis on problems and theories of religion and politics.

3803 Studies in Early Modern Political Thought (4) Machiavelli through the Enlightenment.

3804 Studies in 19th- and 20th-Century Political Thought (4) Political theories of industrial and technological societies: 19th and 20th century.

4831-32 The Systematic Study of Politics (4,4) Scope, methods, and procedures of analysis in political science, intended primarily for seniors intending to pursue graduate work and entering graduate students who have not had such a course.

Other

3918-28-38 Junior Honors Seminar (4,4,4) Required of honors majors; admission with consent of Department.

4101 Foreign Study (1-16) See page 160.

4102 Off-Campus Study (1-16) See page 160.

4103 Independent Study (1-16) See page 160.

4198-28-38 Senior Honors Thesis and Seminar (0-12) Required of honors majors; admission with consent of Department. Maximum credit 12 hours.

GRADUATE

Graduate requirements for the master's degree and doctoral degree as well as course descriptions are found in the Graduate Catalog.

Psychology (330)

Professors


Associate Professors

J. M. Barth, Ph.D. Tennessee; N. W. Dye, Ph.D. Tennessee; E. A. Elliott, M.S. Tennessee; R. S. Freeman, Ph.D. Tennessee; M. G. Johnson, Ph.D. Johns Hopkins; J. Kandlasek, Ph.D. Tennessee; J. E. Lawyer, Ph.D. North Carolina; K. A. Lawler, Ph.D. North Carolina; S. Locks, Ph.D. Tennessee; J. W. Lounsbury, Ph.D. Michigan State; A. McIntyre, Ph.D. Yale; W. G. Morgan, Jr., Ph.D. Tennessee; M. J. O'Connell, Ph.D. Tennessee; R. S. Saundtang, Ph.D. Florida State; E. D. Sundstrom, Ph.D. Utah; C. L. Travis, Ph.D. California (Davis).

Assistant Professors

J. W. Erickson, Ph.D. Tennessee; D. S. Freeman, Ph.D. Tennessee; S. R. Friedlander, Ph.D. Georgia State; K. R. Lounsbury, Ph.D. Michigan State; M. A. Pentz, Ph.D. Syracuse.

Honorary

A. Alumni Distinguished Service Professor

UNDERGRADUATE

B.A. Major: Concentration in General Psychology Designed to give students broad and current background in the science and application of psychological methods and principles. Psychology 2500 and two courses from 2520-25-26 plus 25. 24 hours are prerequisite to a major consisting of Psychology 3150, at least 4 hours of laboratory, field, or practicum courses, and 32 or more hours of upper-division psychology courses. (Concentration in Academic Psychology) Designed to prepare students for advanced work in the scientific, professional, and college-level teaching areas of psychology. Prerequisites to the major include Psychology 18-28 (or 2520 together with 2 courses from 2520-30-40) Mathematics 1540-50-60 or 1840-50-60, and Biology 1210-20-30. The major consists of Psychology 3150, 8 hours of laboratory, field, or practicum courses (including 3319), and 28 or more hours of upper-division courses of which 12 hours must be in courses at the 4000 level. Minor: A minor in psychology shall consist of Psychology 2500 and 20 additional hours from 3000- and 4000-level courses.

2500 General Psychology (4) An introduction to psychology, with emphasis on the development, methods, and contributions of the major movements and ideas which define contemporary psychology. E

2518-28 Honors: General Psychology (334) First quarter an enriched survey of general psychology. Second quarter participation is psychological research, either individually or group arranged. Prereq for 2518: Minimum ACT Composite 25; GPA 3.2. Prereq for 2528: Admission by consent of department. 2518-F; 2528-25-26.

2520 Biological Foundations of Behavior (3) Survey of theories and research pertaining to the biological foundations of behavior. Psychology 2500 recommended.

2530 Psychology as a Social Science (3) Introduction to individual behavior and experience in a social context. Psychology 2500 recommended.
2540 Psychology of the Individual (3) Study of individuals, their behavior, and the progressive changes in behavior that occur in natural environments; introduction to personality, developmental and abnormal psychology. Psychology 2500 recommended. E.

3120 Social Psychology (3) General survey of theories, methods, and research findings on individual behavior in a social context. Prereq: 2500. E.

3129 Social Psychology Laboratory (2) Prereq: 3120; recommended prereq: 3319.

3140 Environmental Psychology (3) Influences of physical environment on individual experience, interpersonal relations, and social systems. Includes such topics as noise, temperature, crowding, air pollution, urban settings. Prereq: 2500 or equivalent recommended.

3150 Psychological Statistics (4) Introduction to basic statistical methods used in behavioral sciences. Not open to students with credit in Statistics 2110, Mathematics 3000, Sociology 3920, or equivalent. Prereq: 2 years of high school algebra or one course in college algebra. E.

3210 Learning and Thinking (3) Study of theoretical and empirical basis of learning and thinking. Prereq: 2500. E.

3219 Laboratory in Learning and Thinking (2) Prereq: 3210; recommended prereq: 3319.

3220 Motivation and Emotion (3) Current theories, approaches, and their development. Prereq: 2500. E.

3240 Psychology of Music (3) Introduction to psychological study of musical sounds and instruments; theories of rhythm, melody, and their relation to the psychology of spoken language. Prereq: 2520.

3319 Introduction to Research in Psychology (3) Basic techniques of research in behavioral science, including experimentation and naturalistic observation.

3550 Child Psychology (3) Origin and principles of behavior in infancy and childhood; physical, intellectual, social, emotional, and language behavior of the normal child. Prereq: 2500 or equivalent; 2540 recommended. (Same as Educ. Psych. 3550.) E.

3559 Laboratory in Child Psychology (2) Field and laboratory studies of child development. Prereq: 3550 and recommended prereq: 3319.

3570 Psychological Problems in Childhood (3) Considers functional and developmental psychopathologies occurring in infancy and childhood, e.g., infantile autism, fears and phobias, and learning problems. Major con-temporary theories and empirical research are emphasized. Prereq: 3550.

3816-38 Human Relations (3,3) The study of interpersonal relations and communication through structured small group experience.

3850 Abnormal Psychology (3) Constitutional and environmental causes of abnormal behavior; neurotic and psychotic reactions; non-technical discussion of diagnostic and therapeutic methods. Prereq: 2560; 2540 recommended. E.

3720 Ethology and Sociobiology (3) Basic concepts of the evolutionary approach to behavior with special reference to controversial issues in applications to psychology, the social sciences, and the arts.

4101 Foreign Study (1-16) See page 160.

4102 Off-Campus Study (1-16) See page 160. Psychology 4103, 4107, 4109, and 4110 are courses of independent study and research taken by consent of instructor only. Course requirements, meeting times, and grading procedures are established by agreement between the student and a member of the psychology faculty. For each credit hour, a student may expect to spend from two to three hours per week for the quarter. No more than 24 credit hours may be earned in courses 4103, 4107, 4109, 4110 combined.

4103 Independent Study (1-12) May be repeated. Maximum 12 credit hours. See note above. Prereq: Consent of instructor.

4107 Experience in Individual Instruction (1-4) Experience as a proctor in individualized instruction. Prereq: Consent of instructor. May be repeated. Maximum 6 hrs.

4109 Undergraduate Research (1-12) May be repeated. Maximum 12 credit hours. See note above. Prereq: Consent of instructor. 

4110 Undergraduate Participation in Community Research (1-12) May be repeated. Maximum 12 credit hours. See note above. Prereq: Consent of instructor.

4115 Psychology of Sex Role Development (3) (Same as Educational and Counseling Psychology 4110).

4120 Topics in Social Psychology (3) Intensive analysis of social psychological research topics. Prereq: 3210 or Sociology 3130. (Same as Sociology 4120.)

4200 Topics in Health Psychology (4) May be repeated. Maximum 8 hrs.

4230 Sensory Processes and Perception (3) Survey of sensory and perceptual processes with emphasis on audition and vision. Prereq: 3150; 2520 recommended.

4239 Laboratory in Sensory Processes and Perception (2) Prereq or coreq: 4230.

4400 Organizational-Industrial Psychology (3) Cannot be taken for credit by students who have credit for Management 3460. (Same as Management 4460.)

4510 Personality Theories (3) Survey of major approaches to understanding human personality and its development. Prereq: 2540, 3550 or 3650.

4610 Group Processes (3) Study and experience of theory and techniques of group processing and facilitation. Those participating in 4110 are expected to continue into 4620 and 4630. Prereq: 3615-26 and consent of instructor.

