

Courses

The following course listing represents the University curricula as of the publication of this catalogue. Additions and changes to the offerings are published in the "Catalogue Supplement," printed in each semester's registration *Bulletin*.

Not all courses are offered every semester. For current offerings consult the most current academic schedule and the *Guide to Course Requirements* during registration periods. See your academic advisors/department chair for additional information.

Accounting (ACCT)

201. PRINCIPLES OF ACCOUNTING I 3 hours credit
Survey of current accounting principles, the accounting cycle and financial statements. Emphasis on proprietorships. Computer spreadsheet applications required. Not open to freshmen. **Three hours per week.**

202. PRINCIPLES OF ACCOUNTING II 3 hours credit
Survey of accounting principles and financial statements as they apply to partnerships and corporations and an introduction to manufacturing statements. Computer spreadsheet applications required. **Prerequisite:** ACCT 201. **Three hours per week.**

302. COST ACCOUNTING I 3 hours credit
Internal financial reporting practices for manufacturing concerns and an examination of cost control. Topics include manufacturing statements, job order costing, process costing and standard costing. Computer spreadsheet applications required. **Prerequisite:** ACCT 202. **Three hours per week.**

304. INTERMEDIATE ACCOUNTING I 3 hours credit
Detailed analysis of current and non-current assets and the related revenue and expense accounts. Emphasis on recent APB and FASB pronouncements. **Prerequisite:** 3.0 GPA for ACCT 201, 202. **Three hours per week.**

305. INTERMEDIATE ACCOUNTING II 3 hours credit
Detailed analysis of accounting concepts, including current and non-current liabilities, stockholders equity accounts, related revenue and expense accounts, and statement of changes in financial position. Emphasis on recent APB and FASB guidelines. **Prerequisites:** Grade of C or better in ACCT 304 and successful completion of the accounting admission test. **Three hours per week.**

306. MANAGERIAL ACCOUNTING 3 hours credit
Introduction to internal accounting--accounting for planning and control and also for special decisions. Various topics and techniques are covered, the most pervasive being budgets. **Prerequisite:** ACCT 202. **Three hours per week.**

338. SPECIAL TOPICS 3 hours credit
Advanced study of varying accounting topics based on students' interests and needs. May be repeated once for credit under different subtitles. May substitute for an accounting elective depending on the topic (see chair of Accounting

Department). **Prerequisites:** ACCT 202 and permission of instructor. **Three hours per week.**

341. FEDERAL INCOME TAX ACCOUNTING: PERSONAL 3 hours credit
Discussion of technical tax provisions as they pertain to individuals. Emphasis on tax planning considerations. Use of IRS forms where appropriate. This course, along with successful participation in the VITA program, satisfies the ABLE requirement. **Prerequisite:** ACCT 202. **Three hours per week.**

342. FEDERAL INCOME TAX ACCOUNTING: PARTNERSHIP AND CORPORATION 3 hours credit
Discussion of technical tax provisions as they pertain to corporations, partnerships, estates and trusts. Emphasis on tax planning considerations. **Prerequisite:** ACCT 341. **Three hours per week.**

401. INTEGRATED ACCOUNTING SYSTEMS 3 hours credit
Detailed analyses and applications of computerized integrated accounting software systems. Topics include general ledger, accounts receivable, accounts payable, payroll, inventory and report writing systems. **Prerequisite:** ACCT 202. **Three hours per week.**

403. ADVANCED ACCOUNTING I 3 hours credit
In-depth study of consolidations and governmental/not-for-profit accounting. **Prerequisite:** Senior status and a grade of C or better in ACCT 305. **Three hours per week.**

404. ADVANCED ACCOUNTING II 3 hours credit
Examination of advanced accounting topics such as foreign currency translations; segment, interim and SEC reporting; troubled debt; partnerships; and estates and trusts. **Prerequisite:** Grade of C or better in ACCT 305. **Three hours per week.**

407. AUDITING 3 hours credit
Duties and responsibilities of auditors, auditing standards, examination procedures, work paper preparation and audit reports. **Prerequisites:** Senior status and grade of C or better in ACCT 305. **Three hours per week.**

410. ADVANCED PROBLEMS IN FINANCIAL, MANAGERIAL AND GOVERNMENTAL ACCOUNTING 3 hours credit
Advanced applications in financial, managerial and governmental accounting. The first of a two-course elective sequence for accounting majors who plan to pursue a career in public accounting as certified public accountants. **Prerequisite:** Senior standing or permission of department chair. **Three hours per week. (P/F)**

411. ADVANCED PROBLEMS IN TAXATION, LAW AND AUDITING 3 hours credit
Advanced applications in federal taxation, business law, professional responsibilities and ethics, and auditing. The second of a two-course elective sequence for accounting majors who plan to pursue a career in public accounting as certified public accountants. **Prerequisite:** Senior standing or permission of department chair. **Three hours per week. (P/F)**

415. GOVERNMENTAL AND NOT-FOR-PROFIT ACCOUNTING 3 hours credit

Examination of the full range of accounting and reporting policies and procedures for state and local governments as well as for not-for-profit organizations. **Prerequisite:** Grade of C or better in ACCT 305. **Three hours per week.**

420. ACCOUNTING INFORMATION SYSTEMS 3 hours credit

Examination of the role of accounting information in the organization. Major topics include users of accounting information, goals and objectives, review of accounting systems, the human component, hardware, software, data, operating controls and management controls. **Prerequisite:** Grade of C or better in ACCT 304. **Three hours per week.**

430. INTERNATIONAL ACCOUNTING 3 hours credit

Introduction to a variety of international accounting issues encountered by multinational organizations. Includes accounting and auditing standards, consolidations and taxation. **Prerequisite:** Grade of C or better in ACCT 304. **Three hours per week.**

435. ACCOUNTING IN ITS GLOBAL SETTING 3 hours credit

Introduction to a variety of international accounting issues encountered by multi-national organizations. Issues include financial accounting standards; consolidation of international operations; auditing standards and procedures; managerial accounting systems for information gathering, planning, control and performance measurement; and international taxation. Part or all of the course will be held in another country. **Prerequisite:** Grade of C or better in ACCT 304. **Three hours per week.**

490. ACCOUNTING INTERNSHIP 3 hours credit

Internship experience in accounting. Placement and approval by chair of the accounting department required. **Prerequisite:** Grade of C or better in ACCT 304. (P/F)

491. ADVANCED ACCOUNTING INTERNSHIP 3 hours credit

Advanced internship experience in accounting. Placement and approval by chair of the accounting department required. **Prerequisite:** ACCT 490. **Three hours per week.**

494. DIRECTED STUDY 1-3 hours credit

For students who desire to do research or pursue a special topic in accounting. May be used as an accounting elective if approved by the chair of the Accounting Department. **Prerequisites:** Junior status and consent of instructor prior to registration.

American Studies (AMST)

205. THE AMERICAN EXPERIENCE 3 hours credit

Introductory course in American Studies. Attempts to define the American character and society through reading in history, biography and fiction covering the 19th and 20th centuries. **Three hours per week.**

305. ALTERNATIVE COMMUNITIES AND LIFESTYLES IN AMERICA 3 hours credit

Survey of American countercultures from the Puritans to recent communes. Emphasis on alternative forms of religion, economic and social organization, and marriage. **Three hours per week.**

315. TOPICS IN AMERICAN STUDIES 3 hours credit

Historical study of some particular aspect of American society and culture. May be taken twice under different course titles recorded with the registrar. **Three hours per week.**

480. SENIOR SEMINAR IN AMERICAN STUDIES 3 hours credit

A research seminar. Students design and carry out a research project. Class reading and discussion attempts to integrate previous work done in American studies and arrive at a comprehensive overview of American society and culture.

Anthropology (ANTH)

212. CULTURAL ANTHROPOLOGY 3 hours credit

Analysis of the concept of culture as humanity's social heritage through study of small-scale societies and their institutions. Focuses on anthropologists' use of participant-observation and techniques for systematically ordering field data into a body of knowledge concerning human behavioral similarities and diversities. Includes a general introduction to the entire field of anthropology. **Three hours per week. Meets General Education IIB.**

215. PRIMITIVE RELIGION 3 hours credit

Study of beliefs and rituals of people affected by the presence of gods or other supernatural beings. Topics include magic, witchcraft and shamanist practices among aboriginal and traditional societies throughout the world. **Three hours per week. Meets General Education IIB.**

250. ARCHAEOLOGY OF ANCIENT SOCIETIES 3 hours credit

Study of excavation techniques and scientific methods for interpreting the evolution of ancient societies. Examines evidence for the surviving record of human societies from the lower Paleolithic to early historic times. **Two hours lecture, one hour laboratory per week. Meets General Education IIB.**

300. STUDIES IN ANTHROPOLOGY 3 hours credit

Independent study in a subfield of anthropology. Topic to be approved by instructor. May include field work and may be repeated twice under different subtitles. **Prerequisite:** ANTH 212. **Three hours per week.**

350. PHYSICAL ANTHROPOLOGY 3 hours credit

Overview of the major evidence for human evolution, including the human fossil record, implications of human biological variation and studies of non-human primates (esp. gorillas, chimpanzees and orangutans) in natural settings. **Prerequisite:** ANTH 212. **Three hours per week.**

355. NORTH AMERICAN INDIAN 3 hours credit

Explores American Indian cultures north of Mexico with emphasis on tribal origins, patterns of adaptation and analysis of economic, social and ideological systems. Reviews ethnographic accounts of traditional Indian life ways, reservation life and its aftermath. **Three hours per week. Meets General Education IIB.**

400. INDIVIDUAL DIRECTED STUDY 3 hours credit

Advanced study in an area of anthropology through intensive literature and/or field research. May be repeated once under different subtitles. **Prerequisite:** ANTH 212. **Three hours per week.**

450. COMPARATIVE CULTURES 3 hours credit

Cross-cultural survey of primitive societies with emphasis on human social differences and their meaning. Examples drawn from Africa, Asia, North and South America and Oceania. Focus on cultural diversity with references to varying marital, religious, economic, family and social problems. **Prerequisite:** ANTH 212. **Three hours per week.**

459. SEMINAR IN ANTHROPOLOGY 3 hours credit

Review of current research and publication in the four

subdisciplines of anthropology (cultural anthropology, physical anthropology, linguistic anthropology, archaeology/prehistory).
Prerequisite: ANTH 212. **Three hours per week.**

Art (ART)

104. ART APPRECIATION **3 hours credit**
 Wide ranging introduction to the visual arts for the non-major. Topics include art theory, varied pictorial and artistic subject matter, media and the relation of art to its historical time period and culture. **Three hours per week. Meets General Education IB.**

119. DESIGN IN CRAFTS **3 hours credit**
 Introduction to a variety of craft design concepts and techniques. Topics may vary from semester to semester. **Four hours per week.**

120. TWO-DIMENSIONAL DESIGN **3 hours credit**
 Introduction to and development of knowledge and comprehension of the underlying principles of composition, through the creation of designs on flat surfaces. Students furnish their own materials. B.A. and B.F.A. core. **Four hours per week. Meets General Education IB.**

130. DRAWING I **3 hours credit**
 Introduction to basic drawing principles, using a combination of black and white media in the exploration of linear and tonal elements. Students furnish their own materials. B.A. and B.F.A. core. **Four hours per week. Meets General Education IB.**

201. INTRODUCTION TO ART HISTORY **3 hours credit**
 Chronological survey of art and architecture in western civilization, from prehistory to the present. Considers the style, subject matter and purposes of art in relation to its historical time period or culture. B.A. and B.F.A. core. **Three hours per week. Meets General Education IB.**

208. HISTORY OF BAROQUE AND ROCOCO ART **3 hours credit**
 Survey of the visual arts in Europe from the late 16th century to the end of the 18th century. Explores the work of the era's major artists in relation to the larger historical, social and cultural contexts of their time. Emphasis on new developments in subject matter, patronage and art theory. **Prerequisite:** ART 201 for majors; no prerequisite for non-majors. **Three hours per week. Meets General Education IB.**

215. CERAMICS I **3 hours credit**
 Introduction to the art of making clay forms using methods of hand building, forming, glazing, decorating and firing. Students furnish their own materials. B.A. core. **B.F.A. Prerequisite:** ART 120. **Four hours per week. Meets General Education IB.**

219. DESIGN IN FIBER CRAFTS **3 hours credit**
 Introduction to the art of textile design utilizing a variety of techniques and materials. Students furnish their own materials. **B.F.A. prerequisites:** ART 120, 130. **Four hours per week.**

220. PRINCIPLES OF COLOR **3 hours credit**
 Introduction to the historical aspects of color and the exploration of the physical and psychological properties of color through practical exercises. Students furnish their own materials. B.A. and B.F.A. core. **Four hours per week. Meets General Education IB.**

225. THREE-DIMENSIONAL DESIGN **3 hours credit**
 Continued exploration of the elements and principles of design with a concentration of interrelationships between mass, space, form and volume. Students furnish their own materials. B.A. and B.F.A. core. **Prerequisite:** ART 120. **Four hours per week.**

226. ADVERTISING DESIGN I **3 hours credit**
 Introduction to commercial design techniques and principles relating to problems of communication and persuasion. Students furnish their own materials. **Prerequisites:** ART 120, 130. **Four hours per week.**

227. COMPUTER GRAPHIC DESIGN **3 hours credit**
 Introduction to computer graphic design involving hands-on experience in preparing design elements using a microcomputer. **Prerequisite:** ART 120, 130. **Four hours per week.**

228. ADVERTISING ILLUSTRATION **3 hours credit**
 Introduction to basics of commercial illustration, principles of type-illustration relationships and various media techniques. Students furnish their own materials. **Prerequisite:** ART 226. **Four hours per week.**

229. PHOTOGRAPHY I **3 hours credit**
 Introduction to elementary black and white photographic methods and darkroom procedures. Students furnish their own cameras, film, paper and developing tank. B.A. core. **Prerequisites:** B.A.-ART 120; B.F.A.- ART 201. **Four hours per week.**

230. DRAWING II **3 hours credit**
 Introduction to monochromatic and polychromatic drawing techniques using wet and dry media. Students furnish their own materials. B.F.A. core. **Prerequisites:** B.A.-ART 120, 130; B.F.A.-ART 120, 130, 201. **Four hours per week.**

246. PAINTING I **3 hours credit**
 Introduction to techniques in oil, acrylics and watercolor. Students furnish their own materials. B.A. and B.F.A. core. **Prerequisites:** ART 120, 130, 201. **Four hours per week.**

261. SCULPTURE I **3 hours credit**
 Exploration of the expressive qualities of form using the subtractive and additive processes. Students furnish their own materials. **Prerequisites:** B.A.-ART 225; B.F.A.-ART 130, 225. **Four hours per week.**

265. WOOD SCULPTURE **3 hours credit**
 Introduction to various woods, tools and sculpting techniques in a studio setting. Students must furnish materials. **Prerequisite:** ART 225. **Four hours per week.**

290. DIRECTED STUDY IN ART **1-3 hours credit**
 Directed study in one or a combination of studio disciplines or art history. Students furnish materials. Course may be repeated one time under a different subtitle. **Prerequisites:** Approval of department chair prior to registration.

