ENGLISH

101 English Composition I (3) Expressive, informative, and persuasive writing, with emphasis on invention, organization, style, and revision; practice in writing journals, letters, and reports, as well as expository and persuasive essays; intensive study of prose for meaning, ways of expressing meaning; conferences on individual writing problems. A,B,C,NC grading.

102 English Composition II (3) Analytical writing based on the study of literature and the study and practice of research and individual conferences. Prereq: 101. A,B,C,NC grading.

103 Writing Workshop (1) Self-paced laboratory course only for students remained to it at the beginning of the semester by their English Composition teachers. Individual instruction in grammar, mechanics, sentence patterns, and paragraph development. To receive credit, a student must participate at least two hours per week and must also pass the 101 class in which he or she is currently enrolled. Satisfactory/No credit grading.

118 Honors English Composition (3) Open only to those students selected on the basis of placement score and high school record. Grading scale and workload the same as regular sequence. Expository and analytical writing based on the study of literature and non-fiction prose; the study and practice of research writing; individual conferences. Students receiving a grade below B will complete the year's work in English composition by taking 102. Students receiving a grade of A or B will complete their freshman English requirements by choosing 102, a sophomore literature course in the English Department or 355. A,B,C,NC grading.

121 English Grammar Review for Foreign Students (4) Comprehensive review of English grammatical structures. Required during their first semester in the University of all foreign students who demonstrate on the English Placement Examination a need for work in English structures. Admission to this course is by the English Placement Exam only. Meets four hours a week. A,B,C,F, grading.

131 Composition for Non-Native Speakers of English (3) Paragraph and composition organization and development with emphasis on informative and persuasive writing. Includes grammar and mechanics. Individual conferences. Admission to this course is by the English Placement Exam only. A,B,C,NC grading.

132 Composition for Non-Native Speakers of English II (3) Writing based on reading and discussion. Emphasis on research techniques and writing research papers. Individual conferences. Admission to this course by the English Placement Exam only. A,B,C,NC grading.

201 British Literature I: Beowulf through Johnson (3) Major literary periods, custom-designed systems, equipment maintenance and control programs for hospitals. Ethical issues and professionalism in clinical engineering. Prereq: 271, E&CE 301.

248 Honors Introduction to Poetry (3) (Enriched section of 241 designed for students with a 3.25 or higher GPA.

251 Introduction to Poetry (3) Poetry as a distinct literary form. Emphasis on English and American authors. Critical tools necessary for reading poetry and fiction, combined with study of models and techniques.

252 Introduction to Drama (3) Critical tools for perceptive reading of plays texts.

253 Introduction to Fiction (3) 5-7 novels from the eighteenth through the twentieth centuries, with emphasis on American and English authors. Critical tools necessary for understanding and knowledge of American and English authors. Admission by permission of instructor.

258 Honors Introduction to Drama (3) (Enriched section of 252 designed for students with a 3.25 or higher GPA.

259 Honors Introduction to Fiction (3) (Enriched section of 253 designed for students with a 3.25 or higher GPA.

261 Introduction to Film Studies (3) Selected world cinema feature films. Critical techniques necessary for understanding and analysis of narrative cinema. Basic elements of film expression and contours of film history. Writing assignments.

301 British Culture to 1660 (3) English literature in the context of parallel developments in art, architecture, music, and social and intellectual history.

302 British Culture: 1660 to present (3) English literature in the context of parallel developments in art, architecture, music, and social and intellectual history.

306 Introduction to Shakespeare (3)

332 Women in American Literature (3) Women as writers and as subjects in American literature from its beginnings to the present. (Same as Women's Studies 332.)

333 Black American Literature and Aesthetics (3) Black American literature and aesthetics from 1860, with emphasis on cultural evaluations and the principles of being "American".

334 Film and American Culture (3) American films as both works of art and social documents. Relationship between the medium of film and American culture in the twentieth century. (Same as American Studies 334.)


355 Advanced Expository Writing (3) Strategies of writing on personal and academic subjects. Discussion of student and professional writing. Open to sophomores with instructor's consent.

363 Writing Poetry (3) Introduction to writing poetry.

364 Writing Fiction (3) Introduction to writing novels and short stories.

365 Writing Drama and the Screenplay (3) Introduction to writing one-act and full-length plays, as well as screenplays.

371 Foundations of the English Language (3) Phonology, morphology, and syntax of English. History of the English language to 1800. (Same as Linguistics 371.)
372 The Structure of Modern English (3) Survey of approaches—traditional, descriptive, and generative—transformational—to the structure of modern Eng.

376 Colloquium in Literature (3) Methods and objectives of literary study, conferences to plan student’s pro-

gram in major.

379 Literary Criticism (3) Historical survey of major works of literary criticism.

381 Introduction to Folklore (3) Essential terms and concepts in modern folklore-folk-life studies. Empha-

sis on North American materials: folktale, folksong, fable, folktale, folklore.

385 Literature of Adolescence (3) Reading of con-

temporary fiction and non-fiction written expressly for adolescents.

389 Literature of the English Bible (3) Types of litera-

ture in the Bible: legend, fable, history, biography, poetry, prophecy, apocalyptic. (Same as Religious Studies 369.)

401 Medieval Literature (3) Reading and analysis of selected medieval literary masterpieces in modern English.

402 Chaucer (3) Reading and analysis of the Canter-

bury Tales and Troilus and Cressyce in Middle English.

404 Shakespeare I: Early Plays (3) Shakespeare’s dra-

matic achievement before 1601. Selected plays from the romantic comedies (e.g., Twelfth Night), the

English histories (e.g., 1 Henry IV) and early tragedy (e.g., Hamlet).

405 Shakespeare II: Later Plays (3) Shakespeare’s dra-

matic achievement between 1601 and 1613. Selected plays from the great tragedies (e.g., Othello), the

problem plays (e.g., Measure for Measure), and the dramatic romances (e.g. The Tempest).

406 Renaissance Drama (3) English theatre between 1590 and 1646. Representative plays by Shake-

peare’s contemporaries (e.g., Marlowe, Webster, Jonson).

409 Spenser and his Contemporarys (3) Principal

achievements in prose and poetry of the first two-thirds of the seventeenth century such as the poetry of Milton, Donne, Marvell, and the prose of Browne, Bacon, Walton.

410 Milton, Donne and their Contemporaries (3) Prin-

cipal achievements in prose and poetry of the first two-thirds of the seventeenth century such as the poetry of Milton, Donne, Marvell, and the prose of Browne, Bacon, Walton.

411 Restoration and Eighteenth-Century Poetry and Poet-

ics (3) Dryden, Pope, Johnson, and their contemporaries with emphasis on major works such as Macleod, Rape of the Lock, Gulliver’s Travels, and Rasselas.

412 British Drama from 1660 to 1800 (3) Playwrights from Dryden and Wycherley to Goldsmith and Sheri-
dan, including formal developments such as heroic play, cynical comedy, affective tragedy, and exempla-

dary drama.

413 The Eighteenth-Century British Novel (3) Selected British novels from Defoe and Austen.

414 Romantic Poetry and Prose I (3) Emphasis on Wordsworth, Coleridge, and Blake, with readings from Lamb, De Quincey, and other prose writers.

415 Romantic Poetry and Prose II (3) Emphasis on Keats, Shelley and Byron, with readings from Hazlitt, Peacock, and other prose writers.

416 Victorian Poetry and Prose I (3) Emphasis on a broad variety of Victorian period, including romantic poets, the Pre-Raphaelites, Carlyle, Newman, and Mill.

419 Victorian Poetry and Prose II (3) Emphasis on authors such as Browning, Arnold, Hopkins, Hardy, Ruskin, Darwin, and Wilde.

420 The Nineteenth-Century British Novel (3) Major

novelists from Scott to Hardy.

421 Modern British Novel (3) Includes such authors as Lawrence, Joyce, Woolf.

422 Women Writers in England (3) Emphasis on the literary consciousness and works of British women writers in the nineteenth and twentieth centuries. (Same as Women’s Studies 422.)

431 Colonial, Federal, and Early National American Literature (3)

432 American Romanticism and Transcendentalism (3)

433 American Realism and Naturalism (3)

434 Modern American Literature (3) World War I to the present.

435 American Novel Before 1900 (3) From earliest sentimental novels through Brown and Cooper, and major figures to 1900, including Hawthorne, Melville, Stowe, Clemens, and James.

436 Modern American Novel (2) Authors such as Faulkner, Steinbeck, Welty.

441 Southern Literature (3) Southern writing from colonial period into the twentieth century, including frontier humorists, local color writers, and southern literary renaissance.

442 American Humor (3) Development of American humor from the early nineteenth century into the twen-
tieth century, with particular emphasis on Mark Twain.

443 Topics in Black Literature (3) Contents vary accord-

ing to particular genres, authors, or theories from the eighteenth century to the present, including Langston Hughes and the Harlem Renaissance, Richard Wright and Gwendolyn Brooks, writing by black women, international black literature in English, and Black American autobi-
obiography.

451 Modern British and American Poetry (3) From Yeats and Frost to Auden, Stevens, and more recent poets.

452 Modern British and American Drama (3) O’Neill’s works as precursors to modern dramatists, such as Williams, Miller, Albee, and representatives of Black theater, like Bullins and Baraka.

453 Continental Drama (3) Plays in English transla-

tion by major European writers from the late Renaissance to the present, with some emphasis on the twentieth-

century achievement.

454 Twentieth-Century International Novel (3) Such authors as Joyce, Camus, Kafka, Nabokov.

455 Persuasive Writing (3) Persuasive strategies in student and professional writing. Practice in master-

ing effectively a logical appeal.

456 Professional Writing (3) Principles and practices of writing for publication. Discussions, theses, ar-

ticles, and reports in science and technology.

459 Advanced Technical Writing (3) For students planning careers in industry, education, and government who need technical writing skills. Writing of definitions, process descriptions, sets of instruc-

tions, descriptions of mechanisms, recommendation reports, abstracts, proposals, and major reports.

460 Technical Editing (3) Editing technical material for publication. Principles of style, format, graphics, layout, and production management.

463 Advanced Poetry Writing (3) Development of skills acquired in basic Writing Poetry course.

464 Advanced Fiction Writing (3) Development of skills acquired in basic Writing Fiction course.

471 Sociolinguistics (3) Language in relation to soci-

ety. Environmental and theoretical focus. Emphasis on large-

scale units: tribes, nations, social groups. Prereq: 371 or 372 or Linguistics 200 or consent of instructor. (Same as Linguistics 471 and Sociology 471.)

472 American English (3) Phonological, morphologi-

cal, and syntactic characteristics of major social and regional varieties of American English with attention to their origins, functions, and implications for cultural pluralism. Prereq: 371 or 372 or Linguistics 200 or consent of instructor. (Same as Linguistics 472.)

474 Teaching English as a Second or Foreign Lan-

guage (3) Grammar and phonology with emphasis on particular grammatical difficulties of non-

native learners of English. Basic phonological struc-

tures of English. Teaching grammar and phonology to non-native speakers with some attention to con-

trastive analysis of English with other languages.

497 Senior Honors II (3) Admission by consent of a faculty member. Prereq: 499. (Same as Linguistics 479.)

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

499 Special Topics in Film (3) Content varies. Partic-

ular directors, film genres, national cinema movements, or other topics. May be repeated with consent of department. Maximum 6 hours.

506 Forest Protection (3) Biological, economic, and legal considerations of fire, pathogens, insects, ver-

tebrates, wind, and pollutants in the forest ecosystem.

321 Economic Entomology (3) Structure, life history, habits and principles of control of important insect
Forest/Courses of Instruction

FOOD TECHNOLOGY AND SCIENCE

140 The Food Industry (3) Role of the food industry in providing an adequate, safe food supply for the United States and international markets. Interaction of the food industry with governmental agencies and consumers. 2 hours and 1 lab. F

289 Meat Evaluation and Grading (2) Grading standards for beef and pork; principles for evaluating beef, pork and lamb; selection and purchase of meats for institutional meat cuts. Practice grading, judging carcasses and cuts, and application of purchase specifications. F

360 Meat Science (2) Carcass characteristics of meat animals, muscle structure and composition, cut identification, curing, freezing and cookery. Sp

365 Meat Science Lab (1) Slaughter and processing methods for beef, pork, lamb and poultry. Prereq: 360 or concurrent enrollment. Sp

401 Food Technology and Science Seminar (1-2) Review of scientific literature, oral and written reports. May be repeated: maximum 3 credit hours. Prereq: Senior standing or consent of instructor. F, Sp

410 Food Chemistry I (3) Reactions of proteins, enzymes, and additives in foods. Study of physiological-chemical interactions of food materials. Prereq: Chemistry 110 or equivalent. 2 hours and 1 lab. F

411 Food Chemistry II (3) Reactions of inorganic compounds, carbohydrates, lipids and vitamins in foods. Prereq: Chemistry 110 or equivalent. 2 hours and 1 lab. Sp

420 Food Microbiology (2) Physical, chemical and environmental factors moderating growth and survival of foodborne microorganisms; pathogenic and spoilage microorganisms; quality of foods and their control. Prereq: Microbiology 210. Coreq: 429. F


430 Sensory Evaluation of Food (3) Principles and methods of sensory evaluation of foods. Prereq: Basic statistics. 2 hours and 1 lab. Sp

440 Preservation of Food (3) Prevention of deterioration and spoilage of foods. Methods of preservation. Prereq: Agricultural Engineering Technology 422. 2 hours and 1 lab. Sp

450 Dairy Products I (3) Procurement, processing and distribution of milk. Manufacture of butter, frozen and condensed dairy products. Prereq: 140 or consent of instructor. 2 hours and 1 lab. Sp

451 Dairy Products II (3) Manufacture of cheese and specialized dairy products. Market standards and grades, product defects, scoring of dairy products. Prereq: 140 or consent of instructor. 1 hour and 2 labs. Sp

460 Meat Products Technology (4) Processing methods for making cured, smoked, fresh, frozen and formed products. Effect of processing on product characteristics. Prereq: 360 or consent of instructor; 3 hours and 1 lab. F

470 Food Crop Products (3) Food products from plants emphasizing types, manufacturing systems, quality attributes, and nutritional characteristics. 2 hours Biological Science. 2 hours and 1 lab. Sp-E

480 Cereal Science and Bakery Products (3) Chemistry and technology of processing cereal grains; interactions of ingredients during production and storage of baked products. Prereq: 410 or 411 or equivalent. 2 hours and 1 lab. F-O

493 Special Problems in Food Technology and Science (1-3) Research problems in student's area of interest. May be repeated; maximum 6 credit hours. Prereq: Consent of instructor. E

FORESTRY

321 Forest Recreation (3) Philosophical foundation of recreation; planning, development, and management of forest recreation resources; interpretation of forest recreation area. May be repeated. 2 hours and 1 lab. F

322 Applied Silviculture (3) Application of silvicultural techniques; tree improvement; use of herbicides; fire management. Prereq: Forestry, Wildlife and Fisheries 312. Coreq: 323, 324, 325, and Entomology and Plant Pathology 306. Sp


324 Forest Resource Analysis (3) Growth and yield prediction; harvest determination; goal setting under multiple use concepts; approaches to regulation; financial aspects of forestry with computer simulation. Prereq: Forestry, Wildlife and Fisheries 315. Coreq: 323, 324, 325 and Entomology and Plant Pathology 306. Sp

325 Forest Resource Inventory and Surveying (3) Volume and growth estimation; timber appraisal; surveying techniques; road layout and construction as applied to forestry; timber harvest techniques. Prereq: Forestry, Wildlife and Fisheries 315. Coreq: 323, 324, 325 and Entomology and Plant Pathology 306. Sp

331 Wood Properties and Uses (2) Fundamental structures, properties and uses of wood. Prereq: 110 or consent of instructor. Coreq: 332 for Forestry and Wood Utilization majors. 1 hour and 2 labs. F

341 Forest and Wildland Resource Economics (3) Production functions, supply-demand and market analysis; non-market programs and projects; economic analysis and decision making and investment and economic analysis; managerial economics; taxes; forest products marketing. Prereq: 324 or consent of instructor. F

342 Forest and Wildland Resource Policy (3) Policy formulation; criteria for policy determination; forest and wildland law and regulation; theory of conflict resolution; formal and informal resolution. Prereq: Senior standing. F

343 Forest Recreation Planning and Management (3) Planning processes, master and site planning, design projects; management strategies, methods of visitor and recreation site management; case studies. Weekend field trips may be required. Prereq: 311 or consent of instructor. Coreq: 331, 333. Forestry, Wildlife and Fisheries 313 or consent of instructor. Coreq: 323, 324, 325 and Entomology and Plant Pathology 306. Sp

344 Solid Wood Processing (3) Processing processes for solid wood products including sawmilling, secondary machining, drying and preservation. Prereq: 331 and 332, or consent of instructor. 2 hours and 1 lab. Sp

345 Pracitcum in Wood Products (2) Standard laboratory procedures used in the evaluation of wood and wood products. Plant visits including sawmills, pulp, plywood, floor, lumber, and furniture, composite panel, and wood products. Prereq: Forestry, Wildlife and Fisheries 313 or consent of instructor. 2 hours and 1 lab. Sp

346 Pracitcum in Wood Products (2) Standard laboratory procedures used in the evaluation of wood and wood products. Application of market principles and analysis to wood products markets and economic structure of wood products industry. Prereq: 341, 433 and Forestry, Wildlife and Fisheries 313, or consent of instructor. Sp

347 Wood Composites and Gluing (3) Principles of adhesion; wood adhesives; fundamentals of plywood and composite panel manufacture. Evaluating resin properties; testing bond strength and durability. Prereq: 331 and 332, or consent of instructor. 2 hours and 1 lab. F

348 Measurement and Marketing of Wood Products (3) Principles of market research and marketing of forest products. Prereq: 325 or consent of instructor. 2 hours and 1 lab. F

349 Field Trip to International Forestry Field Trip to International Forest. Prereq: 321 or consent of instructor. 2 hours and 1 lab. F

350 Research Experience in Forestry (1-5) Special research or individual problem in forestry. E
FORESTRY, WILDLIFE AND FISHERIES

211 Introduction to Forestry, Wildlife and Fisheries
(3)
History of natural resources policies and practices; social perspectives and attitudes concerning natural resources and their use; techniques of integrated natural resource management, ecological principles, current policies, social trends, and forest and wildland resource use. Day-long field trips may be required. Sp

250 Conservation (3)
Use and abuse of wildland resources. Historical perspectives and current management of forests, wildlife, and fish of North America including aspects of outdoor recreation and pollution problems. F

300 Current Issues in Renewable Natural Resources (1)
Study of problems associated with renewable natural resources and their use; techniques of integrated resource management plans and analyzing case studies including conflict resolution. Prereq: Senior standing. 1 hour and 2 labs. Sp

311 Dendrology/Ecology/Silvics (4)
Principles of plant identification, ecological principles, characteristics of forest and associated ecosystems. Prereq: 1 year of Botany or Biology. 2 hours and 2 labs. F

312 Silviculture (2)
Principles for treating forest stands to achieve selected objectives. Prereq: 311. Coreq: 313. 315. 1 hour and 1 lab. F

313 Measurements and Sampling (2)
Measurement techniques and sampling methods for vegetation, estimation of animal populations; map and aerial photo use. Prereq: Statistics 201. Coreq: 312. 315. 1 hour and 1 lab. F

315 Forest Soils and Watershed Management (3)
Soil information, properties, water relations and the basis for cation exchange, nutrient cycling, classification and management of forest soils. Hydrology and management of water in the forest ecosystem. Coreq: 312, 313, 2 hours and 1 lab. F

316 Principles of Forest and Wildland Management (3)
Land management tools and systems including planning use of forest resources, environmental impact statements and geographic information systems. Analysis of land management determinants - legal, institutional, economic and social. Theory and practice of management of organizations that administer and use forest and wildlands. Prereq: 211, 2 hours and 1 lab. F

317 Principles of Wildlife and Fisheries Management (3)
Ecological relationships of wild animals with other animals and their habitats. Biological, social and economic aspects of natural resource management. Coreq: 312, 313 and 315, or consent of instructor. F

416 Planning and Management of Forest and Wildland Resource (3)
Integrated forest and wildland resource management through developing land management plans and analyzing case studies including conflict resolution. Prereq: Senior standing. 1 hour and 2 labs. Sp

FRENCH

111-112 Elementary French (3)
Introduction to French. May not be repeated for credit by students with two years of high school or one year college French. Must be taken in sequence. Language Laboratory required.

211-212 Intermediate French (3)
Sequence stresses the reading, writing, listening, and speaking of French to prepare for upper division courses in the language. Must be taken in sequence. Language Laboratory required.

217-218 Honors: Intermediate French (3)
For students of superior ability in French. Incoming freshmen admitted on basis of diagnostic test; high school average, and performance on ACT. Classes held to a maximum of 15 for individual attention. Students follow enriched program with emphasis on speaking ability and reading, including literary selections. Students with a grade of A in 211 may enter 218 with permission of instructor. Credit for 300 given to students receiving a grade of A or B in the course.

291-292 French Literature in English Translation (3)
291-From the origins through the New Wave. The works of Roland, Rabelais, Montaigne, the Classical period, and Voltaire. 292-Diderot, 19th and 20th centuries; Flaubert, Remarque, Proust. May not be counted toward the major or minor.

300 French Transition (2)
Development of linguistic skills necessary for satisfactory work in courses above 300. Recommended for students who would benefit from additional training beyond 212 in basic skills of reading, speaking and writing French. May not be counted toward the major or minor.

301-302 Elements of French for Upper Division and Graduate Students (3)
Elements of language, elementary and advanced readings. Open to graduate students preparing for language examinations, and upper division students desiring reading knowledge of the language. Undergraduate credit only. Not for credit for those having had 111-112 or equivalent. No auditors.

311-312 History of French Literature (3)
Chronological view of French literature in relation to the specific historical developments that have influenced it. Prereq: 212, 218 or equivalent.

313 Aspects of French Literature (3)
Study of masterpieces from the great literary movements and countermovements. Prereq: 212 or equivalent.

324 Women in French Culture (3)
Role of women in shaping French history and culture. Feminists (George Sand), royal mistresses (Mme de Maintenon), intellectuals (Mme de Stael); actresses (Sarah Bernhardt), scientists (Marie Curie). Taught in English. May not be counted toward the major or minor. (Same as Women's Studies 324.)

341-342 Intermediate Composition and Conversation (3)
Grammatical analysis of modern French prose; review of grammatical principles and their application in translation from English to French, both written and oral; exercises in free composition. Prereq: 212, 218 or equivalent. Coreq: 343 may be applied toward the major, but not both.

345 French for Business (3)
Contemporary French language as it applies to business transactions. Understanding and composing business letters; oral communication and elements of French culture related to good business practices. Either 342 or 345, may be applied toward the major but not both. Prereq: 341 or consent of instructor.

400-401 Consecutive and Simultaneous French English (3)
.concurrent and simultaneous French English translation (3) 400- Consecutive Translation to and from English. Introduction to simultaneous translation to English. 401- Simultaneous translation to and from English, teaching of students with good knowledge of French for consecutive and simultaneous translation from French into English. Emphasis on written and oral presentation of such subjects as business, politics, science. Prereq. 342, 345 or equivalent. Preferably taken in sequence.

410 Medieval French Literature (3)
Major representative works of Medieval French Literature. Texts in modern French. Prereq: 212, 218 or equivalent. (Same as Medieval Studies 410.)

411 French Literature of the 16th Century (3)
Highlights of 16th century French literature. Excerpts from Rabelais, Montaigne; readings of poems from the writers from Lyon and members of the Pleiade. Prereq: 212, 218 or equivalent.

412 French Literature of the 17th Century (3)
Masterpieces of 17th-century French literature. Prereq: 212, 218 or equivalent.

413 French Literature of the 18th Century (3)
Major works of the Enlightenment. Prereq: 212, 218 or equivalent.

414 French Literature of the 19th Century (3)
Romanticism and its counter movements: Realism, Parnassianism and Naturalism. Prereq: 212, 218 or equivalent.

415 French Literature of the 20th Century (3)
Evolution of 20th century French literature. Prereq: 212, 218 or equivalent.