4620-30 Seminar in Group Processes (3,3) Didactic and laboratory experience for those qualified for further training as group facilitators. Prereq: 4610 and consent of instructor.

4640 Psychological Tests and Measures (3) Theory and construction of individual and group measures; survey of various methods of assessment of intelligence, personality, special abilities, and educational achievement. Prereq: 3150.

4650 Symbolic Processes (3) Logic of signs and symbols; directed and associative thinking; memory, problem solving, and concept formation; nature, use, and development of language. Prereq: 3210 or consent of instructor.

4660 The Psychology of Language (3) Theories and descriptions of phonology, syntax, and semantics as applied to psychology and related disciplines. 4650 or linguistics background recommended.

4670 Cognitive Development (3) Theory and research on development of language and thinking in children and adolescents. Prereq: 3210 or 3550.

4710 Physiological Psychology (4) Nervous system and physiological correlates of behavior. Prereq: One year of biology or zoology and Psychology 2520.

4719 Physiological Psychology Laboratory (4) Laboratory studies of nervous system and physiological correlates of behavior. Coreq: 4710.

4720 Comparative Animal Behavior (4) Methods and principles. (Same as Zoology 4720.)

4729 Comparative Animal Behavior Laboratory (4) Laboratory and field studies. Coreq: 4720. (Same as Zoology 4729.)

4770 Psychology and the Law (4) Psychological aspects of the legal system. Prereq: Junior Standing.

4780 Psychology and Current Issues (3) Research and theory relevant to selected contemporary issues.

4830 History and Systems of Psychology (3) Evolution of the field of psychology, focusing on classic schools of thought and recent developments. Prereq: 9 hours of upper-division psychology.


4860 Programmed Learning (3) (Same as Educ. C & G 4860.)

4870 Contemporary Research in Behavior of Women (3) Study of interaction of cultural and biological factors in determining the behavior of women, with emphasis on psychological mechanisms involved. (Same as Women's Studies 4870.)

4880 Afro-American Psychology (3) Review and analysis of psychological literature on Afro-Americans. Prereq: Consent of instructor. (Same as Black Studies 4880.)

4910 Senior Seminar on Great Ideas in Psychology (3) Review of key ideas in psychology that have shaped our conceptions of humankind in basic ways. Contemporary definition of each idea will be explored against the background of the idea's historical development, with an attempt to understand the vicissitudes of each conception as a product of larger social and scientific pressures. Recommended for Seniors.

GRADUATE General requirements for the master's degree and doctoral degree as well as course descriptions are given in the Graduate Catalog.

Religious Studies (863)


Associate Professors: J. L. Fitzgerald, Ph.D. Chicago; M. L. Levering, Ph.D. Harvard.

Assistant Professors: M. W. Harris, Ph.D. Harvard. Adjunct, J. D. Hodges, Ph.D. Chicago; T. Patton, M.A. Yale; L. M. Tober, Ph.D. Vanderbilt.

UNDERGRADUATE B.A. Major: Two options are available in religious studies. Designed to assure that students study at least two different religious traditions, and to attain skills to analyze and interpret theoretical issues in the study of religion, the basic option consists of at least 36 hours of religious studies courses at the 3000 level or above, including the following: (1) 3660; (2) one of the following, 3650, 3671, 3672, 3770; (3) 3370 and 3380; (4) two of the following, 3011, 3021, 3600, 3690, 3740, 3740, 3750; and (5) one 4000 level seminar selected in consultation with the student's advisor. The remaining eight hours which complete the major requirement shall not include courses from related language studies.

As an alternative to the basic option, a student-initiated option is recommended for students who plan to pursue graduate study in religion or who have other special educational needs. A faculty member in religious studies will help a student formulate an individual program consisting of at least 36 hours of study at the 3000 level or above. Students whose educational goals would best be served by such a program are 4 class hours per week. Prereq: Consent of instructor. May be repeated. Maximum 6 credit hours.
encouraged to discuss this option as early as possible with a faculty member in religious studies. Once the proposal is formulated, it will be submitted to the faculty in religious studies for review. Further details on courses and on department courses are available in the department office, located in 501 McClung Tower, or from any member of the religious studies faculty.

Registration for forty-four hours of courses at the 3000 level and above. It is suggested that students minoring in religious studies discuss their programs with a member of the department faculty.

1010 Living Religions of the World (4) Introduction to living religious traditions in a variety of cultural settings.

1020 Current Themes in Religious Studies (1) Introduction to the study of religion through consideration of selected contemporary themes, problems or controversies. Variable content. May be repeated for a maximum of 3 credit hours.

2110-20 Founders in Religion (4,4) Introduction to religion in culture and society; critical examination of selected writings dealing with great religious founders in 2110 and 2110-20. Religious figures such as: Moses, Confucius, Socrates, Joseph Smith and Buddha. 2120 Religious figures such as: Muhammad, Lao Tzu, Krishna, Jesus and Nichiren. Prereq. for 2110: 2110.

2310-20 Criticism of Religion (4,4) Classical and contemporary forms of criticism of Western religious thought. 2310—Forms of criticism in their classical presentations (as in Voltaire, Spinoza, Nietzsche, Marx, Durkheim, Freud, Sartre, Russell). 2320—Contemporary issues involving critical perspectives on religion such as: feminist, environmental; ethnic (African, American, American Indian); liberation movements.

2810 Introduction to Religion (4) Introduction to the study of religion through selected historical traditions of East and West.

2811 Introduction to Ancient Near Eastern Religions (4) Introduction to study of religion through selected ancient Near Eastern and Mediterranean traditions.

2812 Issues in Religious Studies (4) Introduction to study of religion through selected religious problems and alternatives.

3011 Phenomenology of Religion (4) Examination of recurrent forms, themes, and patterns in history of religions, such as high gods, cultural heroes, initiation, and ascensions.

3021 Religious Myth, Symbol, and Ritual (4) Study of interrelation of myths, symbols, and rituals among preliterate peoples through a specific motif, such as solar, lunar, and communal.

3060-70-80 History of Western Religious Thought and Institutions (3,3,3) 3060—First century to 15th century. 3080—16th century to 1900. (Same as History 3060-70-80.)

3110 Ancient Israel's Historical and Religious Traditions (4) Political, religious and cultural history and traditions of ancient Israel from earliest period to Exile.

3120 The Rise of Judaism (4) Political, religious, and cultural history and traditions of exilic and post-exilic Israel and early Judaism through 135 A.D. Later literature of Old Testament, Apocrypha, and Dead Sea Scrolls.

3121 Religious Traditions of Ancient Egypt (4) Religious and cultural traditions of ancient Egypt from Old Kingdom to Hellenistic period.

3131 Religious Traditions of Ancient Mesopotamia (4) Religious and cultural traditions of ancient Semitic, Babylonian, and Assyrian.

3232-33 Religious Aspects of Literature (4,4) 3232—Religious Themes in Classic Works. Major themes of Western religion as reflected in classic literary works; authors such as Vergil, Dante, Shakespeare, Milton, Blake, Goethe, Tolstoy. 3233—Religion and Literature: 20th Century. Religious themes in western writing such as Yeats, Eliot, Kafka, Faulkner, Lawrence, Shaw, Camus, Sartre. Prereq. for 3233: 3232.

3311-12 Images of Jesus (4,4) Introduction to ancient and modern portrayals of Jesus, understood within their cultural milieu. Prereq. for 3311: 3311.


3340 Judaism in the Common Era. (3) Survey of literature and traditions of Judaism in the Common Era.

3370-80 The Christian Tradition (4,4) Introduction to the Christian religious tradition, its origins, development and formative impact on Western culture. 3370—Sacred writings of the tradition; basic forms of spirituality and polity. 3380—Unity and diversity of Christian theology in relation to such issues as human nature and society, nature of the cosmos, and relation of religion and culture. Prereq. for 3380: 3370.

3411-12 The Reformation (3,3) 3411—Renaissance. 3412—Reformation, Counter Reformation, and Wars of Religion, 1517-1618. (Same as History 3411-12.)

3440 Religion of Primitive Peoples (3) (Same as Anthropology 3440.)

3490 African Religions (4) Examination of religions of the indigenous peoples of Africa, including a study of function of myth, ritual, and symbols and an inquiry into how certain political movements in Africa have been and are informed by religious sensibilities. (Same as Anthropology 3490 and Black Studies 3490.)

3510-20 Religion in America (4,4) Not a survey but a representative profile of religion in America, past and present, organized each quarter around theme or problem. May be taken independently.