300. HISTORY OF MODERN ART TO 1945 **3 hours credit**
 Survey of the principal movements comprising the modern tradition in art, including Impressionism, Post-Impressionism, Symbolism, Fauvism, Cubism, Expressionism, Abstract Art, Dada and Surrealism. Emphasis on new theories redefining the concept, form and purpose of art, the persona of the artist, and the relation of art to the social and political order. **Prerequisite:** ART 201; no prerequisite for non-majors. **Three hours lecture per week.**

302. HISTORY OF AMERICAN ART: THE COLONIAL PERIOD TO 1900 **3 hours credit**
 Survey of American painting, sculpture and architecture from the Colonial period to the end of the 19th century. Topics include the historical, social and cultural contexts of American art, the work and ideas of major artists, the relationship of American to European art, and the development of a national identity in American art. **Prerequisite:** ART 201 for majors; no prerequisite for non-majors. **Three hours per week. Meets General Education IB.**

303. HISTORY OF AMERICAN ART: THE 20TH CENTURY

3 hours credit

Survey of the visual arts, primarily painting and sculpture, in the United States from the turn of the century to the present. Topics include the historical and social contexts of this art, the world and ideas of major artists, and the emergence of an American avant-garde after World War II. **Prerequisite:** ART 201 for majors; no prerequisite for non-majors. **Three hours per week. Meets General Education IB.**

310. HISTORY OF ITALIAN RENAISSANCE ART

3 hours credit

Survey of painting, sculpture and architecture in the principal art centers of Italy during the 15th and 16th centuries. Covers the work and influence of several generations of major artists in relation to the larger historical, social and cultural contexts of this era. **Prerequisite:** ART 201; no prerequisite for non-majors. **Three hours lecture per week.**

315. CERAMICS II

3 hours credit

Introduction to the elements and principles of designing and making pottery using the wheel throwing process. Students furnish their own materials. **Prerequisite:** ART 215. **Four hours per week.**

322. ARTS ADMINISTRATION

3 hours credit

Introduction to administrative skills for fine and performing arts: programming, budget, public relations, audience development, fund raising and case studies of art organizations. **Prerequisite:** Department chair approval. **Three hours per week.**

326. ADVERTISING DESIGN II

3 hours credit

Study of commercial communication art principles and techniques including national mass media advertising campaigns, direct mail packages, three-dimensional display with a strong emphasis on illustration and typography. Students furnish their own materials. **Prerequisites:** B.A.-ART 226; B.F.A.-ART 226, completion of 21 hours of the B.F.A. core. **Four hours per week.**

329. PHOTOGRAPHY II

3 hours credit

Continuation of aesthetic and experimental photography. Expands lab and field processes learned in Photography I and emphasizes personal expression. Topics include filters, flash, studio and darkroom techniques, Kodalith and multiple image. Students furnish their own cameras, film, paper and filters. **Prerequisite:** ART 229; B.F.A.-ART 229, completion of 21 hours of B.F.A. core. **Four hours per week.**

335. WOMEN IN ART

3 hours credit

Study of the art of selected women artists in relation to the historical and social contexts in which they worked and the professional opportunities available to them. Also examines how women have been represented in art, and how these images shape, reinforce or challenge society's beliefs about women and feminine gender roles. **Prerequisite:** ART 201; no prerequisite for non-majors. **Three hours lecture per week.**

340. PAINTING II

3 hours credit

Study of selected media chosen by the student, with attention to special techniques and problems. Students furnish their own materials. **Prerequisite:** ART 246. **Four hours per week.**

350. PRINTMAKING: LITHOGRAPHY

3 hours credit

Introduction to the principles of lithographic printing through the study of historical elements and practical processes. Various monochromatic lithographic printing techniques explored. Students furnish their own materials. **Prerequisites:** B.A.-ART 120, 130; B.F.A.-ART 120, 130 and completion of 21 hours of B.F.A. core. **Four hours per week.**

351. PRINTMAKING: ETCHING

3 hours credit

Introduction to the principles of the fine art methods of intaglio

printing through the study of historical elements and practical processes. Various monochromatic etching techniques explored. Students furnish their own materials. **Prerequisites:** B.A.-ART 120, 130; B.F.A.-ART 120, 130 and completion of 21 hours of B.F.A. core. **Four hours per week.**

352. PRINTMAKING: SILKSCREEN

3 hours credit

Introduction to the principles of serigraphic printing through the study of historical elements and practical processes. Various monochromatic and polychromatic silkscreen printing techniques explored. Students furnish their own materials. **Prerequisites:** B.A.-ART 120, 130; B.F.A.-ART 120, 130 and completion of 21 hours of B.F.A. core. **Four hours per week.**

353. PRINTMAKING: RELIEF

3 hours credit

Introduction to the principles of relief printing through the study of historical elements and practical processes. Various monochromatic and polychromatic relief printing techniques explored. Students furnish their own materials. **Prerequisites:** B.A.-ART 120, 130; B.F.A.-ART 120, 130 and completion of 21 hours of B.F.A. core. **Four hours per week.**

361. SCULPTURE II

3 hours credit

Study of the sculpture techniques of welding, casting and hand building. Students furnish their own materials. **Prerequisites:** B.A.-ART 215, 261; B.F.A.-ART 215, 261 and completion of 21 hours of the B.F.A. core. **Four hours per week.**

375. METHODS AND MATERIALS

FOR ELEMENTARY SCHOOL ART 3 hours credit

A look at the use of construction skills to develop creative art projects for elementary education. Content includes basic principles of art instruction, integration with other subject areas, exploration of various media, and peer teaching experiences. Students must furnish some of their own materials. For ELED majors only. Students may not receive credit for both ART 375 and EDUC 375. **Four hours per week.**

390. ADVANCED STUDY IN ART

1-3 hours credit

Advanced study in one or a combination of studio disciplines or art history. Students furnish their own materials. **Prerequisite:** Completion of B.A. and B.F.A. core and all regularly scheduled courses in thesis area; approval of the department chair prior to registration.

395. SPECIAL TOPICS IN ART

1-3 hours credit

Intensive study of a selected area in studio and/or art history that includes research. May be taken twice for credit with different subtitles. Students furnish their own materials. **Prerequisites:** B.A.-ART 120, 130, 201; B.F.A.-completion of 21 hours of the B.F.A. core.

399. INTERNATIONAL FIELD STUDY

3-6 hours credit

Travel and study of art, geography, history and culture of selected countries. Pre-tour lectures and other activities required. May be repeated once for credit. **Prerequisite:** Consent of instructor. **Meets General Education IB.**

400. ART AND ART THEORY SINCE 1945

3 hours credit

Survey of major art movements in the United States and Europe since World War II, including key theoretical writings by artists and critics. Topics include the public persona of the artist, new ideas about the concept, form, purpose and interpretation of art, its relation to other disciplines, and its legitimation through arts organizations and the marketplace. **Prerequisite:** ART 201; permission of the instructor for non-majors. **Three hours lecture per week.**

415. CERAMICS III

3 hour credit

Presentation of advanced techniques in wheel throwing, clay assembly and kiln firing. Students furnish their own materials. **Prerequisites:** B.A.-ART 315; B.F.A.-ART 315, completion of 21 hours of the B.F.A. core. **Four hours per week.**

416. CERAMICS IV **3 hours credit**
 Surveys the history, theory and practice of ceramics in a studio setting. Each student investigates and presents a seminar report on an individually chosen area of ceramic art followed by the practical application of discoveries via individual art works. **Prerequisite:** B.A./B.F.A.-ART 415. **Four hours per week.**

420. PHOTOGRAPHY III **3 hours credit**
 Study of color photography using transparency (slide) film. Practical applications include film selection, exposure and use of color in composition. Discussions of various types of color films and processes and of the history of color. Students furnish their own cameras and most supplies. **Prerequisites:** B.A.-ART 329; B.F.A.-ART 329, completion of 21 hours of the B.F.A. core. **Four hours per week.**

422. INTERNSHIP IN ARTS ADMINISTRATION **3-9 hours credit**
 Training in local, regional or national arts organizations; selected areas of programming, budget, fund raising, audience development and public relations. May be taken one time for three credits, and a second time for up to six credits. **Prerequisites:** ART 322 and department chair approval. **Ten to 30 hours per week. (P/F)**

426. ADVERTISING DESIGN III **3 hours credit**
 Advanced advertising design training and work experience in a classroom. **Prerequisites:** B.A.-ART 326; B.F.A.-ART 326, completion of 21 hours of the B.F.A. core. **Four hours per week.**

427. ADVERTISING DESIGN IV **3 hours credit**
 Internship to develop mechanical production skills in conjunction with advanced advertising and graphic design assignments. **Prerequisite:** ART 426. **One hour lecture/ seminar, 10 or more hours internship per week.**

428. ADVANCED STUDY IN THREE-DIMENSIONAL DESIGN **3 hours credit**
 Creative study and critical analysis of three-dimensional forms in clay and other materials based on a variety of two-dimensional themes. **Prerequisites:** ART 130, 215, 225. **Four hours per week.**

429. PHOTOGRAPHY IV **3 hours credit**
 Study of advanced techniques to develop a personal aesthetic, artistic and professional style. Use of 4 x 5 view cameras and other advanced techniques. Projects of photo-essay form, designed to build students' portfolios. Students furnish their own cameras, film and paper. **Prerequisites:** B.A.-ART 329; B.F.A.-ART 329, completion of 21 hours of the B.F.A. core. **Four hours per week.**

430. DRAWING IV **3 hours credit**
 Study of advanced monochromatic and polychromatic drawing techniques using wet and dry media with special attention given to ongoing thematic projects. Students furnish their own materials. **Prerequisites:** B.A.-ART 330, completion of 21 hours of the B.F.A. core. **Four hours per week.**

431. DRAWING V **3 hours credit**
 Continued study in studio problems associated with drawing. Focus on the development of a portfolio and a series of papers based on a selected list of readings. **Prerequisite:** ART 430. **Four hours per week.**

440. PAINTING III **3 hours credit**
 Study of watercolor, oil, acrylic or media substitute. Focus on painting and critiques. **Prerequisites:** B.A.-ART 340; B.F.A.-ART 340, completion of 21 hours of the B.F.A. core. **Four hours per week.**

441. PAINTING IV **3 hours credit**
 Advanced experience requiring an individual theme and goals using one of the following media: watercolor, oil, acrylic or agreed upon substitute. Development of a professional portfolio. Sketch books and written papers required. Students furnish their own materials. **Prerequisite:** ART 440. **Four hours per week.**

442. PAINTING V **3 hours credit**
 Continued study in studio problems associated with painting. Focus on the development of a portfolio and a series of papers based on a selected list of readings. **Prerequisite:** ART 441. **Four hours per week.**

461. SCULPTURE III **3 hours credit**
 Advanced experience of techniques and media. Students furnish their own materials. **Prerequisites:** B.A.-ART 361; B.F.A.-ART 361, completion of the B.F.A. core. **Four hours per week.**

475. ARTS AND CRAFTS FOR THE EXCEPTIONAL CHILD **3 hours credit**
 Art activities for the exceptional child. Provides a curricular framework for sequential planning and for material exploration for both gifted and slow learners. Students must furnish materials. **Prerequisites:** ART 375/EDUC 375, PSYC 423. **Four hours per week.**

480. ART, PSYCHOLOGY AND VISUAL PERCEPTION **3 hours credit**
 Students use principles of psychology and visual perception to develop increased understanding of the visual arts. Students cannot receive credit for both PSYC 480 and ART 480. Does not satisfy General Education requirements. **Prerequisites:** PSYC 101, a minimum total of six semester hours in art or psychology. **Three hours per week.**

490. INDEPENDENT STUDY **1-3 hours credit**
 Directed study in one or a combination of studio disciplines. Students furnish their own materials. May be repeated once under different subtitle, for a total of no more than six credits. **Prerequisites:** ART 390, approval of the department chair prior to registration.

498. SENIOR SEMINAR **3 hours credit**
 Summary of the University art experience through active planning and execution of professionally oriented activities such as a group exhibit, professional portfolios, resumes and videotaped interviews. **Prerequisites:** Second semester junior or senior standing and completion of core. **Three hours per week.**

Biology (BIOL)

101. FUNDAMENTALS OF BIOLOGY **4 hours credit**
 Introduces students to the principles inherent to life, with a broad overview of the cell, the organism and the community in which living things exist. Does not satisfy biology major requirements. **Three hours lecture, one two-hour laboratory per week. Meets General Education IIIA or IIIB.**

105. BIOLOGY AND SOCIETY **3 hours credit**
 Introduces the non-biology major to the broad principles, fundamental ideas and new discoveries in biology that significantly affect the human being's present and future existence. Relates the study of biology to the pressing social and cultural issues of today. Does not satisfy requirements within the major. **Prerequisite:** BIOL 101. **Three one-hour lectures per week. Meets General Education IIIB.**

115. SAFETY IN THE BIOLOGICAL, CHEMICAL AND CLINICAL LABORATORY **1 hour credit**
 Review of laboratory safety. Summary of government laws and

regulatory bodies and their effect on lab policy. Illustrations of proper procedures for laboratory hazards. Topics include chemicals, infectious microbes, animals, fire, electrical equipment, radiation, glassware and compressed gases. Training in the use of safety equipment and protective clothing and general first aid. Students may not receive credit for both BIOL 115 and MDTC 101. **One hour per week.**

121. BIOLOGICAL PRINCIPLES AND PROCESSES 4 hours credit

Introduction to the study of biology, focusing on the diversity of the plant kingdom and its physiological, biochemical and cellular bases. Designed for students majoring in biology; a prerequisite for most upper-level biology courses **Three hours lecture, three hours laboratory per week. Meets General Education IIIA or IIIB.**

122. BIOLOGICAL PRINCIPLES AND PROCESSES 4 hours credit

Introduction to the study of biology, relating the diversity of the animal kingdom to its genetic, evolutionary, physiological and environmental bases. Designed for students majoring in biology and other sciences; a prerequisite for most upper-level biology courses. **Three hours lecture, three hours laboratory per week. Meets General Education IIIA or IIIB.**

211. MICROBIOLOGY 4 hours credit

Fundamental course in the study of microorganisms and their activity, with emphasis on bacteria. **Prerequisite:** BIOL 101 or 122 or 215. **Two hours lecture, four hours laboratory per week. Meets General Education IIIB.**

215. HUMAN ANATOMY AND PHYSIOLOGY I 4 hours credit

Comprehensive study of the structure and function of the human organism, including the integumentary, skeletal, muscle, nervous and endocrine systems. **Prerequisites:** BIOL 101 or 122 recommended. **Three hours lecture, three hours laboratory per week. Meets General Education IIIA or IIIB.**

216. HUMAN ANATOMY AND PHYSIOLOGY II 4 hours credit

Comprehensive study of the structure and function of the human organism, including the circulatory, respiratory, digestive, urinary, immune and reproductive systems. **Prerequisite:** BIOL 101 or 122 or 215 recommended. **Three hours lecture, three hours laboratory per week. Meets General Education IIIA or IIIB.**

217. NUTRITION 3 hours credit

Foundation in the science of nutrition, including biological and biochemical backgrounds for the understanding of nutritional requirements. Does not satisfy requirements within the major. **Prerequisite:** BIOL 101 or 121 or 122 or 215. **Three hours lecture per week. Meets General Education IIIB.**

219. BIOLOGY OF HUMAN AGING 3 hours credit

Study of the effects of aging on the structure and functioning of the human body. Integrates biological aging with other aspects of human existence. Includes discussions of diseases common among the elderly. May not be used to satisfy requirements within the biology major. **Prerequisites:** BIOL 101 or both BIOL 215 and 216. **Three hours lecture per week. Meets General Education IIIB.**

220. HUMANS AND THE ENVIRONMENT 4 hours credit

Interdisciplinary course in conjunction with the departments of Chemistry and Geography and Regional Planning, designed for non-science majors to develop awareness of ways earth's environment is influenced by human activities and effects of the environment on human society. Cannot be repeated for credit in the Chemistry or Geography and Regional Planning

departments and cannot be used to satisfy course requirements within the major. For students in the Honors Program. **Three hours lecture, two hours laboratory per week. Meets General Education IIIA or IIIB.**

225. ECOLOGY 4 hours credit

Introduction to the interactions between organisms and their environment. Biotic and abiotic factors affecting individuals, populations, communities and ecosystems emphasized. **Prerequisites:** BIOL 121 and 122. **Three hours lecture, three hours laboratory per week.**

250. ECONOMIC BOTANY 3 hours credit

Study of the economic importance of plants, emphasizing the origin, domestication and usage of food and medicinal plants. Does not satisfy General Education III requirements. **Prerequisite:** BIOL 121. **Three hours lecture per week.**

260. BIOLOGICAL DRAWING AND ILLUSTRATION 3 hours credit

Introduction to drawing and illustration techniques used in biology through slide lectures and discussions, class exercises and assigned projects using pencil, charcoal, pen and ink, scratchboard and color. Through these exercises, students will develop their observational skills and closely study biological subjects. Students furnish their own materials. ART 130 or some drawing experience is highly recommended. **Prerequisite:** BIOL 101 or 121 or 122. **Four hours per week.**

301. HISTORY AND LITERATURE OF BIOLOGY 2 hours credit

Introduction to the history and literature of biology. Special emphasis on the development of contemporary concepts and techniques of information retrieval. **Prerequisites:** BIOL 101, 225. **Two hours lecture per week.**