416 Survey of Francophone Literature (3)
Introductory to writing in French outside of France. Prereq: 212, 218 or equivalent.

419 Readings in French Literature (3)

420 French Cinema (3)
The French cinema from its earliest days through the New Wave directors. Prereq: 212, 218 or equivalent. Can be applied to major.

421 Phonetics (3)
The foundation of phonetics. Practical exercises and individual performance. Laboratory training highly recommended. Prereq: 212, 218 or equivalent.

422 Advanced Grammar (3)
Improving one's own style studying basic and more refined structures of the French language. Writing creative free-style compositions. Prereq: 342 or 345.

423-424 Advanced Conversation (1,1)
Informal conversation with native speaker on contemporary topics. Stress in class contact rather than outside preparation. Meets two hours a week for one semester credit. Prereq: 342 or 345.

425 Introduction to Descriptive Linguistics (3)
Phonetics and phonemics, morphology and syntax. Types of languages, linguistic groups, dialects, and dialect geography. Application of descriptive linguistics—field linguistics, dialect study. Its practical use in learning languages and in language teaching. Introduction to transformational grammar. Prereq: six hours of upper division English or six hours of upper division courses in a modern or ancient language (exclusive of German and French 391-302, courses in literature in translation, and general courses in Latin and Greek requiring no knowledge of these languages), or consent of department. (Same as German 425, Russian 425, Spanish 425 and Linguistics 425.)

426 Methods of Historical Linguistics (3)
(Same as Russian 426, German 426, Spanish 426 and Linguistics 426.)

429 Romance Linguistics (3)
Development of Classical Latin through Vulgar Latin into major Romance languages. (Same as Spanish 429 and Linguistics 429.)

430 Theatrical French (2)
Performance in one or more French plays. Prereq: 212, 218 or equivalent and consent of instructor. Can be applied to major.

431 Highlights of French Civilization (3)
Survey of French Civilization from the Gauls to World War II. Historical events, daily life, all forms of arts. Prereq: 212, 218 or equivalent.

432 Contemporary French Culture (3)
Contemporary civilization and culture since World War II. Problems, trends and organization of French society today. Prereq: 212, 218 or equivalent.

440 Capstone Experience in French (4)
Synthesizing senior colloquium and tutorial in which students reflect on the raison d'être of the discipline from a multidimensional point of view.

491 Foreign Study (1-15)
See page 97.

492 Off-Campus Study (1-15)
See page 96.

493 Independent Study (1-15)
See page 96.

GEOGRAPHY

101-102 World Geography (3)
Selected topics and world regions, especially those with problems or situations of contemporary interest, to illustrate geographical points of view, concepts, and techniques. Must be taken in sequence.

131-132 Geography of the Natural Environment (3)
Characteristics and processes of the earth's surface and lower atmosphere; the interaction to learn the world pattern of distinctive environments significant to humanity. Must be taken in sequence. 3 hours lecture and 2 hours lab per week. Not open to students who have taken 330.
107-208 Honors: Elementary and Intermediate German (6.6) Honors course for students of superior ability. Prerequisites: Fr. Freshman 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 A or above must be achieved in 107 in order to continue German 208. A student obtaining a grade of D or better in 107 may continue in German 208 with Instructor permission. Students returning to 101-102 and 201-202 and its completion allows the student to enter all 300-level German courses.

201-202 Intermediate German (3.3) Must be taken in sequence. Prereq: 102 or equivalent.

221-222 German Literature in Translation (3.3) Major works by German writers. Prerequisite: Consent of instructor. No foreign language credit. Writing emphasis in courses.

301-302 Introduction to German Literature (3.3) Prereq: 202 or equivalent. Need not be taken in sequence.

304 Elementary Dutch (3) Prereq: Reading knowledge of German. Primarily for graduate students in German. No graduate credit allowed.

305 Readings in German (3) 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. Prereq: 202 or equivalent.

311-312 Conversation and Composition (3.3) Prereq: 202 or equivalent.

325 Modern German Novel in English Translation (3) Great twentieth-century German novels, including study of novel theory and criticism. No foreign language credit.

326 German Drama in English Translation (3) German drama from the Enlightenment to the present, including study of dramatic theory and criticism. No foreign language credit.

331-332 Elements of German for Upper-Division and Graduate Students (3.3) Elements of language, elementary and advanced readings and a final 10,000 word translation project. Open to graduate students preparing for language examinations, and upper-division students desiring reading knowledge of the language. Undergraduate credit only. No credit for students who have completed 101-102 or 107.

363 Modern German Culture (3) German culture from the ninetieth-century to the present: customs, art, music, literature, sociology, state. Readings in English. No foreign language credit.

411-412 Advanced Conversation and Composition (3.3) Prereq: 311-312 or equivalent or consent of department.

420 Selected Topics in German Literature from 1750 to the Present (3) Prereq: 6 hours of courses excluding 331-332 and courses in English translation, or equivalent.

421 German Lyric Poetry (3) Prereq: 6 hours of courses excluding 331-332 and courses in English translation, or equivalent.

422 German Drama (3) Prereq: 6 hours of courses excluding 331-332 and courses in English translation, or equivalent.

423 German Narrative Prose (3) Prereq: 6 hours of courses excluding 331-332 and courses in English translation, or equivalent.

424 German Literary Movements (3) Major periods in the development of German literature since 1750, with emphasis on the problems and pitfalls of periodization.

425 Introduction to Descriptive Linguistics (3) (Same as Russian 425, French 425, Spanish 425, and Linguistics 425.)

426 Methods of Historical Linguistics (3) Phonetics, distinctive-features analysis, sound change types, nature of sound change, principles of reconstruction and fundamental assumptions about language change through time. Non-phonological linguistic change, language families, Proto-Indo-European and other proto languages. Prereq: 6 hours of upper division foreign language courses excluding courses in translation or graduate reading courses. (Same as Linguistics 435.)

435 Structure of the German Language (3) Contrastive English-German segmental and suprasegmental phonemes, contrastive English-German linguistic structures, selected topics in advanced German grammar and syntactic analysis. Prereq: 6 hours of upper division German language courses excluding courses in translation and graduate reading courses. (Same as Linguistics 435.)

485 Business German (3) German used in fields of business, government, administration and economics. Prereq: 6 hours of upper division German excluding courses in translation or graduate reading courses. (Same as Linguistics 435.)

491 Foreign Study (1-15) See page 97.

492 Off-Campus Study (1-15) See page 96.

493 Independent Study (1-15) See page 96.

GREEK

121-122 Beginning Greek (3.3) Must be taken in sequence.

261 Intermediate Greek: Grammar Review and Readings (3) Systematic review of Attic Greek and readings from selected authors. Prereq: 122.


401 Greek Poetry (3) Epic, lyric, drama. Authors vary. Prereq: 261.

402 Greek Prose (3) History, philosophy, and oratory. Authors vary. Prereq: 261.

405-406 Selected Readings from Greek Literature (3.3) For advanced students in Greek, the study of plays, the historical writings, the poetry of ancient Greece in the original Greek. May be repeated for credit. Maximum 9 hours. Prereq: 401-402 or consent of instructor.

HEALTH

110 Personal Health and Wellness (3) Information and behavior necessary to approach health and wellness scientifically and to develop confidence in judgments affecting personal health and wellness. E

200 Seminar in Human Sexuality (2) Problems and responsibilities of being male and female as they relate to health and wellness. Satisfactory/No Credit only. F, Sp

225 Alcohol/Drugs and the College Student (2) Problems related to use and abuse of substances potentially harmful to health and wellness. Covers alcohol, drugs, tobacco and other substances. Satisfactory/No Credit only. F, Sp

230 Cardiopulmonary Resuscitation (1) Theory and skills to implement basic cardiac life support following cardiac arrest due to such conditions as heart attack, drowning, electrocution, suffocation, poisoning, strangulation, and other accidents. Educational and preventive aspects of controlling cardiopulmonary disease. Leads to basic life support certification. F, Sp

300 Health Education, Promotion, and Behavior (3) Health education goals, roles, target populations in...
school, community and health care settings; health care professional roles; health behavior and intervention techniques; health appraisal techniques; health promotion strategies. F, Sp

305 The School in Community Health (2) Roles and responsibilities of teachers in school health programs. Nutrition, communicable disease, health problems of the school child, recognition and methods of handling them; healthful school environment; school health services. Prereq: Consent of department. F, Sp

306 Health Instruction in Elementary Grades (2) Topics appropriate for school-aged child in elementary grades. Organization and presentation of health content; development of health curricula; selection of teaching materials. F, Sp

310 Advanced First Aid and Emergency Care (3) Theory and practice of first aid and emergency care. Provides essential information for developing functional first aid capabilities of lay persons. Course leads to Advanced First Aid and Emergency Care Certification. Applicant must be at least 18 years old for certification. E

325 Planning, Evaluation and Administration of Health Programs (3) Organization of health programs in school, community and health care settings at public and private schools. Evaluation of health education and health promotion efforts. F

330 Wellness Through Health, Leisure and Physical Activity (3) Emphasis on teaching physical activities which make alcoholism a serious health and safety concern of women and techniques for prevention, diagnosis, and intervention programs. F, Sp

400 Consumer Health (3) Major consumer health care issues, content of sex education. F

403 Suicide and Crisis Intervention (3) Factors which make suicide a serious health problem. Assessment, intervention, and prevention techniques. Sp

435 Substance Use and Abuse (3) Drug and alcohol abuse problems and suspected causes; pharmacology of drugs and effects on society; strategies for intervention and prevention. Sp

465 Aging and Health (3) Aging process in a health perspective as it relates to health promotion and wellness of the aged. F, Sp

470 Special Topics (1-3) For advanced students, teachers, school administrators, nurses and other para-medical personnel. Prereq: Lectures, demonstrations, films, field trips, and supervised research in special health/wellness or health promotion issues. May be repeated. Maximum 12 hours. E

475 Directed Independent Studies (1-3) Individual identification and study of a health/wellness or health promotion problem/issue. Prereq: Consent of instructor. May be repeated. Maximum 12 hours. E

481 Internship I: Grades 7-12 (3-6) Methods and theories of teaching. Internship is completed in local public schools. Application for internship should be made upon admission to Teacher Education Program. Prereq: 410 and admission to Teacher Education Program. F, Sp

482 Internship II: Grades 7-12 (3-6) Demonstration of professional competence in planning, instruction, and classroom management. Internship is completed in local public schools. Prereq: 481 and admission to Teacher Education Program. F

483 Field Practice (8) Off-campus health internship or field practice in an educational or other agency with qualified professional. Prereq: Consent of instructor. E

510 Trends and Issues in Health Education (3) History, philosophy, principles, problems, and trends of health and health education. F

520 Sex Education and Human Sexuality (3) Educational and counseling techniques, materials to be used in school, community, or health care facility. Sp

530 Curriculum Development for Health Education Programs (3) Current health education curricula for elementary and secondary schools, community and health care settings. F, Sp

540 Evaluation in Health Education (3) Principles of evaluation of health instruction and programs in regard to health knowledge, attitudes, and behavior. Construction of instruments and criticism of existing instruments. Sp

HISTORY

151-152 Development of Western Civilization (3,3) Historical survey of the civilization of the western world. 151: Ancient world to 1715; 152: 1715 to present. E

157-158 Honors: Development of Western Civilization (3,3) Consent of department required. 157-F; 158-Sp

161-162 A History of World Civilization (3,3) Historical survey of world civilization. 161: Origins to 1500. 162: 1500 to 1900. F, Sp


221 Early Modern Europe, 1560-1800 (3) Dynamic intellectual and social development during which Europe witnessed religious disunity, economic disintegration and insecurity, political and social instability; totalitarianism; the origins of modern science, war and the witch craze. (Same as Religious Studies 315.)

231 Modern Europe, 1750-1914 (3) Political, industrial and intellectual revolutions against traditions. Topics such as the modern population explosion, urbanization, the political emergence of the middle class and the masses, nationalism, imperialism, rationalism and Romanticism in social thought and politics.

232 Contemporary Europe, 1900-1999 (3) The transformation of industrial society in the context of the transformation of the European nation-state. Topics such as war and depression and the consequent political and social instability; totalitarian control; the impact of Freud, Einstein and existentialism; welfare states; and the problems of European union.

231 New Testament Origins (3) (Same as Religious Studies 321.)

233-331 History of England (3,3) 330-331 History of England: 330-1607, 331-1660 to the present. Medieval, ecclesiastical and civil society; origin of Anglo-American law, the monarchy and parliamentary government, the Reformation, 17th Century revolts, commerce and industrial revolution; class conflict, empire, the welfare state, world wars, economic crisis.


234-335 History of Germany (3,3) 334-1815, 335-1919. The first Reich's Fortune and Failure. The development of the German lands, from the medieval empire to its disintegration, through dynastic and religious realignments, to the Austrian-Prussian dualism in the time of Frederick the Great and Maria Theresa, culminating in the Napoleonic and in the society of Bismarck. 335-1871 Germany, 336-1919 Germany, 337-Since 1919. The Quest for
and the failure of Africans in the south to achieve that goal. Issues of urbanization, industrialization, and for- mation of a national identity within the twentieth- century African context. (Same as Afro-American Studies 371-372)

373 Historical Issues (3) Broad, thematic issues in historiographical lecture-discussion. Especially suitable for non-majors: also open to majors.

374 The West and the Third World Since 1870 (3) Relationships between the West and Africa, Asia, and Latin America since 1870 across a broad spectrum of critical issues. Includes major and underdeveloped, ideologies in conflict with non-Western world views, and the search for individual identity. (Same as Afro-American Studies 270)

375 Revolutions in Historical Perspective (3) Comparative history of major revolutions which transformed political, social, and economic structures and values, such as those in France, Russia, China, Mexico, and Iran. Contrasts and common patterns in their causes, phases and outcomes. Relations between leaders and masses. Major theories of revolution.

376 History Behind the News (3) Contemporary analysis and the historical background of selected newsworthy events in North and South America, and the non-Western world. May satisfy history major requirements for only one course in this division. May be repeated by non-majors. Maximum 6 hours.

379 American Issues: Individualism and Community (3) Ways in which Americans have organized their lives so as to retain the benefits of individual and small group identity while seeking to achieve the pur- poses of society. Political, economic, social and moral goals. Topics include conflicting and competing tendencies toward laissez-faire and "Americanism" and ethnic identity.

380 American Issues: War and the Peaceable Ideal (3) Evolution of the dual tendency among Americans to express abhorrence to war and imperial conquests and, to engage in war and exercise economic or polit- ical domination over other peoples. Topics include relationship between leaders and followers, patterns and dissent, mobilization for war, and post-war atti- tudes.

407-408 Honors: Senior Paper (3,3) 407-Supervised reading, bibliographical search, conceptual clarification, research. 408-Organization and writing of the senior honors paper. Both are required of students working for honors in history.


432 Women in European History (3) Comparative analysis of the roles of women in Medieval, Renaiss- ance, and Victorian societies. May be repeated. Maximum 9 hours.

437 Latin America Since 1870 (3) Cross-cultural studies of Latin America and the non-Western world. May satisfy history major requirements for only one course in this division. May be repeated. Maximum 9 hours.

442 Indian-White Relations in United States History (3) Dilemma of two cultures existing side by side; background and formulation of official Indian policy; understanding of historic relations; Indian wars and campaigns; present-day relationships.

443-444 History of the South (3,3) 443-Old South from colonial period through the Civil War. 444-New South from Reconstruction through the Second Recon- struction.

445 The Afro-American Experience from the Colonial Period to the Present (3) Topics in 19th and 20th century Afro-American history, such as Pan-Africanism and the effect of education on the status of Blacks. (Same as Afro-American Studies 445.)

449 History of Tennessee (3) Tennessee's history from the 18th century to the present.

450 History of American Foreign Relations (3) Rise of United States to global power. Ideology of expansionism and United States response to challenges of autarchy, communism and third world nationalism.

451 United States Military History, 1754 to the Pre- sent (3) The nation's broad strategic aims and means used to attain them, shifting strategy, tactics and weaponry involved in wars, and relationships between American society and its armed forces. (Same as Mil- itary Science 430.)

452 The American Experience in World War II (3) Diplomacy and warfare in Europe and Asia and the impact of the war on American society. (Team-taught course)

453 Women in American History (3) Approaches of applied to American society. (Same as Women's Studies 453.)

454 Cities and Urbanization in American History (3) Origins, growth, and influence of American cities in development of the United States from colonial era to pre- sent. (Same as Urban Studies 454.)

472 Studies in Medieval Europe (3) Variable content. May be repeated. Maximum 9 hours.

473 Studies in Eastern Europe (3) Variable content. May be repeated. Maximum 9 hours.

474 Studies in Latin American History (3) Variable content. May be repeated. Maximum 9 hours.

475 Studies in Asian History (3) Variable content. May be repeated. Maximum 9 hours.

476 Studies in Urban History (3) Variable content. May be repeated. Maximum 9 hours.
480 Directed Study: Human Ecology (1-3) Topic arranged by individual student under supervision of faculty. May be repeated with different topic. Maximum 6 hours. Prereq: Junior or Senior standing in a major in the College of Human Ecology and consent of instructor.

HUMAN SERVICES

220 Introduction to Human Services (3) Focus on related societal values and contemporary issues in human services. Emphasis on the various promotional, protective, rehabilitative, counseling, and social casework roles and settings, and roles as students examine the complexities of human needs and social problems. Prereq: 420. Satisfactory/No Credit only. F, Sp

320 Peoples and Problems of Appalachia (3) Exploration of life style and institutions from contemporary human services point of view. Special emphasis placed on political and economic structures of region.

330 Thinking About People (3) Development of thoughtful, informed and empathetic attitudes toward human beings and those providing services as well as those receiving service. Prereq: Progression to the major.

420 Human Services Methodologies I (3) Basic helping skills essential to the effective delivery of Human Services. Prereq: Progression to the major or consent of instructor.

420 Information Interpretation and Assessment (3) Information gathering and assessment for human services are examined in depth in relation to human services practice. Formulating questions, identifying relevant data, using related resources, interpreting information and applying principles to the practical setting. Prereq: Progression to the major.

420 Human Services Methodologies II (3) Includes reality therapy, behavior modification, family systems, client-centered and rational emotive therapy. Discussion and role playing of methods and skills that will be used during the field experience. Prereq: Progression to the major, 220, 330. Coreq: 440. F

430 Working Within the System (3) Capstone Experience. Context within which the need for human services arises and analysis of the process through which services are provided. Prereq: Progression to the major, 330; senior standing or consent of instructor.

440 Human Services Field Work (6) Practical field experiences in appropriately organized and directed human services settings. Develops specific helping skills; involvement in roles and function of social services; and provides direct services in a supervised learning situation. For majors only. Prereq: Progression to the major, 220, 330. Coreq: 440. Satisfactory/No Credit only.

441 Human Services Field Work II (6) Practical field experiences in appropriately organized and directed human services settings. Develops specific helping skills; involvement in roles and function of social services; and provides direct services in a supervised learning situation. For majors only. Prereq: Progression to the major, 380, 420, 440. Satisfactory/No Credit only.

450 Special Topics in Human Services (3) Issues, methods, values, and trends with implications for helping practitioners, such as art therapy, legal and ethical issues, and self-awareness education. May be repeated. Maximum 9 hours.

451 Foreign Study (1-15)

452 Off-Campus Study (1-15)

453 Independent Study (1-15)

INTERIOR DESIGN

140 Introduction to Interior Design (2) Orientation to the profession; relationship to allied fields; contemporary developments; philosophical approaches.

150 Visual Studies (3) Classification and properties of two and three dimensional visual organization; design principles; visual and spatial elements within simple and complex visual systems; role of movement in experiencing scale and volumetric space.

200 Human-Environment Systems (3) Role of culture in defining environment; physical, social and conceptual aspects of human-environment system; impact of environment on human behavior, feelings and values; mutual-casual properties of behavior-environment systems. (Same as Urban Studies 260.) Sp

240 Fundamentals of Interior Design I (4) Principles of spatial organization; creative problem-solving and communication techniques for micro-environment; perspective drawing, model building, experimentation with various media. Prereq: 140, Art 172. F

250 Fundamentals of Interior Design II (4) Problem solving, spatial organization of micro environments, interaction of space, color and materials; solution, graphic, audio and photographic techniques. Prereq: 240. Sp

270 History of Interior Architecture I (3) Interior architecture, decoration and decorative arts within cultural context, ancient through seventeenth century. Emphasis on Italy, France and England. Prereq: one semester Art History. Sp

280 Micro-Computers for Interior Design (3) Electronic spreadsheets, word processing, and database management; data-base information to relate anthropology and philosophy to furniture dimensioning and specifications for maximizing design criteria, cost-estimating and management. Prereq: Consent of instructor. A, Sp

310 Survey of Interior Design (3) Planning and organizing interior spaces (rooms, apartments, residences) to meet personal and family housing needs; relation of furnishings to architectural space. Not open to Interior Design majors. Enrollment preference given to Home Economics Education and Furniture and Lodging Administration majors. A, Sp

315 Survey of Contract Interiors (3) Planning and organizing interior spaces for restaurants and lodging facilities; relation of furnishings to architectural space. Offered Fall and Spring in even years; A, F, Sp.

340-350 Intermediate Interior Design I, II (4.0) Studio problems of intermediate complexity; integrates and extends previous knowledge of working drawings, materials and sources, design methods, spatial organization and planning of micro and macro environments. Prereq: Third year in Interior Design; courses must be taken in sequence. F, Sp


370 History of Interior Architecture II (3) Interior architecture, decoration and decorative arts within cultural context, seventeenth through the nineteenth centuries; emphasis on France, England and America. Prereq: 270 or consent of instructor.

400 Proxemics (3) Analysis of spatial behavior; emphasis on cultural basis of spacing behavior. Prereq: 200 or consent of instructor. A, Sp

410 Environment as Code (3) Advanced theoretical issues in environment as a medium of human communication. Prereq: 200, 400 or consent of instructor. A, Sp

417 Honors: Interior Design I (1-4) Advanced research in interior design problems for juniors or seniors. May be repeated. Maximum 8 hours. Prereq: Consent of Interior Design faculty. Coreq: E, F.

420 Practicum for Interior Design (15) Supervised experience in a professional design firm; business practices, project management and design philosophy. Prereq: Third year in Interior Design, 260 and consent of instructor.

420 The Development of Historical Linguistics as a Science (3) Development of the scientific understanding of language change. Emergence of the Neogrammarians' paradigm from 19th-century intellectual trends. Impact of synchronic, descriptive, structural, and transformational-generative linguistics on contemporary diachronic theory. Prereq: 6 hours of courses required for Linguistics concentration or consent of instructor.

425 Introduction to Descriptive Linguistics (3) (Same as French 425, German 425, Russian 425, and Spanish 425.)

426 Methods of Historical Linguistics (3) (Same as French 426, German 426, Russian 426, and Spanish 426.)

429 Romance Linguistics (3) (Same as French 429 and Spanish 429.)


431 Directed Readings in Brazilian and Portuguese Literature (3) (Same as Portuguese 431.)

432 Directed Readings in Brazilian and Portuguese Literature (3) (Same as Portuguese 432.)

450 20th Century Hispanic Theater (3) (Same as Spanish 450.)

455 Latin American Government and Politics II (3) (Same as Political Science 455.)

471 Latin American Civilization (3) (Same as Spanish 471.)

472 Masterpieces of Spanish American Literature (3) (Same as Spanish 472.)

473-474 Survey of Spanish American Literature (3) (Same as Spanish 473-474.)