3550 Religion and Racism in America (4) Historical and critical survey of role played by religion in supporting and criticizing American racial injustice. (Same as Black Studies 3550.)

3560 Afro-American Religion in the United States (4) Historical and critical examination of formation and development of Afro-American religion as thought and institutions in the United States. (Same as Afro-American Studies 3560.)

3600-10 Religious Ethics (4,4) Historical and critical survey of religious ethics; basic theories and their application in social problems.

3605-06 Professional Responsibility (4,4) (Same as Philosophy 3605-06.)

3611 Medical Ethics (4) (Same as Philosophy 3611.)

3620 Topics in Religious Ethics (4) Examination of particular theoretical issues and social problems from perspectives of religious ethics. May be repeated once for credit.

3650 Philosophy and Religion in India (4) (Same as Philosophy 3650.)

3660 Buddhist Philosophy and Religion (4) (Same as Philosophy 3660.)

3671 Religion and Philosophy in China (4) (Same as Philosophy 3671.)

3672 Religion and Society in Japan (4) (Same as Sociology 3672.)

3680 Islam (4) Origin and early history, rapid spread as a world faith, development of Muslim theology and culture, interaction with modern cultures.

3690 Philosophy of Religion (4) (Same as Philosophy 3690.)

3710 Literature of the English Bible (3) (Same as English 3710.)

3711 Literature of the English Bible (3) (Same as English 3711.)

3715 Religious Thought in the Nineteenth Century (4) Major problems and themes in European and American religious thought between 1800 and the beginning of World War I.

3720 Contemporary Religious Thought (3) Major themes, issues, and thinkers.

3740 Issues in Science and Religion (3) Relation of religion to history, methods, and theories of science.

3750 Theology and Literature (3) Exploration of issues raised for religious inquiry by phenomenon of literature. Relation of religious to possible contributions to problems of literary criticism. Relation of religious language to certain forms of human expression (symbol, metaphor, myth, image) identified in study of literature.

3760 Eastern Religions and Western Thought (3) Critical consideration of influences of Hindu and Buddhist philosophy on Western thinkers.

3770 Zen Buddhism (3) Examination of historical, philosophical, and mediational materials of Zen. Special emphasis upon Zen theories of emptiness, no-mind, sudden enlightenment, and the Koan.

3780 The Literature of Dissent (3) Critique of religion in Western thought, Aspects of atheism, rebellion, and revolution in such thinkers as Lucretius, Spinoza, Voltaire, Feuerbach, Marx, Nietzsche, Russell, and Camus.

4101 Foreign Study (1-16) See page 160.

4102 Off-Campus Study (1-16) See page 160.

4103 Independent Study (1-16) See page 160.

4111-21 Modern Religious Philosophies (4,4) Examination of the religious implications of major thinkers and movements. 4111—Nicolas of Cusa to Hume. 4121—Kant and the 19th century. Prereq. 9 hours of philosophy other than logic. (Same as Philosophy 4111-21.)

4200 Classical Indian Systems of Philosophy: The Moksha Tradition. (4) Basic writings and philosophical problems of the traditions of Samkhya, Yoga, and Vedanta. Prerequisite Religious Studies/Philosophy 3650 or 3860. (Same as Philosophy 4200.)

4210 Topics in Ancient Israelite and Ancient Near Eastern Religions (4) Prereq.: 3110-20 or consent of instructor. May be repeated once for credit.

4310 Jesus and Paul Compared (4) Jesus' teaching and activity in context of first-century Palestinian Judaism; analysis of what Apostle Paul made of the tradition of and about Jesus. 2610 or 2611 recommended.

4370 Theological Issues in Medical Ethics (4) (Same as Philosophy 4370.)

4410 American Religious Thought (4) Selected figures, movements, and problems in American religious thought from colonial period to present.

4450 Topics in American Religion (4) Prereq.: One of the following: 3510, 3520, 4410, or consent of instructor. May be repeated once for credit.

4460 Social and Religious Change (4) (Same as Sociology 4540.)

4470 Topics in Western Religious Thought and Institutions (4) Selected figures, issues, and institutions. Seniors and graduate students only, except by consent of department. Prereq: 3500-70. May be repeated. Maximum credit 12 hours.

4490 Topics in Early Christianity and Hellenistic Religions (4) Selected figures, issues, and institutions. Seniors and graduate students only, except by consent of department. Prereq: Consent of instructor. May be repeated. Maximum credit 12 hours.

4670 Topics in Eastern Religions (4) Selected figures, issues, and institutions. Seniors and graduate students only, except by consent of department. Prereq: 3650-60. May be repeated. Maximum credit 12 hours.

4810-20-30 Readings and Research in Religious Studies (3-4,3-4,3-4)
one year's work in another college should have had two or more year's work in Berkeley.

Emeritus), Ph.D. Ohio State; A. H. Wallace, Ph.D. Emeritus), Ph.D. Princeton; F. D. Maurino (Emeritus), Ph.D. Yale; R. M. E. DeRycke, Ph.D. Illinois; A. S. Alien, Ph.D. California (Berkeley); D. M. Heflin, Jr. (Head), Ph.D. Florida State; P. E. Barrette, Ph.D. California (Berkeley); C. W. Cobb, Ph.D. Tulane; J. C. Elliott, M.A. Illinois; T. B. Irving (Emeritus), Ph.D. Princeton; F. D. Maurino (Emeritus), Ph.D. Columbia; M. Petrovska, Ph.D. Kentucky; J. O. Swain (Emeritus), Ph.D. Illinois; A. M. Vazquez-Big, Ph.D. Minnesota; G. E. Wade (Emeritus), Ph.D. Ohio State; A. H. Wallace, Ph.D. North Carolina; Y. M. Washburn, Ph.D. North Carolina.

Consult the Graduate Catalog for listing of numbered 3110 or above, including the following special interests, such as Comparative Literature, Language, or Civilization. Students whose major's program, or (2) qualify by demonstrating, with consent of the department) : 3110-20-30 or 3810-20-30 (Aspects or Survey of Literature, 9 hours) ; 3410 or 3420 or 3430 or 3450 (Intermediate Composition and Conversation or Composition and Conversation for Careers in Business, 3 hours) ; 4210 (Phonetics, 3 hours); 4220 or 4230 (Advanced Grammar, 3 hours); 9 hours of literature at the 4000 level; 9 additional hours selected from courses in literature, language, or civilization. Students whose primary interest is language must have the following courses (or their equivalent, with consent of the department): 3110-20-30 or 3810-20-30 (Aspects or Survey of Literature, 9 hours); 3410 or 3420 or 3430 or 3450 (Intermediate Composition and Conversation or Composition and Conversation for Careers in Business, 3 hours); 4210 (Phonetics, 3 hours); 4220 or 4230 (Advanced Grammar, 3 hours); 6 hours selected from courses 3410-20-30 or 3450 (Intermediate Composition and Conversation or Composition and Conversation for Careers in Business, 3 hours); 4220-30 (Advanced Grammar), or 4250-89-70 (Linguistics); 6 hours of literature at the 4000 level; 6 additional hours selected from courses in literature, language, or civilization. With either of the above options, students may substitute Foreign Study (4101) for certain courses; students with special interests, such as Comparative Literature, may make certain substitutions with consent of department.

Minor: Consists of 24 hours in courses numbered 3110 or above, including the following: 3110-20-30 or 3810-20-30 (Aspects or Survey of Literature, 9 hours); 3410 (Intermediate Composition and Conversation, 3 hours); 4210 (Phonetics, 3 hours); 9 additional hours selected from courses in literature, language, or civilization. Students pursuing a minor are strongly advised to consult with a departmental advisor.

Courses which are the equivalents of the foregoing may be substituted with consent of the department; but courses in French literature in English translation may not be counted toward either a major or a minor.

1110-20-30 Elementary French (3,3,3) This sequence strongly recommended for students intending to take upperdivision courses in French. Must be taken in sequence. 3 hours and 2 labs.

1118-28-38 Honors: Elementary French (3,3,3) Honors course for students of superior ability. 1118 not for students who have taken F105 for individual study. Freshmen admitted to 1128 and 1138 on basis of diagnostic test or conference with instructor, high school average, and performance on ACT. Class held to a maximum of 15 for individual attention. Class covers normal elementary French program for first two terms. Students are expected to spend normal amount of preparation time. Students finding course too difficult may elect to transfer to 1120. Students passing 1118 with a grade of B or higher are eligible for 1138 rather than 1130.

1510-20 Elementary French (4,4) Must be taken in sequence. 4 class meetings and 2 laboratory periods.