312. PLANT TAXONOMY 3 hours credit

Classification of plants, with emphasis on the local flora. **Prerequisite:** BIOL 225. **Two hours lecture, three hours laboratory per week.**

313. COMPARATIVE ANATOMY 4 hours credit

Study of vertebrate body structures, emphasizing the progressive and adaptive changes that occurred in evolution. **Prerequisite:** BIOL 225. **Three hours lecture, three hours laboratory per week.**

316. GENERAL ENTOMOLOGY 3 hours credit

Study of the natural history, identification and life cycles of insects. Special reference to those species of medical and economic importance to people. **Prerequisite:** BIOL 225. **Two hours lecture, three hours laboratory per week.**

320. BIOLOGY OF THE VERTEBRATES 3 hours credit

Study of vertebrate animal life, including evolution, behavior, reproduction, thermoregulation, migration and conservation. Field trips emphasize wildlife biology, and identification and natural history of local species. **Prerequisite:** BIOL 225. **Two hours lecture, three hours laboratory per week.**

321. INVERTEBRATE ZOOLOGY 4 hours credit

Study of animals without backbones emphasizing functional morphology and physiological adaptations. Laboratory sessions focus on investigation of living and preserved specimens. **Prerequisite:** BIOL 122. **Three hours lecture, three hours laboratory per week.**

322. PARASITOLOGY 3 hours credit

Study of the important parasites of humans and domestic animals. **Prerequisite:** BIOL 122. **Two hours lecture, three hours laboratory per week.**

323. MEDICAL MICROBIOLOGY 4 hours credit

Study of the medically important microorganisms, including

methodology and techniques of identification. **Prerequisite:** BIOL 211. **Two hours lecture, four hours laboratory per week.**

324. PLANT MORPHOLOGY **3 hours credit**
Study of extinct and extant vascular plants, emphasizing evolutionary relationships, reproduction and vegetative organization. **Prerequisite:** BIOL 121. **Two hours lecture, three hours laboratory per week. Meets General Education IIIB.**

325. PLANT ANATOMY **4 hours credit**
Study of gross and microscopic plant structure, with special emphasis on higher plants. **Prerequisite:** BIOL 121. **Three hours lecture, three hours laboratory per week. Meets General Education IIIB.**

333. IMMUNOLOGY **4 hours credit**
Basic course dealing with the cellular and chemical aspects of immunity. Antigen-antibody reaction surveyed and its clinical laboratory implications thoroughly discussed. **Prerequisite:** BIOL 211. **Two hours lecture, four hours laboratory per week.**

334. PATHOPHYSIOLOGY **4 hours credit**
Study of the causes, bodily changes, signs and symptoms, and mechanisms involved in common and serious human diseases. **Prerequisites:** BIOL 215, 216. **Three hours lecture, two hours laboratory per week.**

350. CELL BIOLOGY **4 hours credit**
Study of the structure and function of cell surfaces, membranes, cytoplasm and organelles in both eucaryotic and procaryotic organisms. Cannot be taken for credit if student has credit for BIOL 275 or 375. **Prerequisites:** BIOL 121, 122; CHEM 121, 122, 221. **Three hours lecture, three hours laboratory per week.**

360. GENETIC ANALYSIS **3 hours credit**
Introduction to genetic analysis including Mendelian principles, population and quantitative genetics, cytogenetics and contributions to molecular biology. Satisfies Biology Department core requirements for genetics. **Prerequisites:** BIOL 121 and 122 required; MATH 155 recommended. **Three hours lecture per week.**

370. MOLECULAR GENETICS **3 hours credit**
Study of mechanisms of heredity emphasizing organization of the genome, mutation and regulation of gene expression. **Prerequisites:** BIOL 350. **Three hours lecture per week.**

399. INTERNATIONAL FIELD STUDIES **3 hours credit**
Students experience a specific aspect of a biological discipline in a foreign country. Pre-tour lectures, post-tour discussion and other activities required. **Prerequisite:** Consent of instructor. **Fifteen hours pre-trip experience, at least 50 hours field activities over a minimum of 10 days, two-hour post-trip discussion session.**

401. WETLAND ECOLOGY **4 hours credit**
Study of relationships between environmental features and the structure and function of wetland types. Emphasizes hydrology, chemistry and plant species distribution and examines effects of disturbance on wetland ecosystems. **Prerequisite:** BIOL 225; BIOL 202: Marine Botany (UMES) strongly recommended. **Three hours lecture, three hours laboratory per week.**

405. ORNITHOLOGY **3 hours credit**
Study of birds. Topics include form and function, behavior and communication, reproduction, migration, ecology and conservation. Field trips emphasize identification and natural history of local species. **Prerequisite:** BIOL 225. **Two hours lecture, three hours lab per week.**

407. THE BIOLOGY OF FISHES **3 hours credit**
Study of evolution, anatomy, physiology, classification, ecology and behavior of the fishes. Addresses current research and future directions in ichthyology. **Prerequisites:** BIOL 122, 225. **Three hours lecture per week.**

410. ESTUARINE BIOLOGY **3 hours credit**
Study of estuarine biology with a focus on the Chesapeake Bay. Detailed discussion of the biota of the bay, its unique biology and current perturbations due to environmental pollution. Introduction to physical and chemical processes of estuaries. **Prerequisite:** BIOL 225 (BIOL 321 strongly recommended). **Two hours lecture, two hours laboratory per week. (available for graduate or undergraduate credit)**

411. VERTEBRATE EMBRYOLOGY **4 hours credit**
Comparative study of vertebrate embryology including evolutionary relationships and topics in molecular and developmental biology. **Prerequisites:** BIOL 122, 350. **Two hours lecture, four hours laboratory per week.**

412. ALGAE, FUNGI AND BRYOPHYTES **4 hours credit**
Study of the phylogenetic and ontogenetic development and ecological importance of non-vascular plants. **Prerequisites:** BIOL 121, 225. **Three hours lecture, three hours laboratory per week.**

413. HISTOTECHNIQUE **3 hours credit**
Preparation of tissues for microscopy. **Prerequisite:** BIOL 350. **One hour lecture, four hours laboratory per week.**

415, 416. RESEARCH IN BIOLOGY **3 hours credit each**
Independent student research under the supervision of a faculty member. BIOL 416 may not be used to satisfy requirements within the major. **Prerequisite:** Consent of instructor. **Schedule to be arranged individually.**

418, 419. BIOLOGY SEMINAR **1 hour credit each**
Discussions of timely topics in biology and related fields. Includes instruction in seminar preparation and requires student presentations and participation. BIOL 419 may not be used to satisfy course requirements within the major. **Prerequisite:** Junior standing or consent of instructor. **One hour per week.**

420. READINGS IN BIOLOGY **1-3 hours credit**
Readings designed to permit in-depth study of selected topics. Students submit written reports of their findings at the end of the semester. Specific topics are indicated on students' transcripts. **Prerequisites:** Sixteen hours in biology, consent of instructor.

422. VERTEBRATE PHYSIOLOGY **4 hours credit**
Study of the physiological processes of vertebrate animals including specific adaptations of certain species to their environment. **Prerequisites:** BIOL 122 and 350, CHEM 121. **Three hours lecture, three hours laboratory per week.**

425. TOXICOLOGY **3 hours credit**
Introduction to basic principles, history and scope of modern environmental toxicology, and to the effects and to the mechanisms of toxicants. Includes applications to risk assessment, regulations and industry. Cross-listed with ENVH 425. May not be taken for credit if student has credit for ENVH 425. **Prerequisites:** Junior standing, eight hour of chemistry, eight hours of biology, or consent of instructor. **Three hours lecture per week.**

430. PLANT PHYSIOLOGY **4 hours credit**
Advanced study of the physiological mechanisms utilized by plants with special reference to the higher phyla. **Prerequisite:** BIOL 121, CHEM 221. **Three hours lecture, three hours laboratory per week.**

435. EVOLUTIONARY BIOLOGY 3 hours credit

Advanced study of the principles, mechanisms and processes of biological evolution. **Prerequisite:** BIOL 350. **Three hours lecture per week.**

440. CONTEMPORARY GENETICS 4 hours credit

Blended lecture and laboratory-based exploration of biochemical techniques commonly used in industrial and academic laboratories. Demonstrates the relationship between structure and function of biomolecules. Cross-listed with CHEM 419. Cannot receive credit for both BIOL 440 and CHEM 419. **Prerequisites:** BIOL 350 and 370, and CHEM 221; or pre/corequisite CHEM 418. **Six hours per week.**

445. VIROLOGY 3 hours credit

Study of structure, replication and pathogenesis of viruses with emphasis on animal viruses and the role of viruses in our current understanding of cell and molecular biology. **Prerequisite:** BIOL 350. **Three hours lecture per week.**

450. INTERNSHIP 1-6 hours credit

Work experiences are arranged to provide students with an opportunity to use acquired biological knowledge in a professional way. Traditional biology internships generate 1-3 credits. The awarding of 4-6 credits will only be awarded in special circumstances with approval of the Internship Coordinator. The maximum number of credits allowed for this course is six credits. **Prerequisite:** Senior standing, biology major and approval of Internship Coordinator. **45 student contact hours per credit hour. (P/F)**

490. SPECIAL TOPICS IN BIOLOGY 1-4 hours credit

Study of a specific area of biological science. Topic varies semester to semester. May be taken twice for credit under different subtitles. **Prerequisites:** Sixteen hours of biology, junior standing, approval of instructor.

499. HONORS 3 hours credit

Independent study in an area of biology leading to an honors thesis. **Prerequisite:** Approval of department chair.

Business Administration (BUAD)

103. INTRODUCTION TO BUSINESS 3 hours credit

Introduction to the internal and external environment of contemporary business. Topics include the nature of business and its operations and a survey of basic concepts, principles and practices. Provides a foundation for advanced study and assistance in making career decisions. Not open to students who are concurrently enrolled in, or have received academic credit for, any 300- or 400-level BUAD/ACCT/ISMN courses. **Three hours per week.**

104. PERSONAL FINANCE 3 hours credit

Comprehensive survey of personal financial topics including budgeting; borrowing; savings and investments; life, health and casualty insurance; and home buying. Emphasis on lifetime economic cycle. Students who have credit for or are taking BUAD 311 will not receive credit for this course. **Three hours per week.**

248. LEGAL ENVIRONMENT 3 hours credit

In-depth analysis of legal principles and their relationship to commerce. Topics include areas of torts, constitutional law, contracts and government regulation. **Three hours per week.**

281. INTERMEDIATE BUSINESS STATISTICS 3 hours credit

Study of statistical technique applied to organizational decision-making. Topics include analysis of variance and experimental design, chi-square applications, regression and correlation analysis, time series analysis and index numbers. **Prerequisites:** MATH 160 and a grade of C or better in MATH 155. **Three hours per week.**

311. FINANCIAL MANAGEMENT 3 hours credit

Addresses fundamental concepts in financial management such as security markets, interest rates, taxes, risk analysis, time value of money, valuation models and related global issues. Explains how financial managers help maximize the value of a firm by making capital budgeting, cost of capital and capital structure decisions. **Prerequisites:** Junior status (60 or more credits); ACCT 202; BUAD 281; ECON 211, 212, or economics major with senior standing. **Three hours per week.**

312. RISK MANAGEMENT AND INSURANCE 3 hours credit

Examines principles and practices of asset and income conservation for businesses and individuals through various risk-management techniques including insurance. **Prerequisite:** BUAD 311 or consent of instructor. **Three hours per week.**

320. MANAGEMENT AND ORGANIZATIONAL BEHAVIOR 3 hours credit

Study of the general nature, behavior and functions of organization and management in business. Emphasis on planning, organizing, leading, motivating and controlling. **Prerequisite:** Junior status. **Three hours per week.**

326. PRODUCTION AND OPERATIONS MANAGEMENT 3 hours credit

Study of productivity, quality control, cost-effectiveness and profitability of manufacturing and service organizations from the managerial perspective. Topics include product design, resource requirements and flow, facility layout, distribution system design, quality control, forecasting techniques and inventory policy. **Prerequisites:** Junior standing. **Three hours per week.**

330. PRINCIPLES OF MARKETING MANAGEMENT 3 hours credit

Survey of basic marketing concepts and principles from a managerial perspective. Topics include the marketing concept, environment and demand analysis, marketing mix (product, price distribution and promotion) and an introduction to marketing strategy and international marketing. **Prerequisites:** Junior status, ECON 211 or 212. **Three hours per week.**

331. PROMOTION MANAGEMENT 3 hours credit

Managerial overview of advertising and sales promotion as they relate to economic and social systems. Topics include promotional planning, research, media selection, creative implementation, retail, business/professional and consumer advertising. **Prerequisite:** BUAD 330. **Three hours per week.**

332. BUYER BEHAVIOR 3 hours credit

Examination of the buyer (individual consumer and organizational agent) as problem solver. Topics include buying decision processes and social, psychological, anthropological and economic factors that influence behavior in the marketplace. Examines principles, theories, models and research techniques related to purchasing behavior. **Prerequisite:** BUAD 330. **Three hours per week.**

333. SALES MANAGEMENT I 3 hours credit

Introduction to sales management and the personal selling component of marketing management. Emphasis on the selling process, the buyer-seller dyad, market analysis, formulation of sales strategies, the sales presentation, and account and territory management. **Prerequisite:** BUAD 330. **Three hours per week.**

334. PRINCIPLES OF RETAILING 3 hours credit

Evaluation of retailing in our economy with emphasis on change in a dynamic environment. Topics such as structure, organization, merchandising, planning policy, inventory, pricing, record keeping, communication, personnel and location are reviewed, discussed and analyzed. **Prerequisite:** BUAD 330. **Three hours per week.**

338. SPECIAL BUSINESS TOPICS 3 hours credit

Advanced study of varying business topics based on students' interests and needs. May be repeated once for credit under different subtitle. May substitute for a concentration elective depending on the topic; (see director of undergraduate studies). **Prerequisite:** Varies by topic. **Three hours per week.**

345. PURCHASING AND MATERIALS MANAGEMENT 3 hours credit

Examination of the procurement and materials management function of government and industry including planning, acquisition, storage, physical movement and control of materials. **Prerequisite:** BUAD 320, 330. **Three hours per week.**

348. BUSINESS LAW 3 hours credit

Detailed expansion of Legal Environment (BUAD 248). Additional topics include business associations, partnerships, agencies, corporations, bankruptcy law, securities and accountants' liability. Stresses topics commonly found on the uniform CPA examination. **Prerequisite:** BUAD 248. **Three hours per week.**

360. GOVERNMENT REGULATION OF BUSINESS 3 hours credit

Business function under the regulatory bodies of all levels of government. Federal, state and local government requirements for business operations are covered as well as their effect on the economic operation of the enterprise. **Prerequisites:** ECON 211, 212. **Three hours per week.**

380. MANAGEMENT SCIENCE 3 hours credit

Study of quantitative models for business decision making in a computer-assisted environment. Emphasis on converting typical business problems into mathematical formats. Topics include linear and integer programming, distribution models, inventory and production management, scheduling, queuing theory and business simulation. **Prerequisites:** MATH 151, 160; ISMN 111. **Three hours per week.**

384. INTERNATIONAL BUSINESS 3 hours credit

Study of the international aspects of business. Topics include but are not limited to the economics of international trade and other major aspects of international business operations (e.g. finance, management, marketing, etc.). May not be taken for credit if student has credit for BUAD 385 or 386. **Prerequisites:** BUAD 320, 330, and 104 or 311. **Three hours per week.**

386. BUSINESS IN ITS GLOBAL SETTING 3 hours credit

Study of the international aspects of business management and its cultural, economic and political environment in its actual setting. Topics include the economics of international trade, sociocultural environment, political risk and other major aspects of international business operations (e.g. finance, management, marketing, etc.). Part or all of the course will be held in another country. **Prerequisites:** Junior standing and permission of instructors. **Three hours per week.**

401. BUSINESS MARKETING 3 hours credit

Study of concepts, techniques and problems in organizational marketing. Topics include organizational buying process, buyer-seller relationships, business market segmentation, market planning, sales forecasting and design of marketing mix strategies. Considers a variety of business marketing situations. **Prerequisite:** BUAD 330. **Three hours per week.**

420. BUSINESS AND SOCIETY 3 hours credit

Focus on social problems facing business organizations. Equal rights, ecology, consumerism, quality of work life, government-business interface, economic instability, energy and other emerging social issues are examined. Students analyze these problems and develop approaches for dealing with them effectively and responsibly. **Prerequisites:** BUAD 320 or 330. **Three hours per week.**