475 Studies in Latin American History (3) (Same as History 475.)

479 Social Protest Literature of Latin America (3) (Same as Spanish 479.)

LIBRARY AND INFORMATION SCIENCE
310 Finding Information: Resources and Strategies (3) Information as a critical resource for research and decision making, emphasis on planning and executing information searches and using library resources.
330 Books and Related Materials for Children (3) Materials for children in leisure time or classroom activities; criteria for selecting books, magazines, recordings, films and related materials; storytelling and other devices for encouraging reading. Undergraduate credit only. E

340 Books and Related Materials for Young People (3) Materials for teenagers in leisure time or classroom activities; criteria for selecting books, magazines, recordings, films and related materials; book talks and other devices for encouraging reading. Undergraduate credit only. Sp

430 History of the Book (3) History of writing and various methods of bookmaking from earliest times through the 19th century. Sp

475 Utilization of Instructional Media (3) Basic communication process, need for instructional media, instructional development, selection and utilization of basic media, and basic software production techniques. (Same as Educational Curriculum and Instruction 475.) E

LINGUISTICS
200 Language, Linguistics and Society (3) Introduction to linguistics with focus on language development and use of language by individuals and groups. Prereq: Completion of Freshman English or equivalent.
371 Foundations of the English Language (3) (Same as English 371.)
372 The Structure of Modern English (3) (Same as English 372.)
400 Topics in Linguistics (3) Content varies. May be repeated. Maximum 6 hours.
411 Linguistic Anthropology (3) (Same as Anthropology 411.)

431 Personnel Management (3) Theory, methods and issues pertaining to successful personnel management. Prereq: 301, senior standing.

432 Implementation and Evaluation of Personnel Programs (3) Methods of identifying, developing, implementing and evaluating personnel programs. Prereq: 431, senior standing.


461 Database Management in Business (3) Application, logical structure, and implementation of database systems. Management of data resources to effectively support information systems in organizations. Prereq: Computer Science 261.

471 International Management (3) Factors significant to the manager in international business activities.


493 Independent Study I (3) Research, readings, and special projects. Prereq: Consent of instructor. May be repeated one time for credit.

MARKETING
301 Marketing Management (3) Institutions comprising the marketing system; principal environmental opportunities and constraints facing the marketing manager. Prereq: Economics 201.

310 Buyer Behavior - Analysis for Marketing (3) Comprehensive framework of consumer behavior concepts and processes. Application to market analysis, design and control of marketing programs. Prereq: 301.

320 Marketing Research and Information Planning (3) Marketing Research process from its inception to implementation of study's results. Students should be able to critically evaluate the merit of a research project, as well as possess the ability to design a sound marketing project. Major writing requirement. Prereq: 301 and Statistics 201.

420 Promotion Management (3) Principles and practices of promotion management and their relationship to overall marketing program. Managerial focus emphasizing types of decisions continually confronting promotion executives. Prereq: 301.

430 Marketing Analysis and Strategy (3) Approaches for finding markets and evaluating them for opportunity. Concepts, types of information and analysis techniques combined into a strategy for strategic decisions. Major writing requirement. Prereq: 301 and 320.

440 Organizational Psychology (3) (Same as Psychology 440.)

493 Independent Study I (3) Directed research on subjects of mutual interest to student and staff member. Prereq: Consent of instructor.

497-498 Honors I & II (3,3) Topics may include non-business marketing applications, macroenvironmental issues, market segmentation, international marketing, services marketing, marketing channels and related issues. Prereq: Consent of instructor.

MATHEMATICS
110 Algebraic Reasoning (3) Algebraic functions, their properties and uses, including applications in financial mathematics and other areas. No student who has earned a grade of C or better in any Mathematics course numbered 121 or higher may subsequently receive credit in 110. Prereq: Two years of algebra and one year of geometry in high school.

115 Statistical Reasoning (3) Introduction to probability and statistics without calculus. Not available for credit to students in the College of Business Administration. Prereq: Two years of algebra and one year of
geometry in high school, plus satisfactory placement
test scores, or 110, or 130.
122 Calculus B (3) Sequel to 121, including element-
ary matrix algebra, multivariable calculus, and optimization.
No student who has received credit for 241 or 251 may subsequently receive credit for 122. Prereq: 121, or 141, or 151.
130 Precalculus (4) Review of algebraic, logarithmic,
and trigonometric functions for students who satisfy the course prerequisites for 141 or 151, but whose placement test scores indicate additional preparation is necessary. Students who have earned a grade of C or better in 141 or 151 may subsequently receive credit for 130. Prereq: Two years of algebra, a year of geometry, and half a year of trigono-
metry in high school. Students who did not study trigonometry in high school may take the noncredit course in trigonometry simultaneously with 130.
141-142 Calculus I, II (4,4) Standard first-year course in single variable calculus, especially for students of sciences. Concepts, definitions, and computations. Differential and integral calculus with applications. Credit will not be given for both 141 and 151. Prereq: Two years of algebra, a year of geometry, and half a year of trigonometry in high school, plus satisfactory placement test scores, or 130.
143-144 Microcomputer Laboratory (1,1) Optional sup-
plementary laboratory featuring computer demonstrations and projects. Coreq: Students registering for one of these lab courses must also be registered for the corresponding calculus course.
147-148 Honors: Calculus I, II (4,4) Honors version of 141-142 for well-prepared students. Qualified stu-
dents are usually invited to enroll, but inquiries from other students having excellent high school mathe-
matics backgrounds are welcome.
151-152 Biocalculus I, II (3,3) For students majoring in the life sciences. Topics from calculus, including geometri-
cal, logarithmic, and exponential functions, probability and statistics, with emphasis on applications to the life sciences. Credit will not be given for both 141 and 151. Prereq: Two years of algebra, a year of geometry, and half a year of trigonometry in high school, plus satisfactory placement test scores, or 130.
200 Matrix Computations (1) Introduction to matrix cal-
culations, including determinants, eigenvalues and eigenvectors. For students in the College of Engi-
neering and College of Business Statistics of different levels. No student who has received a grade of C or better in 200 may not subsequently receive credit for 200. Prereq: 141-142.
221-222 Discrete Mathematics I, II (3,3) Logic, sets,
combinatorics and probability, functions and rela-
tions, induction and recursion, elementary number theory. Prereq: 141 or 151.
231 Differential Equations I (3) First course, empha-
sizing solution techniques. Includes first-order equations and applications, theory of linear equations, exist-
ence with constant coefficients, Laplace transforms, and series solutions. Prereq: 141-142.
241 Calculus III (4) Calculus of functions in two or more dimensions. Includes solid analytic geometry, partial differentiation, multiple integration, and selected topics in vector calculus. Prereq: 141-142.
243 Microcomputer Laboratory (1) Optional supple-
ment to 241, featuring computer demonstrations and projects. Coreq: 241. Students registering for 243 must also be registered for 241.
247 Honors: Calculus III (4) Prereq: 147-148 or invi-
tation of the department.
251 Matrix Algebra I (3) First course in the algebra of simultaneous linear equations and matrices. Includes
Gaussian elimination, determinants, vector spaces, linear transformation, eigenvalues, and eigenvect-
ors. Prereq: 141-142.
253 Microcomputer Laboratory (1) Optional supplement to 251, featuring computer demonstrations and projects. Coreq: 251. Students registering for 253 must also be registered for 251.
257 Honors: Matrix Algebra I (3) Prereq: 147-148 or invitation of the department.
233 Probability I I (3) Elementary combinatorics; dis-
crete probability spaces, conditional probability and stochastic independence; discrete and continuous random variables; binomial, Poisson, uniform and normal, joint distributions and characteristics functions; elementary treatment of laws of large numbers and the central limit problem. Prereq: 241.
341 Analysis I (3) Introduction to the theory of the real number system, limits of sequences, and func-
tions of a real variable. Prereq: 241.
351 Algebra I (3) Introduction to abstract algebra, emphasizing integers and polynomial rings. Prereq: 221 and 251.
371 Numerical Algorithms I (3) Selection of algo-
rithms and associated library software for problems selected from roots of equations, systems of linear equations, eigenvalue problems, numerical inte-
grolation, numerical methods for ordinary and partial differen-
tial equations, including stiff systems. Prereq: 221 and knowledge of a high level programming language, such as FORTRAN. Credit will not be given for both 371 and Basic Engineering 201.
399 Studies in Mathematics (3) May be repeated. Maximum 5 hours. Prereq: Consent of instructor.
400 History of Mathematics (3) Development of math-
ematics from ancient to modern times. Prereq: 241 or 151.
401 Mathematics and Microcomputers (3) Primarily for students seeking certification as mathematics teach-
ers at the secondary level. The use of microcomputers to study concepts and problems in mathematics. Does not satisfy major requirements for a B.S. or M.S. in mathemat-
ics. Term paper required. Prereq: 141-142 or equivalent.
404 Applied Vector Calculus (3) Topics from mul-
tivariable and vector calculus including line and surface integrals, the divergence theorem and the theorems of Gauss and Stokes. Prereq: 241.
405 Models in Biology (3) Difference and differential equation models of biological systems. Prereq: 141, 221 or 504.
411 Undergraduate Research Participation (1-3) Expe-
rience in active biomedical research projects under the supervisi-
ion of faculty. Students in pre-medicine and other biology majors may conduct their own research projects within designated areas. Prereq: 141 or senior standing; prior consent of faculty member. May be repeated. Maximum 9 hours. Prereq: Consent of instructor.
447-448 Honors: Advanced Calculus I, II (3,3) Honors version of 445-446. Prereq: 341 or consent of instruc-
tor.
457-458 Honors: Abstract Algebra I, II (3,3) Honors version of 455-456. Prereq: 351 or consent of instruc-
tor.
460 Geometry (3) Axiomatic and historical development of neutral, Euclidean, and Hyperbolic geometry stressing proof technique and critical reasoning. Models of Non-Euclidean geometries. A term paper required. Prereq: 141-142 and 221, or consent of instructor.
461 Topology (3) Includes topology of line and plane, separation properties, compactness, connected-
ness, continuous functions, homeomorphisms, continua, and topological invariances. Prereq: 341 or consent of instructor.
471 Numerical Analysis I (3) Introduction to computa-
tion, instabilities, and rounding. Interpolation and approximation by polynomials and piecewise poly-
nomials. Quadrature and numerical solution of initial and boundary value problems of ordinary differential equa-
tions, including stiff systems. Prereq: 371. (Same as Computer Science 471.)
472 Numerical Algorithms (3) Direct and iterative meth-
ods for systems of linear equations. Solution of a single linear equation or set of linear equations using Gauss elimination, iterative methods, and con-
ceptual decompositions, least squares and the algebraic eigenvalue problem. Prereq: 371. Recommended: 483. (Same as Computer Science 472.)
490 Readings in Mathematics (1-3) Open to superior
students with consent of department head. Indep-
endent study with faculty guidance. May be repeated. Maximum 6 hours. Prereq: Agreement of faculty mentor to supervise independent work.
491 Seminar in Mathematics (1-3) Students must reg-
ister for the number of credit hours announced for a particular seminar. May be repeated. Maximum 6 hours. Prereq: Consent of instructor.

MEDICAL BIOLOGY

410 Laboratory Safety Education (2) Preparation for

 laboratories of teacher education. Problems of flamm-
ibles, corrosive chemicals, isotopes, pathogens, poisons, and equipment will be discussed. Tech-

niques of safe operation and handling will be presented.

411 Undergraduate Research Participation (1-3) Expe-

rince in active biomedical research projects under the supervisi-

ion of faculty. Students in pre-medicine and other biology majors may conduct their own research projects within designated areas. Prereq: 141 or senior standing; prior consent of faculty member. May be repeated with consent. Maximum 9 hours. Satis-

factory/No Credit only.
MEDICAL TECHNOLOGY


420-421 Clinical Chemistry (4,4) Clinical aspects of biochemistry, including overview of principles and instrumentation with emphasis on practical laboratory application of analytical procedures, specimen collection and handling, significance of results, and quality assurance. Includes blood gas analysis, including radiommunooassay, and analysis of blood and other body fluids for enzymes, hormones, and other constituents of clinical interest, utilizing both automated and manual techniques.

430-431 Hematology and Clinical Microscopy (4,4) Principles, theories, and instrumentation related to qualitative and quantitative evaluation of cellular elements of blood and other body fluids; factors of hemostasis, quantitative chemical analysis of urine, and renal function studies. Emphasis on microscopic identification of cells and the significance and correlation of laboratory data.


450 Clinical Serology and Immunology (1) Performance and interpretation of broad range of clinical serological and immunological tests. Emphasis on principles and clinical correlation. Formal lecture series included.

460 Nuclear Medicine (1) Physical characteristics, detection and use of short half-life radioactive materials for in vivo diagnostic medicine. Principles and theory of in vitro procedures such as radiommunooassay which utilize radioisotopes.

470 Orientation and Basic Techniques (1) For facilitation of students from campus to hospital community and clinical laboratory. Introduction to medical terminology, ethics, and health team concept. Orientation to basic techniques including procedures for collection and handling of specimens, principles of operation of many laboratory instruments, review of laboratory math, and introduction to quality control procedures. PORTION OF COURSE EXTEND OVER SEVERAL SEMESTERS.

480 Principles of Supervision and Education in Medicine (1) Seminars in basic principles of management, supervision, and education theories and methods. Comprehensive examination covers entire course.

MEDIEVAL STUDIES

201 Medieval Civilization (3) Introduction to basic themes in medieval experience, approached from interdisciplinary points of view and including philosophy and religion, art and architecture, language and literature, social and political history.

261 Medieval Culture: Readings from the Early Middle Ages, 500-1000 (3) Critical analysis and interpretation of selected works from the early medieval period. Focuses on major types of literature produced during the period 500-1000 A.D., e.g., cultural, religious, romantic traditions. Includes Homeric tales, Confessions, Beowulf, Consolatio, St. Gregory's Life of St. Benedict, The Life of Charlemagne, etc.

262 Medieval Culture: Readings from the Later Middle Ages, 1000-1500 (3) Critical analysis and interpretation of selected works from the later medieval period. Focuses on romantic, allegorical and mystical writings from the high and later Middle Ages, e.g., the Song of Songs, the works of the in the St. Bernard's Commentary on the Song of Songs. Peter Abelard's History of My Calamity. Should be taken in sequence with 261.

312-313 Medieval History (3,3) (Same as History 312-313)

322 Medieval Philosophy (3) (Same as Philosophy 322)

371 Early Christian and Byzantine Art, to 1500 (3) (Same as Art 371)

372 Northern European Painting, 1350-1600 (3) (Same as Art 372)

381 Medieval Art of the West, 800-1400 (3) (Same as Art 381)

382 The Art of Italy, 1250-1450 (3) (Same as Art 382)

401 Dante and Medieval Culture (3) (Same as Italian 401)

402 Petrarch and Boccaccio (3) (Same as Italian 402)

403 Seminar in Medieval Studies (3) Interdisciplinary treatment of selected topics. Content varies. May be repeated.

410 Medieval French Literature (3) (Same as French 410)

415 Medieval Architecture (3) (Same as Architecture 415)

475 Ancient and Medieval Political Thought (3) (Same as Political Science 475)

MICROBIOLOGY

200 Microbiology for Student Nurses (3) Only for 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.

210 General Microbiology (3) General properties of bacteria and viruses including physiology, metabolism, genetics, applied bacteriology, pathogenesis, and immunity. May not be used as part of the major in microbiology. 2 hours and 2 labs.


319 Introductory Microbiology Laboratory (1) Basic techniques for the examination, cultivation, and identification of microorganisms. Coreq: 310, F, Sp.

400 Laboratory Problems in Microbiology (2-4) Research projects under the direction of a faculty member. May not be used for credit toward requirements for a major. May be repeated for credit up to 9 hours. Satisfactory/No Credit only. Prereq: Consent of instructor. E

410 Physiology and Genetics of Bacteria (3) Modern concepts of the structure and function of the bacterial cell, including metabolism, energy flow, and the transmission and expression of genetic information. Prereq: 310.

419 Bacterial Physiology and Genetics Laboratory (1) Laboratory exercises designed to accompany 410. Coreq: 410.

420 Pathogenic Bacteriology (3) Disease producing microorganisms including bacteria, rickettsia, and chlamydia. Prereq: 310.


430 Immunology (2) Principles of inflammation and immunity. Includes theories of formation and diversity; complement, hypersensitivities; cell cooperation and recognition in immunity; mechanisms: soluble factors. Prereq: Biology 220. (Same as Zoology 430).

439 Immunology Laboratory (1) Laboratory exercises designed to accompany 430. Coreq: 430. (Same as Zoology 430).


480 Mycology (3) Morphology, physiology, genetics, and taxonomy of yeasts and molds; pathogenesis of disease-causing fungi. Prereq: 310.

489 Mycology Laboratory (1) Laboratory exercises designed to accompany 480. Coreq: 480.

491 Foreign Study (1-15) See page 97.

492 Off-Campus Study (1-15) See page 96.

493 Independent Study (1-15) See page 96.

495 Senior Seminar (3) In-depth consideration of microbiological problems of current interest requiring an in-depth treatment of two or more disciplines. Emphasis on original literature and the experimental basis of current knowledge. Historical background, impact on society, predictions for the future. Prereq: senior standing. May be taken as pass/fail only. May be repeated for a maximum of 12 hours.

MILITARY SCIENCE

110 Basic Military Science (2) Formation and functioning of the American defense establishment, customs and traditions of the army, application of the principles of war, and current military threats faced by the United States. Introduces military skills of marksmanship and mountaineering. Prereq: United States citizen; freshman or sophomore standing. Students with higher standing require consent of instructor. Letter grade only. F, Sp.

120 Leadership Development Techniques (2) Introduction to basic leadership theory, human motivation theory, and principles of efficient and effective communications. Application of theories and principles in individual and group exercises. Prereq: 110 or consent of the Professor of Military Science. Letter grade only. F, Sp, Su.

200 Basic Military Studies - Practicum (4) 240 contact hours of instruction and evaluation at Fort Knox, Kentucky, over a six-week period during the summer. Prereq: United States citizen; physically qualified; at least sophomore standing with two years remaining at the University (whether or not graduate, graduate or in pursuit of additional course work; cumulative GPA 2.00 or above; legally qualified. Letter grade only. Su.

210 Basic Military Leadership (2) Preview of the leadership job with practical exercises in leadership principles and skills. Performance based program. Prereq: 110 or consent of the Professor of Military Science. Letter grade only. F, Sp, Su.

220 Basic Officer Skills (2) Small unit operating techniques to include tactics, team operations with military equipment, land and sea navigation, and first aid. Prereq: 110 or consent of the Professor of Military Science. Letter grade only. F, Sp, Su.

210 Advance Military Studies I (4) Advanced leadership including operation of the military team, electronic communications, land navigation, small unit leadership, internal defense development, field trip, and leadership laboratory. Philosophy of organization and organization of military in tactical and administrative roles. Prereq: United States citizen; minimum of 30 credit hours passed and have at least two years remaining to complete degree (undergraduate or graduate); physically qualified; cumulative GPA 2.00 or higher; legally qualified; under thirty years age at time of commissioning; 3 or 4 years of JROTC (or) 110, 120, 210, 220 completion (or) 220 completion (B) Basic training
164 Courses of Instruction/Music Education

Completion (or) regimented course structure of 310, 320, 200, 410, 420, 400. Letter grade only. 3 hours and 1 hour lab. F

320 Advance Military Studies II (4) Applied leadership including operation of the military team, electronic communications, land navigation, small unit leadership, internal defense development, four field trips, and leadership laboratory. Philosophy of organization and control. Military ethical and administrative roles. Prereq: 310 or consent of instructor. Letter grade only. 3 hours and 1 hour lab. Sp

400 Advance Camp-Practicum (4) 249 contact hours of supervision and evaluation at Ft. Lewis, Washington during the summer between the Junior and Senior years. Prereq: 310, 320. Letter grade only. Su

410 Command and Staff Functions (4) Command and staff duties and relationships including logistics, personnel systems, efficiency reports, correspondence, training management, briefings, counseling, strategic force positioning, and non-commissioned officer relationships. Prereq: 310 and 320, 410 or consent of instructor. Letter grade only. 3 hours and 1 hour lab. Sp

420 Military Ethics and Law (4) Military profession, ethics, technical skills, military ethics, military justice system, individual leadership, Law of Land Warfare. Prereq: 310, 320 and 400 or consent of instructor. Letter grade only. 3 hours and 1 hour lab. Sp

430 U.S. Military History, 1754 to the Present (3) (Same as History 451.)

MUSIC EDUCATION

210 Class Woodwind Methods (3) Structure, use, techniques of playing, care and repair of principal instruments in school instrumental organizations. Emphasis on current instructional materials. Letter grade only. F

220 Class Brass Methods (3) Structure, use, techniques of playing, care and repair of principal instruments in school instrumental organizations. Emphasis on current instructional materials. Letter grade only. F

230 Class Percussion Methods (3) Structure, use, techniques of playing, care and repair of principal instruments in school instrumental organizations. Emphasis on current instructional materials. Letter grade only. F, Sp

300 Music for Elementary Teachers (2) Singing, rhythmic activities, instrumental activities, listening, music reading, and creative activities appropriate for the elementary grades. For elementary education majors only. Prereq: Admission to Teacher Education Program. Letter grade only. F, Sp

310 Conducting I (3) Basic skills of conducting: baton, time-beating of traditional patterns, preparatory beat, cut-offs, cueing. Achievement of the left hand, fermata, subdividing. Mechanics of full score. Video tapes of great conductors. Conducting "live" groups. Video tapes of each student conductor. Prereq: Two years of music theory or consent of instructor and admission to Teacher Education Program. Letter grade only. F

320 Conducting II (3) Developing advanced baton technique. Multiple rhythms, modern beat patterns and their variations. Studying, analyzing, and interpretation of the full score. Conducting in advanced works. Prereq: Consent of instructor and admission to Teacher Education Program. Letter grade only. F

330 Music Methods for the Elementary School (3) Methods and materials for teaching music in the elementary grades. Primarily intended for music education majors. Prereq: Consent of instructor and admission to Teacher Education Program. Letter grade only. F

350 Field Experience in Music Education (1) Prereq: Consent of instructor and admission to Teacher Education Program. May be repeated. Maximum 3 hours. Satisfactory/No Credit only. E

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

420 Music Methods for the Junior High School and Middle School (3) Methods and materials for teaching vocal, instrumental, and general music at the junior high school or middle school level. Prereq: 410 and admission to Teacher Education Program and consent of instructor. Letter grade only. Sp

430 Music Methods for High School (3) Methods and materials for vocal and instrumental music at the high school level, including charting for the marching band. Prereq: Admission to Teacher Education Program and consent of instructor. Letter grade only. F

450 Eurhythmics (3) Principles and practice of eurhythmics, as developed by Emile Jaques-Dalcroze. Prereq: Consent of instructor. Letter grade only. F

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

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

490 Special Topics in Music Education (3) Prereq: Consent of instructor. May be repeated. Maximum 9 hours. Letter grade only. E

493 Independent Study in Music Education (2-9) Prereq: Consent of instructor. May be repeated. Maximum 9 hours. Letter grade only. E

495 Advanced Music Methods for Elementary Teachers (3) Continuation and amplification of the concepts and skills covered in Music Education 300. Intended for Elementary Education majors. Prereq: 300 or consent of instructor. Letter grade only. Sp

MUSIC ENSEMBLE

301-501 Woodwind Choir (1,1) May be repeated. 303-503 Small Jazz Ensemble (1,1) May be repeated. Maximum 12 hours.

304-504 Jazz Ensemble (1,1) May be repeated. 305-505 Studio Orchestra (1,1) May be repeated. Maximum 12 hours.

306-506 Trombone Choir (1,1) May be repeated. 309-509 Tuba Ensemble (1,1) May be repeated. 310-510 Percussion Ensemble (1,1) May be repeated. 311-511 Marimba Choir (1,1) May be repeated. 312-512 Baroque Ensemble (1,1) May be repeated. 313-513 Synthesizer Ensemble (1,1) May be repeated. 314-514 Brass Choir (1,1) May be repeated. 315-515 Chamber Music Ensemble (1,1) May be repeated. Maximum 12 hours. 320-520 UT Singers (1,1) May be repeated. 330-530 Chamber Singers (1,1) May be repeated. 332-532 Collegium (1,1) May be repeated. 334-534 Saxophone Choir (1,1) May be repeated. 340-540 Opera Theatre (1,1) May be repeated.

342-542 Opera Workshop (1,1) May be repeated. 350-550 Concert Band (1,1) May be repeated. 352-552 Campus Band (1,1) May be repeated. 354-554 Varsity Band (1,1) May be repeated. 356-556 Laboratory Band (1,1) May be repeated. 359-559 Marching Band (1,1) May be repeated. 370-570 Symphony Orchestra (1,1) May be repeated. 380-580 Concert Choir (1,1) May be repeated. 382-582 University Chorus (1,1) May be repeated. 383-583 Men's Chorus (1,1) May be repeated. 389-589 Women's Chorus (1,1) May be repeated. 399-599 Accompanying (1,1) May be repeated.