2110-20-30 Intermediate French (2,3,5) This sequence strongly recommended for students intending to take upperdivision courses in French. Must be taken in sequence. 3 hours and 2 labs.

2118-28-38 Honors: Intermediate French (3,3,5) Honors course for students of superior ability in French. Incoming freshmen admitted on basis of diagnostic test, high school average, and performance on ACT. Class held to a maximum of 15 for individual attention. Students follow enriched program which emphasizes speaking ability and reading, including literary selections. Students passing 2110 with a grade of B or higher are eligible for 2128 rather than 2120. Students passing 2120 with a grade of B or higher are eligible for 2130, and in modern movements of surrealism, dadaism, and existentialism.

2190-20-30 French Literature in English Translation (3,3,3) From the periods through the 19th century. The works: Stendhal, The Red and the Black; Flaubert, Madame Bovary; Zola, Germinal; Maupassant, The Open Window; Balzac, The Human Comedy.

3000 French Transition (3) Development of linguistic skills necessary for satisfactory work in courses above 3000-00. Recommended for students who would benefit from additional training beyond 2310 or 2520 in basic skills of reading, speaking, and writing French.

3010-20-30 Elements of French for Upper-division
and Graduate Students (3,3,3) Elements of language, elementary and advanced readings. Open to gradu-
ate students preparing for language examinations, and upper-division students desiring reading knowl-
edge of the language. Undergraduate credit only. Not for credit for those having had 1110-20-30, 1510-20, or equivalent. No auditors.

3110-20-30 Aspects of French Literature (3,3,3) Study (not usually chronological) of various periods of the litera-
ture, emphasis upon the genres (poetry, novel, drama) varies. Prereq: 2130, 2520, or equivalent. Rec-
commended for literature majors.

3240 Women in French Culture (4) Role of women in shaping French history and culture. Feminists (George Sand), royal mistresses (Mme. de Maintenon), intel-
lectuals (Mme. de Staël); actresses (Sarah Bernhardt); scientists (Marie Curie). Same as Women’s Studies 3240.

3250 Masterpieces of French Fiction in English Translation (4) Among works studied are Romance of Tristan and Isolde, Eugene Grandet, Swann's Way, The Wan-
derer, and short stories of Maupassant and Mariveti.

4310-20-30 Intermediate Composition and Conver-
sation (3,3,3) Grammatical analysis of modern French prose, review of grammatical principles and their appli-
cation in translation from English to French, both written and oral exercises in free composition. Prereq: 2130 or 2520.

4350 Composition and Conversation for Careers in Business (3) Analysis of contemporary French lan-
guage as it applies to business transactions. Understanding and composing business letters, oral-
communication and elements of French Culture relat-
ed to good business practices. Only one of the courses, 4350 or 4540, may be applied toward the major. Prereq: 3410-3420 or permission of instructor.

3810-20-30 Survey of French Literature (3,3,3) Chron-
ological study of various genres (poetry, novel, drama) by periods, from medieval period to the present. May be taken in place of 3110-20-30. Prereq: 2130, 2520 or equivalent.

4001-02-03 Introduction to Consecutive and Simul-
taneous French Translation (3,3,3) 4001—Oral Translation into English. 4002—Consecutive Trans-
lation to and from English; 4003—Simultaneous Transl-
tation to and from English. Training of students with intermediate or advanced knowledge of French for consecutive and simultaneous oral translation from French into English, and vice versa, on a variety of practical subjects, such as tourism, economics, poli-
tics, and science. The course will be given mainly in the language lab with additional classroom supervi-
sion by the instructor. Prereq: 3430 or equivalent. Must be taken in sequence.

4010 Masterpieces of French Literature in English Translation (3) No foreign language credit.

4020 Masterpieces of French Drama in English Trans-
literation (3) No foreign language credit.

4101 Foreign Study (1-16) See page 160.

4110-20-30 French Literature of the Seventeenth Century (3,3,3) Prereq: 2130, 2520, or equivalent.

4150 Theatrical French (1-3) Performance in one or more French plays. May be repeated for credit with consent of department. Prereq: 2130, 2520, or equivalent.

4160-70-80 Advanced Conversation (2,2,2) Intensive training in prepared and spontaneous conversations. Subjects range from travel and current events to lit-
erature and aspects of national culture. Prereq: Not Completion of 9 hours of courses on 3000 level.

4210 Phonetics (3) Prereq: 2130, 2520, or equiva-

4230-30 Advanced Grammar (3,3) Prereq: 2130, 2520, or equivalent.

4250 Introduction to Descriptive Linguistics (3) Pho-
tics and phonemics, morphology and syntax. Types of languages and language families. Typology of dialects, and dialectal geography. Application of descriptive linguistics—field linguistics, dialectal study; its practical use in learn-
ling languages and in language teaching. Introduction to transformational grammar. Prereq: 9 hours of upper-
division English or 9 hours of upper-division courses in a modern or ancient language (exclusive of German 
and French 3010-2030, courses in literature in trans-
literation, and general courses in Latin and Greek requiring no knowledge of these languages), or consent of depart-
ment. (Same as German, Russian, Spanish, and Linguistics 4250.)

4260 Introduction to Historical and Comparative Lin-
guistics (3) (Same as German, Russian, Spanish, and Linguistics 4260.)

4270 Romance Linguistics (3) Development of clas-
sical Latin; Latin as taught in school. Beginning Latin into major Romance 
languages. (Same as Spanish and Linguistics 4270.)

4310-20-30 French Literature of Eighteenth Century (3,3,3) Prereq: 2130, 2520, or equivalent.

4350-60-70 Medieval French Literature (3,3,3) Medi-

4101 Foreign Study (1-16) See page 160.

4220 Petrarach (3) Prereq: 3130, 3520, or equivalent.

4230 Boccaccio (3) Prereq: 3130, 3520, or equiva-

4110-20-30 Aspects of Italian Literature (3,3,3) Prereq: 2130, 2520, or equivalent. Recommended for litera-
ture majors.

3110 Italian Literature in English Translation (3-4) Sicilian School, the Florentine School, Dante, Petrarch, Boccaccio, Machiavelli, Ariosto, Tasso. No change in credit hours after deadline. Option of 4 hours credit must present appropriate amount of extra work above that required for 3 hours.

3410-20 Advanced Grammar, Composition, and Conver-
sation (3,3,3) Laboratory, work, drills, and tapes. Prereq: 2130, 2520, or equivalent.

3510-30 Aspects of Italian Literature (4,4) Prereq: 2130, 2520, or equivalent. Recommended for litera-
ture majors.

4020 Italian Drama in English Translation (3-4) 20th-
century theatre: operatic drama, the Grottesco, Pir-
andello, De Filippo, Frail. No change in credit hours after add deadline. Option of 4 hours credit must present appropriate amount of extra work above that required for 3 hours.

4050-60-70 Dante and Medieval Culture (3,3,3) Read-
ings and lectures in English for students majoring or minoring in other departments. Readings, reports, and term papers in Italian for students majoring or minoring in Italian. (Same as Comparative Literature 4050-60-70.)

4101 Foreign Study (1-16) See page 160.

4220 Petrarach (3) Prereq: 3130, 3520, or equivalent.

4230 Boccaccio (3) Prereq: 3130, 3520, or equiva-

4110-20-30 Aspects of Italian Literature (3,3,3) Prereq: 2130, 2520, or equivalent. Recommended for litera-
ture majors.

3110 Italian Literature in English Translation (3-4) Sicilian School, the Florentine School, Dante, Petrarch, Boccaccio, Machiavelli, Ariosto, Tasso. No change in credit hours after deadline. Option of 4 hours credit must present appropriate amount of extra work above that required for 3 hours.

3410-20 Advanced Grammar, Composition, and Conver-
sation (3,3,3) Laboratory, work, drills, and tapes. Prereq: 2130, 2520, or equivalent.