422. MANAGEMENT OF THE MULTINATIONAL BUSINESS 3 hours credit

Provides students with an understanding of the unique features that characterize the multinational enterprise. Emphasis on the changing context in which business is conducted on a global basis. **Prerequisite:** BUAD 320. **Three hours per week.**

423. INTERNATIONAL MARKETING 3 hours credit

Study of the decision-making process in marketing products and services across national boundaries. Examination of the design and modification of marketing strategies. Identification of potential markets with consideration of product, price, promotion and distribution decisions within the restraints of a particular cultural, economic and political setting. **Prerequisite:** BUAD 330. **Three hours per week.**

425. APPLIED ORGANIZATIONAL SCIENCE 3 hours credit

Use of understandings about human behavior to motivate employees to work together in harmony. Topics include fundamentals of organizational behavior, leadership and its development, organizational environment and communications, and group processes. **Prerequisite:** BUAD 320. **Three hours per week.**

428. ENTREPRENEURSHIP 3 hours credit

Practical analysis of the viability of a business venture and development of a business plan to fund such a venture. Emphasis on reducing risk and uncertainty under competitive economic conditions. **Prerequisites:** BUAD 320, 330. **Three hours per week.**

429. SMALL BUSINESS CONSULTING 3 hours credit

Study of methods and techniques for consulting with small and independent businesses. Students work with business owners under faculty supervision to study real problems of small business organizations and devise and recommend solutions. Successful completion of the experiential component of this course satisfies the ABLE requirement. **Prerequisites:** Senior status, BUAD 428, consent of instructor. **Three hours per week.**

430. MARKETING MANAGEMENT STRATEGY 3 hours credit

Comprehensive managerial analysis of the marketing function. Emphasis on strategic planning and implementation and control of marketing mix activity. Students apply overall knowledge to analyze and propose solutions to marketing problems/opportunities. **Prerequisites:** Senior status, BUAD 330, six additional hours of marketing electives. **Three hours per week.**

433. SALES MANAGEMENT II 3 hours credit

Advanced study of the personal selling component of marketing management. Emphasis on leading and managing sales personnel and the creation and administration of the sales program. **Prerequisite:** BUAD 333. **Three hours per week.**

438. MARKETING RESEARCH 3 hours credit

Collection and analysis of marketing data viewed in context of identifying the market demand. Methods of decision making for marketing management. Topics include Bayesian decision theory, sampling techniques, and regression and correlation analysis. Successful completion of the experiential component of this course satisfies the ABLE requirement. **Prerequisites:** BUAD 281, 330. **Three hours per week.**

439. SENIOR MARKETING SEMINAR 3 hours credit

Students address contemporary marketing issues and practice marketing management by using an experimental approach to assess the marketing plans and programs of marketing organizations. **Prerequisites:** Senior status, BUAD 430 or 438, consent of instructor. **Three hours per week.**

440. CORPORATE FINANCE 3 hours credit

Study of corporate financial policy issues within the context of value creation. Topics include in-depth analysis of advanced capital budgeting methods, capital structure policy, dividend policy, derivatives and hedging risk within the context of corporate financial policy. Case studies, application-oriented articles and daily media reports used to bridge the academic/theoretical arguments to the real life problems/situations. **Prerequisite:** C or better in BUAD 311. **Three hours per week.**

441. INVESTMENTS I 3 hours credit

Examines the capital market and marketable securities traded in the market, with emphasis on stocks and fixed income securities. Topics include portfolio theory, the efficient market hypothesis and evaluation of portfolio performance. **Prerequisite:** C or better in BUAD 311. **Three hours per week.**

442. INVESTMENTS II 3 hours credit

Advanced study of security markets and investment alternatives. Topics include options, futures, advanced security analysis, portfolio theory, portfolio management and international dimensions of investing. **Prerequisite:** C or better in BUAD 441. **Three hours per week.**

443. ESSENTIALS OF REAL ESTATE 3 hours credit

Analysis of the structure of real estate markets. Study of consumption of and investment in real estate and valuation of real estate assets. Successful completion of the experiential component of this course satisfies the ABLE requirement. **Prerequisite:** C or better in BUAD 311. **Three hours per week.**

445. FINANCIAL INSTITUTIONS AND MARKETS 3 hours credit

Examines the structure and functions of depository and non-depository financial institutions, the money and capital markets, and the role of government in the financial markets. **Prerequisite:** C or better in BUAD 311 or economics major with senior status. **Three hours per week.**

447. INTERNATIONAL FINANCIAL MANAGEMENT 3 hours credit

Analysis of the foreign exchange markets, exchange rate behavior and risk management, international trade financing, country risk analysis, international banking and the role of direct foreign investment. **Prerequisite:** C or better in BUAD 311. **Three hours per week.**

450. HUMAN RESOURCE MANAGEMENT 3 hours credit

Study of management of human resources in organizations. Topics include recruiting, selecting, developing and compensating personnel; labor union relations; and development of personnel policy. Not open to students with credit for BUAD 427. **Prerequisite:** BUAD 320. **Three hours per week.**

451. STAFFING ORGANIZATIONS 3 hours credit

Detailed examination of recruitment, selection and placement as human resources management activities. Emphasis on functional and strategic staffing topics. Topics include position advertising, interviewing and selection testing. **Prerequisite:** BUAD 320. **Three hours per week.**

452. EMPLOYEE-MANAGEMENT RELATIONS 3 hours credit

Detailed examination of human resource areas covering the relationship between employees and management. Course covers unions/collective bargaining, employee rights/responsibilities and employment law. **Prerequisite:** BUAD 320. **Three hours per week.**

460. MANAGERIAL DECISION SUPPORT SYSTEMS 3 hours credit

Analysis of rational management decision making under

conditions of risk and uncertainty. Emphasis on the analysis of problems with multiple, conflicting objectives in industry and government. **Prerequisites:** BUAD 311, 320. **Three hours per week.**

490. BUSINESS INTERNSHIP 3 hours credit

Intern experience in business or government. May be used as a business concentration/track elective if approved by the school dean. **Prerequisites:** Junior or senior status; business, accounting, management information systems or economics major; placement and approval by the ABLE program director. (P/F)

491. ADVANCED BUSINESS INTERNSHIP 3 hours credit

Research associated with an internship experience in business or government. **Prerequisites:** BUAD 490 (prereq/coreq), approval of the ABLE program director. (P/F)

492. STRATEGIC MANAGEMENT 3 hours credit

Seminar in strategic business decision making. Emphasizes evaluating and integrating appropriate marketing, financial and management information. **Prerequisites:** BUAD 311, 320, 330; business/accounting/management information systems major in their last semester before graduation. **Three hours per week.**

494. DIRECTED STUDY IN BUSINESS/ ACCOUNTING/SMN 1-3 hours credit

For students who desire to do research or pursue a special topic in business administration. **Prerequisites:** Junior/senior status, consent of instructor prior to registration.

Chemistry (CHEM)

100. INTRODUCTION TO CHEMISTRY 3 hours credit

Study of the fundamentals of chemistry with emphasis on the development of reasoning and quantitative skills necessary for problem solving. Students with little or no previous algebra/chemistry may wish to take this course prior to CHEM 121. Does not satisfy chemistry major requirements. **Three hours per week.**

101. PHYSICAL SCIENCE 4 hours credit

Introduces students to the fundamental concepts of the physical sciences. The course will emphasize practical applications, especially those which integrate all of the natural sciences. Credit may not be received for both CHEM 101 and PHYS 101. **Prerequisite:** MATH 103 or college algebra. **Three hours lecture and two hours lab per week. Meets General Education IIIA or IIIB.**

107. CHEMISTRY: A HUMANISTIC PERSPECTIVE 4 hours credit

Study of the development of chemistry and the impact of chemistry on our world. Chemical principles and concepts are used to understand applications of chemistry to our everyday lives. **Three hours lecture, one two-hour laboratory per week. Meets General Education IIIA or IIIB.**

109. ENERGY AND THE ENVIRONMENT 4 hours credit

Study of the interaction of physical science and the environment, providing students not majoring in science an understanding of the scientific principles in our technological society. **Three hours lecture, one two-hour laboratory per week. Meets General Education IIIA or IIIB.**

121. GENERAL CHEMISTRY I 4 hours credit

Study of fundamental laws of chemistry and atomic structure emphasizing quantitative relationships. **Prerequisite:** Two years high school algebra and chemistry, or CHEM 100. **Three hours lecture, one three-hour laboratory per week. Meets General Education IIIA or IIIB.**

- 122. GENERAL CHEMISTRY II** 4 hours credit
Continuation of CHEM 121, including chemical equilibrium, electrochemistry and organic chemistry. **Prerequisite:** CHEM 121. **Three hours lecture, one three-hour laboratory per week. Meets General Education IIIA or IIIB.**
- 207. LABORATORY SAFETY** 1 hour credit
Development of skills and attitudes for working with chemicals in a confident and responsible way. Emphasis on safety precautions and emergency procedures in case of a chemical accident. **Prerequisite:** CHEM 122, CPR certification (prereq/coreq). **One hour per week.**
- 210. INTRODUCTION TO CHEMICAL RESEARCH** 1-3 hours credit
Introduction to individual directed study on an approved subject under faculty supervision. Written report required. May be taken twice for credit. May not be used to satisfy requirements for chemistry major or minor. **Prerequisite:** Consent of the department. **Two hours laboratory per week per credit hour.**
- 212. CHEMISTRY OF THE ELEMENTS** 2 hours credit
Introduction to the properties and reactivities of the elements and their compounds. Emphasis on interpreting trends of the periodic table to predict physicochemical behavior. **Prerequisite:** CHEM 122. **Two hours per week.**
- 220. HUMANS AND THE ENVIRONMENT** 4 hours credit
Interdisciplinary laboratory course in conjunction with the departments of Biology and Geography and Regional Planning, designed for non-science majors to develop awareness of ways earth's environment is influenced by human activities and effects of the environment on human society. Cannot be repeated for credit in the Biology or Geography and Regional Planning departments within the major. For students in the Honors Program. **Three hours lecture, two hours laboratory per week. Meets General Education IIIA or IIIB.**
- 221. ORGANIC CHEMISTRY I** 4 hours credit
Systematic study of the compounds of carbon including their organization, preparation and typical reactions. Classes of compounds studied include aliphatic hydrocarbons, aromatic hydrocarbons. **Prerequisite:** CHEM 122. **Three hours lecture, one three hour laboratory per week. Meets General Education IIIB.**
- 222. ORGANIC CHEMISTRY II** 4 hours credit
Continued study of carbon compounds including acid derivatives, aldehydes, ketones, amines and phenols. Emphasis on the mechanism and stereochemistry of organic reactions. **Prerequisite:** CHEM 221. **Three hours lecture, one three-hour laboratory per week.**
- 310. INTERMEDIATE CHEMISTRY RESEARCH** 1-3 hours credit
Intermediate level individual chemical research on an approved subject under supervision of a member of the faculty. Written report and seminar presentation required. May be taken for credit. May not be used to satisfy requirements of chemistry major or minor. **Prerequisites:** Consent of department and successful completion of, or current enrollment in CHEM221. **Two hours laboratory per week per credit.**
- 311. SURVEY OF PHYSICAL CHEMISTRY** 3 hours credit
Survey of physical chemistry and its application to biological systems. Designed for students wishing to complete the chemistry/biochemistry track. **Prerequisite:** Math 201 and PHYS 123 or 223. Math 202 recommended. **Three hours per week.**
- 321. ANALYTICAL CHEMISTRY** 4 hours credit
Study of the theory and applications of classical and modern analytical techniques. Includes volumetric, potentiometric, spectrophotometric and chromatographic methods.
- Prerequisite:** CHEM 122. **Three one-hour lectures, one three-hour laboratory per week. Meets General Education IIIB.**
- 333. INSTRUMENTAL ANALYSIS** 3 hours credit
Study of the theoretical and practical aspects of modern instrumental analysis. Topics include information processing, spectroscopic, chromatographic and electrochemical methods. **Prerequisite:** CHEM 321. **Three hours lecture per week.**
- 341, 342. PHYSICAL CHEMISTRY I, II** 3 hours credit each
Comprehensive study of the fundamental concepts of physical chemistry. **Prerequisites:** MATH 201, 202, PHYS 309 and CHEM 122 or consent of instructor. **Three hours lecture per week.**
- 381. ENVIRONMENTAL CHEMISTRY** 3 hours credit
Introductory survey of contemporary issues and problems in the chemistry of the environment. Chemistry of the atmosphere, natural and treated waters, and wetlands examined and discussed. Numerical application problems solved in group settings. **Prerequisites:** CHEM 121/122, 221/222. **Three hours per week.**
- 406. INORGANIC CHEMISTRY** 3 hours credit
Study of the theoretical concepts of inorganic chemistry with focus on the relationship between structure, bonding and reactivity. Emphasis on the chemistry of transition metals. **Prerequisite:** CHEM 342. **Three hours per week.**
- 408. POLYMER CHEMISTRY** 3 hours credit
Study of the fundamental concepts of polymer chemistry with emphasis on structure, stereochemistry, synthesis and properties. **Prerequisites:** CHEM 222, 342. **Three hours per week.**
- 409. ELECTROCHEMISTRY** 3 hours credit
Study of the theory and applications of modern electrochemistry. Topics include a review of electrochemical cells, ion-selective electrodes, electrophoresis, polarography, cyclic voltammetry, corrosion processes and impedance measurements. **Prerequisite:** CHEM 333. **Three hours per week.**
- 410. CHEMICAL RESEARCH** 3 hours credit
Individual undergraduate research on approved subject under supervision of a member of the staff. Written report, seminar presentation required. May be taken twice for credit. **Prerequisites:** Twenty-four hours of chemistry and 3.25 GPA or consent of instructor. **Six hours laboratory per week, conference with the instructor.**
- 412. ORGANIC CHEMISTRY III** 3 hours credit
Continued study of carbon compounds including aryl halides, heterocyclic, polynuclear aromatic, unsaturated carbonyl and the organic compounds of sulfur and phosphorus. Emphasis on reaction mechanism and the interaction of functional groups. **Prerequisite:** CHEM 222. **Three hours lecture per week.**
- 413. INTERNSHIP/CO-OP IN CHEMISTRY** 3 hours credit
Work experience designed to provide qualified students opportunities to use acquired chemical knowledge in a professional way. Written report, seminar presentation required. **Prerequisites:** Twenty-four hours of chemistry, consent of instructor. **Six hours work per week, conference with supervisor.**
- 415. SEMINAR** 2 hours credit
Introduces students to the literature, writing styles and oral presentation styles used by the scientific community in general, and the field of chemistry specifically. Builds skills in discussing current topics in chemistry. **Prerequisite:** Junior standing or consent of instructor. **Two hours per week.**

417. BIOCHEMISTRY I 4 hours credit

Application of chemical principles to biological systems through study of the properties, analysis, functioning and relationship of proteins, carbohydrates, lipids and nucleic acids. May not be taken for credit if student has credit for CHEM 407. **Prerequisite:** CHEM 222 or consent of instructor. **Three hours lecture, three hour laboratory per week.**

418. BIOCHEMISTRY II 3 hours credit

Study of the intermediary metabolism of biomolecules and the biochemistry underlying the expression of information contained in DNA in the synthesis of biomolecules. **Prerequisite:** CHEM 417. **Three hours per week.**

419. BIOCHEMICAL METHODS 4 hours credit

Blended lecture and laboratory-based exploration of biochemical techniques commonly used in industrial and academic laboratories. Demonstrates the relationship between structure and function of biomolecules. Cross-listed with BIOL 440. Cannot receive credit for both CHEM 419 and BIOL 440. **Prerequisite/corequisite:** CHEM 418, or **Prerequisite:** BIOL 350, 370 and CHEM 221. **Six hours per week.**

441. ADVANCED EXPERIMENTAL CHEMISTRY I 4 hours credit

Blended lecture/lab experience in experimental chemistry. Emphasis on the relationship between synthesis, instrumental methods and thermodynamic principles. **Prerequisite:** CHEM 333; CHEM 341; and CHEM 342 or 311. **Six hours per week.**

442. ADVANCED EXPERIMENTAL CHEMISTRY II 4 hours credit

Continuation of CHEM 441. Blended lecture/lab experience in experimental chemistry. Emphasis on the relationship between synthesis, instrumental methods and molecular structure. **Prerequisite:** CHEM 441. **Six hours per week.**

499. SPECIAL TOPICS IN CHEMISTRY 3 hours credit

Study of a specific area of chemistry. Topic varies semester to semester. May be taken twice for credit. **Three hour lecture per week/laboratory-lecture equivalent.**

Communication Arts (CMAT)

100. FUNDAMENTALS OF COMMUNICATION 3 hours credit

Foundations of communication theory and practice relevant to interpersonal and public oral communication. Surveys the skills necessary to articulate oneself effectively in a variety of communication settings such as the interpersonal relationship, formal and informal groups, and public forums. **Three hours per week. Meets General Education IB.**

105. LISTENING: PROCESSES AND BEHAVIOR 3 hours credit

The place and value of listening in communication. Awareness of the importance of listening and the kinds of aural experiences that make for better understanding. **Three hours per week. Meets General Education IB.**

110. INTRODUCTION TO MASS MEDIA 3 hours credit

Theory, history, structure and functions of mass media (print, film, recording, radio, television, multimedia). **Three hours per week. Meets General Education IB.**

120. INTRODUCTION TO THEATRE 3 hours credit

Introduction to theatre as a unified art with emphasis upon the literary and social significance of theatre in our society. **Three hours per week. Meets General Education IB.**

121. TECHNICAL PRODUCTION 3 hours credit

Practical experience in technical theatre and television including set construction, scene painting, lighting and sound.