MUSIC GENERAL

100 Fundamentals of Music (3) Theory and practice of basic elements of music.

110 Music Appreciation (3) Developing listening skills and understanding of Western music from the ancient world through the 20th century. For non-music majors.

120 History of Rock (3) Study and appreciation of rock music, its origins in blues and rock and roll, its development and cultural dimensions to the present.

130 Music Performance (3) Individualized course of study combining participation in a University musical ensemble with collaborative study of an instrument or voice. One hour of applied study (Music Performance 103-440) and ensemble rehearsals as scheduled (Music Ensemble 301-389). May be repeated once for credit. Requires payment of Applied Music fee. For non-majors only. Prereq: Performing ability on an instrument or voice.

200 Solo Class (6)

301 Junior Recital (0)

401 Senior Recital (0)

411 Lecture Recital (0)

421 Special Topics in Performance (1-3) Prereq: Consent of department head. May be repeated. Maximum 4 hours.

431 Special Topics in Pedagogy (1-3) Prereq: Consent of department head. May be repeated. Maximum 4 hours.

MUSIC HISTORY

200 Introduction to Music Literature (3) Basic forms of music and accepted masterworks through chronological approach. For music majors and minors only.


310 Introduction to Afro-American Music (3) History of African music, blues, gospel music, and jazz with emphasis on Black artists and their contributions. (Same as Afro-American Studies 310.)

330 Women in Music (3) History of women in music from the Middle Ages to present as composers, performers, educators, and patrons. (Same as Women's Studies 330.)

350 History of Jazz (3) Origin, development, and styles of jazz music and its exponents. Cultivation of special listening techniques. (Same as Afro-American Studies 350.)

390 World Music (3) Basic attitudes and techniques of ethnomusicology. Survey of music cultures throughout the world, with emphasis on the Pacific, Near East, Asia, and Europe.
Music History Survey (3) History of music with emphasis on genres, style changes, and cultural forces. Western European tradition from 400 to 1500. Recommended as a review course for graduate students. Prereq: Consent of instructor.

Music History Genre (3) Topics vary. May be repeated for credit. Maximum 6 hours.

History of Opera (3) Dramatic, vocal, and orchestral elements in opera of Italian, French, and German schools. 1600-present.

Symphonic Literature (3) Survey of literature for orchestra from Baroque to the present, with emphasis on the evolution of the symphony.

Music of North America (3) Folk and art music of the United States and Canada from colonial times to the present.

Composer Seminar (3) Life and works of a single composer. Subjects vary.

Music Aesthetics (3) Nature of music and musical experience, sense perception and emotions, music and role of artist in society. Aesthetic viewpoint of individuals and historical eras through selected writings.

Music in Christian Worship (3) Music traditions in Christian worship, including hymnody.

Church Music Methods and Administration (3)

Independent Study (1-15) Prereq: Consent of department head. May be repeated for credit.

MUSIC INSTRUMENT

Brass Literature (3) Prereq: Consent of instructor.

Woodwind Literature (3) Prereq: Consent of instructor.

Percussion Literature (1) Prereq: Consent of instructor.

String Literature I, II (2,2) 340-Survey of string techniques, issues, research and pedagogics; topical presentations by the applied string faculty and guests. 350-Development of the violin family of instruments and bows; survey of string literature, performances, and performance styles; application of historical, analytical, and pedagogical procedures to performance. Prereq: 340 and applied enrollment in strings at 300 level or collateral teaching experience.

Band Arranging (3) Study and application of techniques employed in scoring for the marching and concert bands. Prereq: Music Theory 320.

Instrumental Conducting (3) Knowledge and skills in instrumental conducting; various periods and composers and relationship of different styles to the conductor's art; musical analysis and practice in conducting. Prereq: Music Education 320 or equivalent.

Suzuki Violin Method (2) Psychology, procedures, and literature of the Suzuki violin method and pedagogy. May be repeated. Maximum 8 hours. Prereq: Consent of instructor.

MUSIC JAZZ

Jazz Theory (2) Fundamentals of the jazz language, including terminology, chord symbols, chord scales, and chord progressions, plus ear-training lab. Prereq: Music Theory 110.

Analysis of Jazz Styles (2) Individual improvisatory styles through analysis of their transcribed solos. Transcription and function of the ear in music. Transcription of solos from recordings and preparation of analysis. Prereq: 110.

Jazz Piano I, II (1,1) Harmonic language of jazz. Interpretation of chord symbols, formulas for voicing chords, chord progressions, and fundamental melody-playing and improvisation for right hand. Must be taken in sequence.

Studio Guitar Styles (2) Introduction to guitar styles in jazz, rock, country, and blues idioms. Prereq: Consent of instructor.

Introduction to Styles in Jazz Drumming (2) Examination of major composers and performers who have contributed significantly to creation of principal styles of jazz drumming.

Jazz Improvisation I, II (2,2) Study and application of principles of improvisation, including nomenclature, chord progressions, chord patterns, melodic development, and tone styles. Prereq: 110.

Jazz Composition and Arranging (2) Prereq: Consent of instructor.

Jazz Band Arranging (2) Arranging and scoring for the Big Jazz Band. Prereq: Consent of instructor.

Advanced Improvisation (3) Development of individual skills and solving individual problems in jazz improvisation. Prereq: 210 and 220.

Jazz Pedagogy (1) Methods and materials relating to teaching of jazz; designing and administering jazz programs, and rehearsal techniques for jazz ensembles. Prereq: Studio Music and Jazz major or consent of instructor.

Music Keyboard

Class Piano I, II (1,1) Development of keyboard skills in reading, technique, repertoire, harmonization, and transcription. Must be taken in sequence.

Class Piano III, IV (1,1) Continuation of 110-120; 220 completes piano competency requirement; must be taken in sequence.

Keyboard Harmony (1) Melody harmonization, figured bass realization, and improvisation. Prereq: Music Theory 110-120.

Church Service Playing I (1) Practical skills applicable to the use of the organ in church services, including improvisation, hymn playing, and accompanying. Prereq: 230 and organ proficiency at the 200 level.

Church Service Playing II, III (1,1) Continuation of 240. Prereq: 240.

Sight Reading at the Keyboard (1) Prereq: Consent of instructor.

Early Keyboard Literature (2) Keyboard music through the baroque period, with primary emphasis on music for the harpsichord. Prereq: Music History 210-220.

Piano Literature I, II (2,2) 420-From 1750 to middle 19th century. 430-Middle 19th century to the present.

Piano Pedagogy I, II (2,2) Pedagogical methods and materials related to the development of principles of learning; specific programs based on pupil aptitude and background; collateral teaching experience. Must be taken in sequence. Prereq: Consent of instructor.

The Organ and Its Literature II (2,3) Development of the organ and organ literature from the Middle Ages to the present; problems of style and interpretation; pedagogical literature and methods; organ design. Prereq: or Coreq: Music History 220 and consent of instructor.

Teaching Class Piano I, II (1,1) Historical survey and evaluation of teaching materials and methodology for college and/or adult beginning piano classes, with collateral teaching experience. Prereq: Consent of instructor.

Suzuki Piano Method (3) Study of the psychology, procedures, and literature of the Suzuki Piano Method. Prereq: Consent of instructor.

Music Performance

Movement (3) History and background of movements to music. May be repeated for credit. Maximum 6 hours.


Class Piano III, IV (1,1) Continuation of 110-120; 220 completes piano competency requirement; must be taken in sequence.

Advanced Improvisation (3) Development of individual skills and solving individual problems in jazz improvisation. Prereq: 210 and 220.

Jazz Pedagogy (1) Methods and materials relating to teaching of jazz; designing and administering jazz programs, and rehearsal techniques for jazz ensembles. Prereq: Studio Music and Jazz major or consent of instructor.
and reinforcement systems. Topics include room acoustics, audio measurements, microphones, studio and real-time processing, noise reduction, mixing, edit-ire and systems, system wiring, and maintenance. Exercises in writing and analysis. Recommended as a corequisite for graduate students. Prereq: Consent of instructor.

400 Survey of Music Theory (3) Emphasis on harmonic practice of Baroque, Classic, and Romantic periods. Exercises in writing and analysis. Recommended as a corequisite for graduate students. Prereq: Consent of instructor.

420 Orchestration (3) Advanced techniques in instrumental writing with emphasis on scoring for the concert orchestra. Prereq: 320.

430-440 Counterpoint I, II (3, 3) Species counterpoint in modal and tonal styles with emphasis on works of Palestrina and J.S. Bach. Prereq: 220. 440-Writing of contrapuntal forms of the 18th century and fugue and other forms of the 18th through the 20th centuries. Prereq: 430.

493 Independent Study in Music Theory (1-15) May be repeated for credit. Prereq: Consent of department head.

MUSIC VOICE

110 Class Voice I (1) Development of basic vocal skills. May be repeated for credit. Maximum 2 hours.

120 Class Voice II (1) Prereq: Consent of instructor. May be repeated for credit. Maximum 2 hours.

210 Vocal Techniques in Popular Music (1) Development of performance techniques in Broadway and other contemporary music styles. Prereq: Consent of instructor. May be repeated for credit. Maximum 4 hours.

220 Introduction to Music Theatre Technology (2) Stage technology unique to sync stage.


240-250 Diction I, II (2, 2) Sounds by phonetic symbols. Exercises in vocal and art songs used for examples. Performance practice.

330 Opera Production (1-3) Supervised work on opera productions. May be repeated for credit. Prereq: Consent of instructor. Maximum 12 hours.

410-420 Song Literature I, II (2, 2) 410-German songs; 420-French. Italian, Russian, Scandinavian, Czechoslovakian, British, and American art songs.

430 Styles in Opera Acting (2) Study and practice of styles in opera acting based on historical and national characteristics. Prereq: 230.

440 Projects in Opera Theatre (1-3) May be repeated for credit. Prereq: Consent of instructor. Maximum 5 hours.

450-460 Pedagogy I, II (1, 1) 450-Concepts and approaches to teaching singing (past and present). 460-Vocal teaching materials; includes collaborative teaching experiences. Prereq: Consent of instructor.

NURSING

214 Integrated Biomedical and Health Sciences (1) Examination and application of selected theories from physics and chemistry, microbiology, and nutrition to nursing process. Each module carries one credit. Prereq: One year of biology or chemistry and consent of instructor.

301 Pharmacology (3) Biochemical and pharmacological effects of therapeutic drugs on the human body; positive and negative reactions to drugs; interactions of drugs, foods, and other substances; procedures for administration of drugs. Prereq: Chemistry 100-10 and 6 semester hours of anatomy and physiology.

302 Introduction to Professional Nursing (3) History, philosophy, and scope of nursing. The nurse-client relationship. Prereq: Consent of instructor.

304 Nursing Assessment and Health Promotion (3) Development of physiological, psychological, cultural, and social dimensions of health assessment. Collection, analysis, and application of assessment data in formulation of health-oriented nursing diagnoses and use of the nursing process in promotion of wellness. Evolution and expansion of the nursing role in health promotion and education. Laboratory sessions for development of health assessment skills. 3 lectures, 1 lab. Coreq: 301, 302.

305 Transition to Professional Nursing (4) Current status of professional nursing; utilization of the nursing process in a changing health care delivery system. Prereq: Consent of instructor.

311 Acute Care Nursing (10) Continuation of 302 with emphasis on psychological and behavioral deviations which underlie or are associated with more complex and critical illnesses of adults and children. Clinical laboratory experiences in adult and pediatric acute care settings for enhanced knowledge and skill in providing nursing care for children and adults with complex and critical illnesses. 6 lectures, 4 lab. Prereq: 301, 302 and 304.

312 Acute Care Nursing Theory (3) Theoretical component of 311. For RN's only. Prereq: 305.

313 Introduction to Nursing Research (3) Language of research; types of research designs, methodology; sampling, data analysis, and significance of findings. Evaluation of existing and ongoing nursing research studies. Prereq: 302 or consent of instructor.

315 Clinical Nursing Practice (2) Application of nursing theories, principles, and concepts to care of hospitalized clients. Prereq: 305. Prereq: or Coreq: 312. For RN's only. Satisfactory/No Credit only.

317 Wellness and Lifestyle (3) Models of wellness and holistic health within the framework of modern medicine, eastern philosophy, and recent discoveries about the interaction of mind and body. Biopsychosocial interactions of lifestyle and genetic risk factors for cardiovascular and malignant diseases, wellness potential, and potential longevity. Process of lifestyle changes will be facilitated by faculty. Open to undergraduate students in all colleges.

401 Family Health Nursing (8) Nursing needs of families in health and in crisis. Provision of comprehensive care to families in the childbearing and childrearing phases of family development. Application of theories of human growth and development, family dynamics, and crisis intervention to provision of nursing care to families experiencing normal pregnancy and birth and to those experiencing such health problems or complications as congenital anomalies, high risk birth, disturbed parent/child relationships, or gynecologic disturbances. 3 lectures, 3 lab. Prereq: All 300 level nursing courses.

402 Family Health Nursing Theory (3) Theoretical component of 401. For RN's only. Prereq: 312.

403 Community Health Nursing (4) Application of the nursing process to individuals, families, and groups in home and community settings with special emphasis on health promotion, disease prevention, and coping with communicable diseases. Epidemiological approach is used to identify aggregates within the population that are at risk for illness, disability, or premature death. Prereq: Consent of instructor. Maximum 12 hours.

404 Nursing Management and Strategies (3) Theories, concepts, and principles of organization, planning, decision-making, and implementation of leadership and management to management of nursing care for groups of clients; exposure to a variety of nursing service organization models; evaluation of existing and potential macro and micro environments. Prereq: Consent of instructor.

405 Contemporary Nursing (3) Current status of professional nursing; utilization of the nursing process in a changing health care delivery system. Prereq: Consent of instructor. Maximum 12 hours.

406 Nursing Leadership (3) Theories, concepts, and principles utilized to deliver and manage nursing care for specific populations. Prereq: Consent of instructor. Pre or Coreq: 401 or 411. For generic MSN students only.

411 Psychosocial Long-Term Nursing (6) Needs of clients whose health problems are of a developmental, behavioral, or long-term nature. Focus on prevention, health promotion, and rehabilitation. Prereq: Consent of instructor. Prereq: 302 or consent of instructor. Maximum 12 hours.

412 Psychosocial Long-Term Nursing Theory (3) Theoretical component of 411. For RN's only. Prereq: 312.

450 Physiological Principles (3) Concepts and principles of normal human physiology; tissue and organ physiology as a basis for integration of system physiology within the context of complex and critical illnesses in a variety of acute, extended care, and rehabilitation facilities. 3 lectures, 3 lab. Prereq: All 300 level nursing courses.

412 Psychosocial Long-Term Nursing Theory (3) Theoretical component of 411. For RN's only. Prereq: 312.

451 Computers and Nursing Care (3) Computerized information processing with application to patient care, health care administration, nursing education, and nursing research. 2 lectures, 1 lab. Prereq: All 300 level nursing courses or consent of instructor.

453 Oncology Nursing (3) In-depth exploration of cancer problems; relates cellular kinetics to theories of carcinogenesis and metastasis; treatment modalities and nursing interventions employed in all phases of the disease. Prereq: Consent of instructor. Maximum 2 hours.

454 Physiological Principles (3) Concepts and principles of normal human physiology; tissue and organ physiology as a basis for integration of system physiology within the context of complex and critical illnesses in a variety of acute, extended care, and rehabilitation facilities. 3 lectures, 3 lab. Prereq: All 300 level nursing courses.

455 Psychological Principles (3) Concepts and principles of normal human physiology; tissue and organ physiology as a basis for integration of system physiology within the context of complex and critical illnesses in a variety of acute, extended care, and rehabilitation facilities. 3 lectures, 3 lab. Prereq: All 300 level nursing courses.

493 Independent Study (1-3) Nursing or health-related topic not covered in other nursing courses. Prereq: Senior standing or permission of instructor.

NUTRITION AND FOOD SCIENCES

100 Introductory Nutrition (3) Nutritional concepts; current consumer issues in nutrition; nutritional needs through life cycle; international nutrition concerns and/or issues. A student who has received credit for NFS 107 or 300 may not receive credit for this course. F, Sp

101 Food Principles (3) Food selection, safety, preparation, evaluation, meal planning, service. 2 hours and 1 lab. Sp

105 Food for the Next Century (3) Interdependence of people on this planet for food; global perspective from United States point of view. F

107 Honors: Introductory Nutrition (3) Nutritional concepts; current consumer issues in nutrition; nutritional needs through life cycle; international nutrition concerns and/or issues. A student who has received credit for NFS 107 or 300 may not receive credit for this course. F, Sp

120 Introduction to Tourism, Food and Lodging Administration (1) Socioeconomic factors in the food economy; basic operating systems, organization structure, problem areas in hospitality complex. F

126 Front Office Management (3) Front office procedures within context of overall operation of a hotel/motel; includes reservation systems, equipment, accounting
procedures, settlement procedures, public relations and management. A, Sp

200 Physiological Chemistry (3) Metabolism of carbohydrates, lipids, and nitrogenous compounds; role of vitamins and minerals as co-enzymes and prosthetic groups. Prereq: Chemistry 110 or equivalent. F

201 Food and Clinical Analysis (4) Principles, procedures, instrumentation for analysis of food and body fluids. Prereq: 200 with a grade of C or better for NFS majors. 2 hours and 2 labs. Sp

220 Foodservice Systems Administration (3) Management concepts, processes, resources in foodservice systems; decision-making and problem solving principles. F

300 Fundamentals of Nutrition (3) Nutrition in normal and altered health states during life cycle; nutritional analysis of diets. Prereq: Chemistry 110 or equivalent, Zoology 230. A student who has received credit for NFS 100 or 107 may not receive credit for this course. Sp

301 Nutrition for Educators (3) Principles of nutrition, biochemistry and physiology of eating patterns and effects on nutrition during the life cycle; nutrition education concepts and strategies. Prereq: 100 or 107, 101, Chemistry 100 or equivalent, Zoology 230, or consent of instructor. A, Sp

311-12 Science of Food (4,4) Chemical and physical properties of food related to functional and nutritional properties; application of food principles to meal planning and computer applications. Prereq: 100 or 107, 201, Micro 210. 3 hours and 1 lab. Must be taken in sequence. F, Sp

313 Advanced Nutrition (4) Integrated knowledge of physiological chemistry and physiology applied to understanding human nutrition requirements; computer analysis for dietary adequacy. Prereq: 100 or 107, 201, Zoology 230. F

320 Quantity Food Procurement, Production and Service (2) Principles for determining needs, procuring, storing, producing and serving foods in volume. Prereq: 100 or 107, 101 or 311, 220, Micro 210 or PH 310, progression into TF&LA or consent of instructor. Coreqs: 321 or 322, Sp

321 Quantity Food Procurement, Production and Service Laboratory (1) Application of principles in determining needs, procuring, storing, producing and serving foods in volume. Prereq: 100 or 107, 101 or 311, 220, Micro 210 or PH 310. Coreq: 322, Sp

322 Quantity Food Procurement, Production and Service Observation (1) Application of principles in determining needs, procuring, storing, producing and serving foods in volume. Prereq: 100 or 107, 101 or 311, 220, Micro 210 or PH 310. Coreq: 322, Sp

323 Field Experience in Tourism, Food and Lodging (2) Supervised educational experiences in selected technical aspects of food and lodging operations; discussion, seminar. Prereq: 320 or 321 or 322; progression into TF&LA program. Satisfactory/No Credit only. F

324 Tourism and Travel Administration (3) Economic and social forces influencing domestic and international tourism; services, functions of retail, wholesale travel agencies. Prereq: 120, F

325 Hospitality Sales (3) Products, services and sales conditions within industry; emphasis on integrating operational, sales, purchasing and decision making skills. Prereq: 321 or consent of instructor. F

326 Food and Lodging Cost Control (3) Budget, cost analysis; computer, financial statement use in decision making in lodging and foodservice systems. Prereq: 320 or 322, Accounting 202. F

410 Professional Issues in Dietetics (1) Dietetic registration, licensure, third party payments; dietetic practice; marketing dietetics; internship application preparation; policy in dietetic practice. Prereq: Senior standing. F

411 Nutrition in Disease (4) Metabolic processes of diseased organs and/or tissues, dietary modifications required. Prereq: 312, 313, F

412 Food and Nutrition Resources Management (3) Integration of community food and nutrition resources; geographic, social, economic, educational, cultural, health characteristics of area; leadership in dealing with food and nutritional problems and the need for services by individuals in community; public policy. Prereq: 411, Sp

413 Experimental Food Science (3) Individual and group laboratory experimentation in food science; micromethods and apparatus. Prereq: 312, PSS 471. 1 hour and 2 labs. F

414 Nutrient-Drug Interactions (2) Nutrient effects on efficacy and toxicity of drugs; drug effects on absorption, metabolism of nutrients. Prereq: 300 or equivalent. A, Sp

420 Advanced Field Experience in Tourism, Food and Lodging (5) Supervised educational experiences in selected tourism, food or lodging operations followed by a two-day seminar. Offered only in summer semester. Students enrolled in this course may not enroll in any other courses. Prereq: 323, Accounting 202. Economics 201, Marketing 310, Business Law 310, Statistics 201, progression into TF&LA program. Satisfactory/No Credit only. Su

422 Food and Lodging Personnel Development (3) Training programs; personnel management procedures and policies; institution and community resources for lodging and foodservice systems. Prereq: 320, 420 or consent of instructor. F

423 Foodservice Systems Design and Equipment (3) Principles of system design, equipment analysis; equipment selection, purchase. Prereq. 320 or consent of instructor. A, F

424 Lodging Administration (3) Marketing and financial techniques in lodging administration; hotel marketing plans; feasibility studies; accounting systems; computer information systems. Prereq: 420, Sp

425 Hospitality Law (3) Legal rights and responsibilities of staff, management and guests. Prereq: 324, Business Law 301 or consent of instructor. Sp

426 Convention Management (3) Scope and segments of convention market including requirements meeting individual needs; methods and techniques for outstanding service. Prereq: 323, Marketing 310, A, Sp

429 Marketing of Hospitality Services (3) Strategic marketing plans for hotel/motel properties; includes product analysis, market analysis, competition analysis, and planning toward maximum revenue and profit potential. Prereq: 324, Marketing 310, or consent of instructor. F

440 Special Topics: Tourism, Food and Lodging Administration (1-3) Developments, issues, and problems in Tourism, Food and Lodging Administration; topics vary. Prereq: Junior or Senior standing in TF&LA or consent of instructor. May be repeated. Maximum 3 credits. E

450 Special Topics: Nutrition and Food Sciences (1-3) Developments, issues and problems in Nutrition and Food Sciences; Prereq: Junior or Senior standing in NFS or consent of instructor. May be repeated. Maximum 3 credits. E

487 Honors: Nutrition and Food Sciences (1-3) Senior project. Prereq: Senior standing and consent of instructor. E

492 Field Experience: Nutrition and Food Sciences (1-3) Prereq: Junior or Senior standing, consent of instructor. Satisfactory/No Credit only. E

493 Directed Study: Nutrition and Food Sciences (1-3) Prereq: Junior or Senior standing consent of instructor. Satisfactory/No Credit only. E

494 Directed Study: Tourism, Food and Lodging Administration (1-3) Individual student/faculty experience. Prereq: Junior or Senior standing, consent of instructor. Satisfactory/No Credit only. E

497 Honors: Tourism, Food and Lodging Administration (1-3) Senior project. Prereq: Senior standing, consent of instructor. E

ORNAMENTAL HORTICULTURE AND LANDSCAPE DESIGN

110 Environmental Horticulture (3) Basic plant sciences and their relationship to ornamental horticulture. Introduction to awareness and appreciation of ornamental plants, design and management of home landscapes, selection and use of herbaceous plants and turfgrasses. 3 hours. F

210 Floral Design (2) Principles and techniques of basic floral arrangement with emphasis on arrangements for home and special use. Lab fee will be charged. 2 labs. Sp