3510-30 Aspects of Italian Literature (4,4) Prereq: 2130, 2520, or equivalent. Recommended for litera-
ture majors.
Spanish (924)  

UNDERGRADUATE  

B.A. Major: Consists of 36 hours in courses numbered 3110 or above. Students whose primary interest is literature must have 3 hours from the following sequences: 3110-20-30, 3310-20-30 (Aspects of Spanish Language or Aspects of Spanish American Literature, 9 hours); 3410 plus 3420 or 3450 (Composition and Conversation, 6 hours); 4210 (Phonetics, 3 hours); 9 hours of literature at the 4000 level; 3 hours of civilization; sufficient additional hours selected from courses in literature, language, or civilization to fulfill the major requirements. Students whose primary interest is language must have a minimum of 9 hours chosen from the following sequences: 3110-20-30, 3310-20-30 (Aspects of Spanish Literature or Aspects of Spanish American Literature, 9 hours); 3410 (Composition and Conversation, 3 hours); 4210 (Phonetics, 3 hours); 9 hours selected from courses 3420-30 (Composition and Conversation, 3 hours); 4220-30 (Advanced Grammar), or 4250-60-70 (Linguistics); 3 hours of literature at the 4000 level; 3 hours of civilization; sufficient additional hours selected from courses in literature, language, or civilization to fulfill the major requirements. With approval of the instructor, students may substitute Foreign Study (4101) for certain courses; with special interest, such as Comparative Literature, may make certain substitutions with consent of the department.

Minor: Consists of 24 hours in courses numbered 3110 or above, including a minimum of 9 hours chosen from the following sequences: 3110-20-30, 3310-20-30 (Aspects of Spanish Literature or Aspects of Spanish American Literature, 9 hours); 3410 (Composition and Conversation, 3 hours); 4210 (Phonetics, 3 hours); sufficient additional hours selected from courses in literature, language, or civilization to fulfill the minor requirements. Students pursuing a minor are strongly advised to consult with a departmental advisor.

Courses which are the equivalents of the foregoing may be substituted with consent of the department; but courses in Spanish literature in English translation may not be counted toward either a major or a minor.  

1110-20 Elementary Spanish (3,3,3) This sequence strongly recommended for students intending to take upper-division courses in Spanish. Must be taken in sequence. 3 hours and 2 labs.  

1510-20 Elementary Spanish (4,4) Must be taken in sequence. 4 class meetings and 2 laboratory periods.  

2110-20 Intermediate Spanish (3,3,3) This sequence strongly recommended for students intending to take upper-division courses in Spanish. Must be taken in sequence. 3 hours and 2 labs.  

2510-20 Intermediate Spanish (4,4) Must be taken in sequence. 4 class meetings and 2 laboratory periods.
Sociology (915)

**Professors:**
- D. M. Betz, Ph.D. Michigan State; J. A. Black, Ph.D. Iowa; D. J. Champion, Ph.D. Purdue; L. Ebersole (Vice Chancellor for Administration), Ph.D. Pennsylvania; D. W. Hastings, Ph.D. Massachusetts; D. R. Poch, Ph.D. North Carolina; N. E. Shover, Ph.D. Illinois (Urban); S. E. Wallace, Ph.D. Minnesota.

**Associate Professors:**
- T. C. Hood (Acting Head), Ph.D. Duke; D. Clelland, Ph.D. Michigan State; R. G. Ferrin, Ph.D. British Columbia.

**Assistant Professors:**

**Instructor:**
- D. Harris, M.A. Tennessee.

**UNDERGRADUATE**

**B.A. Major:** Consists of 36 upper-division hours in sociology. Eight lower-division hours in sociology are prerequisite to a major. Students will select 20 hours within one of the following six programs of study:
1. **Humanistic Sociology** designed for students who wish to develop an appreciation of how the social world works and of the individual's place in it. Courses include: Collective Behavior 3010, Resource Scarcity and Social Change 3015, Social Psychology 3130, Prejudice and Racism 3330, Stratification 3350, Urban Environment 3410, American Society 3780, Sociological Theory 3810, Social Research 3910, Sociology of Sport 4050, and Social Movements 4930.
2. The Social Service program provides a broad background for students interested in helping professions. Courses include: Social Psychology 3130, Deviance 3140, Sociology of Medicine 3160, The Family 3220, Poverty and Inequality 3340, Urban Problems 3420, Juvenile Delinquency 3510, Social Research 3910, Socialization Across the Adult Life Cycle 4160, and Sociology of Aging 4730.
3. The Pre-professional program assists in preparation for graduate study in law, urban studies, planning, ecology, and sociology. Courses include: Political Sociology 3030, Social Psychology 3130, Urban Environment 3410, Occupations as Organizations 3820, Sociological Theory 3810, Social Research 3910, Elementary Social Statistics 3920, Social Change 4540, and Formal Organization 4550.
4. The Research Analyst program is preparation for data analysis in public and private research organizations and in business and industry. Courses include: Stratification 3350, Social Research 3910, Elementary Social Statistics 3920, Population Problems 4110, Theory of Attitudes and Values 4160, and selected courses in the Social Environment. Students should consult with the Undergraduate Coordinator.
5. The Human Management program is preparation for those who manage people as part of their work. Courses include: Social Psychology 3130, Gender in Society 3150, Communicative Processes 3320, Prejudice and Racism 3330, Occupations 3810, Occupations as Organizations 3820, Social Research 3910, and Formal Organizations 4560.
6. The Criminal Justice program is preparation for careers in corrections, law enforcement, parole and probation, and criminology. Courses include: Collective Behavior 3010, Deviance 3140, Prejudice and Racism 3330, Juvenile Delinquency 3510, Social Research 3910, Sociology of Law 4030, Punishment and Corrections 4130, and Criminology 4310. A Minor consists of 24 upper-division hours. Eight lower-division hours in sociology are prerequisite to a minor.

**1510 General Sociology (4)** Social origins, structures, forces, processes, and products.

**1518 Honors: General Sociology (4)** Enriched introduction to sociological principles and research. Permission of department required. B average or better. Selected freshman.

**1520 Sociology of Social Problems (4)**

**1528 Honors: Social Problems (4)** Permission of department required. B average or better. Selected freshman.

**1530 Contemporary Social Change (4)** Introduction to basic concepts and principles used in analyzing social change. Emphasis on contemporary society.

**2510 Introduction to Sociology Through Literature (4)** Social processes such as social control and socialization, sociological concepts such as status and role, and the other elements of a basic introduction to sociology are examined in this specialized introduction to sociology.

**2520 Social Problems: Crime and Justice (4)** Specialized introduction to social problems confined primarily to an analysis of American experiences in areas such as the cause of crime, the operation of the police and courts, and the correctional process.

**3010 Collective Behavior (4)** Analysis of collective phenomena emphasizing crowd behavior, responses to disasters, popular crazes, mass movements, and social protests.

**3015 Resource Scarcity and Social Change (4)** The relationship between scarcity of natural resources and changes in societal beliefs and social structure. Topics include: economic limits to growth and collective action problems.

**3030 Political Sociology (3)** Sociological analysis of American political system. Attention given to consideration of concept of power, elitist-pluralist controversy, and-ideology debate, and related topics.

**3110 Social Psychology (4)** Social psychological analysis of social behavior emphasizing its acquisition, its enactment and its dynamic nature.

**3140 Deviance and the Social Order (4)** Examination of relations between deviance and social order. Various types of social deviance considered, with focus on their structure, social factors related to process of becoming deviant, and consequences of deviant conduct.

**3150 Gender in Society (4)** Exploration of gender in society utilizing various sociological perspectives with special focus on the relationships between social structures, social roles and gender identities. (Same as Women's Studies 3150.)

**3160 Sociology of Medicine (4)** Introduction to sociological approach to study of health and medicine. Emphasis on relationship of demographic characteristics to the prevention and control of disease, the organization of health care facilities, and staff-patient relationships.

**3220 The Family (4)** Examines theoretical frameworks and methodological approaches and their
application in the sociological study of past and present family forms.

3320 Sociology of Communicative Processes (4) Sociological dimensions of communication and of communication processes at the organizational and interpersonal levels.

3330 Prejudice and Racism in the United States (4) (Same as Afro-American Studies 3330)

3340 Comparative Poverty and Inequality (4) Comparative description and sociological analysis of poverty and inequality in the modern world. (Same as Afro-American Studies 3340)

3350 Social Stratification (4) Study of economic class, prestige, life style, and power hierarchies; causes and consequences of structured social inequality.

3410 Urban Environment (4) Introduction to urban environment; emergence of the city; cities of New World; rise of metropolitan America; urban society, social worlds within urban environment.

3420 Urban Problems (4) Crises and the urban conscience; urban problems and interventions; housing, urban renewal, and neighborhood conservation; the urban poor, the disoriented, and alienated; planning for urban youth; the urban elderly; the social and physical planning process; new towns.

3510 Juvenile Delinquency (4) Critical assessment of nature of the delinquency problem, major sociological theories and their implications for control, and administration of juvenile justice.

3610 Sociology of Occupations (4) Introduction to occupations and their relation to the individual and society; technology and occupations; unequal rewards and occupations; social organization and occupations.