Two hours lecture, one hour laboratory per week. Meets General Education IB.

122. PERFORMING 3 hours credit

Introduction to performing in various media including theatre, TV and film; emphasis on movement and silent expressions as ways of communicating. **Three hours per week. Meets General Education IB.**

125. THEATRE PRACTICUM 1-2 hours credit

Provides supervised experience in theatre production and performance. May be repeated for a total of eight credit hours. **Prerequisite:** Permission of the instructor. (P/F)

131. WRITING FOR BROADCASTING 3 hours credit

Fundamentals of writing for broadcasting, including basic script formats and basic forms such as public service announcements, continuity, news and dramas. **Prerequisite:** C or better in ENGL 101. **Three hours per week. Meets General Education IB.**

134. RADIO PRODUCTION 3 hours credit

Study and practice of all phases of radio production and equipment operation; includes legal and professional requirements for radio broadcasters. **Prerequisite:** CMAT 131. **Four hours per week.**

136. TELEVISION PRODUCTION 3 hours credit

Introduction to the equipment and techniques of television production. Operation of television studio production equipment; processes and procedures of producing and directing. **Prerequisite:** CMAT 131. **Four hours per week.**

200. THEORIES OF HUMAN COMMUNICATION 3 hours credit

Introductory survey of theories, including rhetoric, feminism, theories of meaning and mass, interpersonal, organizational, group and intercultural communication, and providing the theoretical bases for further study in communication. **Prerequisite:** CMAT 100. **Three hours per week.**

201. ELEMENTS OF VOICE AND DICTION 3 hours credit

Study of the fundamentals of voice production and articulation. Designed to establish good habits of speech through analysis of each student's voice, articulation and pronunciation, with directed exercises for improvement. **Three hours per week. Meets General Education IB.**

205. INTERPERSONAL COMMUNICATION 3 hours credit

Study of the factors that motivate and determine communication or non-communication among individuals, of the psychological barriers and inducements to open communication and of the effects of these factors upon the people involved. **Three hours per week. Meets General Education IB.**

218. ADVANCED PUBLIC SPEAKING 3 hours credit

Designed to improve exposure and practice in the preparation and presentation of messages. Emphasizes the nature, methods and principles of public address including persuasive, informative and special occasion presentations. **Prerequisite:** CMAT 100. **Three hours per week.**

220. HISTORY OF THE THEATRE 3 hours credit

Survey of theatre history, dramatic theory, plays and playwrights, production practices and performance styles, emphasizing their relationship to the development of world civilization as both product of and mirror to changing values, tastes, attitudes and customs. **Three hours per week. Meets General Education IB.**

223. MAKEUP FOR STAGE AND TELEVISION 3 hours credit

Practical survey of techniques in the application of theatrical

makeup for performance on stage as well as television and film. Recommended for all performers. **One hour lecture, one two-hour laboratory per week and required practical application in productions. Meets General Education IB.**

224. ACTING 3 hours credit
Study of the theory and basic principles of the creative processes of acting with an emphasis on physical, mental and emotional process in the building of a dramatic character. **Three hours per week. Meets General Education IB.**

236. ELECTRONIC FIELD PRODUCTION 3 hours credit
Study of the production of television and film programs using single camera and editing techniques. **Prerequisites:** CMAT 136. **Four hours per week.**

239. RADIO AND TELEVISION PRACTICUM 2 hours credit
Supervised experiences in radio and television production and performance. May be repeated once. Credits may be earned in several areas. **Prerequisites:** CMAT 136 and 236 (for television) or 134 (for radio). **Four hours per week.**

246. JOURNALISM 3 hours credit
Introduction to newspaper reporting and journalistic writing; the practical problems of publishing a newspaper. **Prerequisite:** ENGL 101. **Three hours per week.**

248. INTRODUCTION TO PUBLIC RELATIONS 3 hours credit
Study of the function of public relations, the relevant communication tools, the impact of emerging technology and the tasks, roles and responsibilities of a public relations professional. Additionally, it provides students with insight into future trends. May not be taken for credit if student has credit for CMAT 443. **Prerequisite:** CMAT 131 or 246. **Three hours per week.**

250. INSTRUCTIONAL COMMUNICATION 3 hours credit
Study of the communicative factors involved in the teaching-learning process. Explores the communication concepts applicable to classroom instruction and develops the communication skills essential in teaching groups of students. Special focus is given to communicating a supportive classroom environment, developing effective questioning strategies and effective interpersonal relationships in a classroom setting. **Three hours per week. Meets General Education IB.**

260. FUNDAMENTALS OF ORGANIZATIONAL COMMUNICATION 3 hours credit
Study of human communication systems in organizations. Students explore one-to-one, small group and one-to-many communication, and develop the skills needed in organizational communication. **Three hours per week. Meets General Education IB.**

300. INTERCULTURAL COMMUNICATION 3 hours credit
Study of correctable communication problems caused by cultural differences. Analysis of problems from communication and cultural perspectives. Emphasis on ways to avoid and correct such problems. Does not satisfy General Education requirements. **Prerequisites:** CMAT 100 or 200 or 205 or consent of instructor. **Three hours per week.**

304. COMMUNICATION, GENDER AND CULTURE 3 hours credit
Explores the relationships among communication, gender and culture. Illuminates the pivotal role of communication in sustaining and altering existing gender and cultural patterns. **Prerequisites:** CMAT 200 and 205 or permission of the instructor. **Three hours per week.**

305. INTERPERSONAL COMMUNICATION II 3 hours credit
Extension of CMAT 205. A laboratory approach to the study of communicating in relationships. Exercises and assignments assist students in examining how they talk to others and form partnerships. **Prerequisites:** CMAT 200, 205. **Three hours per week.**

306. CONVERSATIONAL ANALYSIS 3 hours credit
Study of conversational goals and strategies. Focus on recognizing and understanding role of specific features (i.e. pronouns, sentence structure) in interpersonal contexts; individual communicative strategies and their effects on conversational patterns. Readings, data analyses, two or three exams. **Prerequisites:** CMAT 200, 205. **Three hours per week.**

307. INTERPERSONAL CONFLICT 3 hours credit
Examines the role of communication in interpersonal contexts where there is a need to manage conflict. Explores how communication can reflect, create and transform conflict. Analyzes the role of power, climate, emotions and other factors that contribute to destructive or constructive conflict patterns. Emphasizes conceptual understanding and basic skills in diagnosing conflict, making recommendations, monitoring one's own behavior and third party intervention. **Prerequisite:** CMAT 205.

308. INTERVIEWING 3 hours credit
Investigates interviewing situations based on giving and/or getting information and influencing the behavior of others through persuasion. Includes exercises demonstrating most commonly used forms of the interview. **Prerequisite:** CMAT 100, 205, 250 or 260. **Three hours per week.**

310. SMALL GROUP DISCUSSION 3 hours credit
Participation in and analysis of small group discussion. Emphasizes communication within the small group setting and effective group decision making. **Prerequisite:** CMAT 100 or 205 and CMAT 200. **Three hours per week.**

311. PARLIAMENTARY PROCEDURE 1 hour credit
Designed to familiarize the student with the fundamental practices in the process and procedures of rules of order. Explores rules of order and how they are used to guide a meeting; roles and responsibilities of the group leader; responsibilities of individual members; establishing organizations, their charters and bylaws; and the role of the parliamentarian. **One hour lecture per week.**

312. NONVERBAL COMMUNICATION 3 hours credit
Study of human communicative behavior without the use of words. Ways of sending and receiving nonverbal messages are examined with the goal of awareness and understanding of their communicative value. **Prerequisites:** CMAT 100 or 205 and 200. **Three hours per week.**

315. PERSUASION 3 hours credit
Historical and critical study of persuasive forms and techniques including propaganda and advertising. Study of theory and ethics of persuasion. Practice in persuasive communication. **Prerequisites:** CMAT 100, 200. **Three hours per week.**

316. ARGUMENTATION AND DEBATE 3 hours credit
Study of the basic principles of argumentation, rational decision making and advocacy. Concepts include logical reasoning, analysis and critical thinking. Practice in the presentation and application of these principles. **Prerequisites:** CMAT 100, 200 or permission of instructor. **Three hours per week.**

319. ADVANCED THEATRE HISTORY: RENAISSANCE TO REALISM 3 hours credit
Designed as a continuation of CMAT 220, this course begins with an overview of principal influences on the shaping of the aesthetics of drama as evidence in Shakespeare and his

contemporaries. The course moves through the social, political and philosophical forces which shaped the theatre in the emergence of the modern world. **Prerequisite:** CMAT 220. **Three hours lecture per week.**

320. ENVIRONMENTAL THEMES IN THEATRE **3 hours credit**
Focus on questions of theme, dramatic action, character, comedy, tragedy, dramatic metaphors and style in plays which dramatize environmental issues. Reflection on differing views of nature and themes of materialism, exploitation and deception. **Prerequisite:** CMAT 120. **Three hours per week.**

321. ADVANCED TECHNICAL PRODUCTION **3 hours credit**
Advanced study of the art and craft of scenery through experience in drafting, scene painting, period study and model building for theatre and television. **Prerequisite:** CMAT 121 and 122 or written consent of instructor. **Two hours lecture, two one-hour laboratories per week.**

322. ARTS ADMINISTRATION **3 hours credit**
Introduction to administrative skills for fine and performing arts: programming, budget, public relations, audience development, fund raising and case studies of arts organizations. **Prerequisite:** Department chair approval. **Three hours per week.**

323. COSTUME DESIGN **3 hours credit**
Emphasis on the concept of costume design as it relates to character analysis. The student translates the interpretation of character(s) into functional costume renderings. Professionally oriented; for those interested in producing high school or community theatre. **Prerequisites:** CMAT 220 or written consent of instructor. **Three hours per week.**

324. DIRECTING **3 hours credit**
Study of the theory and basic principles, skills and techniques underlying direction. Student-directed theatre production required. **Prerequisite:** Consent of instructor. **Three hours per week.**

325. ORAL INTERPRETATION **3 hours credit**
An approach to the study of literature through the medium of oral performance. May be counted as an English elective for students majoring in English. **Three hours per week. Meets General Education IB.**

326. ACTORS' WORKSHOP **3 hours credit**
Provides experience training for intermediate and advanced acting through the exploration of improvisational techniques, character analysis, scene work and exercises in acting style. **Prerequisite:** CMAT 224.

327. READERS' THEATRE **3 hours credit**
Covers the philosophy and uses of Reader's Theatre. Emphasis on the analysis, adaptation and staging of non-dramatic literature within the context of this art form. Lecture/workshop format will be employed. **Prerequisite:** CMAT 224 or consent of instructor. **Three hours per week.**

328. SCENE DESIGN FOR THEATRE AND TELEVISION **3 hours credit**
Study of scene design as a visual art and as a part of total television and theatre production. Perception and execution of scene designs through script analysis and practical experiences. **Prerequisite:** CMAT 121 and 220 or consent of instructor. **Three hours per week.**

329. MEDIA LIGHTING **3 hours per week**
Study of lighting as a vital component of technical production. Includes design and technology of theatre, television and video lighting. **Prerequisite:** CMAT 121 and 220 or consent of instructor. **Three hours per week.**

330. BROADCAST JOURNALISM **3 hours credit**
Principles, forms and techniques of broadcast journalism. Practicum in broadcast news writing, editing, processing and delivery. Practical experience in producing magazine-style news packages for a weekly newscast. **Prerequisite:** CMAT 236, 246; **Corequisite:** CMAT 339. **Three hours per week.**

331. DRAMATIC WRITING FOR RADIO AND TELEVISION **3 hours credit**
Instruction in the elements of drama, broadcast writing techniques, forms and styles. Assignments include creating scripts for such broadcast genres as public service announcements, docudramas and comedies. **Prerequisite:** Consent of instructor. **Three hours per week.**

332. MEDIA CRITICISM AND ANALYSIS **3 hours credit**
Development of critical viewing skills through analysis of program conventions, genres and media aesthetics, and through intensive writing. **Prerequisite:** CMAT 334 or consent of instructor. **Three hours per week.**

333. DOCUMENTARY PRODUCTION **3 hours credit**
Investigates documentary styles and techniques. Emphasizes the documentary production process, familiarity with variety of documentary styles and good production skills. **Prerequisite:** CMAT 236 or consent of instructor. **Three hours lecture per week.**

334. THE MASS MEDIA IN SOCIETY **3 hours credit**
Critical study of the persuasive elements generated through the mass media, and the resulting influence the media exert upon society. **Prerequisites:** CMAT 110, 200. **Three hours per week.**

335. COMMUNICATING ON THE WEB **3 hours credit**
Acquaints the student with the numerous and varied elements contained on the Internet. The course will enhance communication skills specifically for the networked environments and discuss how to reach specific audiences on the net. Instruction includes media writing, page design, site development and learning about hypertext markup language. Integral to the course is evaluating and analyzing Web based content. **Prerequisites:** CMAT 131, 110. **Three hours per week.**

336. ADVANCED TELEVISION PRODUCTION **3 hours credit**
Application to advanced television production of principles and processes learned in earlier production classes. Creation of programming for campus cable. **Prerequisites:** CMAT 136, 236. **Four hours per week.**

338. ISSUES IN BROADCAST MANAGEMENT **3 hours credit**
Students confront some of the problems faced by contemporary broadcast managers and seek to determine viable solutions. Topics include economics, personal relations, programming, organization, production, advertising and business, community relations and Federal Communications Commission rules and regulations. **Prerequisite:** CMAT 334 or consent of instructor and CMAT 200. **Three hours per week.**

339. PRODUCING THE NEWS **3 hours credit**
Application of broadcast journalism principles and processes in the production of a newscast. Includes designing, directing, on-camera presentation and ethical issues. Emphasizes creation of a weekly magazine-style news program for campus cable and local access. **Prerequisites:** CMAT 236, 246; **Co-requisite:** CMAT 330. **Four hours per week.**

341. FEATURE WRITING **3 hours credit**
Principles of research, organization and style for newspaper feature articles. Writing articles for possible submission to selected journals and newspapers. **Prerequisite:** CMAT 246 or consent of instructor. **Three hours per week.**

346. PUBLIC AFFAIRS REPORTING 3 hours credit
Examines media coverage of public agencies and social issues while emphasizing civic journalism. **Prerequisite:** CMAT 246. **Three hours per week.**

365. MANAGERIAL COMMUNICATION 3 hours credit
Study of the role of the manager as a communicator at various organizational levels. Students study various communication strategies available to managers. Topics include information processing; presenting, receiving and gathering information; goal setting; decision making and change. **Prerequisites:** CMAT 200, 260 or permission of instructor. **Three hours per week.**

390. STUDIES IN INTERPERSONAL AND ORGANIZATIONAL COMMUNICATION 3 hours credit
Study in interpersonal, organizational or public communication process and messages. May be repeated under different subtitles recorded with the registrar. **Prerequisite:** CMAT 200. **Three hours per week.**