220 Basic Landscape Plants (2) Identification, classification, adaptation, culture and landscape design uses of ornamental plants. Prereq. 8 hours Botany or consent of instructor. 2 labs. E

230 Interior Plants (2) Identification, culture, design application, and propagation of foliage plants used in the interiorscape; introduction to interiorscape management. 2 labs. Sp

280 Fundamentals of Landscape Design (3) History of landscape design as it relates to contemporary applications. Awareness and sensitivity to the landscape, basic graphic design and design theory with an emphasis on residential landscape planning. Introduction to landscape design; material selection, and plant design. Prereq: 120 or consent of instructor. 2 hours and 1 lab. E

310 Greenhouse Production and Management (3) Management and operation of a greenhouse for commercial purposes, research and institutional use, and home hobby purposes. Culture and management of economically important florists' crops in the United States; basic plant physiological principles including photoperiodism, thermoperiodism, growth regulation, and nutritional requirements of crops. Prereq: 119 or consent of instructor. 2 hours and 1 lab. F

320 Plant Materials (2) Identification, classification and design uses of ornamental plants including trees, shrubs, vines and herbaceous plants and generally excluding those covered in 220. Prereq: 220 or consent of instructor. 2 labs. Sp

330 Plant Propagation (3) Physiology, methodology, and environmental requirements for propagation. Prereq: 110 and 8 hours Botany or consent of instructor. 2 hours and 1 lab. F

340 Turfgrass Management (3) Practical turfgrass management concepts, turfgrass exploration and enrichment; basic applied fertility programs, mowing, and irrigation practices, and thatch and compaction control. Must complete an internship. Prereq: 110, Plant and Soil Science 210 and 8 hours of Botany or consent of instructor. 2 hours and 1 lab. F

350 Basic Landscape Construction (3) Basic material and detailing. Introduction to the landscape construction and contracting industry; application of landscape materials; wood, concrete and masonry construction; site drainage, and landscape grading. Prereq: 280. 2 hours and 1 lab. F

360 Practicum in Landscape Construction (3) Practical experience in implementation of landscape development projects. Directed lab and field instruction in planting operations and basic landscape construction including interpreting and implementing landscape design drawings and specifications. Prereq: 360. 2 hours and 1 lab. Sp

370 Grounds Maintenance (3) Identification and understanding of maintenance tasks; transplanting, soil amendments, growth control, irrigation, climate protection and guest control. Maintenance and use of equipment; maintenance practices. Prereq: 110.2 hours and 1 lab. F

380 Supplemental Landscape Design Graphics (2) Refinement of graphic skills. Sketches, elevations, sections, isometric views, axonometric views, and perspective letters, plan graphics, color rendering, and other visual presentation media. Prereq: 280. Two 2 hour labs. F
168 Courses of Instruction/Philosophy

410 Nursery Management and Production (3) Management methods as applied to retail and wholesale nurseries and landscape contracting firms. Methods of producing liners, container and field-grown woody ornamental plants. Prereq: 220, 330, and Plant and Soil Science 210. 2 hours and 1 lab. Sp

440 Advanced Turfgrass Management (4) Principles and scientific basis of turfgrass culture, adaptation, ecology, physiology, soil fertility, and grass nutrition; climatic influences on grass culture; physiology of clipping and water management; design, construction, and management of golf courses; physiological influences of pest infestation and control measures. Prereq: 340 or consent of instructor. 3 hours and 1 lab. Sp

450 Specialty Landscape Construction (2) Design, material, installation and demonstration techniques for specialized components of the landscape industry. Irrigation systems, outdoor lighting, pools and other water features, and interscape construction. Prereq: 350. Two hour two labs. F

460 Professional Practices in Landscape Construction and Management (2) Professionalism, salesmanship, proposals, bidding, estimating, specifications, and contract management in landscape services industry. Computer technology applicable to landscape construction and contracting industry. Includes professional preparation by industry representatives. Prereq: 350 or consent of instructor. 2 hours. F

480 Advanced Landscape Design (4) Comprehensive application of landscape design skills. Design applications involving site layout, landscape grading, applied landscape construction, and planting design. Analysis, programming, design, detailing, estimating, and specifying applicable to a variety of landscape problems. Prereq: 280, 350, and 380. 1 hour and 3 three hour labs. Sp

490 Seminar (1) Current problems in ornamental horticulture and landscape design. Prereq: Senior standing. Sp

492 Off-Campus Internship (1-3) Work experience in approved ornamentals, turf or landscaping industry. Includes study of living things from the Greeks through the early twentieth century. Prereq: 8 hours of physical science or consent of instructor. F

493 Individual Problem Study (1-3) May be repeated. Maximum of 6 credits. E

493 Individual Problem Study (1-3) May be repeated. Maximum of 6 credits. E

PHYSICS

110 The Human Condition: Value and Reality (3) The meaning of the existence of God, freedom of the will, human nature and value.

111 The Human Condition: Knowledge and Reality (3) The place of mind in a material universe and the nature and possibilities of human knowledge. May be taken before 119.

120 Foundations of Western Thought: Antiquity through 1500 (3) Plato, Late Antiquity and the Medieval Period.

121 Foundations of Western Thought: 1500 through Early Twentieth Century (3) Development of Rationalist and Empiricist thought. Nineteenth Century and early Twentieth Century Philosophy. May be taken before 120.

130 Informal Logic (3) Analysis, evaluation, and construction of reasoning in ordinary language.

135 Formal Logic (3) Introduction to formal deductive systems: propositional and predicate logic.

200 Special Topics (3) When content varies, may be repeated. Maximum 6 hours.

240 Ethics (3) Theories of ethical values.

250 Social and Political Philosophy (3) Basic problems and concepts of social and political philosophy.

320 Ancient Western Philosophy (3)

322 Medieval Philosophy (3) Development of medieval thought from St. Augustine to William of Occam. Secondary and primary sources. (Same as Medieval Studies 322.)

324 Seventeenth- and Eighteenth-Century Philosophy (3)

326 Nineteenth- and Twentieth-Century Philosophy (3)

335 Intermediate Formal Logic (3) Metatheory of formal logic and philosophy of logic. Prereq: 135 or consent of instructor.

342 Business Ethics (3) Ethical problems as they confront both business as a social institution and individuals in business.

344 Professional Responsibility (3) Critical analysis of selected classic texts from philosophy, religious studies, and social sciences dealing with responsibility and the nature of professionalism. Theoretical principles and analytical skills applied to selected case studies and other detailed descriptions of professional practice from engineering/architecture; business/accounting; and at least one of law/politics; helping professions (social work, human services, ministry); teaching. (Same as Religious Studies 344.)

345 Medical Ethics (3) Ethical issues in medicine such as abortion, euthanasia, human experimentation, fairness in health care delivery and the doctor-patient relationship. (Same as Religious Studies 345.)

349 War and Morality (3) Moral justification for war (justa bellum) legal and moral constraints in war (just in bello).

350 Aesthetics (3) Philosophical discussion of art.

353 Philosophy and Literature (3) Nature of literature; philosophical assumptions in literary works.

360 Introduction to Philosophy of Science (3) Standard topics in philosophy of science: scientific method, nature of laws and theories, problem of induction, explanation, measurement. No background in logic is presupposed.

363 Conceptual History of Science (3) Historical evolution of thought in astronomy, mechanics, and the study of living things from the Greeks through the early twentieth century. Prereq: 8 hours of physical science or consent of instructor.

370 Philosophy of Religion (3) Analysis of basic issues of religion. (Same as Religious Studies 370.)

374 Philosophy and Religion of India (3) (Same as Religious Studies 374.)

375 Buddhist Philosophy and Religion and (3) (Same as Religious Studies 375.)

379 Religion and Philosophy in China (3) (Same as Religious Studies 379.)

380 The Concept of Woman (3) The nature of woman as it has been conceived by major western philosophers from Plato to Simone de Beauvoir. (Same as Women’s Studies 380.)

382 Philosophy of Feminism (3) Feminist theories and their application to social issues of concern to women today. (Same as Women’s Studies 382.)

390 Philosophical Foundations of Democracy (3) Philosophical problems relating to the nature and justification of the central values, principles, and concepts of democratic society.

393 Marxism (3) Basic philosophical issues in Marxist thought: ideology, dialectics, praxis, the critique of modern society.

395 Existentialism (3) Themes related to freedom and finitude in the tradition that begins with Kierkegaard and Nietzsche, and extends to Heidegger and Jaspers, Sartre and Merleau-Ponty.

400 Special Topics (3) When content varies, may be repeated. Maximum 6 hours.

411 Modern Religious Philosophies (3) (Same as Religious Studies 411.)

412 Classical Indian Systems of Philosophy: The Moksha Tradition (3) (Same as Religious Studies 412.)

420 Topics in History of Philosophy (3) One or more figures or movements from antiquity through mid-twentieth century. Prereq: 6 hours of philosophy or consent of instructor. When content varies, may be repeated. Maximum 9 hours.

425 American Philosophy (3) Colonial to early 20th Century. Prereq: 6 hours of philosophy or consent of instructor.

430 Topics in Logic (3) Prereq: 6 hours of logic or consent of instructor. When content varies, may be repeated. Maximum 6 hours.

440 Contemporary Ethical Theory (3) Topics in metaethics or ethics. Prereq: 6 hours of philosophy or consent of instructor.

446 Theoretical Issues in Medical Ethics (3) Prereq: 240 or 345 or consent of instructor. (Same as Religious Studies 446.)

460 Philosophy of Science (3) Methodological and conceptual issues in the natural and social sciences: patterns of theory modification and replacement, the nature of explanation and causation, the status of theoretical entities. Prereq: 360 and one year of natural or social science, or consent of instructor.

465 Philosophy of History (3) Speculative and critical aspects of philosophy of history. Prereq: 6 hours of philosophy or consent of instructor.

473 Philosophy of Mind (3) Problems of mind and body in relation to consciousness and personal identity. Prereq: 6 hours of philosophy or consent of instructor.

475 Analytic Metaphysics and Epistemology (3) Topics in metaphysics and epistemology in recent Anglo-American tradition. Prereq: 6 hours of philosophy or consent of instructor.

476 Philosophy of Language (3) Survey of issues such as meaning, reference, and truth. Prereq: 6 hours of philosophy or consent of instructor.

479 Studies in Recent Continental Philosophy (3) Selected thinkers or topics from areas such as Existentialism, Phenomenology, Hermeneutics, Structuralism, Post-Structuralism. Prereq: 6 hours of philosophy or consent of instructor. When content varies, may be repeated. Maximum 6 hours.

491 Foreign Study (1-15) See page 97.

492 Off-Campus Study (1-15) See page 96.

493 Independent Study (1-15) See page 96.

PHYSICAL EDUCATION

100 Orientation to Physical Education (2) Overview of the professional and disciplinary areas in physical education with special emphasis on introductory field experiences.

102 PE Major: Basketball (1) Fundamentals of basketball, including individual and team skills with consideration of techniques for effective teaching of these fundamentals.

103 PE Major: Tennis (1) Development of skills, rules and game strategies to an intermediate level in tennis with application to the various techniques of teaching.

104 PE Education Major: Gymnastics I (1) Beginning to intermediate skills in tumbling and on selected men’s and women’s gymnastics apparatus. Tumbling skills include forward, backward, and balance skills. Apparatus include vaulting, balance beam, and pommel horse. Special emphasis on teaching techniques, safety, progression, and spotting.

105 PE Major: Folk and Square Dance (1) Basic folk and square dance steps, patterns and designs with emphasis on skill development, terminology, etiquette and teaching techniques.

106 PE Major: Track and Field (1) Basic skills of track and field with consideration of techniques for effective teaching.

271 PE Major: Soccer/Softball (1) Basic fundamentals, including individual and team skills with consideration of techniques for effective teaching.
272 PE Major: Volleyball (1) Elementary and intermediate volleyball skills, general rules, and strategy related to the game of volleyball with particular emphasis on teaching techniques and skill development.

273 PE Major: Golf (1) Fundamental skills, general rules, and strategies related to the game of golf with emphasis on skill development and teaching techniques.

274 Physical Education Major: Gymnastics II (1) Beginning to intermediate skills in tumbling and on selected men's and women's gymnastics apparatus. Tumbling skills will include twisting, kips, and combinations of previous skills. Apparatus will include uneven bars, horizontal bar, parallel bars, and still rings.

275 PE Major: Ballroom Dance (1) Basic ballroom dance patterns and designs. Terminology and etiquette with application to the various techniques of teaching.

290 Human Motor Behavior (3) Theories and principles explaining motor behavior; psychological factors related to and/or affecting motor skill acquisition and performance. Prereq: At least sophomore standing.

291 Sport in American Society (3) For all university undergraduates on the study of sport in American society from a sociological perspective. (Same as Sociology 291.)

292 Field Studies I (3) Builds on observational techniques from Physical Education Orientation. Provides opportunities to lead, instruct, manage and test individuals and/or small groups in K-12 physical education settings. Includes peer teaching and video-taped analyses. Prereq: 100.

311 Coaching Football (1) Theoretical and practical application of various coaching techniques in football for the prospective secondary/college coach. Includes analysis and selection of appropriate game plans, specific conditioning and training programs, practice organization, player evaluation, scouting, individual and team offensive and defensive Prereq: Consent of instructor.

312 Coaching of Basketball (1) Individual and team fundamentals for the high school coach; conditioning, schedule making, and other business arrangements. Prereq: Consent of instructor.

313 Coaching of Track and Field (1) Coaching methods and training techniques for various track and field events, including experience observing and working at meets and practices. Prereq: Consent of instructor.

314 Coaching of Gymnastics (1) Fundamentals used in the coaching and judging of competitive men's and women's gymnastics. Emphasis on the safety and specifics of competitive gymnastics skills. Prereq: Consent of instructor.

315 Coaching of Baseball/Softball (1) Theoretical and practical application of various coaching techniques in baseball/softball for the secondary/college coach. Includes analysis and selection of appropriate game plans, specific conditioning and training programs, practice organization, player evaluation, scouting, individual and team offensive and defensive strategies. Prereq: Consent of instructor.

321 World History of Sport and Physical Education (2) Historical survey of the development of sport and physical education from ancient primitive to twentieth century civilization. Prereq: Admission to Teacher Education Program or progression to the major.

322 Fitness Activities (2) Methods of instructing and leading fitness activities, including jogging, exercise testing, swimming, water activities, and fitness games. Prereq: At least junior standing and progression to the major.

325 Athletic Training Techniques (2) Prevention of athletic injuries through sound conditioning programs and practices. Recognition and immediate treatment of injuries. Prereq: Progression to the major.

326 Practicum in Preschool Aquatics (2) Individualized planning and teaching of aquatic experiences to 3 to 5 year-old children within the context of a broad-based motor development program.

330 Wellness Through Health, Leisure, and Physical Activity (3) (Same as Health 330.)

332 Applied Anatomy (3) Structure and roles of bones, joints and muscles in human movement and exercise. Prereq: Progression to the major and admission to Teacher Education Program or progression to the major.

335 Approaches to Physical Education for Children (3) Contemporary approaches with emphasis upon movement education. Prereq: Admission to Teacher Education Program.

345 Educational Games, Dance, and Gymnastics (3) Design, implementation and evaluation of games/sports and creative dance forms for children. Prereq: Admission to Teacher Education Program.


372 Philosophy of Sport and Physical Education (2) Theories of reality and values as they apply to sport with emphasis on ethical issues. Prereq: Admission to Teacher Education Program or progression to the major.

380 Special Topics (1-3) Study in selected disciplinary or professional areas of Physical Education. May be repeated. Prereq: Progression to the major.

391 Psychology of Coaching (2) Major topics and theories dealing with social-psychological factors affecting coach and relating to sport performance, with practical implications and applications to teaching and coaching. Prereq: Admission to Teacher Education Program or progression to the major.

405 Sociology of Sport (3) Social meaning, organization and process of sport. Difference between sport and play, games, social stratification and sport, sport as an occupation, place of sport in mass culture, sport sub-culture, and the influence of sport and cultural milieu. Prereq: 291 or Sociology 285, or permission of instructor. (Same as Sociology 465.)

409 Measurement and Evaluation of Physical Education (3) Relationship of teaching, learning, and evaluation in Physical Education. Critique, selection, and administration of appropriate affective, sport skill, and knowledge assessment instruments for children through adult age group. Prereq: Junior standing and admission to Teacher Education Program or progression to the major.

410 Pre-Internship Seminar (1) Objectives and policies of the Pre-Internship Seminar will be completed the term immediately preceding the internship. Prereq: Admission to Teacher Education Program. Satisfactory/No Credit only. Sp, Su

411 Adapted Physical Education (2) Developmental disabilities with emphasis on communicative and vari- ant/invariant characteristics of specific syndromes germane to motor development/programming for those with special education needs.

412 Practicum in Adapted Physical Education (1) Teaching those with special education needs. Observation and assistance to physical education teachers who teach in schools for the handicapped and/or in which many handicapped individuals are mainstreamed. Prereq: Progression to the major. Coreq: 411.

413 Special Practicum in Adapted Physical Education (1) Two sections including an on-campus lab program with one-one-one with a 2-5 year-old child who is a high-educational risk and a section with expe- rience with children with mild disabilities with physical education teacher, physical or occupational therapist, at a school for the handicapped. May be repeated. Maximum 3 hours.

414 Physical Activity and Fitness (2) Relationship of physical activities and fitness with the exercise program, health, low back, and stress. Prereq: 200, 292 and admission to Teacher Education Program or progression to the major. (Same as Health 414.)

415 Field Evaluation of Physical Fitness (1) Measurement and evaluation of cardiorespiratory function, body composition, strength, and flexibility. May be repeated. Prereq: Consent of advisor and progression to the major. Coreq: 414. (Same as Health 415.)

416 Athletic Coaching Field Experience (1) Practical experience in coaching and related responsibilities. Prereq: Consent of advisor and progression to the major. Maximum 2 hours. Prereq: Approval of instructor.

420 Methods in Physical Education (3) Application of theory and styles of teaching to learning environments, including planning, presenting, and evaluating lessons concerning knowledge, strategies, and skills for physical activity, games, and sport. Prereq: Consent of instructor. Prereq: Minimum 6 credits in Physical Education Major activities and admission to Teacher Education Program.

422 Applied Kinesiology (3) Human movement with emphasis on biomechanical principles and their application to movement and neuromuscular fitness. Prereq: 322 and admission to Teacher Education Program or progression to the major.

423 Readings in Physical Education (2) Current and classic literature in physical education.

424 Program Planning in Physical Education (2) Curriculum theory, planning, and practical application to physical education with opportunities to develop and evaluate K-12 physical education programs. Prereq: Admission to Teacher Education Program.

426 Practicum for Physical Education Majors (1-10) Experience in the coaching and teaching of physical education settings. Includes video-taping of learning experiences in the school setting. Prereq: 292 and 466 and admission to Teacher Education Program.

456 Motor Development Laboratory: Preschool or Primary (3) Application of selected perceptual-motor development, movement education, and pedagogical concepts to performance assessment and motor task/lesson design and presentation to normally developing preschool or primary grade children. Participation in intra- or inter-disciplinary research projects. Prereq: 100 and admission to Teacher Education Program.

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

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

493 Directed Independent Studies I (1-3) Independent study in a special area with physical education. Prereq: May be repeated. Maximum 9 hours. Prereq: Consent of advisor and progression to the major.

PHYSICAL EDUCATION

SERVICE PROGRAM

200 Special Topics (2)
201 ARC WSI-Handicapped (1)
202 Badminton (2)
**Courses of Instruction/Physics**

203 Elementary Ballet I (2)
204 Elementary Ballet II (2)
205 Basketball (1)
206 Bowling (2)
209 Flag Football (1)
210 Folk and Square Dance (1)
211 Golf (2)
212 Handball (2)
213 Ice Skating (1)
214 Elementary Jazz I (2)
215 Elementary Jazz II (2)
216 Martial Arts: (Special Topics) (1)
219 Coed Gymnastics: Men's Apparatus (1)
220 Elementary Modern Dance I (2)
221 Elementary Modern Dance II (2)
222 Paddleball (1)
223 Personal Safety and Self-Defense (1)
224 Physical Fitness: Conditioning (1)
225 Physical Fitness: Exercise to Music (1)
226 Physical Fitness: Exercise and Weight Control (1)
229 Physical Fitness: Jogging (1)
230 Physical Fitness: Swimming (1)
231 Physical Fitness: Walking (1)
232 Racquetball I (1)
233 Racquetball II (1)
234 Soccer (1)
235 Social Dance (1)
236 Softball (1)
239 Swimming I: Elementary (2)
240 Swimming II: Lifesaving (2)
241 Swimming III: WSI (2)
242 Tap Dance I (2)
243 Tap Dance II (2)
244 Tennis I (1)
245 Tennis II (1)
246 Track and Field (1)
249 Tumbling I (1)
250 Tumbling II (1)
251 Volleyball (2)
252 Weight Training (2)
253 Coed Gymnastics: Women's Apparatus (1)
254 Yoga and Relaxation (1)

**PHYSICS**

121-122 Introductory Physics (3,3) For students whose major is outside the physical sciences. Concepts of physics developed by observation of phenomena and logic, using a minimum of mathematical analysis. 121: Description of motion, forces, energy and momentum, properties of matter. 122: Electricity, magnetism, light, topics from modern physics including properties of atoms and nuclei. Must be taken in sequence. 3 hours lecture including demonstration lab. Prereq: Algebra.

131-132 Fundamentals of Physics: Mechanics and Heat (4,4) For engineers and liberal arts majors in mathematics and the physical sciences. Basic Engineering 131-132 is equivalent course for engineers. Must be taken in sequence. Coreq: Mathematics 141-142. 3 hours lecture, 2 hours lab.

137-138 Honors: Fundamentals of Physics: Mechanics and Heat (4,4) Honors for physics and engineering physics majors and qualified students from other disciplines. Must be taken in sequence. Coreq: Mathematics 141-142. 3 hours lecture, 2 hours lab.

141-142 Nature of the Physical World (3,3) Concepts, vocabulary, and principles of physical sciences to establish a unified picture of the physical universe. 141: Principles of mechanics, electricity, and wave motion are developed and applied to fields such as solar systems, atomic and molecular behavior, radiation, dynamic changes in atmospheres and in earth's crust. 142: Principles applied to topics such as stellar and galactic phenomena, nuclear energy, cosmology, atmospheric and oceanic phenomena, drifting continents, and science and society. Must be taken in sequence. 3 hours lecture including demonstration lab.

145 Physics of Athletic Activity (3) Principles of physics, particularly mechanics and energy with emphasis on athletic activities. Related topics include statics, equilibrum, linear and angular motion, momentum, force, work, and energy. 3 hours lecture and demonstration.

151-152 Elements of Physics for Computer Scientists (4,4) For students majoring in computer science. 151: Principles of mechanics, heat and thermodynamics, wave motion and sound, electricity and magnetism, light, relativity, and modern physics. Must be taken in sequence. Coreq: Mathematics 141-142. 3 hours lecture, 2 hours lab.

181 Physics of Music (3) Production, transmission, and reception of sound waves. Frequency, intensity, timbre. Basic acoustics of instruments and voice. 3 hours lecture and demonstration.

221-222 Elements of Physics (4,4) Basic physical principles and applications required in pre-medical, pre-dental, pre-pharmacy and pre-veterinary programs. 221: Mechanics, wave motion, and optics. 222: Electricity and magnetism, modern physics. Must be taken in sequence. 3 hours lecture, 3 hours lab. Prereq: Math和技术s 121-122 or 141-142 or 151-152.

231 Fundamentals of Physics: Electricity and Magnetism (3) For engineers and liberal arts majors in mathematics and the physical sciences. Required of all engineering students. Prereq: 131-132 or Basic Engineering 131-132. Coreq: Mathematics 231. 2 hours lecture, 3 hours lab/recitation.


237 Honors: Electricity and Magnetism and Light (4) Honors course for selected students admitted on basis of performance. Prereq: 131-132 or 137-136 or Basic Engineering 131-132. Coreq: Mathematics 231. 3 hours lecture, 3 lab hours.