3620 Occupations as Organizations (4) Occupations as interest groups; their impact on work settings and the wider community.

3672 Religion and Society in Japan (4) (Same as Religious Studies 3672)

3710 Corporate and Organizational Deviance (4) An introduction to analysis and understanding of crime and deviance committed by organizations. Intended for students from diverse curricula, the course examines case studies of corporate and organizational deviance. A principal focus is a critical examination of organized responses to this type of deviance, especially the operation of regulatory agencies.

3780 American Society (4) An analysis of the institutional organization of contemporary American society, with attention to institutional interrelations (e.g., between the economy and the polity), characteristics of important social groups (e.g., educators, political parties, and workers), and major forces of change.

3810 Sociological Theory (4) Survey and analysis of development of sociological theory from time of Comte to present.

3910 Introduction to Social Research (4) Scientific method applied to social phenomena; formulating test hypotheses; techniques for collecting data; measuring social variables; interpreting research findings. Lectures and laboratory.

3920 Elementary Statistical Methods (4) Statistics used in social research; elementary descriptive techniques; measures of central tendency; dispersion; establishment of statistical inference; tests of significance for parametric and non-parametric data.

4000 Special Topics (4) Student-generated course offered at convenience of department upon student initiative. Scope of subject matter determined by student and instructor with consent of department. Elective credit only. Prereq: Determined by department.

4030 Society and Law (4) General treatment of social origins and consequences of law and legal process. Particular emphasis on problems of law and social change, and on structure and functioning of legal sanctions. Law and law-like phenomena in formal organizations and primitive societies.

4050 Sociology of Sport (4) Social organization and meaning of sport. The difference between sport and play and games, social stratification and sport, sport as an occupation, place of sport in mass culture, sport subcultures, and reciprocal influences of sport and cultural milieu.

4102 Off-Campus Study (1-16) See page 160.

4103 Independent Study (1-16) See page 160.

4110 Population Problems (4) Demographic factors and social structure trends in fertility, mortality, population growth, migration, distribution, and composition; population policy.

4120 Topics in Social Psychology (4) (Same as Psychology 4120).

4160 Theory of Attitudes and Values (4) Study of organization, functions and measurement of attitudes and values; approaches to attitude change; and relationship to attitudes, values and behavior.

4190 Socialization Across the Adult Life Cycle (4) The social process through which people acquire skills and abilities and undergo identity transformations and types of adult socialization (e.g., occupational, institutional) are emphasized.

4230 Urban Ecology (4) Examination of public, private, and collective, and individual space. Classical school ecology, its current critique, and the area analysis and cognitive symbolic ecology emphasized. (Same as Urban Studies 4330).

4410 Educational Sociology (3) (Same as Educ. C & I 4410).

4500 Criminology (4) A systematic inquiry into the causes and control of crime and criminalism. Emphasis on causation.


4520 Criminal Justice II: Corrections (4) The historical development of institutions and programs such as juvenile training schools, prisons, probation and parole. Analysis of their operation and impact is special focus. Discusses evaluation research and its application to correctional programs. Recommended: Sociology 4500.

4530 Community Organization (4) Structure; function; linkages. Change and development and important community studies. Emphasis on sociological analysis, not on implementation of change.

4540 Development and Underdevelopment (4) Critical examination of theories which attempt to explain differential development in the modern world. In-depth examination of development issues in selected regions of the world. (Same as Religious Studies 4540).

4560 Formal Organization (4) Analysis of bureaucratization process, division of labor, delegation of authority, controlled communication under system of rationality.

4730 Sociology of Aging (4) Emphasizes how roles and statuses change with age in relation to the major social institutions and explores the impact that the rapidly increasing number of older people have on society, as well as the effect of society on older people.

4820 American Minority Groups (4) Minority groups and social structure in American society; analysis of intergroup relations within attention given to both past and present relationships of selected groups to broader society.

4920 Social Movements (4) Development, organization, and function of social movements; attention is given to ideology, leadership, and organization of political, religious, and other types of social movements.

4940 Sociology of Religion (4) Interrelationship of society, culture, and religion. (Same as Religious Studies 4940.)

4980 Honors: Sociology (4) Intensive study and research under faculty direction, including writing of senior thesis. Course credit may be split into two quarters. Candidacy is open only to majors who have shown a marked capability for independent study and have grade averages of at least 3.0 in the College of Liberal Arts and 2.5 in the department. Prereq: Senior standing.

GRADUATE
The General requirements for the master's and doctoral degrees as well as course descriptions are in the Graduate Catalog.

Spanish
See Romance Languages.

Speech and Theatre


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


UNDERGRADUATE

B.A. Major: The Department of Speech and Theatre offers a single undergraduate degree, the Bachelor of Arts in Speech and Theatre. Majors must declare a concentration in either (a) speech or (b) theatre.

(a) Major in Speech and Theatre (Speech concentration)

Speech 1211-21 is a prerequisite to a concentration which consists of: (a) 2 of the following 4 Speech courses: 2021, 2311 (or 3551 by permission), 2311, 2351; (b) 30 additional hours of Speech courses numbered 2000 or above; or (c) at least 24 of the hours listed above must be numbered 3000 and above.

(b) Major in Speech and Theatre (Theatre Concentration)

Theatre 1320-30-40 is prerequisite to a concentration which consists of: (a) Theatre 2111, 2211-21, 2231, 2252-53-54, 3252-53-54, 3451, 3511; (b) 19 additional hours of Theatre courses numbered 2000 or above1, 12 hours of which may be cognate areas approved by the department; (c) at least one half of the hours in the concentration must be earned at the 3000-level and above.

Minors: Two minors are offered: (a) Speech and (b) Theatre.

(a) Minor in Speech:

I. Prerequisites: Speech 1211, 2311.

II. Requirements: 24 hours in Speech courses numbered above 3000.

1 Students majoring in Speech and Theatre with a Speech Concentration may choose an emphasis in Oral Interpretation.

2 A maximum of 12 of these hours may be in cognate areas approved by the Department.

3 Students choosing a Theatre Concentration must emphasize one of the following areas: history and criticism, playwriting, performance, production or oral interpretation.
Communication (4) Designing experiments; planning field studies; using statistical analysis.

4541 Rhetorical Theory and Criticism (4) Survey of Western rhetorical theory; contemporary approaches to criticism of public address.

4580 Rhetoric of the Women's Rights Movement (4) Historical and critical study of public address in campaign for women's rights from the 1830s to present. (Game as Women's Studies 4580.)

4571 British Oratory (4) Historical and critical study of British public address.

4591 Persuasive Uses of Imaginative Literature (4) Topics in social and political uses of novels, plays, and poems.

4811 Advanced Phonetics (4) Phonetic aspects of contemporary dialects of the English language. Prereq: Consent of instructor.

4930 Studies in American Public Address (4) May be repeated. Maximum credit 12 hours.

4999 Colloquium in Speech Communication (1) May be repeated for credit. Graduate

Consult the Graduate Catalog for listing of graduate level courses.

Theatre (976)

1320-30-40 Introduction to Theatre (3,3,3) 1320—Understanding theatre: thought, philosophy and aesthetics. Prerequisite: English placement and consent of instructor. Prerequisite: English placement and consent of instructor. Maximum credit 4 hours.

2211-21 Acting (4,4) 2211—Realism: readings, improvisation, and scene study. 2212—Extended Realism: voice and movement for the stage, basic rehearsal techniques. Prerequisite: Consent of instructor for 2211. Production participation required.

2211-21 Stagecraft (4,4) 2211—Techniques of scenery construction. 2221—Fundamental methods of stage lighting. Production participation required.

2231 Basic Stage Costuming (4) Costume design and construction: basic theory and technique. Production participation required.

2252-54 Survey of World Dramas (3,3,3) 2252 Greek, Roman, Medieval, and Eastern forms of drama; 2253 covers Elizabethan through nineteenth century drama; and 2254 deals with the study of realism through contemporary drama.

1321-22 Advanced Acting (4,4) Historical styles of acting. 1321-Renaissance. 1322-17th and 18th centuries. Prerequisite: Consent of instructor. Production participation required.

151 Theatre Practicum: Performance (1-4) Continuation of 1315. Available for credit only to theatre majors. Prerequisite: Consent of instructor. May be repeated. Maximum credit 4 hours.

152 Theatre Practicum: Production (1-4) Continuation of 1315. Available for credit only to theatre majors. Prerequisite: Consent of instructor. May be repeated. Maximum credit 4 hours.

153 Summer Repertory Productions (1-4) Continuation of 1315. Available only to members of summer company by consent of instructor. May be repeated. Maximum 4 credit hours.