391. STUDIES IN MASS MEDIA 3 hours credit
Study of various mass media concepts as they impact contemporary society. May be repeated a maximum of two times under different subtitles as recorded by the registrar. **Prerequisite:** junior standing or consent of the instructor. **Three hours per week.**

392. STUDIES IN THEATRE 3 hours credit
Study of various theatrical processes and concepts as they impact the theatre world and contemporary society. May be repeated a maximum of two times under different subtitles as recorded by the registrar. **Prerequisite:** junior standing or consent of the instructor. **Three hours per week.**

397. INDEPENDENT TELEVISION PRODUCTION 3 hours credit
Students propose a program for production with the advice and permission of an instructor prior to registration. Types of programs may include (but are not limited to) a series (news, talk or game show) for SSU-TV, a full-length corporate video for a local "client," a full-length informative video on a regional issue, or a feature-length drama. Only three hours may be counted toward upper-level major requirements. May be taken twice for a total of six credit hours. **Prerequisites:** CMAT 330 or 336, junior standing, 3.0 grade point average in CMAT, written permission of the department. **Three hours per week.**

400. ADVANCED COMMUNICATION THEORY 3 hours credit
Selected philosophies and theories of human communication, encompassing structures, forms and contexts of communication, which include cultural contexts, assumptive bases and world views of theories and theorists. **Prerequisite:** CMAT 200 and junior standing. **Three hours per week.**

405. FAMILY COMMUNICATION 3 hours credit
Characterization of family styles of communication as they reflect values, attitudes and perceptions of family members as a group. Examination of effects of individual communication strategies on development of family patterns of interaction. Selected readings, field research, two exams. **Prerequisites:** CMAT 200, 205. **Three hours per week.**

422. INTERNSHIP IN ARTS ADMINISTRATION 6-12 hours credit
Training in local, regional or national arts organizations; selected areas of programming, budget, fund raising, audience development and public relations. May be taken once. **Prerequisites:** ART 322, department chair approval. **Twenty to 40 hours per week. (P/F)**

424. PLAYWRITING 3 hours credit
Study of the theory and practice of playwriting. Topics include exposition, language, structure and character. Plays to be written and produced in staged readings of workshops. **Prerequisites:** CMAT 120, permission of instructor. **Three hours per week.**

430. POLITICAL COMMUNICATION 3 hours credit
Studies the role of media and rhetoric in political campaigns and the political process. **Prerequisite:** CMAT 200 and junior standing; or permission of the instructor. **Three hours per week.**

438. MASS COMMUNICATION LAW 3 hours credit
Consideration of the legal and regulatory context of mass communication. Topics include constitutional, first amendment and statutory issues and the study of regulatory agencies and processes. **Prerequisites:** CMAT 334 or consent of instructor and CMAT 200. **Three hours per week.**

444. ENVIRONMENTAL COMMUNICATION 3 hours credit
Focuses on the reporting and dissemination of environmental policy, information and education, environmental reporting and environmental public relations. Also discusses risk and crisis communication management. **Prerequisite:** CMAT 200, 248 or permission of the instructor. **Three hours per week.**

448. PUBLIC RELATIONS CASES AND STRATEGIES 3 hours credit
Examines public relations cases while developing strategies and scenarios for response. **Prerequisite:** CMAT 248. **Three hours per week.**

453. CREATIVE DRAMATICS 3 hours credit
Emphasis on the manner in which creative dramatics assists in the growth of the child. Considers creative dramatics as a motivating factor in the teaching and learning process. **Three hours per week. Meets General Education IB.**

456. TECHNIQUES OF CHILDREN'S THEATRE 3 hours credit
Assists the elementary school teacher in developing the imagination of children through the medium of theatre. Emphasis on staging children's theatre within the framework of the public school. **Three hours per week. Meets General Education IB.**

460. APPLIED ORGANIZATIONAL COMMUNICATION 3 hours credit
Examines the process of communication from the perspective of the whole organization and studies various structures in business, education, the arts, etc. in order to analyze and improve communication. **Prerequisite:** CMAT 200. **Three hours per week.**

465. COMMUNICATION TECHNOLOGY 3 hours credit
Examines innovations in communication techniques and applications. Topics include satellite and terrestrial based technology, conferencing, decision support systems, computer mediated communication and the impact of technology on the communication process and communicators. **Prerequisites:** CMAT 110, 200. **Three hours per week.**

490. COMMUNICATION SEMINAR 3 hours credit
Intensive study of a selected topic in speech, communication studies or theatre. May be repeated under different subtitles recorded with the registrar. **Prerequisite:** CMAT 200. **Three hours per week.**

492. INDEPENDENT STUDY 1-3 hours credit
Student must choose a topic for investigation with the advice of an instructor prior to registration. Variable credit; may be taken twice. **Hours arranged.**

495. INTERNSHIP IN COMMUNICATION 3-6 hours credit
Provides practical experience in the application of theoretical concepts including broadcasting, theatre, journalism, organizational communication, public relations, training, etc. Only three hours may be counted toward upper-level major requirements. May be taken twice for a total of six credit hours. **Prerequisites:** Junior standing, written permission of the department. **Three to six hours per week.**

499. HONORS 3 hours credit
Independent study undertaken for departmental honors at the invitation of the department.

Computer Science (COSC)

116. INTRODUCTION TO COMPUTER SYSTEMS 4 hours credit
Overview of computer science and the theory and application of computer fundamentals. Lab activities include: file and directory/folder manipulation, word processing, spreadsheets and program implementation. May not be taken for credit if student already has credit for any of the following: COSC 110, 112, 115, ISMN 111. **Three hours lecture, two hours lab per week. Meets General Education IIIB.**

120. COMPUTER PROGRAMMING 4 hours credit
Step-by-step approach to problem solving, modular structured design, and structured programming in C++. Emphasizes production of readable, well documented, efficient, tested and correct programs. Includes time intensive assignments. **Prerequisite:** COSC 116 or similar computing experience. **Three hours lecture, two hours laboratory per week. Meets General Education IIIB.**

220. DATA STRUCTURES AND ALGORITHM ANALYSIS 4 hours credit
Object-oriented approach to design and implementation of medium to large software projects. Abstract data types including lists, stack and queues. Emphasizes design trade-offs based on analysis of run time and storage requirements. Includes time-intensive assignments. **Prerequisite:** COSC 120. **Three hours lecture, two hours lab per week. Meets General Education IIIB.**

250. MICROCOMPUTER ORGANIZATION 4 hours credit
Organization and internal behavior of microcomputer hardware: digital logic, Boolean algebra, switching networks, design of memories and ALUs, controllers, microprocessor architecture, introduction to machine code and assembly language. **Prerequisite:** COSC 116 or 120. **Three hours lecture, two hours laboratory per week. Meets General Education IIIB.**

320. ADVANCED DATA STRUCTURES AND ALGORITHM ANALYSIS 3 hours credit
Continuation and expansion of the material in COSC 220. Topics include data abstraction; trees, graphs, networks and tables; calculating time/space complexities; advanced searching and sorting algorithms; and programming tools. **Prerequisite:** COSC 220. **Three hours per week.**

350. SYSTEMS SOFTWARE 3 hours credit
Study of UNIX basics, C programming in a UNIX environment, writing shell scripts and assembly language programming. **Prerequisites:** COSC 220 and 250. **Three hours per week.**

362. MATHEMATICAL FOUNDATIONS OF COMPUTER SCIENCE 3 hours credit
Applications of discrete mathematics to computer science and introduction to the theory of computation. Topics include automata and formal languages, computability by Turing machines and recursive functions, undecidability and computational complexity. Cross-listed with MATH 362. **Prerequisite:** COSC 120, MATH 210. **Three hours per week.**

380. INTERNSHIP 3 hours credit
Students work under supervisors in a local firm or public institution in conjunction with an advisor from the department. Cross-listed with MATH 380. MATH/COSC 380 may be taken twice for a maximum of six credits, but used only once toward a major in mathematics or computer science. **Prerequisite:** Approval of department chair. **Eight to ten hours per week. (P/F)**

390. UNDERGRADUATE RESEARCH PROJECT 1-3 hours credit
Offers study of some area of computer science in more depth than is possible in the usual classroom setting. Students work on projects under the direction of faculty members. **Prerequisite:** Department approval. **(P/F)**

422. ORGANIZATION OF PROGRAMMING LANGUAGES 3 hours credit
Study of the organization of programming languages, with emphasis on their formal specifications and on the run-time behavior of procedural, object-based, functional and logic programming languages. History, syntax and grammars, control, binding, pointers, blocks, parameters, and encapsulation. **Prerequisite:** COSC 220. **Three hours per week.**

425, 426. SOFTWARE ENGINEERING I, II 3 hours credit
Study of conventional and object-oriented software engineering principles and methods: the human-computer interface, requirements analysis, prototyping, software design, system models, use of tools, project management, implementation, testing strategies, software metrics, maintenance, quality assurance, ethics and professional responsibility. Use of standards, verification and validation, configuration management, quality assurance and human factors. Student teams will analyze a real-world problem and design, implement, document and test a software system based upon the specified requirements. COSC 426 is a continuation of 425. **Prerequisite:** COSC 320. **Three hours per week.**

450. OPERATING SYSTEMS 3 hours credit
Analysis of the operating system, the program which supervises the activity of the computer. Study of processes, interprocess communication, scheduling, I/O systems, deadlock, file systems, memory management, security/protection mechanisms and resource allocation. **Prerequisite:** COSC 350. **Three hours per week.**

456. COMPUTER ARCHITECTURE 3 hours credit
Advanced study of computer systems which includes addressing modes, parallelism, pipeline processing, memory management, control designs and I/O interrupts. Various architectures compared and contrasted. **Prerequisites:** COSC 220 and 250. **Three hours per week.**

482. COMPUTER GRAPHICS 3 hours credit
Generate and manipulate graphic information using the computer. Emphasis on the analysis of fundamental problems associated with these activities and on the structured design of solutions. Cross-listed with MATH 482. Cannot receive credit for both COSC 482 and MATH 482. **Prerequisites:** COSC 120 and MATH 306. **Three hours per week.**

490. SPECIAL TOPICS 3 hours credit
Seminar course with content that varies semester to semester (e.g., artificial intelligence, compiler construction or other topics suggested by faculty or students). May be taken twice under different titles recorded by the registrar. **Prerequisite:** COSC 220. **Three hours per week.**

495. DIRECTED CONSULTING 4 hours credit
Provides teams of 3-12 students with experience in using mathematical and computing tools to solve real-world problems posed by a client organization, such as a research institute, business or industry. Combines individual and group work, and requires the presentation of a written and oral report to the client organization and the department. Cross-listed with MATH

495. COSC/MATH 495 may be taken twice for a maximum of eight credits, but used only once toward a major in mathematics or computer science. **Prerequisite:** Invitation by the department. **Four hours per week.** (P/F)

Dance (DANC)

162. CREATIVE MODERN DANCE I **3 hours credit**
Introduces a biomechanical approach to movement and basic principles and techniques for modern dance as a creative art form. **Three hours per week. Meets General Education IB.**

167. BALLET I **3 hours credit**
Introduction and application of the fundamentals of ballet technique as highly disciplined dance form. Focus on flexibility, precision, strength, musicality and on appreciation of the inherent beauty of form. **Three hours per week. Meets General Education IB.**

168. JAZZ DANCE **3 hours credit**
Study of jazz dance including a working knowledge of the music, the period and the movement techniques used. May be taken as one of the required technique classes. **Three hours per week. Meets General Education IB.** (spring semester only)

202. DANCE APPRECIATION **3 hours credit**
Study of traditions of dance in communities around the world; provide perspective for understanding and appreciating the function of dance in human societies. **Three hours per week. Meets General Education IB.**

260. INTRODUCTION TO DANCE/MOVEMENT **1 hour credit**
Introduces broad principles of dance/movement, rhythmic/step analysis, notation and Laban movement analysis through traditional and cultural dance forms. Emphasizes physical experience as the source of dance through exploration, improvisation and creative problem-solving. No experience required. **Two hours per week.**

262. CREATIVE MODERN DANCE II **3 hours credit**
Continues DANC 162. Emphasizes intermediate level principles and techniques for modern dance as a creative art form through the Hawkins style. **Three hours per week. Meets General Education IB.**

267. BALLET II **3 hours credit**
Application of principles of ballet dance technique and vocabulary beyond the beginning level. **Prerequisite:** PHEC 167 or equivalent. **Three hours per week. Meets General Education IB.**

323. DANCE EXPERIENCE **1-3 hours credit**
Opportunity for students to nurture creative abilities and to develop a working knowledge of dance production and administration through supervised experiences. May be repeated for a total of eight credit hours. **Prerequisite:** Permission of instructor.

360. TEACHING DANCE **2 hours credit**
Study of methods and materials for teaching cultural and creative dance as a medium for enhancing classroom learning. Preceptorship in DANC 260 provides opportunities for lesson planning and practice teaching. Applies culturally diverse resources to materials and activities. Open to all prospective teachers. **Prerequisite:** DANC 260. **Three hours per week.** (fall semester only)

380. DANCE TECHNIQUE III **3-9 hours credit**
Applies advanced-level training to ballet, modern dance and jazz dance techniques. May be repeated for a total of nine credit hours. **Prerequisite:** Dance audition during the first class meeting. **Four hours per week.**

490. SELECTED TOPICS **1-3 hours credit**
Intensive study of selected topics in dance. May be repeated for a maximum of six credits under different subtitles. **Prerequisite:** DANC 160 and 162 or consent of instructor.

491. INDEPENDENT STUDY **1-3 hours credit**
Independent study of problems not considered in other classes. May be repeated for a maximum of six hours. **Prerequisite:** Consent of instructor and department chair. **Two to nine hours per week.**

Economics (ECON)

150. PRINCIPLES OF ECONOMICS **3 hours credit**
A general introduction to economic ideas and analysis with emphasis on economic institutions and processes in the context of a market economy. Includes basic discussion of micro-economic and macroeconomic topics including economic decision making in the context of scarce resources, price theory, monetary and fiscal policy, etc. This course is intended for non-business majors. This course cannot be taken concurrently with or after having completed ECON 211 or 212. **Three hours per week. Meets General Education IIB.**

211. MICRO-ECONOMIC PRINCIPLES **3 hours credit**
Introduction to the behavior of individual business enterprises and factors that shape their competitive environment. Strengths and weaknesses of the private enterprise system are examined through studies of issues such as farm policy, pollution, antitrust policies, and tariffs and quotas on imports. Not open to freshmen. **Three hours per week. Meets General Education IIB.**

212. MACRO-ECONOMIC PRINCIPLES **3 hours credit**
Explores forces behind consumer purchases, businesses, capital spending and the balance of payments and their relationship to unemployment, inflation and the value of the dollar abroad. Also examines the effect of government spending, taxation and money supply policies on the economy's performance. Not open to freshmen. **Three hours per week. Meets General Education IIB.**

220. INTRODUCTION TO ECONOMETRICS **3 hours credit**
Introduction to measurement and empirical testing of economic theories. Principles and methods of statistical inference are reviewed and applied to such ideas as law of demand and the consumption function. Training on widely used statistical software. **Prerequisites:** MATH 155 "C" or better grade, ECON 212 pre or corequisite. **Three hours per week.**

300. ECONOMIC HISTORY OF THE UNITED STATES **3 hours credit**
Study of major developments in the American economy from the founding of colonies to the present, with emphasis on the economic factors contributing to U.S. industrial growth. **Prerequisites:** ECON 211, 212. **Three hours per week.**

305. INTERMEDIATE MACRO-THEORY **3 hours credit**
Study of the theory of economic aggregates through the use of national income accounts to determine the effect of certain key variables on employment and production. Key variables studied include savings and investment, the quantity of money, the velocity of money, the rate of interest and consumption. **Prerequisites:** ECON 211, 212; and MATH 155 or 160 or 201, all with a grade of C or better. **Three hours per week.**

306. INTERMEDIATE MICRO-THEORY **3 hours credit**
Study of supply and demand relationships under the various market classifications. Major topics include the market forms, the principles of production, costs of production, resource allocation and income distribution with some discussion of welfare economics. **Prerequisites:** ECON 211, 212; and MATH 155 or 160 or 201, all with a grade of C or better. **Three hours per week.**