238 Honors: Wave Motion and Modern Physics (4) Honors course for selected students. Continuation of 237. Prereq: 237. Coreq: Mathematics 241. 3 hours lecture, 3 hours lab/recitation.


321 Thermal Physics (3) Concepts of temperature and heat; laws of thermodynamics; elementary statistical mechanics; applications to physical and chemical problems. Prereq: 311 or 231 and consent of instructor.


**401 History of Physics (2) Development of quantum mechanics and fundamental principles of quantum mechanics and methods of calculation. Solution of the Schrodinger equation for simple systems. Application to atomic, molecular, nuclear, and condensed matter physics. May be repeated with consent of department. Maximum 6 hours.

402 Forefront of Physics (2) Modern developments in various fields of physics. Planck's constant, quantum mechanics, many-body systems and other selected techniques of theoretical physics. Must be taken in sequence. Prereq: 232 or equivalent. Mathematics 435.

421 Modern Optics (4) Transmission of light in uniform, isotropic media, reflection and transmission at interfaces; mathematics of wave motion and interference effects. Rudiments of Fourier optics and holography. Prereq: 431 or 432 and consent of instructor. 3 hours lecture. 3 hours lab.

425 Principles of Non-Destructive Testing (3) (Same as Engineering Science and Mechanics 425.)


461-462-463 Modern Physics Laboratory (3,3,3) Variety of experimental techniques, including spectroscopy, nuclear magnetic resonance, investigating instruments, detectors and statistical analysis, applied to experiments in nuclear, atomic, molecular, and solid state systems. Coreq: 232 and a basic knowledge of circuits.

471-472 Health Physics (3,3) Radiobiology, interaction of electromagnetic radiation with matter, radiation detectors and units, point kernel and extended sources, X-rays and gamma rays, neutron activation, interaction of charged particles with matter, stopping power, charged-energy relations, counting statistics, shielding, dosimetry, waste disposal, criticality prevention, radiation biology and ecology. Prereq: 340 or 341.

490 Senior Seminar (1-3) Topics of current interest. Prereq: Introductory Physics. May be repeated with consent of department. Maximum 6 hours.
PLANT AND SOIL SCIENCE

210 Introduction to Soil Science (4) Differences in soils, classification, morphology, fundamental statistics, economic importance, soil fertility, basic soil properties, soil formation, land use, tillage, management, nutrient availability, soil testing, soil structure, soil survey, state of the art, principles of soil science. Prereq: Botany 210 or consent of instructor. May be repeated with consent of instructor. 4 hours and 1 lab. F-A

230 Introduction to Crop Science (3) Fundamentals of soil, crop, and field science, growth and reproduction of higher plants, principles of crop production, selection of crop plants, soils and climate, principles of crop production, crop science, and soil science. Prereq: Botany 210. 3 hours and 1 lab. F-A

292 Soil Morphology (1) Intensive course involving description, classification, growth and reproduction of higher plants, principles of soil science, and soil formation. Prereq: Botany 110, 120 or Biology 110, 120. Sp

311 Soil Fertility (3) Fundamentals of soil properties on plant nutrients, soil fertility, and soil fertility testing. Principles of soil fertility and soil fertility testing. Prereq: 210. 2 hours and 1 lab. Sp

312 Soil and Water Conservation (3) Principles, practices, and testing of soil and water conservation. Prereq: 210 and Biochemistry 311. 3 hours and 1 lab. Sp

331 Field and Forage Crops (3) Agronomic principles of crop production, crop management, and crop improvement. Prereq: 210 or 230. 2 hours and 1 lab. Sp

332 Fruit Crops (3) Fundamentals of site selection, planting, proper care, and management of fruit and nut crops. Prereq: 210 or 230. 2 hours and 1 lab. F-A

333 Vegetable Crops (3) Characteristics, economic importance, adaptability and productivity of vegetables for fresh and processing markets in the United States. Prereq: 210 or 230. 2 hours and 1 lab. Sp-A

334 Weed Management (3) Principles of weed interference, control, and management. Prereq: 210. 2 hours and 1 lab. F

392 Practicum in Agriculture (2-4) Working with agricultural enterprises in area of student's career interest. May not be used as 300-level prerequisite for any course in Plant and Soil Science. Prereq: Consent of advisor and faculty committee.

401 Seminar (1) Current topics in the plant and soil sciences. Techniques of effective oral and written professional presentation; professional ethics; review of literature; assignments for written and oral presentations. Senior standing. Sp

411 Soil Microbiology (3) Soil microbial population and the soil ecosystem; microbial transformations of inorganic and organic compounds; decomposition of residues; dynamics of soil organic matter. Prereq: 210 and Biochemistry 311. Consent of instructor. F

412 Soil Genesis, Classification and Mapping (3) Soil genesis and formation; observing and describing morphology of agricultural and forest soils; chemical and physical properties, classification, mapping. Prereq: Botany 210. 2 hours and 1 lab. Sp

413 Soil Chemistry (3) Structure and chemical properties of soil materials with emphasis on the colloidal fraction as it relates to exchange, chemical equilibria, soil acidity, oxidation-reduction, weathering, nutrient availability and waste disposal. Prereq: 311 or consent of instructor. F

414 Soil, Land Use and the Environment (3) Soil as an environmental component and soil properties affecting land use. Soil as a resource in development planning including nonengineering aspects of site selection for land use, soil surveys, soil testing, and soil sampling. Prereq: 210 and Soil Science 230. Consent of instructor. Sp-A

431 Crop Physiology and Ecology (3) Plant physiology and ecology as applied to crop production. Effects of environmental factors on physiological processes. Prereq: Botany 230. 2 hours and 1 lab. F-A

433 Agricultural Pesticides (3) Regulation of pesticide development, manufacture, transportation, marketing and use. Structure, use, modes of action, degradation and environmental impact of pesticides used in agriculture, forestry and related areas. Prereq: 1 year biological sciences and 1 semester chemistry. 2 hours and 1 lab. Sp

453 Principles of Plant Breeding (3) Genetic principles and techniques used in crop improvement. Prereq: Biology 220 or equivalent. 2 hours and 1 lab. F-A

471 Statistics for Biological Research (3) Notation, descriptive statistics, probability, distributions, confidence intervals, student's t and chi-square tests, analysis of variance, mean separation procedures, linear regression and correlation. Prereq: Math 121 or equivalent. 3 hours and 1 rec. F

493 Problems in Plant and Soil Science (1-3) Special research or library problems in plant and soil science. May be repeated. Maximum 6 hours. E

POLITICAL SCIENCE

101 United States Government and Politics (3) Introduction to fundamental institutions and procedures of American National Politics including the constitution, voting, presidency, congress and the courts. 3 hours and 1 lab. F-A

102 Introduction to Political Science (3) Analysis of political science and political systems in various countries. 3 hours and 1 lab. F-A

107 Honors: United States Government and Politics (3) Analysis and exploration of the American political system for students with superior ability. Admission by permission of department for students with at least a B average; entering freshmen accepted on basis of strong placement scores and high school record. 3 hours and 1 lab. F-A

301 Introduction to Political Analysis (3) Nature, character, and functions of research design, data collection, and statistical techniques used in the study of politics. 3 hours and 1 lab. F-A

310 Political Community (3) Examination of a variety of value systems and social and political structures related to political community. 3 hours and 1 lab. F-A

311 Contemporary Issues in American Public Policy (3) Selected public policy issues confronting the nation, including the background, nature, and effects of present policies, and options for the future. 3 hours and 1 lab. F-A

312 Popular Culture and American Politics (3) Popular culture related to American politics and government focusing on television, film, fiction, music, drama, art and sports. 3 hours and 1 lab. F-A

315 Tennessee Government and Politics (3) Major elements in Tennessee government and politics. 3 hours and 1 lab. F-A

320 State Government and Politics (3) Setting, institutions, and processes of government in the fifty states; generalizations and comparisons, with emphasis on federalism and intergovernmental relations. 3 hours and 1 lab. F-A


322 Minority Group Politics in the United States (3) Content varies. May be repeated with the consent of the department. Maximum 6 hours. (Same as Afro-American Studies 322.)

330 Law in American Society (3) Law as a process through which social problems are addressed in the United States. Examples from case law, legislation, and administrative regulation. 3 hours and 1 lab. F-A

331 Judicial Process (3) Courts as components of political systems, and public policy formulation through judicial decision making. 3 hours and 1 lab. F-A

340 Introduction to Public Administration and Public Policy (3) Public agencies, their organization, personnel, and financial management and administrative responsibility; the policy-making process; political environment. 3 hours and 1 lab. F-A

350 Political Change in Developing Areas (3) Characteristics and problems of political changes with primary focus on development areas. 3 hours and 1 lab. F-A

355 Latin American Government and Politics (3) Introduction to contemporary conditions in Latin America. (Same as Latin American Studies 355.)

361 Politics in Western Democracies (3) Political culture patterns, and institutions of Western democratic systems. 3 hours and 1 lab. F-A

365 Introduction to International Relations (3) Resource availability, international economics, international security and peace (imperialism, war, diplomacy, the balance of power, international law and international organization). 3 hours and 1 lab. F-A

366 United States Foreign Policy Process (3) Processes through which United States foreign policies are made and implemented, focusing on interaction within federal bureaucracy and roles of the President, Congress, the press, and public opinion. 3 hours and 1 lab. F-A

370 Contemporary International Problems (3) Analysis of current international events. 3 hours and 1 lab. F-A

374 American Political Thought (3) Major themes and ideas in American political thought related to the development of American political institutions, values, and practices. 3 hours and 1 lab. F-A

387-388 Junior Honors Seminar (3,3) Required of honors majors; admission with consent of department. 3 hours and 1 lab. F-A

410 Special Topics in United States Government and Politics (3) May be repeated with consent of department. Maximum 6 hours. 3 hours and 1 lab. F-A

411 Presidency (3) Nature, functions, and processes of the United States Presidency. 3 hours and 1 lab. F-A

412 Congress (3) Nature, functions, and processes of the United States Congress. 3 hours and 1 lab. F-A

420 Political Attitudes and Opinions (3) Nature, formation, development, and dissemination of politically relevant attitudes and opinions in the American political system. 3 hours and 1 lab. F-A

421 Political Parties and Interest Groups (3) Role of political parties and organized groups in American politics and government. 3 hours and 1 lab. F-A

422 Political Campaigns and Elections (3) Nature of
campaigns and elections in the American political process.

430 United States Constitutional Law: Sources of Power and Restraint (3) Judicial review, constitutionality of laws of Congress, federalism, sources of regulatory authority, and constitutional protection of political and economic rights.

431 United States Constitutional Law: Civil Rights and Liberties (3) Current issues in civil rights and liberties including: first amendment freedoms, equal protection, privacy and the rights of the accused.

440 Public Management and Human Resources (3) How to mobilize and manage technical and human resources in pursuit of public sector organization goals.

441 Budgetary Process and Financial Management (3) Fiscal planning, budget and expenditure processes in government, their policy and administrative implications.

442 Administrative Law (3) Legal dimensions of administrative power and procedures, and constitutional controls over administrators.

452 Black African Politics (3) Recent evolution and current political environment of Black African nations. (Same as Afro-American Studies 452.)

454 Government and Politics of China and Japan (3) Political setting, structure and political processes in China and Japan.

455 Latin American Government and Politics II (3) Selected topics on Latin American political dynamics, including consideration of leading theoretical explanations. (Same as Latin American Studies 455.)

459 Government and Politics of the Soviet Union (3) Origins and development of the Soviet political system, and selected policy areas.

460 Revolution (3) Characteristics, theories, and consequences of revolution with particular focus on left-wing revolutions and movements.

461 Policy Making in Democracies (3) Comparative approach to theory and process of making public policies.

463 Contemporary Middle East Politics (3) Governments and movements in the Middle East, their characteristics, bases, and interrelationships.

464 Special Topics in Comparative Government (3) May be repeated with consent of department. Maximum 6 hours.

469 Soviet Foreign Policy (3) Soviet international behavior since 1917 and selected problems of Soviet foreign policy post World War II.

470 International Law (3) Nature and development of international law and compliance with it. Particular attention to function of international law in the context of international conflict.

475 Ancient and Medieval Political Thought (3) Major western political thinkers from Socrates to Marx.

476 Modern Political Thought (3) Major western political thinkers from Machiavelli to Marx.

487-488 Senior Honors Thesis and Seminar (0-6) Required of honors majors; admission with consent of department. Students register for zero hours credit in spring semester. Credit is granted on completion of thesis.

491 Foreign Study (1-15) See page 97.

492 Off-Campus Study (1-15) See page 97.

493 Independent Study (1-15) See page 96.

PORTUGUESE

111-112 Elementary Portuguese (3,3) Introduction to Portuguese. May not be taken for credit by students with two years of high school or one year college Portuguese. Must be taken in sequence. Language Laboratory required.

211-212 Intermediate Portuguese (3,3) Stresses reading, writing, listening, and speaking of Portuguese to prepare for upper division courses in the language. Must be taken in sequence. Language Laboratory required.

300 Portuguese for Spanish Speakers (3) Accelerated class for beginning students of Portuguese with a strong background in another Romance language. Introduction to grammar, reading and culture of Portugal and Brazil. Prereq: 3 hours at 300 level in another Romance language or equivalent.

311 Asuntos de Luso-Brazilian Literature (3) Luso-Brazilian literature, with emphasis on contemporary works. Genres may vary. Prereq: 212 or equivalent. (Same as Latin American Studies 311.)

323 Conversation and Composition (3) Development of speaking, writing, reading, and culture in Portuguese; some review of grammar. Prereq: 212 or 300 equivalent.

431-432 Directed Readings in Brazilian and Portuguese Literature (3,3) May be repeated with consent of instructor. (Same as Latin American Studies 431-432.)

491 Foreign Study (1-15) See page 97.

PSYCHOLOGY

110 General Psychology (3) Introduction to primary approaches to the study of human behavior and experience.

117 Honors: General Psychology (3) Enriched introduction with extra readings. Prereq: Consent of instructor.

210 Biological Basis of Behavior (3) Survey of theories and research concerning the role of genetic factors, nervous and endocrine systems, and other biological influences on behavior. Recommended: 110 or equivalent.

220 Behavior and Experience: Humanistic Psychology (3) Behavioral and phenomenological analysis of individuals and their development in a social context. Prereq: 110 or equivalent. Recommended: 210, 220.

300 Child Psychology (3) The normal child from conception through infancy, childhood, and adolescence. Physical, cognitive, social, and emotional development. Prereq: 110 or equivalent and 200 or 210.

310 Learning and Thinking (3) Survey of theory and findings of research concerning both humans and nonhumans. Prereq: 110 or equivalent. Recommended: 210, 220.

320 Motivation (3) Survey of theories and related research; discussion of applications. Prereq: 110 or equivalent. Recommended: 210, 220.


359 Laboratory in Human Relations (3) Interpersonal relations and communication through structured experiences in small groups. Prereq: 110 or equivalent, and consent of instructor. May be repeated. Maximum 6 hours.

360 Social Psychology (3) Theories, methods, and findings of research concerning individual behavior in a social context. Prereq: 110 or equivalent.

370 Ethology and Sociobiology (3) Basic concepts in the evolutionary approach to behavior, including applications to psychology, the social sciences, and the arts. (Same as Zoology 370.)

382 Contemporary Topics in Psychology (3) Current issues or problems, such as architectural psychology, impact of technology, artificial intelligence, or stereotypes. Different topic each semester. Prereq: 110 or equivalent. May be repeated. Maximum 9 hours.

385 Statistics in Psychology (3) Descriptive statistics, logic of hypothesis-testing and statistical inference. Basic parametric and non-parametric tests. Prereq: Mathematics 110. Not open to students with credit in Mathematics 116, Statistics 201, or equivalent.

395 Methods of Research in Psychology (3) Fundamentals in the design, conduct, and interpretation of research, including experimental, quasi-experimental, and program-evaluation designs. Focus on both laboratory and natural settings. Prereq: 110 or equivalent.

396 Laboratory in Psychology (2-3) Introduction to techniques used in the laboratory to study different topics in psychology, such as perception, memory, learning, and social behavior. Supervised experience in the use of laboratory techniques, collection and interpretation of data. Different topic each semester. Prereq: 110 or equivalent, 210, 220, 385, 395. May be repeated. Maximum 9 hours.

399 Supervised Research and Field Work (1-3) Field experience in community-based research and service settings. Prereq: 110 or equivalent, 210, 220, 385, 395. May be repeated. Maximum 12 hours in 399, 489, 491, 492, and 493 combined may be applied toward the major.


409 Group Facilitation (3) Study of theory and techniques used in group counseling in small groups. Prereq: 395 and consent of instructor. May be repeated. Maximum 6 hours.


424 Psychology and the Law (3) Psychological aspects of legal systems. Prereq: 110 or equivalent, upper division standing and consent of instructor.

430 Health Psychology (3) Psychological factors related to health and illness, including stress, personality, and environment. Applications of psychological treatments to physical illness. Prereq: 110 or equivalent, 210.

434 Psychology of Gender (3) Biological, psychological, and social factors in gender. Importance of gender roles and stereotypes for behavior and experience. Prereq: 110 or equivalent, 210, 220. (Same as Women's Studies 434.)

440 Organizational Psychology (3) Social-psychological analysis of organizations, emphasizing role theory, research on organizational systems theory. Prereq: 360. (Same as Management 440.)


455 Comparative Animal Behavior (3) (Same as Zoology 455.)

469 Comparative Animal Behavior Laboratory (3) Coreq: 455. (Same as Zoology 455.)

471 Physiological Psychology (3) Nervous system and physiological correlates of behavior. Biological basis of emotion, learning, memory and stress. Prereq: 110 or equivalent, 210, and one year of Biology or Zoology introductory sequences or equivalents.

479 Laboratory in Physiological Psychology (3) Laboratory studies of nervous system and physiological correlates of behavior. Coreq: 461.

470 Theories of Personality (3) Major theories of human personality and their development. Prereq: 230 and 300 or 330.

480 Theories of Learning (3) Classical and current approaches to learning and cognition. Prereq: 310.

482 Topics in Psychology (3) Intensive analysis of special topics, such as Afro-American Psychology or evaluation of cognitive development. Prereq: 210.
**PUBLIC HEALTH**

300 Introduction to Public Health (3) Aspects of public health including discussion of contemporary and controversial health issues. E

305 Communicable and Noncommunicable Diseases (3) Modern concepts of diseases, etiology of common communicable and chronic disease problems including prevention and control. Prereq: 1 year of biological science or consent of instructor. F, Sp

310 Environmental Management and Control (3) Contemporary principles of control of disease-producing agents in our environment. Emphasizes concepts for effective application of control principles to vocational endeavors and/or daily living activities. Includes: Drinking water quality (chemical, physical and biological), waste management (liquid, solid and hazardous), vector control, safe food management, recreational sanitation and safety to include pool management, shelter hygiene (homes, child care, schools, hospitals, etc.), occupational health and safety. F, Sp

400 Consumer Health (3) (Same as Health 400.)

410 Health in the Work Environment (3) Fundamental activities involved in field of industrial health aimed at reducing health problems for employees. Emphasis on workplace health hazards and problems of concern to nurses, medical staff, management, engineers and union representatives. Preparation of industrial health and safety files. Prereq: Consent of instructor. May not be taken for credit by occupational health concentration (MPH) majors. F, Sp

415 Special Topics (3) Instructional or research topics to be assigned. Prereq: Consent of instructor. May be repeated under different topic. Maximum 6 hours. F, Sp

493 Directed Independent Study (1-3) Individual study of selected issues. Prereq: Consent of instructor. May be repeated. Maximum 6 hours. E

**RECREATION AND LEISURE STUDIES**

110 Foundations for Leisure Studies and Services (3) Focuses on understanding concepts, principles, and practices related to providing leisure service including philosophy, history and theory, programming, economics, leadership, and a survey of leisure services organizations and occupational opportunities.

210 Dynamics of Recreation Leadership (3) Theoretical practices and concepts as they apply to all roles of recreation leadership. F

220 Introduction to Therapies and Medical Terminology (1) Responsibilities of recreation, occupational, physical, horticulture, art, and music therapists. Basic terminology used in medical environment. Sp

250 Specialized Study in Leisure Education (1-3) Focus on developing positive attitudes toward leisure. Contribution of leisure to mental and physical health. Creative Cooking, Bike Hikes, New Games. E

290 Field Practice (1-2) Supervised practice in approved agency offering leisure services. Each hour's credit requires 25 hours of work in field agency. For recreation students only. Prereq: Permission of instructor. E

310 Leisure Program Development and Evaluation (3) (Essential elements and basic principles involved in organization, administration, marketing, evaluation of various types of recreation programs with emphasis on development of program objectives, practical and comprehensive program designs and evaluation for population and facility within student's particular area of interest. Prereq: 210 or consent of instructor. Sp

320 Analysis of Leisure and Special Populations (3) Principles, concepts, historical development of recreation, therapeutic recreation, and leisure services to special populations. Prereq: 230 or consent of instructor. F

390 Field Practice (1-2) Supervised practice in approved agency offering leisure services. Each hour's credit requires 25 hours of work in field agency. For recreation majors only. Prereq: 290 and permission of instructor. F

410 Maintenance and Management of Recreation and Sports Related Facilities (3) Principles for operationalizing modern facility maintenance systems and management strategies for recreation/sports related facilities and settings. Cost tracking, inventory systems, specialized maintenance techniques, safety guidelines, maintenance management systems and security. Prereq: 110, 310 or consent of instructor. F

420 Principles of Therapeutic Recreation (3) Principles and practices in therapeutic recreation including activity analysis, activity and program selection, individual assessment, treatment plans and professional issues. Prereq: 320 or consent of instructor. Sp

430 Organization and Administration of Leisure Service (3) Principles of administration applied to provision of leisure services offered by public, private, and/or commercial enterprises. Organizational structures, personnel management, evaluation, legal authority, introduction to budgeting and fiscal procedures. Prereq: 310 or consent of instructor. F

440 Dimensions of Private and Commercial Recreation Businesses (3) Nature and function of recreation in private, commercial, and industrial settings. Development of management of recreation methods and services offered in leisure market, factors influencing participation, management considerations, and research in commercial recreation and tourism. Prereq: 110, junior standing or consent of instructor. Sp

450 Specialized Study in Leisure Education (1-4) Special interest leisure activities for developing positive attitudes toward leisure. Contribution of leisure to mental and physical health. May be repeated. Maximum 6 hours. E

490 Practicum in Recreation (1-3) Full time practice in approved recreation agency. Emphasis on supervisory and administrative procedures. Prereq: 290, 390, senior standing. Satisfactory/No Credit only. E

**RELIGIOUS STUDIES/COURSES OF INSTRUCTION**

111 Ways of Understanding Religion (3) Sources and methods used in the study of religion and religious analysis of approaches to the study of religion.

212 Criticism of Religion (3) Classical and contemporary forms of criticism of religious thought as in the work of Marx, Freud, Nietzsche, and current feminist and liberation movements.

235 Issues in Religious Studies (1-3) Introduction to the study of religion through selected themes, problems, controversies, or contemporary issues. Variable content. May be repeated. Maximum 6 hours.

301 Religious Myth, Symbol, and Ritual (3) Distinctive modes of religious expression and analysis of theoretical approaches appropriate to their particular social and cultural functions in religions.

302 Religion of Primitive Peoples (3) Religions of selected non-literate peoples. Role of religion in their social and cultural systems. (Same as Anthropology 302.)

305 Contemporary Religious Thought (3) Major themes, issues, and thinkers in twentieth century religion.

309-310 Elementary Classical Hebrew (3,3) Basic elements of Hebrew phonology, script, morphology and syntax. Introduction to basic elements of text, form, and literary analysis.

311 Ancient Hebraic Religious Traditions (3) Development of ancient Israelite and early Jewish traditions with emphasis on those concerning the Exodus, Davidic kingship, and Zion in historical, prophetic and apocalyptic material.

312 Religious Aspects of Biblical and Classical Literature (3) Ways in which contemporary modes of literary study enhance appreciation of biblical and classical material. Ways in which the western literary tradition has appropriated and reconstituted the biblical and classical heritage.