2124-15 Advanced Technical Theatre (4,4) Advanced theatre management; advanced scenery and property execution; special problems in technical theatre.

2421-42 Advanced Scene Design (4,4) 2421—Descriptive drawing as an approach to three-dimensional design; theatrical graphic standards and preparation of design drawings. 2422—Perception of surface color; construction of spatial illusion through color with reference to rendering, scene painting, and preparation of paint harmonies. Must be taken in sequence. Prerequisite: 2211-21, 3221-22, and consent of instructor.

3431-44 Advanced Lighting Design (4,4) Relationship of light to setting in creating stage environment. May be taken in sequence. Prerequisites: 3312-22 or consent of instructor.

4441-42 Advanced Play Directing (4,4) Problems of play interpretation; directing period plays; preparation of a play for public performance. Must be taken in sequence. Prerequisite: 3451-52 and consent of instructor.

4541-42 Advanced Theatre Costume Design (4,4) Advanced problems in costume design and construction. Prerequisite: 3511-12. 4442—Scene Painting (3) Introduction to materials, techniques and principles of the craft. Emphasis on gaining skill and understanding of past through studio experiences. Prerequisite: Consent of instructor.


4999 Colloquium in Speech Communication (1) May be repeated for credit. Graduate

Consult the Graduate Catalog for listing of graduate level courses.

Speech and Theatre (945)

2021 Voice and Dictation (4) Voice production; attention to individual speech problems.
2031 Introduction to Oral Interpretation (3) Art of reading aloud; development of interpretive techniques and their application to selected passages of prose, poetry, and drama.

3651 Oral Interpretation of Prose Literature (4) Prereq: 2031 or consent of instructor.

3661 Oral Interpretation of Poetry (4) Prereq: 2031 or consent of instructor.

3871 Oral Interpretation of Drama (4) Prereq: 2031 or consent of instructor.

4101 Foreign Study (1-16) See page 160.

4102 Off-Campus Study (1-16) May be repeated for major credit to maximum of 12 hours. See page 160.

4103 Independent Study (1-16) May be repeated for major credit to maximum of 8 hours. See page 162.

4640 Ensemble Interpretation (4) Oral interpretive techniques of choral reading, readers theatre, and chamber theatre.

GRADUATE Consult the Graduate Catalog for listing of graduate level courses.

**Statistics**

See faculty list page 85.

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 study in statistics or for professional work in various applications of statistical methods, including applications in the natural and social sciences, business, and industry. It is highly recommended that a student majoring in statistics have a minor in an area of application.

Minor:
- (a) Required courses: 24 hours to consist of Mathematics 2840-50-60; Statistics 3450-60; Computer Science 4310; Statistics 3550 or Mathematics 4650 or 4750.
- (b) Statistics electives: 15 hours from upper-division statistics courses not listed in part (a) above.
- (c) Electives: 12 hours to be selected from no more than two of the following groups: Computer Science 3150, 3510, 3520, 4320; Industrial Engineering 3430, 3510, 3520, 3530, 4590; Industrial Management 4610, 4620; Mathematics 3780-90, 4060-70, 4510-20-30 (or 4518-28-38), 4660-70.

Minor: Required courses: 21 hours to consist of Mathematics 2840-50-60; Statistics 3450-60; Computer Science 4310.

(b) Statistics electives: 9 hours from upper-division statistics courses not in part (a) of the minor.

**University Studies (984)**

(Non-Departmental)

The University Studies Program has three objectives: 1) to foster interdisciplinary teaching and scholarship in the promotion of superior intercollege, general education; 2) to provide a mechanism for integration and synthesis within the university community; and 3) to nurture personal and intellectual development of faculty and students.

To these ends, the Program sponsors three types of activities: 1) faculty colloquia, which are on-going structured conversations on a particular topic or nexus of topics; 2) learning communities, which are year-long residential educational environments focused on a common theme; and 3) interdisciplinary courses, which are intercollegiate and team-taught.

University Studies explores important contemporary issues which are sufficiently fundamental to involve the study and attention of faculty and students from all colleges. Currently, faculty and students in the Program are investigating three broad areas of interest: 1) Technology, Society, and the Common Good; 2) Land, People, and the Common Good; and 3) Aging, Society, and the Common Good. Further information is available through the Dean's Office, The College of Liberal Arts, 226 Ayres Hall.

1000 The First Course (3) An introduction to university education as an adventure in personal growth and professional development. ENC.

2001-02-03 University Learning Seminar (1,1,1) Laboratory course for facilitating integrative thinking and learning. Only for students enrolled in a University Learning Community.

2110-20-30 Topics in University Studies (3,3,3) Varies in content or context; studies and problem-solving approaches to explore interdisciplinary issues. Only for students enrolled in a University Learning Community.

3110-20 Technology, Society and the Common Good (3,3) Introduction to the interlocking relationships between population, food production and distribution, environmental pollution, depletion of non-renewable natural resources, global arms race, two-semester sequence designed for students of all colleges, first quarter—global perspectives; second quarter—decisions for the future. Extensive use of films, field trips, student discussion.

**Women's Studies**

See Cultural Studies.

**Zoology (995)**

Professors:
- J. H. Axel(Head), Ph.D. Brown; R. M. Bagby, Ph.D. Illinois; D. L. Bunting, II, Ph.D. Oklahoma State; J. D. Carlson (Emeritus), Ph.D. Pennsylvania; A. C. Cole (Emeritus), Ph.D. Ohio State; A. C. Echternacht, Ph.D. Kansas; D. A. Ethier, Ph.D.
- Minnesota; R. C. Fraser (Emeritus), Ph.D. Minnesota; B. Hochman, Ph.D. California (Berkeley); J. C. Howell (Emeritus), Ph.D. Cornell; E. T. Howley, Ph.D. Wisconsin; K. W. Leom, Ph.D. London (England); A. W. Jones (Emeritus), Ph.D. Virginia; J. H. Kennedy, Ph.D. Iowa; J. N. Liles, Ph.D. Ohio State; J. A. MacCabe, Ph.D. California (Davis); S. E. Riechert, Ph.D. Wisconsin; L. E. Roth, Ph.D. Chicago; C. A. Shivers, Ph.D. Michigan State; J. T. Tanner (Emeritus), Ph.D. Cornell; H. G. Welch, Ph.D. Florida; M. G. Whiteside, Ph.D. Indiana; G. L. Whitson, Ph.D. Iowa.

Associate Professors:

Assistant Professors:
- T. T. Chen, Ph.D. Florida; G. F. McCracken, Ph.D. Cornell.

UNDERGRADUATE

Prerequisites to upper-division courses: Biology 1210-20-30 or Zoology 1118-28 are prerequisites for all upper-division courses, with the exception of 3090 and 4940. Additional prerequisites are included with course descriptions.

B.A. Major: Consists of Biology 3110, 3120, 3130; 18 hours of upper-division zoology courses and 3 hours of 3090-4940. A course in biochemistry at the 2000 level or above. Of the 18 hours of upper-division zoology courses, a minimum of 6 hours must be at the 4000 level, and must include at least one laboratory or field course. 1 to 3 hours of Zoology 3990 and 3 hours of Zoology 4990. Perspectives in Zoology must also be included. Prerequisites to this major are: Biology 1210-20-30 or Zoology 1118-28 (Zoology 2820-30 may be substituted for Zoology 1118 or Biology 1220) and Chemistry 1110-20-30. Corequisites are: (1) A Mathematics and Statistics/Computer Science package consisting of Mathematics 1560-50, 1840-50 or 1841-51, (Mathematics 1841-51 is the recommended choice) plus one of the following: Mathematics 1860, 3050, 3060, 3861, Psychology 3150, Computer Science 1510, 1610, Plant and Soil Science 3610; (2) a year sequence in Physics (except 1410-20-30).

Note: Students majoring in zoology are advised to exercise care in fulfilling Science and Mathematics requirements. Mathematics 1840-50 or 1841-51 or 1540-50-60-70 and Chemistry 1110-20-30 or equivalent (20 or 21 hours altogether) must be completed by all zoology majors.

Minor: Consists of 24 hours of zoology, or zoology and biology, courses. (Zoology courses must be at the upper-division level; but 3000-level biology courses may be used, e.g., Biology 3110, 3120, 3130.) Prerequisites to this minor are Biology 1210-20-30 or Zoology 1118-28 and Chemistry 1110-20-30.

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 specified quarters. Students should plan in advance the proper sequence. Information on the courses, which are offered, may be offered or available in the departmental office.