331. MONEY AND BANKING 3 hours credit

Study of financial institutions, economic aspects of commercial banking, monetary economics, and banking and fiscal policy. **Prerequisites:** ECON 211, 212. **Three hours per week.**

336. PUBLIC SECTOR ECONOMICS 3 hours credit

Study of the principles, techniques and effects of obtaining and spending funds by governments and the management of governmental debt. Taxes and expenditures of all levels of government in the United States considered. **Prerequisites:** ECON 211, 212; MATH 155. **Three hours per week.**

338. SPECIAL TOPICS IN ECONOMICS 3 hours credit

In-depth study of varying economic issues not covered in other economics courses. Students may repeat this course under a different topic. **Prerequisites:** ECON 211, 212. **Three hours per week.**

340. ECONOMICS OF SOCIAL ISSUES 3 hours credit

Study of selected current economic issues (with concentration on issues not covered in other courses such as money and banking, public sector economics, etc.) including the economics of pollution, crime, poverty, transportation, women in the work force, education, inflation, etc. **Prerequisite:** ECON 211 or 212. **Three hours per week.**

370. INDUSTRIAL ORGANIZATION 3 hours credit

Examines differences in how firms behave and perform under alternative market structures including monopolistic competition, oligopoly, monopoly and pure competition. Analyzes problems created by industrial concentration and public policies for dealing with these problems. **Prerequisites:** ECON 211, 212; MATH 155. **Three hours per week.**

381. LABOR ECONOMICS 3 hours credit

Examination of factors which influence the number of job seekers and the number of jobs in the aggregate, and the efficiency with which the economic system utilizes its labor resources. Topics include individual decision-making with regard to education, job search strategy and hours of work as well as government policies affecting labor compensation, welfare and the right to bargain collectively. **Prerequisites:** ECON 211, 212; MATH 155. **Three hours per week.**

401. HISTORY OF ECONOMIC THOUGHT 3 hours credit

Survey of important trends in economic ideas, showing their relation to basic economic issues. Readings from selected economists. **Prerequisites:** ECON 211, 212. **Three hours per week.**

402. COMPARATIVE ECONOMIC SYSTEMS 3 hours credit

Comparative study of contemporary economic systems in capitalists, socialist and communist societies. **Prerequisites:** ECON 211, 212. **Three hours per week.**

407. ECONOMICS OF AGING 3 hours credit

Explores the economic consequences of our aging society by discussing topics such as income security, retirement and health care. Provides the analytical tools necessary to understand and respond to our changing demographics and the public policies affecting them. **Prerequisites:** ECON 211 and 212. **Three hours per week.**

410. THE ECONOMICS OF HEALTH CARE 3 hours credit

Examines economic aspects of health care including special characteristics of the health care industry, economic behavior of health care consumers and providers, and the role of health insurance and government regulation. Compares health care finance and insurance in the U.S. and other advanced countries. **Prerequisites:** ECON 211, 212 or permission of instructor. **Three hours per week.**

411. ECONOMIC DEVELOPMENT 3 hours credit

Study of the theory of economic development and its application to the underdeveloped regions and countries of the world. Emphasis on the technological, locational and financial aspects of economic growth. **Prerequisites:** ECON 211, 212. **Three hours per week.**

415. ENVIRONMENTAL AND NATURAL RESOURCE ECONOMICS 3 hours credit

Economics-based analysis of causes and consequences of environmental problems and environmental policy and a study of the critical issues in natural resource allocation. Topics include common pool resources, externalities, property rights, exhaustible and renewable resources, privatization and the economics of environmental policy formation. Students may not receive credit for both ECON 415 and 420. **Prerequisite:** ECON 211. **Three hours per week.**

430. ECONOMETRICS 3 hours credit

Stresses the derivation of the theory behind concepts learned in ECON 220 and introduces more rigorous application of those concepts. Introduction to the theory and application of time series and limited dependents variable models. **Prerequisites:** BUAD 281; ECON 211, 212; MATH 155. **Three hours per week.**

441. INTERNATIONAL ECONOMICS 3 hours credit

Study of the basic economic concepts and theories for international business, international trade and finance, commercial policy, and foreign investment and multinational firms. **Prerequisites:** ECON 211, 212; MATH 155. **Three hours per week.**

460. APPLIED ECONOMICS WORKSHOP 3 hours credit

Practical experience with methods used by professional economists to measure economic conditions. Students collect, process, evaluate, interpret and report economic data. Satisfies ABLE requirement for business majors in economics track only. **Prerequisites:** Senior with major, minor or track in economics. **Three hours per week.**

492. SENIOR SEMINAR IN CONTEMPORARY ECONOMIC PROBLEMS 3 hours credit

Economics majors research problems of their own choosing and present a seminar paper. Focus on problems facing the American and world economies. **Prerequisite:** Economics major or consent of instructor. **Three hours per week.**

494. DIRECTED STUDY IN ECONOMICS 1-3 hours credit

Supervised study in an area of interest to the advanced student. May be taken twice under different course topics recorded with the registrar. **Prerequisite:** Junior/senior status in economics/business administration or consent of the instructor.

Education (EDUC, ELED, SCED)

EDUC

210. SCHOOL IN A DIVERSE SOCIETY 3 hours credit

Sociological, historical and philosophical approach to the role of the school in an increasingly diverse society. Emphasis on development of knowledge, values and skills needed to live, learn, interact and work in a global society. Field experience required. **Three hours per week.**

300. DEVELOPMENT AND LEARNING 3 hours credit

Physical, intellectual, emotional and social development of children (ages 3-18) considered. Required application. Attention given to motivation and learning. **Prerequisite:** PSYC 101. **Three hours per week.**

301. ROLES OF THE TEACHER 3 hours credit

Study of various functions and classroom structures appropriate to teaching in the elementary and secondary schools through a series of field-based experiences allowing students to explore various roles and functions of a teacher. **Three hours per week. (P/F)**

304. LEARNING AND ASSESSMENT 3 hours credit

Examines concepts, principles, theories and research related to teaching and learning for diverse populations across grade levels. Explores traditional and non-traditional strategies for assessing student learning. Field experience is included. Credit cannot be received for both EDUC 300 and EDUC 304. **Prerequisite:** EDUC 201. **Three hours per week.**

306. PRINCIPLES OF INSTRUCTION: RESEARCH, THEORY AND PRACTICE 3 hours credit

Objectives and curricula with a focus on planning, organizing content, developing teaching methods, establishing classroom management procedures, evaluating and reporting on student progress. Includes classroom observation and "bit teaching." **Prerequisite:** Admission to Professional Teacher Education Program. **Three hours per week.**

308. AUDIO-VISUAL EQUIPMENT OPERATION 1 hour credit

Self-instructional, self-paced course designed to foster competency in the operation of selected AV equipment. Recommended participation in a 50-minute lab session each week. Participants proceed at own rate of speed.

318. COMPUTERS IN EDUCATION 3 hours credit

Overview of the role of computers in education. Examination of computer applications as they relate to specific teaching/learning operations and educational functions in the pre-K-12 classroom. **Prerequisite:** Admission to Professional Teacher Education Program. **Three hours per week.**

343. ELEMENTARY SCHOOL PHYSICAL EDUCATION 3 hours credit

Analysis of elementary school physical education teaching methods, program implementation and curricula. Emphasis on teaching effectiveness through reflective problem solving. Credit cannot be received for both EDUC 343 and PHEC 343. **Prerequisite:** Admission to professional teacher education program. **Two hours lecture, four hours clinical per week.**

371. SECONDARY SCHOOL PHYSICAL EDUCATION 3 hours credit

Analysis of secondary school physical education teaching methods, program implementation and curricula. Emphasis on teaching effectiveness through reflective problem solving. Credit cannot be received for both EDUC 371 and EDUC 477. **Prerequisite:** EDUC 343. **Three hours per week.**

375. MATERIALS AND METHODS FOR ELEMENTARY SCHOOL ART 3 hours credit

A look at the use of construction skills to develop creative art projects for elementary education. Content includes basic principles of art instruction, integration with other subject areas, exploration of various media, and peer teaching experiences. Students must furnish some of their own materials. For art majors with admission to the professional teacher education program. Credit cannot be received for both ART 375 and EDUC 375. **Four hours per week.**

403, 404. DIRECTED TEACHING IN PHYSICAL EDUCATION 6 hours credit each

Directed student teaching experience in nearby public schools under the direction of the public school teacher and with supervision from the University staff. Half semester in elementary physical education teaching and half semester in secondary teaching to qualify for certification in all 12 grades. **Prerequisites:** Admission to Professional Teacher Education

Program and student teaching criteria. EDUC 403 prerequisite to 404; a grade of NR will be assigned to those who satisfactorily complete EDUC 403 until successful completion of 404. **Corequisites:** EDUC 477, 478. *(P/F)*

409. LITERATURE FOR ADOLESCENTS 3 hours credit

Study of literature for and about contemporary adolescents. Emphasis on methods of teaching that build adolescent appreciation for the more established literary selections in secondary school curriculum. **Prerequisite:** Admission to the Professional Teacher Education Program. **Three hours per week.**

415. INSTRUCTIONAL TECHNIQUES FOR INCLUSION 3 hours credit

Develops skills for creating and implementing curricular, instructional and environmental modifications/accommodations to meet the social, affective, behavioral and cognitive needs of exceptional students. In depth study of collaborative processes involving family, community, school staff and special education teachers in developing and implementing IEPs as well as developing the support system necessary for inclusion. **Prerequisite:** Admission to Professional Teacher Education Program; ELED 310, 311, 312, 313, 316, 317, 408, EDUC 318. **Corequisite:** ELED 309. **Three hours per week.**

416. CLASSROOM MANAGEMENT 3 hours credit

Explores the ability to create and maintain productive learning environments. Emphasis on development of learner responsibility, promotion of positive social relationships, interdependence of effective instruction and management, and prevention/intervention strategies. Consideration given to accommodating diversity and communicating with families. Field experience included. **Prerequisite:** Admission to Professional Teacher Education Program; ELED 310, 311, 312, 313, 316, 317, 408, EDUC 318. **Corequisite:** ELED 309. **Three hours per week.**

425. TEACHING READING COMPREHENSION: RESEARCH FINDINGS AND STRATEGIES FOR INSTRUCTION 3 hours credit

Elective in reading education. Investigates contemporary research relating to the development of reading comprehension, procedures for assessing reading comprehension competencies and teaching strategies to improve comprehension. Designed for elementary, middle school, reading and resource teachers. **Prerequisites:** Admission to Professional Teacher Education Program, either EDUC 316, 420 or 422. **Three hours per week.**

432. LITERACY AND ESOL READING 3 hours credit

Introduces students interested in questions of language acquisition to the theories and practices relating to learning to read in a second language or second dialect. Topics include models for acquiring foreign language reading skills, teaching strategies for second language/dialect literacy, evaluating literacy skills, current research about acquisition of literacy skills, and political and social implications of second language/dialect literacy. **Prerequisite:** ENGL 430 or permission of instructor. **Three hours per week.**

440. INTRODUCTION TO EARLY CHILDHOOD EDUCATION 3 hours credit

Introduction to curriculum and methods in early childhood education, including theories, practices, techniques and materials. Attention to art, music, nutrition, safety, health education, motor activities and positive teacher-parent relations. Field experience required. **Prerequisites:** EDUC 300 and declared elementary education major. **Three hours per week.**

443. LITERACY AND ESOL WRITING 3 hours credit

Introduces students interested in questions of language acquisition to the theories and practices of learning to write in

a second language or second dialect. Topics include writing theory, writing strategies, evaluating writing, and writers and rhetorical concerns. Students develop a literacy project, writing materials for specific ESOL students. **Prerequisite:** ENGL 430 or permission of instructor. **Three hours per week.**

454. COMPOSITION: CURRICULUM AND METHODS 3 hours credit

Study of the emergence of contemporary curriculum for teaching writing with emphasis on contributing models. Design of instructional materials which employ a range of methods within a "writing process" framework and promote the use of writing to teach academic content. Lecture, discussion, design and analysis of instructional materials, microteaching and instructional analysis. **Prerequisite:** At least one course in composition beyond ENGL 101. **Three hours per week.**

467. EDUCATING THE MILDLY HANDICAPPED CHILD IN THE REGULAR CLASSROOM 3 hours credit

Acquaints classroom teachers with instructional approaches for the mildly handicapped learner. Major topics of the course include mainstreaming, IEPs, adapting instructional approaches, behavior management, stressing early childhood, elementary and secondary levels. Intended for the regular classroom teacher and not for certification in special education. Credit cannot be received for both EDUC 467 and 480. **Prerequisite:** EDUC 300 or equivalent. **Three hours per week.**

472. THEORY AND PRACTICE OF TEACHING ADULTS 3 hours credit

For upper-division students in any discipline seeking information about contemporary methods of effective adult instruction. Assumes no prior knowledge about educational methods, theories or practices. **Prerequisite:** Junior/senior standing. **Three hours per week.**

475. METHODS AND MATERIALS IN ENVIRONMENTAL EDUCATION 3 hours credit

Increases students' awareness of their immediate environment with the aim of developing a broad philosophy of environmental education. Existing teaching methods and materials analyzed and new methods developed for use in interdisciplinary, problem-focused situations. **Prerequisite:** Senior standing. **Three hours per week.**

478. STUDENT TEACHING OF PHYSICAL EDUCATION SEMINAR 3 hours credit

Critical analysis of the decisions made by student teachers in the public schools. Emphasis upon identifying possible solutions for problems students are confronted with in their teaching. **Corequisites:** EDUC 403, 404. (P/F)

490. SPECIAL PROBLEMS AND PRACTICES IN EDUCATION 1-6 hours credit

Individually designed programs including seminars, workshops and courses in curriculum development, planning, evaluation, specialized areas of study for purposes of enrichment, in-depth study of special problems and/or professional practices in education. May be taken twice under different subtitles. **Prerequisite:** Admission to professional program or permission of department chair.

491. INDEPENDENT STUDY 1-3 hours credit

Permits self-study of problems not considered in other courses. May be taken twice under different subtitles. **Prerequisites:** Approval of course instructor and department chair.

495. SPECIAL PROBLEMS AND PRACTICES IN ART EDUCATION K-12 3 hours credit

For individually designed classroom programs in education, including seminars, workshops, curriculum development, daily planning, evaluation and art study projects. Students furnish some materials. Recommended for senior undergraduate or graduate credit. May only be taken once for credit.