313 Religious Aspects of Modern Literature (3) Issues raised for religious inquiry in contemporary literature. Relation of religious and moral considerations to problems of literary analysis; relation between religious language and forms of human expression (symbol, metaphor, myth, image) identified in study of literature.

315 Reformation Europe, 1500-1650 (3) (Same as History 315.)

316 Topics in Religion and Literature (3) Selected themes that suggest points of intersection between literary art and the religious experience. Variable content. May be repeated. Maximum 6 hours.

319 Sociology of Religion (3) (Same as Sociology 319.)

321 New Testament Origins (3) Influence of pre-Christian Judaism and Greek culture and philosophy on early Christianity. Motivations and guiding concepts which led to the formation of the New Testament. Victory of the Christian Church over the forces of persecution and the Constantinian settlement (311 A.D.). (Same as History 321.)

322 Christian Thought (3) Principal forms of Christian thought and institutions through the interpretation of representative thinkers and movements from Augustine of Hippo to the twentieth century.

326 Images of Jesus (3) Major portrayals of Jesus Christ from the first century to the twentieth within the context of the cultural milieu which gave birth to each. Extensive use of slides, video material, recordings, and literature.

329-330 Intermediate Classical Hebrew (3,3) 329-330 Intermediate Classical Hebrew (3,3) Readings in narrative material from the Hebrew Bible. Readings in poetic and prophetic material from the Hebrew Bible. Prereq: 329 or consent of instructor.
200 Introduction to Social Work (3) Emergence of the social work profession; professional mission; knowledge, skills, and values; practice settings; client groups; helping services; career patterns; practice methods. Designed to assist students to consider their ability for a career in social work.

250 Social Welfare (3) Development and function of the social welfare institution. Analysis of social welfare programs and impact of the institution on society.


312 Social Work Practice I (3) Knowledge, values, and skills for entry level generalist practice in a variety of settings. The social work problem solving process, different size client systems, ethnic-sensitive assumptions, and the worker's regard for persons-environment configuration. Concurrent skills laboratory. Prereq: Initial progression. Pre or Coreq: 314.


314 Human Behavior and the Social Environment (3) Integration of theories of behavior, social, cultural, environmental and psychological factors in human behavior. Person-in-environment over the life span with special attention to diversity, impact of racism, sexism, and other sociocultural factors. Integration of knowledge into a social work practice perspective. Prereq: Initial progression.


412 Social Work Practice III (3) Generalist practice with emphasis on groups and communities, including treatment theories, techniques, and issues. Prereq: Full progression. Coreq: 480.


460 Integrative Seminar (2) Social work content for entry-level professional practice and current issues influencing the profession. Includes development of a portfolio reflecting BSW outcomes. Prereq: Full progression. Coreq: 481.


SOCIIOLOGY

100 General Sociology (3) Major concepts and theoretical approaches of sociology with emphasis on culture, socialization, social organization, and social stratification. Prereq: Full progression.

110 Social Problems and Social Change (3) Increasingly acute and intense problems such as alcoholism, violence, crime, inequality, lifestyle preferences, and environmental abuse within the context of social change. Assessment of control strategies. May be taken instead of 100.

200 Sociological Analysis (3) Selected set of contemporary issues emphasizing theoretical and logical structure of the issues and development of data needed to enter into informed debate on the issues. Students are expected to develop their own analytical arguments. Prereq: English 102 or consent of instructor.

220 Interpersonal Communication (3) (Same as Speech 220.)

232 Varieties of Religious Community (3) (Same as Religious Studies 332.)

291 Sport in American Society (3) (Same as Physical Education 291.)

310 American Society (3) Institutional organization of contemporary American society with particular attention to major social values.

311 Family (3) Theoretical frameworks and methodological approaches; their application in the sociological study of past and present family forms.

319 Sociology of Religion (3) Interrelationship of sociology, culture, and religion. (Same as Religious Studies 319.)

320 Interpersonal Communication Processes (3) (Same as Speech 320.)

321 Sociological Theory (3) Survey of contemporary issues and problems in sociological theory with an emphasis on their historical development and their importance for the field. Students are required to form critical appraisals of the topics addressed.

330 Computers and Society (3) History of computer and social systems; capabilities of computer applications in various fields; social, cultural, and economic impacts.

331 Sociological Research (3) Selected issues in philosophy of social science, research design, sampling, methodology, data collection, and interpretation. Requires written research report.

336 Elementary Social Statistics (3) Statistics used in social research; elementary descriptive techniques; measures of central tendency, dispersion; elementary statistical inference; tests of significance for parametric and non-parametric data.


343 Race and Ethnicity (3) Social sources of racial and ethnic cleavages, and patterns of conflict. Analysis of who gets what, why, and how in the United States.

346 Organization of Occupations (3) Occupations and classifications as interest groupings in work settings and the wider community.

350 Criminology (3) Systemic inquiry into alternative definitions of crime, statistical distribution of different types of crime causation, and responses to crime, primarily by the police.


352 Deviance and Social Control (3) Deviants, their lifestyles, social organization, and social control.

360 Environment and Resources (3) Relationship between scarcity of natural resources and changes in societal beliefs and social structure. Topics include social and physical limits to growth and collective action problems.

363 The City (3) The revolutionary impact of cities and city life as seen from an ecological perspective. The organization of life in cities into communities, neighborhoods, and other territories. Urban planning and problems.

370 Social Psychology (3) Social psychological analysis of social behavior emphasizing its acquisition, enactment, and its dynamic nature.

375 Gender in Society (3) 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 375.)

380 Rural Sociology (3) (Same as Rural Sociology 380.)

442 Advanced Driver and Traffic Safety Education (4) Principles, practices, and procedures for safe driving skills and traffic awareness. Concurrent skills laboratory. Prereq: 405 or consent of instructor.

476 Special Topics (1-3) Study in selected disciplinary or professional areas of safety. Maximum 12 hours.


Sociology/Courses of Instruction 175
464 Urban Ecology (3) The relation of humans to their urban environment with emphasis on conservation and the use of appropriate technology. (Same as Urban Studies 464.)

471 Sociolinguistics (3) (Same as English 471 and Linguistics 471.)

480 Diffusion of Agricultural Technology (3) (Same as Rural Sociology 480.)

491 Foreign Study (1-15) Prereq: Advance departmental approval of number of hours and topics. May be repeated. Maximum 15 hours. See page 97.

492 Off-Campus Study (1-15) Prereq: Advance departmental approval of number of hours and topics. May be repeated. Maximum 15 hours. See page 96.

493 Independent Study (1-15) Prereq: Advance departmental approval of number of hours and topics. May be repeated. Maximum 15 hours. See page 96.

SPANISH

111-112 Elementary Spanish (3,3) Introduction to Spanish. May not be taken for credit by students with two years of high school or one year college Spanish. Must be taken in sequence. Language Laboratory required.

211-212 Intermediate Spanish (3,3) Reading, writing, listening and speaking of Spanish to prepare for upper division courses in the language. Must be taken in sequence. Language Laboratory required. Prereq: 111-112 or equivalent.

217-218 Honors: Intermediate Spanish (3,3) Honors course for students of superior ability in Spanish. Incoming freshmen are admitted on the basis of a diagnostic test; high school average and performance on the ACT. Classes normally held to a maximum of 15 students. Students follow enriched program with continuing emphasis upon speaking ability and with an introduction to reading literary selections. Students who earn an A or B in 218 receive credit for 211. Prereq: 117-118 or equivalent.

291 Spanish Literature in English Translation (3) From the Golden Age, Don Quixote, the picaresque novel, and St. John of the Cross, to the modern, Unamuno, Lorca, Ortega, and Cela. No foreign language or major credit.

292 Spanish American Literature in English Translation (3) Contemporary Spanish American fiction: such as Borges, Fuentes, Marquez, Asturias. No foreign language or major credit.

300 Spanish Transition (3) Development of linguistic skills in factory work courses above 300. Recommended for students who would benefit from additional training beyond 212 in the skills of speaking, reading and writing Spanish. Particular attention for preparation to read Hispanic literature and other advanced-level material.

311 Aspects of Spanish Literature (3) Introduction to Spanish literature, using selections from prose, drama and poetry of the medieval, Golden Age and modern periods. Required of all majors. Prereq: 212, 218 or equivalent.

312 Aspects of Spanish American Literature (3) Introductory to the study of Spanish American literature, with emphasis on contemporary works. Genres may vary. Prereq: 212, 218 or equivalent. (Same as Latin American Studies 312.)

323-324 Intermediate Conversation and Composition (3-3) Designed to improve proficiency in oral and written communication in Spanish.

321 Phonetics (2) Prereq: 212, 218 or equivalent.

422 Advanced Grammar (3) Finer points of grammatical structures. Required of all majors. Native speakers must receive permission from the instructor to take this course. Prereq: 212, 218 or equivalent.

423-424 Advanced Conversation and Composition (3-3) Development of oral and written communication in Spanish for pre-professionals.

426 Methods of Historical Linguistics (3) (Same as Russian 426, German 426 and Linguistics 426.)

427 Survey of Spanish American Literature (3) Selected works of major Spaniards and Latin American writers such as Darío, Paz, Borges, Fuentes and others. Genres and periods may vary. Prereq: 311, 312 or equivalent. (Same as Latin American Studies 427.)

470 20th Century Hispanic Theatre (3) Emphasis on major 20th century Spanish American dramatists. Prereq: 311, 312 or equivalent. (Same as Latin American Studies 470.)

471 Latin American Civilization (3) Latin America's diverse heritage and influence social and political institutions. Prereq: 311, 312 or equivalent. (Same as Latin American Studies 471.)

472 Masterpieces of Spanish American Literature (3) Selected works by major Spanish-American period writers such as Darío, Paz, Borges, Fuentes and others. Genres and periods may vary. Prereq: 311, 312 or equivalent. (Same as Latin American Studies 472.)

473-474 Survey of Spanish American Literature (3,3) 473-Historical survey from the Conquest to late 19th century. 474-Major literary movements, writers and works of the 20th century. Prereq: 311, 312 or equivalent. (Same as Latin American Studies 473-474.)

479 Social Protest Literature of Latin America (3) Literature as a means of unmasking social ills that have traditionally beset Latin America. Among major themes: Indigénismo, Black literature, women writers, the role of the writer in Latin American society. Prereq: 311, 312 or equivalent. (Same as Latin American Studies 479.)

451 Foreign Study (1-15) See page 97.

SPECIAL EDUCATION

270 Special Education Seminar (1) Introduction to the field; career avenues and objectives including observation in the field.

351 Articulation Disorders (3) Prereq: Admission to Teacher Education Program. (Same as Audiology and Speech Pathology 351.)

370 Survey of Exceptional People (2) Definition, characteristics and special needs of exceptional individuals: mainstaining; historical and legal background of special education; cause-effect of handicapping conditions; educational settings/adaptations for instruction; professional roles and responsibilities; social adjustments of exceptional persons and others; current trends and issues in special education. Prereq: Admission to Teacher Education Program. (Same as Education 370.)

371 Audiology I (3) (Same as Audiology and Speech Pathology 371.)

404 Appraisal of Speech and Language Disorders (3) (Same as Audiology and Speech Pathology 404.)

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

423 Communication Processes for the Hearing Impaired (3) Expressive and receptive vocabulary development in sign communication. Fingerspelling and educational applications of sign language.

424 Nature of Hearing Impairments (3) Anatomy and physiology of hearing loss and auditory training; loss; methods and instrumentation for assessment of hearing level; interpretation of audiologic services to medical and other rehabilitative disciplines.

425 Introduction to the Psychology and Education of the Hearing Impaired (3) Primarily for those planning to teach the hearing impaired. Related to psychology, social adjustment, communication methodology, language development and educational applications of hearing impaired. Survey of literature. Visits to programs.

433-434 Clinical Practice in Speech Pathology (1,4) (Same as Audiology and Speech Pathology 433-434.)

460 Voice Disorders (3) (Same as Audiology and Speech Pathology 460.)

451 Psychology and Education of the Mildly Handicapped (3) Nature and characteristics of mildly handicapped students with learning disabilities, emotional disturbance, and mental retardation. Instructional approaches, techniques, and evaluation and development of materials. Prereq: Admission to Teacher Education Program. Coreq: 480. F

452 Psychology and Education of the Moderate and Severely Handicapped (3) Nature and characteristics of children and youth with moderate and severe handicapping conditions, and educational strategies necessary to accommodate them. Traditional and innovative trends and approaches. Prereq: Admission to Teacher Education Program. Coreq: 490. Sp

454 Education of the Gifted and Talented Children (3) Psychometric and behavioral studies of giftedness. Analysis of past and present school practices in reference to curriculum and program implementation. Prereq: Admission to Teacher Education Program. Sp

455 Speech and Language Basis of Learning Disabilities in the Classroom (3) Normal communication development; understanding of speech and language impairments in school-age students; integration of oral and written communication skills into existing curriculum, especially for high incidence special education students. Sp

470 Psychology of the Exceptional Child (3) General characteristics and educational needs of exceptional children. Implications of developmental variations for functioning as adults. Enrollment limited to non-education majors.

471 Internship I: Special Education (3-15) Testing methods and theories of teaching. Internship is completed in local public schools. Application for internship should be made upon admission to the Teacher Education Program. Prereq: 410 and admission to Teacher Education Program. Satisfactory/No Credit only. F

473 Audiology II (3) (Same as Audiology and Speech Pathology 473.)

480 Field Experience with Mildly Handicapped Students (3) Practicum in teaching mildly handicapped persons; planning, developing, implementing, and evaluating instruction. Prereq: Admission to Teacher Education Program. Coreq: 451. F

481 Policies, Procedures, and Practices in Special Education (3) Comprehensive review of Federal and State laws and regulations which direct implementation of special education programs in all public and private facilities and agencies. Multiple service delivery systems reviewed. Prereq: Admission to Teacher Education Program. Sp
482 Speech and Language Services in the Schools (3) Organization and implementation of speech and language programs. Emphasis on the IEP process as it affects assessment, case-selection, and programming for students age 4-21. Procedures and materials, group intervention, and classroom consultation. Prereq: Admission to Teacher Education Program.

483 Clinical Practice in Communication Disorders in Schools (3) Supervised practice with children with communication disorders. Same as Psychology 482 and Audiology and Speech Pathology 433, 434 (80-100 clinical contact hours) and admission to Teacher Education Program.

484 Internship with Hearing Impaired Children (6) Supervised practicum with preschool, day school and residential students. Prereq: Admission to Teacher Education Program.

490 Field Experience with Moderately and Severely Handicapped Students (3) On-site teaching experience with moderately and severely handicapped children and youth. Prereq: Admission to Teacher Education Program.

506 Internships in Teaching in Special Education and Rehabilitation (3-15) Placement in professional settings in public schools or agencies under supervision of master practitioners. Enrollment limited to those in teacher education major or special education program. Restrictive measures to eliminate or minimize resulting handicaps. Skills for communication with lay and professional persons.

541 Psychosocial Aspects of Exceptionalities (3) Psychosocial impact of exceptionality on the person and the person's family. Reaction to loss, coping with disability, and societal rehabilitation.

543 Medical Aspects of Disability (3) Etiology and clinical symptoms related to disabling conditions served by special education and rehabilitation personnel. Restrictive measures to eliminate or minimize resulting handicaps. Skills for communication with lay and professional persons.

553 Assessment of Exceptional Students (3) Historical, legal, and ethical contexts of assessment; concepts of evaluation models, test instruments and assessment procedures. Same as Psychology 320. Prereq: Admission to Teacher Education Program. Satisfactory/No Credit.

539 Transition from School to Work (3) Development of programs and procedures to facilitate adjustment of exceptional persons to independent living. Evolving perspective of work, attributes of effective programs, and the interface between school-based programs and rehabilitation agencies.

541 Psychosocial Aspects of Exceptionalities (3) Psychosocial impact of exceptionality on the person and the person's family. Reaction to loss, coping with disability, and societal rehabilitation.

543 Medical Aspects of Disability (3) Etiology and clinical symptoms related to disabling conditions served by special education and rehabilitation personnel. Restrictive measures to eliminate or minimize resulting handicaps. Skills for communication with lay and professional persons.

553 Assessment of Exceptional Students (3) Historical, legal, and ethical contexts of assessment; concepts of evaluation models, test instruments and assessment procedures. Same as Psychology 320. Prereq: Admission to Teacher Education Program. Satisfactory/No Credit.

595 Clinical Experience in Assessment and Instruction (3) Academic remediation applied in a lab/field setting; student performs tasks related to teaching such as assessment, preparation of lessons, and delivery of instruction. Coreq: 553. F

SPEECH COMMUNICATION

100 Introduction to Speech Communication (3) Fundamental theories and practices with particular reference to interpersonal, personal, group, organization, and public communication.

200 Developing Speech Confidence (1) Principles and techniques for coping with apprehension about communication. Recommended for students who are concurrently enrolled in 200 level speech courses and desire additional work in dealing with their anxiety about speaking.

210 Public Speaking (3) Preparation and delivery of informative and persuasive speeches. Topics include research, organization, adapting to an audience, topic selection, reasoning, and evaluating the discourse of others.

220 Interpersonal Communication (3) Process by which thoughts, feelings, and actions affect and are affected by the face-to-face communication situation. (Same as Sociology 220.)

240 Business and Professional Speaking (3) Basic principles and communication within organizations, including such topics as organizational/communication theory, group problem solving, formal presentations, written and oral communication.

270 Argumentation and Debate (3) Reasoned decision-making with emphasis on analysis, evidence, reasoning, constructing and refuting arguments.

271-272 Intercollegiate Forensics (1,1) Supervised work in tournament debate and individual events. Prereq: Consent of Instructor.

280 Introduction to Oral Interpretation (3) Art of reading aloud; development of interpretive techniques and their application to selected passages of prose, poetry, and drama.

300 Nonverbal Communication (3) Exploration of nonverbal communication from human communication perspective; origins and research, usage and coding of nonverbal behavior, research strategies, and theoretical approaches.

310 Persuasion (3) Methods which contribute to effective and ineffective persuasion. Topics include credibility, message construction, receiver variables.

320 Interpersonal Communication Processes (3) Social dimensions of interpersonal communication and relationships. (Same as Psychology 320. Prereq: Admission to Teacher Education Program. Satisfactory/No Credit.

330 Group Communication (3) Small group decision-making; evidence, argumentation, leadership, roles, and norms as they affect critical thinking in groups.

350 Communication Theory and Research (3) Survey of contemporary communication theories; their applications in society, and the process by which theories are created, tested, and changed.

360 Topics in Communication and Society (3) Content varies. Studies in social function of such communication forms as posters, speeches, songs, plays, demonstrations. May be repeated with consent of department. Maximum 6 hours.

370 Evidence and Argumentation (3) Concept of evidence in public controversies, uses and sources of evidence, and conditions affecting credibility.

371-372 Intercollegiate Forensics (1,1) Continuation of 271-272. Prereq: Consent of instructor.

380 Oral Interpretation of Prose Literature (3) Individual oral interpretive techniques of fiction and nonfiction; ensemble interpretation including readers and chamber theatre forms. Prereq: 290 or consent of instructor.

385 Oral Interpretation of Poetry (3) Individual and group performances of poetry. Prereq: 280 or consent of instructor.

400 Topics in Speech Communication (3) Variable content course affording opportunity to offer subject matter not covered in an existing course. Topics, scope and prerequisites to be determined by department. May be repeated. Maximum 6 hours. Major credit limited to 9 hours.

420 Communication and Conflict (3) Communication as a significant factor in the development, management, and resolution of conflict at the interpersonal, small group, organizational, or societal levels.

440 Organizational Communication (3) Organization and design of communication within organizational process that affect the quality of human interaction both within and outside the organization. May be repeated. Maximum 6 hours.

460 History of Rhetorical Theory (3) Western rhetorical theory from Plato to the present.

465 Studies in Rhetorical History and Criticism (3) Historical and critical study of public address. May be repeated. Maximum 6 hours.

466 Rhetoric of the Women's Rights Movement (3) Historical and critical study of public address in campaign for women's rights, 1830's to present. (Same as Women's Studies 466.)

470 Theories of Argumentation (3) Conceptual bases of argumentation from classical to contemporary theories. Prereq: Consent of instructor.

480 Ensemble Interpretation (3) Study and presentation of literary texts through group performance.

491 Foreign Study (1-15) See page 97 and description of major concentration.

492 Off-Campus Study (1-15) See page 96 and description of major concentration.

493 Independent Study (1-15) See page 96 and description of major concentration.

STATISTICS

201 Introduction to Statistics (3) Descriptive statistics, including bivariate trends and time series analysis; concepts of probability and probability distributions, binomial and normal distributions, linear correlation and regression, estimation and significance tests for means, contingency tables. Prereq: Mathematics 121. E


261 Computing for Data Management and Analysis (3) Use of computer operating system commands and packaged programs for managing data files and statistical analysis. Prereq: 201. E


411 Introduction to Statistical Computing (3) Use of computer software packages for statistical analysis. Emphasis on use of computer packages. Prereq: 201 or 251. E


471 Random Processes and Probability Models (3) Functions of random variables, multivariate distributions, conditional expectations, waiting time distributions, random processes, Markov chains, queuing theory. Major writing requirement. Prereq: 251, F

480 Special Topics in Probability (1-3) Topics in probability and stochastic processes. Prereq: Consent of the instructor. May be repeated. Maximum 6 hours.

493 Special Topics in Statistics (1-3) Topics vary. Prereq: Consent of instructor. May be repeated. Maximum 6 hours.

495 Principles of Statistical Process Management (3) Control charts and other statistical techniques applied
to management of business processes. Prereq: Consent of department head. E

456 Undergraduate Seminar (1) Directed readings and active participation in the Department's undergraduate seminar program. Prereq: Senior standing and consent of Chairperson of Statistics Department Undergraduate Affairs Committee. Satisfactory/No credit only. May be repeated. Maximum 2 hours.

492 Internship (1-6) Supervised off-campus experience in application of statistical principles and methods in business, industry, government, or environment, culminating in a written report. Prereq: Permission of the Chairperson of the Statistics Department Undergraduate Affairs Committee. Satisfactory/No credit only. May be repeated. Maximum 6 hours.

493 Independent Study (2-6) Faculty directed reading and investigation of specified topic in probability or statistics culminating in a written report. Prereq: Two courses in statistics and permission of the Chairperson of the Statistics Department Undergraduate Affairs Committee. Letter grade or Satisfactory/No credit. May be repeated. Maximum 6 hours.