1118-28-38 Honors: Fundamentals of Zoology (4,4,4)

Course designed for superior students in any field who are interested in obtaining a solid foundation in zoology. On completing this sequence students may register for core Biology 3110-20-30. Honors zoology is open to all students with a minimum ACT composite score of 27 and a minimum GPA of 3.2 in college. Students must achieve at least a B in any quarter to be eligible for the next quarter. Students who do not satisfy this requirement must complete the sequence with appropriate quarters of Biology 1210-20-30. Must take each course in sequence. 1119 (Fall)—Processes, Structure and development. 1120 (Winter)—Genetics and phylogeny. 1138 (Spring)—Ecology; independent projects. Each quarter consists of six hours of combined lecture and lab. Students who receive credit for this course may not receive additional credit for Biology 1210-20-30 or Botany 1110-20 or 1118-28.

2460-70-80 Human Anatomy and Physiology for Nurses (3,3,3) Fundamentals of human anatomy and physiology. 2 hours and 1 lab.

2461-71-81 Human Anatomy and Physiology for Nurses (4,4,4) Same as 2460-70-80 except 2 hrs. and 2 labs.

2510-30-30 Human Biology (4,4,4) For non-majors.
Not available for major credit in zoology and biology. 2910—What we are; diversity of life forms, uniqueness of man, cell biology, reproduction, development, principles of genetics. 2520—How we live; physiology of movements, utilization of food, respiration, circulation, excretion. 2530—Survival, infection and immunity, aging, vascular disorders, genetic disorders, cancer, nutritional inadequacies, human ecology, genetic engineering. May be taken in any sequence. 3 hrs. and 1 lab.

2920-30 Human Physiology (4,4) Fundamentals of biology; principles of human physiology. Must be taken in sequence. Prereq: One year of college chemistry. 3 hrs. and 1 lab.

2990 Human Anatomy (4) Gross and Microanatomy of the Human. Prereq: 1 year of an introductory Biology course or Zoology 2920-30 or equivalent. 2 hrs. and 2 labs. (Does not carry credit for Biology or Zoology Majors).

3050 Comparative Vertebrate Embryology (5) Developmental morphology of selected vertebrates. 2 hrs. and 3 labs.

3060 Comparative Vertebrate Anatomy (5) Phylogeny and anatomy of organ systems. Dogfish shark and cat primarily used in laboratory. Three hrs. and 2 labs.


3090 Biology and Human Affairs (3) (Same as Botany 3090.)

3110 General Entomology (5) Introduction to insects; basic structure, development, behavior; classification of insect orders and representative families; interpretation and use of keys. 3 hrs. and 2 labs.

3150 Invertebrate Zoology (5) Biology of invertebrates (except insects) with emphasis on ecology and behavior. Prereq. Biology 3130. 3 hrs. and 2 labs.

3220 Physiology of Reproduction (3) (Same as Animal Science 3220.)

3320 Histology (4) Study of animal tissues. Prereq: Biology 3120. 2 hrs. and 2 labs.

3410 Bioethics (3) Relationship between biological discoveries and human values. Open discussion of selected dilemmas arising from new knowledge about medicine, behavior, resources, and technology.

3729 Ethology and Sociobiology (3) Basic concepts of the evolutionary approach to behavior with special reference to controversial issues in applications to psychology, the social sciences, and the arts. (Same as Psychology 3729.)

3880 Junior Seminar (1-3) Topic of current interest. May be repeated for credit with consent of department. Maximum 6 credit hours.

3920 Human Endocrinology (4) Basic course in human endocrinology with emphasis on the practical diagnosis of hormone levels for analysis of glandular function and treatment of endocrine abnormalities. Three lectures and 1 discussion. Prereq: a course in physiology. (Does not carry credit in the Zoology major or minor.)

3990 Zoology Colloquium (1) Weekly discussions of contemporary interest. Open to sophomores, juniors, and seniors. Each Zoology major is required to take a minimum of one hour. Grading: S/NC. May be repeated. Maximum 3 hours.

4007-9-10-11-12-13-14-15-16-17 Minicourse in Zoology (2,2,2,2,2,2,2,2,2,2,2) Selected, advanced topics in zoology, concentrated in time and subject matter. Consult departmental listing for actual topics offered. Prereq: As posted. May be repeated for credit. Maximum 12 hours.

4050 Developmental Biology (4) Experimental morphology, fertilization, cellular interactions, hormonal effects, and related topics with examples drawn primarily from invertebrates and vertebrates. Prereq: 3050. 2 hrs. and 2 labs.

4110-20-30 Undergraduate Research Participation (2,2,2) Experience in active research projects under supervision of staff members. Prereq: Junior or senior standing and prior consent of instructor.

4140 Practicum in Zoology (1-3) Participation in practical application of zoology in community institutions, government organizations, and industry. Approximately 5 hours of involvement per week. Prereq: Biology 3110, 3120, 3130, and senior standing.

4190 Mammalogy (4) Classification, evolution, distribution, reproduction, populations, and behavior. 2 hours and 2 lab or field periods.

4200 Ichthyology (5) Classification, collection and identification, distribution, fish histories, and economic importance of fishes. Prereq: Biology 2130 or consent of instructor. 2 hours and 2 lab or field periods.

4210 Cell Physiology (5) Development of modern concepts in cell physiology from point of view of information and control which examines kinetics and integration of cellular activities. Prereq: Cell biology or any physiology, and organic chemistry. Biochemistry recommended. 3 lectures and 1 lab.

4250 Environmental Physiology (4) Survey of physiological mechanisms to animal ecology and to survival of animals in diverse environments. Prereq: Biology 3120-30, 2 years of chemistry.

4259 Comparative Animal Physiology Laboratory I (1) Coreq: 4250.


4269 Comparative Animal Physiology Laboratory II (1) Prereq: 3080 and consent of instructor; coreq: 4250.

4270 Immunology (3) (Same as Microbiology 4270.)

4280 Comparative Endocrinology (3) Comparative analysis of the physiology and morphology of endocrine glands in vertebrates and invertebrates. Their role and interaction in maintenance of the organism and species. Prereq: 3060 or equivalent. 3 hours and one 3-hour lab.

4290 Herpetology (4) Classification, distribution, life histories, collection, and identification of amphibians and reptiles, primarily of local species. 2 hours and 2 lab or field periods.

4300 Ornithology (4) Morphology, physiology, behavior, reproduction, populations, evolution, field identification. 2 hours and 2 labs or field periods.

4320 Microtechnique (4) 3320 recommended. 2 hrs. and 2 labs.

4330 General Cytology (4) Study of cellular organisms at the light and electron microscope levels and the functioning of these organisms. Prereq: Biology 3120.

4369 General Genetic Laboratory (2) Mainly Drosophila experiments designed to illustrate basic principles of inheritance. Prereq: Biology 3110. 2 labs.

4380 Organic Evolution (3) Modern concepts of animal evolution. Prereq: Biology 3110.

4390 Human Genetics (3) Principles and problems of inheritance in man. Prereq: Biology 3110.

4410 General Parasitology (4) Morphology, taxonomy, and ecology of parasitic worms and protozoa, with emphasis on host-parasite relationships. 3 hrs. and 1 lab. Prereq: Biology 3130 or consent of instructor.

4560 Introduction to Aquatic Ecology (4) Introduction to the physicochemical nature of the inland waters. Biotic communities are described and their interrelationships explored. Prereq: Chemistry 1110-20-30 and Biology 3190. 2 hrs. and 2 labs.

4700 Arachnology (4) Biology of spiders, mites, scorpions, and relatives. Prereq: 3110 or 3150. 2 hrs. and 2 labs.

4720 Comparative Animal Behavior (4) Methods and principles. (Same as Psychology 4720.)

4729 Comparative Animal Behavior Laboratory (4) Laboratory and field studies. Coreq: 4720 (Same as Psychology 4729.)

4810-20-30 Insect Morphology and Taxonomy (4,4,4) 4820—Taxonomy of major orders. 4830—Taxonomy of minor orders and immature forms. Prereq for 4820-30: 3110 or consent of instructor. 2 hrs. and 2 labs.

4940 Physiology of Exercise (4) Functions of body in muscular work; physiological aspects of fatigue, training, and physical fitness. Prereq: 2920-30 or 3080. 3 hrs. and 1 lab.

4990 Perspectives in Zoology (3) Critical analysis of selected readings in biology. Prereq: Senior standing.

GRADUATE
Consult the Graduate Catalog for listing of graduate level courses.