TECHNOLOGICAL AND TECHNICAL EDUCATION

161 Graphic Communications (3) Drafting as a means of communication in technology. Orthographic and multiview drawing, conventional practices, pictorial techniques and applications, sheet metal development and auxiliary view drawing. Sketching, dimensioning, board work, and CAD. F

163 Power and Energy Systems (3) Automotive technology and internal combustion engines. Includes various prime movers, methods of utilization, distribution, and transmission of power. Engine tune up and overhaul and small engine maintenance and repair is stressed through experimental and applied laboratory experiences. F

165 Woods Technology (3) Processes, tools, equipment, and products of the woodworking industry. Importance of safety and using hand tools and basic machinery. F

166 Metals Technology (3) Processes, equipment, materials and products of metal working industries. Processes in machine, foundry, forging, heat treat ment, sheet metal and fabrication. F

201 Field Experience in Vocational Technical Education (1) Field experience in public school programs in district education. May be repeated. Maximum 3 hours. Satisfactory/No Credit only. E

230 Typewriting and Shorthand Proficiency (3) Proficiency credit for students planning to certify in business education and office technology who have typewritten and/or shorthand courses. Prereq: Department approval. E

261 Architectural Graphics (3) Graphic representation and architecture. Principles of construction, working drawings for a residential dwelling, and CAD techniques. Prereq: 161 or consent of instructor. Sp

263 Basic Electricity/Electronics (3) Operation and characteristics of electrical systems and devices; includes general DC/AC theory and application, use of electronic measuring instruments, circuit analysis, introduction to semi-conductors and various laboratory experiences that involve the function of different types of circuits. Prereq: 163 or consent of instructor. Sp

265 Construction Technology (3) Residential construction, including site selection, foundations, framing, roofing, interior, and exterior finishes. Prereq: 165 or consent of instructor. Sp

266 Machine Tool Processes (3) Function, care, setup, operation and theory of basic machine tools. Prereq: 166 or consent of instructor. Sp

326 Micro Business Applications (3) Operating and programming microcomputers. BASIC language is used and programming examples are oriented in business applications. Prereq: Admission to Teacher Education Program. F

350 Related and Applied Theory in Occupations (1-15) Applicants must show evidence of bonafide occupational experience compatible with State Plan requirements. Written theory tests and the submission of a comprehensive portfolio are used to award variable credit. Measures evaluated by technical specialist and departmental faculty. May be repeated. Maximum 15 hours. Prereq: Junior standing and departmental approval. E

351 Manipulative Skills in Occupations (1-15) Applicants must show evidence of bonafide occupational experience compatible with State Plan requirements. Written theory tests and comprehensive portfolio are used to award variable credit. Measures evaluated by technical specialist and departmental faculty. May be repeated. Maximum 15 hours. Prereq: Junior standing and departmental approval. E

352 Practicum in Industrial Education (1-3) Updating and upgrading experiences in non-traditional settings for technical teachers. May be repeated. Maximum 6 hours. Satisfactory/No Credit only. E

354 Job Analysis Techniques and Curriculum Development (3) Instructional materials development utilizing the techniques of job analysis. F

355 Microcomputer Applications in Technology (3) Use and applications of microcomputers for educational, business, and industry. Implications and impact of microcomputers on occupations and everyday living. Open lab for required hands-on experience in operations and programming. F

356 Lab Organization, Management, Maintenance, and Safety (3) Principles of classroom and laboratory organization, maintenance, safety, and management in vocational and technical laboratories. Sp

361 Graphic Reproduction Processes (3) Principles of printing, duplicating, photography, and other forms of graphic communication; includes laboratory experience in SLR camera applications, camera copy preparation, line and halftone photography, layout, typesetting, and offset finishing. Prereq: Admission to Teacher Education Program. F

363 Applications of Integrated Electrons (3) Electrical circuit analysis and IC applications, including amplifiers, switching and timing circuit, oscillators and the basic and application of digital electronics through lecture and laboratory experiments and projects. Prereq: 263 or consent of instructor and admission to Teacher Education Program. F

365 Manufacture of Wood Products (3) Design and construction of furniture, and small engine operation and repair. Prereq: 165, 166. Sp

366 Manufacturing Technology (3) Manufacturing system, including researching and developing products, preparing to produce, producing, marketing, and servicing products. Prereq: 165, 166, and admission to Teacher Education Program. Sp

372 Job Analysis (3) Applied techniques of job analysis to determine job descriptions, training requirements, performance standards and sequence of training technical personnel. F

373 Instructional Techniques in Industrial Education (3) Application of learning theories, motivational techniques, and instructional strategies to technical and related subjects. F

374 Planning Instruction for Human Resource Development (3) Selection, design, and development of performance-based training programs. Prereq: 372 or consent of instructor. F

401 Utilization of Community Resources (3) Strategies of developing linkages between vocational education and the private sector through advisory committees, councils and working parties. Includes special reference to management of public relations programs. Prereq: Three years of teaching experience. A

410 Pre-Student Teaching Seminar (1) Objectives and policies of the student teaching program. Must be completed the term immediately preceding student teaching. Prereq: Admission to Teacher Education Program. Satisfactory/No Credit only. F, Sp

413 Special Topics in Technological and Adult Education (1-3) Topics to be assigned. May be repeated. Maximum 6 hours. E

414 Individual Study in Technological and Adult Education (3) Prereq: Consent of supervising instructor with approval from the chairperson of the department head. May be repeated. Maximum 6 hours. E

415 Coordination Techniques (3) Necessary procedures, duties and responsibilities to implement, maintain, and evaluate a successful cooperative education program. A

420 Introduction to Adult Education (3) Breadth of adult education activities and the diversity of adult clientele, including opportunities for professional practice apart from traditional instructional settings. A

421 Adult Education Program Design and Management (3) Processes of program development and special application to adult training programs. Sp

422 Adult Development and Training (3) Application of adult development concepts to design and management of training programs for adults. Sp

430 Principles and Organization of Business Marketing Education (3) Historical background and development needs. Principles of vocational education in business and marketing, curriculum implications, establishing, evaluating, and improving the programs. Prereq: Admission to Teacher Education Program. F

431 Word Processing and Office Technology (3) Word processing concepts and applications, methodology for teaching word processing and machines. Prereq: Advanced typewriting skill and permission of instructor. Sp

432 Methods and Materials in Business and Marketing Education (3) teaching techniques, aids and evaluation in subject matter fields. Prereq: Admission to Teacher Education Program. Sp

433 Methods in Office Technology (3) Materials, methods, evaluation procedures, and recent research in typewriting, shorthand, and other office procedures. Sp

434 Methods in Accounting and Data Processing (3) Methods, materials, evaluation procedures, and recent research in accounting and data processing. Automated accounting is introduced. Prereq: Admission to Teacher Education Program. F

436 Supervised Occupational Experience (3) Practical field experience in the field, including experiences under the supervision of practitioner and departmental representative. May be repeated to a maximum of 3 credits. E

439 Areas of Marketing (3) Marketing, personnel development, operations and management as they affect the instructional leadership program in marketing education. Sp

440 Special Topics in Business and Marketing Education (1-3) Topics to be assigned. May be repeated. Maximum 9 hours. E

450 Seminar in Industrial Education (1-3) Current issues, innovations, problems, and other topics associated with technical programs. Must be repeated. Maximum 9 hours. A

454 Training Aids Development (3) Study and preparation of instructional aids and non-print media commonly used by technical instructors and trainers. F

455 Performance-Based Evaluation (3) Assessing the effectiveness of training through the development of performance-based measures; evaluation of incumbent worker job performance. Sp

456 Organization and Operation of VICA/HOSA (3) Planning, organizing and implementing youth-club activities in vocational-technical programs. A

459 New Developments in Industrial Education (3)
Developments, significant problems and recent trends in fiber and fabric research by coordinating instructor and instructor in conjunction with knowledgeable resource personnel. May be repeated. Maximum 6 hours. E

464 Methods and Mediation in Technology Education (3) Methods and media used in teaching technology education in secondary public schools. Prereq: Admission to Teacher Education Program. A

465 Materials and Processes (3) Materials relative to specifications, testing, and methods to classify and categorize materials. Determining correct processes to manufacture industrial products. Prereq: Consent of instructor.

466 Course Construction in Technology Education (3) Selection and arrangement of course content. Planning, instructional objectives, project/product selection, assignments and evaluation. Prereq: Admission to Teacher Education Program. A

469 Plastic Technology (3) Characteristics and applications of thermoplastic and thermosetting materials. Plastics production equipment related product design and processing of plastics. Prereq: 165 and admission to Teacher Education Program. A

470 Training for Human Resource Development (3) Organization and management of training, including roles of change agents and pay. Benefits and productivity of training systems. F

471 Principles of Supervision (3) Problems of motivation, communication, interpersonal relationships and leadership. Sp

479 Internship in Human Resource Development (5-10) Planning, implementing, and evaluating the effectiveness of training programs in an industrial setting. E

481 Student Teaching: Grades 7-12 and Adults (10) Full-time experience in classroom and laboratory teaching and related responsibilities under the direct supervision of a master teacher in the content area. Prereq: Admission to Teacher Education Program. E

TEXTILES AND APPAREL

101 Apparel Construction (3) Garment construction focused on decision making and time management; pattern alterations, fitting and quality of construction. Not available for credit for departmental majors. F, Sp

120 Textiles I (3) Consumer-oriented textiles: fibers, fabric construction and finishes in relation to use, serviceability and care of apparel and household fabrics. Laboratory examination of fibers, yarns, fabrics and finishes. E

230 Apparel Evaluation (3) Analysis of construction techniques to ascertain cost/equity relationships; elements and principles of design in relation to garment construction. Prereq: 120. F

232 Design Analysis (3) Apparel design analysis based on flat patterns, draping, finishing techniques; comparison of methods for style variations and costing of garments. Sp

310 Principles of Merchandising (3) Buying practices, procedures, problems, activities, techniques, underlying concepts fundamental to merchandising. Prereq: Accounting 201. F

320 Textiles II (3) Recent developments in fibers, fiber structure, yarn processing, yarn structure and fabric construction: dyeing, finishing and printing, textile performance and evaluation; legislation and standards. Prereq: 120, Chemistry 100-110 or 120-130. F

330 Apparel Production (3) Industrial methods in garment production; focus on stages of production, plant layout, costing and quality control. Prereq: 230. F


345 Fashion in History (3) Development of apparel styles in western civilization from middle ages to present; factors associated with origin, adoption and abandonment including historic, social and economic settings. F

350 Consumers in the Market (3) Consumer decision-making and problems in the domestic and international marketplace; consumer issues and policies, emphasis on consumer choice, information, consumer protection and current issues. Prereq: Economics 201. Sp

390 Introduction to Field Experience (1) Interviews, placement and planning for field experience. Prereq: Approved application for field experience. Sp

410 Retail Management (3) Retail sector of economy from management perspective; decision-making in retail operations: promotion, pricing, financial planning and control, computer application, product mix-strategy. Prereq: 2 semesters Marketing. Sp

415 Fashion Promotion (3) Advertising and special purpose media used to promote fashion merchandise; evaluation of retail sales promotion activities. Sp

420 Textile Microscopy and Physical Testing (3) Microscopic techniques applied to textile fibers, yarns and fabrics; standard methods and equipment used in physical testing. Prereq: 320. F

422 Textile Fiber Chemistry (3) Chemistry of textile fibers; emphasis on structure, preparation and reactions; implications relating to dyeing and finishing of fabrics. Prereq: Chemistry 350. Sp

450 Textile and Apparel Economics (3) Economics of the United States textile, apparel and fiber industries; emphasis upon production, distribution, institutions, impact upon consumers; international and domestic issues. Prereq: 350 or consent of instructor. Sp


492 Field Experience in Merchandising, Apparel or Textiles (6) Off-campus, cooperative program with business establishments which merchandise or manufacture textiles and/or apparel. Prereq: Coreq. 490. F

493 Directed Study (1-3) Individual problems for Junior and Senior students with special interests in textiles, merchandising or apparel. Prereq: Junior or Senior standing, consent of instructor. E

495 Special Topics (3) Topics in textiles, merchandising, and/or apparel. May be repeated. Maximum of 9 hours. Prereq: Junior or Senior standing, consent of instructor. E

497-498 Honors: Textiles and Apparel (3) Individual problems for Junior and Senior students showing special ability and interest in textiles and apparel. Prereq: Recommendation of Department Head. E

THEATRE

100 Introduction to Theatre (3) Understanding theatre: thought, philosophy, aesthetics, and production practices.

210-211 Survey of World Drama (3,3) 210-Includes Greek, Roman, Medieval, Elizabethan, and Eastern forms of drama. 211-Covers 19th century, as well as realism through contemporary drama.

220-221 Acting (3,3) 220-Improvisations, theatre games, acting skills. 221-Use of acting skills in extensive scene work.

226 Voice and Diction (3) Voice production; attention to individual speech problems.

245 Basic Stage Costuming (3) Costume design and construction; basic theory and technique. Production participation required. Prereq: 100.

250 Introduction to Scenery Technology (3) Techniques of scenery and stage properties construction. Production participation required.

260 Fundamentals of Lighting and Sound Production (3) Survey of practical information on electricity, physics, psychology, and instrument engineering as it relates to stage lighting and sound production. Emphasis on hands-on skills in labs.

310-311 History of the Theatre (3,3) 310-Drama in performance with particular emphasis in theatre architecture, scene design, and acting styles Antiquity to Renaissance. 311-The European and modern theatres.

312-313 History of the American Theatre (3,3) Development of the theatre as social institution in American life. 312-From its beginnings to 1900. 313-From 1900 to present.

320 Advanced Acting (3) Special problems in contemporary roles. Prereq: 220-221 and consent of instructor.

340 Introduction to Costume Design (3) Development of research and rendering skills. Prereq: 245 or consent of instructor.

345 Costume Construction (3) Study and practice of costumes in costume construction. Includes stitching, corsetry, millinery, and crafts. Production participation is required.

355 Introduction to Scenic Design (3) Introduction to art and craft of scenic design.


380 Theatre Practicum: Production (1-3) Supervised work on departmental productions. Available for credit only to theatre majors or with consent of department. Prereq: Consent of Instructor. May be repeated. Maximum 3 hours.

381 Theatre Practicum: Performance (1-3) Supervised work on departmental productions. Available for credit only to theatre majors or with consent of department. Prereq: Consent of instructor. May be repeated. Maximum 3 hours.

401 Principles of Theatrical Design (3) Fundamental principles of design; visual and structural relationships. Projects will be assigned to develop understanding and production.

409 Stage Make-Up (2) Problems in make-up design and application, character analysis, physiognomy and chiaroscuro. Prereq: 100.

410 Dramatic Theory and Criticism (3) Theatre aesthetics from Aristotle to the present.

420 Special Studies in Acting (3) Content varies. Exercises in selected concentrated areas such as Shakespeare, techniques, approach, e.g., Shakespeare, movement, humor. Prereq: 320.

426 Advanced Phonetics (3) Phonetic aspects of contemporary dialects of the English Language. Prereq: Consent of instructor.

430 Principles of Play Directing (4) Problems in composition, dramatization, movement. Prereq: 220, 221 and consent of instructor.


445 Advanced Costume Construction (3) Advanced construction technique, such as tailoring, vacuum forming, plastic molding, and cobbling. Prereq: 345 or consent of instructor.

446 Costume Patternmaking (3) Draping patterns for period costumes. Includes corsetry and the study of historic patterns 1500-1900. Prereq: 345 or consent of instructor.

450 Advanced Scenery Technology I (3) Study and practice of theatre woodworking; production participation will be required. Prereq: 250. Graduate credit available to theatre M.F.A. students only.

451 Advanced Scenery Technology II (3) Study and practice of metalworking and plastics for theatrical productions; production participation will be required. Prereq: 250. Graduate credit to theatre M.F.A. students only.
452 Advanced Scenery Technology III (3) Study and practice of stage rigging for theatrical productions; preparation and control of stage will be required. Prereq: 250. Graduate credit available to theatre M.F.A. students only.

454 Scenery Painting (2) Introduction to materials, techniques, and principles of the craft. Emphasis on gaining skill and understanding through studio experience. Prereq: Consent of instructor.


460 Advanced Lighting and Sound Technology (3) Projects in lighting and sound coordination. May include opera, dance, musical theatre, and "rock videos." Final projects will be live productions. Emphasis on developing artistic sensitivity and subtleties in control. Prereq: 259.

461 Special Effects in Lighting and Sound (4) Projects in special effects including creative application of technology. Problem solving, drafting, and execution of effects for production emphasized. Production participation required. Prereq: 260 or instructor's permission.

462 Advanced Lighting Design (3) Advanced problems in lighting design and theory including areas such as lighting musical theatre, opera, and dance. Prereq: 362 or consent of instructor.

463 Sound Design (3) Sound design for the performing arts. Use of equipment and acoustical factors that affect sound production. Sound designs will be plotted from selected plays. Final projects will be mixed, edited, and culled for production.

465 Introduction to Lighting Design for Non-Designers (3) Theory and practice of stage lighting design with emphasis on the relationship between designers and non-design practitioners such as directors, actors, choreographers, architects, etc. Not open for option in lighting design.

470-471 Playwriting (3,3) Advanced instruction in the writing of plays. Prereq: Consent of instructor.

480 Theatre Practicum: Production (1-3) Continuation of 380. Prereq: Consent of instructor. For theatre majors only. May be repeated. Maximum 3 hours.

481 Theatre Practicum: Performance (1-3) Continuation of 381. Prereq: Consent of instructor. For theatre majors only. May be repeated. Maximum 3 hours.

491 Foreign Study (1-15) See page 97.

492 Off-Campus Study (1-15) See page 96.

493 Independent Study (1-15) See page 96.

UNIVERSITY HONORS

118-128 Honors: First Year (3,3) Small seminar classes taught by faculty from all undergraduate colleges of the university. Open to first and second year students on three initial trials (first, second, third), and offered on a pass/fail grading basis. Topics vary. May be repeated.

218-228 Honors: Second Year (3,3) Small seminar classes taught by faculty from all undergraduate colleges of the university. Not open to first year students; open to all other students with a GPA of 3.25 or greater. Topics vary. May be repeated.

318-328 Honors: Junior Colloquium (3,3) Small group studies of selected topics, issues, or problems. Open to juniors and seniors with a GPA of 3.25 or greater. May be repeated.

338-348 Tennessee Scholars Seminar (1,1) Sequence limited to and required of all Tennessee Scholars each year. May be repeated. Maximum 8 hours. Satisfactory/No Credit grading only.

418-428 Honors: Senior Colloquium (3,3) Small group studies of selected topics, issues, or problems. Open to juniors and seniors with a GPA of 3.25 or greater. May be repeated.

491 Honors: Foreign Study (3-15) Open to any undergraduate honors student. Proposals must be approved in advance. See the Director of University Honors for further information.

492 Honors: Off-Campus Study (3-15) Open to any undergraduate honors student. Proposals must be approved in advance. See the Director of University Honors for further information.

493 Honors: Independent Study (3-15) Open to any undergraduate honors student. May be used by Tennessee Scholars preparing their senior projects. Proposals must be approved in advance. See the Director of University Honors for further information.

WILDLIFE AND FISHERIES SCIENCE

341 Law Enforcement and Public Relations (3) Fundamentals and general principles of local, state and federal laws and regulations governing natural resources and their management. Principles and practices of interacting with the public. F

441 Wildlife and Fisheries Techniques (3) Capturing and handling fish and wildlife; population redistribution; food handling and survival skills; wild animal marking techniques; fish culture systems; management plans; track and sign identification. Prereq: Forestry, Wildlife, and Fisheries majors only. F

443 Fisheries Science (3) Quantification and management of freshwater fisheries including population estimation, age and growth, biological assessment, and stocking. Prereq: Forestry, Wildlife, and Fisheries majors only. F

444 Ecology and Management of Wild Mammals (3)
Zoology/Courses of Instruction

117-118 Honors: Fundamentals of Zoology (4,4) For superior students in any field; open to students with a minimum ACT composite score of 27 or a minimum college GPA of 3.2, or consent of instructor. Prereq: One year of college chemistry, 4 hours and 1 lab.

210-220 Human Biology (3,3) For non-majors; not available as prerequisite or major credit in Zoology or Biology. May be taken out of sequence. 210-Diversity of life forms, uniqueness of humans, cell biology, genetics, reproduction, prenatal development. 220-Human physiology and ecology. 2 hours and 1 lab.

230 Human Anatomy (3) Gross and microanatomy of the human. Credit may not be applied toward Zoology major. Prereq: One year of introductory biology or Zoology 230 or equivalent. 2 hours and 1 lab.

301 Special Topics (1-2) Topics of current interest. Consult departmental listing for topics offered. May be repeated but maximum of 2 credit hours may be applied toward the Zoology major.

302 Zoology Colloquium (1) Weekly discussions of topics of current interest. Intended for life sciences majors. Satisfactory/No Credit only. May be repeated but one 1 credit hour may be applied toward the Zoology major.

310 Bioethics (3) Relationships between biological disciplines and human values. Open discussions of selected dilemmas arising from new knowledge about evolution of behavior, genetics, reproduction, medicine, and environment.

322 Physiology of Reproduction and Lactation (3) (Same as Animal Science 322.)


331 Animal Development and Embryology Laboratory (2) Coreq: 330. 1 lab.

350 Comparative Vertebrate Biology (4,4) Origins, phylogeny, diversity and functional anatomy of vertebrates. Laboratory involves dissection of shark, cat, and selected other vertebrates. 2 hours and 2 labs.

360 Comparative Invertebrate Biology (4,4) Origins, phylogeny and functional anatomy of invertebrates with emphasis on diversity of life forms and adaptation to specific local environments. 2 hours and 2 labs.

370 Ethology and Sociobiology (3) (Same as Psychology 370.)

380 General Entomology (3) Introduction to insects: basic structure, physiology, behavior, evolution and classification of insect orders. 2 hours and 1 lab.

400 Undergraduate Research (2) Research projects under supervision of faculty. Prereq: Junior or senior standing and consent of instructor. May be repeated. Maximum of 4 hours may be applied toward the Zoology major.

402 Practicum in Zoology (2) Participation in individual practical applications of zoology in community, government, and industry. Prereq: Biology 210, 220, 230 and prior consent of instructor.

403 General Genetics Laboratory (2) Experiments designed to illustrate basic principles of inheritance; primary equipment used is Drosophila. Prereq: Biology 220. 2 labs.

404 Cytological Technique (2) Practical experience with a variety of techniques including microscopy, embedding and sectioning, chromosome preparations, autoradiography, in situ hybridization, histochemistry, and immunofluorescence. Prereq: Biology 210, 2 labs.

405-406 Minicourse in Zoology (1) Selected advanced topics in zoology, concentrated in time and subject matter. Consult departmental listing for topics offered. Prereq: As announced. May be repeated but a maximum of 3 hours may be applied toward the Zoology major.

409 Perspectives in Zoology (2) Critical analysis of selected readings in biology. Prereq: Senior standing.

410 Advanced Cell Biology (3) Molecular and supramolecular structure and functions of eukaryotic cells including regulatory mechanisms, physiology, behavior, and cellular interactions. Prereq: Biology 210, 220. 2 hours and 1 lab.

415 Parasitology (3) Parasitic relationships: physiological, ecological, evolutionary and economic aspects. Prereq: Biology 230 or consent of instructor. 2 hours and 1 lab.

420 Cell and Tissue Structure and Function (4) Animal cells and tissues at light and electron microscope levels. Prereq: Biology 210. 2 hours and 2 labs.

430 Immunology (3) (Same as Microbiology 430.)

439 Immunology Laboratory (1) (Same as Microbiology 439.)


445 Comparative Animal Physiology (3) Comparison of diverse physiological mechanisms aiding in adaptation to particular habitats and lifestyles. Prereq: Biology 210, 230. 2 years of chemistry; recommended: 380.

449 Laboratory in Physiology (2) Prereq or Coreq: 440 or 445.

450 Comparative Animal Behavior (3) Principles and methods of ethology with emphasis on ecological, developmental, physiological and evolutionary aspects. Coreq: 459. (Same as Physiology 450.)

459 Comparative Animal Behavior Laboratory (3) Introduction to observational and experimental research in ethology. Coreq: 450. (Same as Physiology 459.)

460 Evolution (3) Modern concepts of animal evolution.

465 Human Genetics (3) Genetic and molecular principles and problems of human inheritance. Prereq: Biology 220.

470 Aquatic Ecology (3) Introduction to the physiochemical nature of inland waters with description of biotic communities and their interrelationships. Prereq: Biology 210, 217-230, 230 and 2 hours and 1 lab.

472 Arachnology (3) Biology of spiders, mites, scorpions and relatives. Prereq: 360 or 380. 2 hours and 1 lab.

473 Herpetology (3) Biology of amphibians and reptiles with emphasis on ecology and adaptive radiation. Prereq: Biology 230. 2 hours and 1 lab.

474 Ichthyology (3) Evolution, classification, collection and identification, distribution and biology of fishes with emphasis on fresh water fauna of Eastern North America. Prereq: Biology 230 or consent of instructor. 2 hours and 1 lab.

475 Ornithology (3) Behavior, ecology, populations, avian anatomy and identification of birds. Prereq: Biology 230. 2 hours and 1 lab.

476 Mammalogy (3) Evolution, classification, biogeography, ecology, behavior and functional anatomy of mammals. Prereq: Biology 230 or equivalent. 2 hours and 1 lab.

480 Physiology of Exercise (3) Functions of the body in muscular work: physiological aspects of fatigue,
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<td>230 or 440</td>
<td>Training and adaptation to the environment. Prereq: 230 or 440. 2 hours and 1 lab.</td>
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<tr>
<td>490</td>
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<td>Comparative analysis of physiology and morphology of endocrine glands in vertebrates and invertebrates, their role and interaction in maintenance of the organism and species. Prereq: 440 or equivalent.</td>
<td>440 or equivalent</td>
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