ELED

309. CLASSROOM VISITATIONS 0 hours credit

Classroom visitations and field experiences for students enrolled in elementary professional education courses. Includes observing instruction, teaching lessons and completing assignments as determined by corequisite instructor(s). **Prerequisite:** Admission to Professional Teacher Education Program. **Corequisite:** Any of the following elementary professional education courses: ELED 310, 311, 312, 313, 316, 317, 427, EDUC 416. **One-half day per week.**

310. LANGUAGE ARTS INSTRUCTION 3 hours credit

Introduces the processes of communication and strategies for promoting growth in these areas in the elementary and middle school. Emphasis on language acquisition, oral and written language development, viewing, diverse language learners, and the relationship of language proficiency to literacy development. Field experiences and reflective evaluation included. **Prerequisite:** Admission to Professional Teacher Education Program. **Corequisite:** ELED 309. **Three hours per week.**

311. MATHEMATICS INSTRUCTION 3 hours credit

Selection and creation of meaningful mathematics learning experiences for elementary and middle school students. Attention given to use of technology, manipulatives, literature, and assessment that support mathematical thinking and learning in diverse classrooms. Field experiences and reflective evaluation included. **Prerequisites:** Admission to Professional Teacher Education Program; ELED 310, 316, 317, EDUC 318. **Corequisite:** ELED 309. **Three hours per week.**

312. SCIENCE INSTRUCTION 3 hours credit

Introduces the processes of science that facilitate student learning in elementary and middle schools. Emphasis on planning, teaching and assessment with a focus on inquiry and understanding of everyday phenomena. Attention given to environmental education. Field experiences and reflective evaluation included. **Prerequisites:** Admission to the Professional Teacher Education Program; ELED 310, 316, 317, EDUC 318. **Corequisite:** ELED 309. **Three hours per week.**

313. SOCIAL STUDIES INSTRUCTION 3 hours credit

Selection, organization, presentation and assessment of meaningful social studies learning experiences for elementary and middle school students. Attention given to technology, literature, and local resources that support learning in diverse classroom settings. Field experiences and reflective evaluations included. **Prerequisites:** Admission to Professional Teacher Education Program; ELED 310, 316, 317, EDUC 318. **Corequisite:** ELED 309. **Three hours per week.**

316. READING INSTRUCTION 3 hours credit

Introduction to balanced literacy instruction. Includes developmentally appropriate word recognition and comprehension strategies, activities, materials and programs coupled with organization and grouping procedures to maximize literacy learning for diverse populations. Field experiences and reflective evaluations included. **Prerequisite:** Admission to Professional Teacher Education Program. **Corequisite:** ELED 309. **Three hours per week.**

317. CREATIVE ARTS INSTRUCTION 3 hours credit

Provides a basic arts knowledge base along with reasons and techniques for incorporating the arts throughout the elementary and middle-school curriculum. Emphasizes infusing the arts in teaching, an alternative approach to the traditional view of the arts solely as enjoyable "add-ons." **Prerequisite:** Admission to Professional Teacher Education Program. **Corequisite:** ELED 309. **Three hours per week.**

401, 402. DIRECTED TEACHING IN THE ELEMENTARY AND MIDDLE SCHOOL: I, II 6 hours credit each

Engages pre-service teachers in observation, planning, teaching, assessment and collaboration in order to support and enhance student learning and well-being. Participation in activities required of fully employed teachers. Emphasis on reflective evaluation and professional growth. Placement in local schools. **Prerequisites:** Admission to Professional Teacher Education Program; fulfillment of directed teaching criteria. ELED 401 is a prerequisite to ELED 402; a grade of NR will be assigned to those who satisfactorily complete ELED 401 until successful completion of 402. **Corequisite:** ELED 411. (P/F)

408. CHILDREN'S LITERATURE 3 hours credit

Study of classic and contemporary literature for children. Emphasis on selecting and incorporating a wide variety of literature into the elementary and middle school curriculum. Technological and media resources are included. **Prerequisites:** Admission to Professional Teacher Education Program; ELED 310, 316, 317, EDUC 318. **Three hours per week.**

411. INSTRUCTIONAL ANALYSIS IN THE ELEMENTARY AND MIDDLE SCHOOL 3 hours credit

Seminar approach to current practices and trends in teaching. Involves interaction analysis, evaluation techniques and strategies, instructional planning, self-assessment and reflection, and preparation of professional portfolio. **Prerequisites:** Admission to the Professional Teacher Education Program and directed teaching. **Corequisite:** ELED 401, 402. **Three hours per week.**

419. TEACHING MUSIC IN THE ELEMENTARY SCHOOL 3 hours credit

Techniques for teaching music in the elementary school; study of the child voice; appropriate singing, listening, rhythmic, instrumental and creative activities; remedial work for poor singers; activities for musically talented children; comprehension overview of music materials and their application to the elementary school curriculum. **Prerequisites:** Admission to Professional Teacher Education Program, MUSC 200/equivalent. **Three hours per week.**

420. FOUNDATIONS OF READING (Elementary Education) 3 hours credit

Deals with pre-reading skills, beginning reading, informal assessment, analysis of reading programs, grouping procedures, word attack skills, and development of vocabulary and comprehension abilities. Intended for personnel in elementary education. **Prerequisite:** Admission to Professional Teacher Education Program. **Three hours per week.**

427. CLASSROOM ASSESSMENT AND INTERVENTION IN READING 3 hours credit

Deals with a variety of formal and informal assessment techniques, processes and instruments from classroom, state, and national sources used to make appropriate instructional decisions in literacy for diverse populations. Includes early intervention strategies and reporting to parents. **Prerequisites:** Admission to Professional Teacher Education Program; ELED 310, 311, 312, 313, 316, 317, 408, EDUC 318. **Corequisite:** ELED 309. **Three hours per week.**

430. DIRECTED TEACHING IN MUSIC IN THE ELEMENTARY SCHOOL 6 hours credit

Student teaching experience in all aspects of the elementary school music curriculum at several grade levels under the direction of public school music teacher, with supervision from the University staff. Includes observation and participation in the classroom as well as actual teaching and other activities and duties normally performed. **Prerequisites:** Completion of courses in the music concentration through the third year, EDUC 419 and 429, written approval of the Music Department, admission to Professional Teacher Education Program. (P/F)

441. EARLY CHILDHOOD EDUCATION INTEGRATED CURRICULUM I 3 hours credit

Study of materials and methods for teaching language arts to kindergarten and pre-kindergarten level children. Emphasis on curriculum planning, use of space, class management and lesson planning. **Prerequisites:** EDUC 440 and admission to professional teacher education program. **Three hours per week.**

442. EARLY CHILDHOOD EDUCATION INTEGRATED CURRICULUM II 3 hours credit

Study of materials and methods for teaching science, social studies and math readiness to kindergarten and pre-kindergarten level children. Emphasis on curriculum planning, room design, class management, lesson planning, field trip planning and professional development. **Prerequisites:** EDUC 440 and admission to professional teacher education program. **Three hours per week.**

445. PRE-PRIMARY DIRECTED TEACHING 6 hours credit

Supervised placement in public school prekindergarten or kindergarten classrooms. Students observe teaching, work with children, and teach and participate in activities for which regularly employed teachers are responsible. **Prerequisites:** GPA of 2.75 or better in the following courses and no grades below C: EDUC 440; ELED 310, 311, 312, 313, 316, 441 and 442. (P/F)

SCED**332. METHODS AND MATERIALS FOR SECONDARY SCHOOL ART 3 hours credit**

Prepares art students for the teaching and administration of art programs on the secondary level and for careers as art education consultants and supervisors. **Prerequisite:** Acceptance in the Art Education Professional Program. **Four hours per week. (spring semester only)**

333. ENGLISH IN THE SECONDARY SCHOOL 3 hours credit

Study of materials and methods for teaching language arts in the high school. Various models and strategies for teaching language arts—language, literature and media—at this level demonstrated and analyzed. **Prerequisite:** Admission to Professional Teacher Education Program. **Three hours per week. (fall semester only)**

334. SOCIAL STUDIES IN THE SECONDARY SCHOOL 3 hours credit

Analysis of the secondary school program in social studies; emphasis on methods of teaching history, geography and citizenship. Current curriculum trends considered. **Prerequisite:** Admission to Professional Teacher Education Program. **Three hours per week. (fall semester only)**

335. MATHEMATICS IN THE SECONDARY SCHOOL 3 hours credit

Analysis of the secondary school program in mathematics; emphasis on methods of teaching mathematical concepts and understandings. Organization of teaching units, observation and evaluation of teaching in particular situations. **Prerequisite:** Admission to Professional Teacher Education Program. **Three hours per week. (fall semester only)**

336. SCIENCE TEACHING IN THE SECONDARY SCHOOL 3 hours credit

Analysis of secondary school science teaching methods, materials and existing programs. Curricula and materials for the middle school and senior high school levels investigated by the student in biology, chemistry, earth science, general science, physical science and physics. **Prerequisite:** Admission to Professional Teacher Education Program. **Three hours per week. (fall semester only)**

337. FOREIGN LANGUAGE IN THE SECONDARY SCHOOL 3 hours credit

Study of the philosophy, aims and methods of teaching foreign language in the secondary school with emphasis upon the techniques and materials in current use. **Prerequisite:** Admission to Professional Teacher Education Program. **Three hours per week.** (fall semester only)

339. SECONDARY/K-12 METHODS VISITATION 0 hours credit

Classroom visitations and field experiences for students enrolled in methods courses. Includes observing instruction, teaching lessons and completing assignments as determined by co-instructor(s). **Prerequisite:** Admission to the Professional Teacher Education Program. **Corequisite:** Any secondary or K-12 methods course. SCED 333, 334, 335, 336, 337, 429, 447, EDUC 306, 343, 371, ELED 419. **One half day per week.**

422. TEACHING READING IN THE CONTENT AREAS: PART I 3 hours credit

Knowledge of the reading process, instructional strategies and materials used is drawn from research-based recommendations for using text in secondary content areas. Intended for all secondary and K-12 teacher education candidates. **Prerequisite:** Admission to Professional Teacher Education Program. **Corequisite:** EDUC 339. **Three hours per week.**

424. TEACHING READING IN THE CONTENT AREAS: PART II 3 hours credit

In-depth study of literacy needs of diverse student populations. Includes instructional and assessment methods in reading and writing. Intended for Secondary and K-12 teacher certification candidates. **Prerequisite:** Admission to Professional Teacher Education Program; SCED 422. **Corequisite:** EDUC 339. **Three hours per week.**

426, 428. DIRECTED TEACHING IN THE SECONDARY SCHOOL 6 hours credit each

Students assigned to cooperating teachers in two secondary schools, a half-semester in each setting. Cooperating teachers and University supervisors guide the students in observing, working with pupils, teaching and participating in all activities for which regular teachers are responsible. **Prerequisites:** A major in one of the academic disciplines with an MSDE-approved program; competency tests; admission to Professional Teacher Education Program; EDUC 200, 300, 306, 308 and special methods. EDUC 426 prerequisite to 428. Credit not be awarded for EDUC 426 until successful completion of 428. (P/F)

429. TEACHING MUSIC IN THE SECONDARY SCHOOL 3 hours credit

Methods and materials of music teaching in grades 7-12. Emphasis on vocal, instrumental and general music. **Prerequisites:** MUSC 200, admission to Professional Teacher Education Program.

431. DIRECTED TEACHING IN MUSIC IN THE SECONDARY SCHOOL 6 hours credit

Student teaching experience in all aspects of the secondary school music curriculum including the areas of choral, instrumental and general music. Observation, participation, teaching and other activities and duties normally performed by professional teachers done under the direction of public school music teacher(s), with supervision from the University staff. **Prerequisites:** Completion of courses in the music concentration through the third year, EDUC 419 and 429, written approval of the Music Department. (P/F)

433. STUDENT TEACHING SEMINAR—SECONDARY EDUCATION 3 hours credit

Forum for discussion of issues pertinent to current practices, trends and issues in the middle, junior and senior high school

during the student teaching experience. **Prerequisite:** Admission to student teaching. **Corequisites:** EDUC 426, 428. (P/F)

447. ESOL METHODS 3 hours credit

Introduces students to the study, philosophy, aims and methods of teaching English as a foreign or second language with an emphasis upon the techniques and materials in current use. **Co- or prerequisites:** ENGL 433, 528. **Prerequisites:** ENGL 430, 431 and 439; admission to the professional teacher education program; passing scores on PRAXIS I Examinations as defined by the University and Seidel School; GPA of 2.75 in ESOL courses; or consent of the instructor for non-teachers. **Three hours per week.**

Engineering (ENGR)**101. ENGINEERING GRAPHICS 2 hours credit**

Introduces procedures and tools of engineering drawing. Visualizing in three dimensions and expressing ideas graphically are covered. **One hour lecture, three hours laboratory per week.**

110. STATICS 3 hours credit

The equilibrium of stationary bodies under the influence of various kinds of forces. Forces, moments, couples, equilibrium, trusses, frames and machines, centroids, moment of inertia, beams and friction. Vector and scalar methods used to solve problems. **Prerequisites:** MATH 201, PHYS 221. **Three hours per week.**

221. DYNAMICS 3 hours credit

Systems of heavy particles and rigid bodies at rest and in motion. Force acceleration, work energy and impulse-momentum relationships. Motion of one body relative to another in a plane and in space. **Prerequisites:** MATH 202, ENGR 110. **Three hours per week.**

English (ENGL)**101. COMPOSITION I 3 hours credit**

A course in expository writing. Focus on logical thinking and critical reading and writing. **Three hours per week. Meets General Education IA (required C or better).**

102. COMPOSITION II 3 hours credit

Continued study of expository writing which focuses on the writing of critical papers responding to literature. **Prerequisite:** C or better in ENGL 101. **Three hours per week. Meets General Education IA (required C or better).**

201. COMPOSITION III 3 hours credit

Focuses on the practice and theory of writing, advanced strategies of writing, and the forms and aims of discourse. Emphasis on effective assignments, evaluation of prose, and the nature and analysis of style. Cannot receive credit for both ENGL 371 and ENGL 201. **Prerequisite:** ENGL 102. **Three hours lecture per week.**

220. INTRODUCTION TO FILM 3 hours credit

Introduction to the art of film. Concepts of organization, structure, and editing techniques through viewing and discussing short films. Literary and dramatic influences in feature films. Cannot receive credit for both ENGL 121 and ENGL 220. **Prerequisite:** ENGL 102. **Three hours per week.**

230. CREATIVE WRITING 3 hours credit

Techniques of writing fiction and poetry through reading, analysis and directed writing. Students submit work-in-progress for class discussion and a portfolio of poems or stories. **Prerequisite:** ENGL 102. **Three hours per week.**

240. INTRODUCTION TO THE STUDY OF LANGUAGE**3 hours credit**

Study of the ways language works and an introduction to the scientific study of language and linguistics. Presupposes no formal study or knowledge of language. Cannot receive credit for both ENGL 110 and ENGL 240. **Prerequisite:** ENGL 102. **Three hours per week.**

250. UNDERSTANDING POETRY (Genre)**3 hours credit**

Reading and interpreting a wide variety of poems, examining the features of the poem as a form, variations of the form throughout history. Cannot receive credit for both ENGL 203 and ENGL 250. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

251. THE ART OF THE DRAMA (Genre)**3 hours credit**

An introduction to the types of drama in the American, British and Continental traditions. Cannot receive credit for both ENGL 204 and ENGL 251. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

252. ASPECTS OF THE NOVEL (Genre)**3 hours credit**

Analysis of American, British and Continental novels; the form of the novel and its variations. Cannot receive credit for both ENGL 209 and ENGL 252. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

253. THE SHORT STORY (Genre)**3 hours credit**

A study of the historical development of the short story, its forms, characteristics and its most successful practitioners. Cannot receive credit for both ENGL 210 and ENGL 253. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

254. SATIRE (Genre)**3 hours credit**

The nature of satire and its historical forms. Cannot receive credit for both ENGL 212 and ENGL 254. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

300. STUDIES IN ENGLISH**3 hours credit**

Study of a literary figure, period, genre, movement or theme. May be repeated under different subtitles. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

301. STUDIES IN ENGLISH**3 hours credit**

Study of a topic in language, film or writing. May be repeated under different subtitles. **Prerequisite:** ENGL 102. **Three hours per week.**

302. INTERNSHIP IN ENGLISH I**1-3 hours credit**

Provides students practical experience in using English course skills through work in a business, public service agency or professional office. A maximum of three credits may be applied to English major. May be taken for a maximum of three hours credit. Cannot receive credit for both ENGL 339 and ENGL 302. **Prerequisites:** ENGL 101, 102; senior English major with minimum 3.0 GPA; written permission of chair and internship coordinator.

303. INTERNSHIP IN ENGLISH II**1-3 hours credit**

Provides students practical experience in using English course skills through work in a business, public service agency or professional office different from that used for ENGL 302: Internship in English I. May be taken for a maximum of three hours of elective credit toward degree requirements and not major requirements. Cannot receive credit for both ENGL 339 and ENGL 303. **Prerequisites:** ENGL 101, 102, 302; senior English major with minimum 3.0 GPA; written permission of internship coordinator and chair.

304. BUSINESS AND PROFESSIONAL WRITING**3 hours credit**

Study of business and professional documents emphasizing a rhetorical approach to analyzing issues germane to the

message. Stresses effectiveness and correctness of writing, including memos, letters, resumes, proposals, press releases, abstracts, reports and evaluations. Cannot receive credit for both ENGL 372 and ENGL 304. **Prerequisite:** ENGL 102. **Three hours lecture per week.**

305. TECHNICAL WRITING AND EDITING**3 hours credit**

Effective writing and editing technique applied to, among others, formal proposals, mechanical descriptions, user manuals, investigative reports, field reports, feasibility reports and articles for publication. Cannot receive credit for both ENGL 373 and ENGL 305. **Prerequisite:** ENGL 102. **Three hours lecture per week.**

306. WRITING FOR THE DISCIPLINES**3 hours credit**

Helps students improve their writing to meet career demands of particular majors. Students examine styles and forms of writing and evaluate options and requirements for particular writing tasks. Not acceptable for General Education credit. Cannot receive credit for both ENGL 353 and ENGL 306. **Prerequisite:** ENGL 102. **Three hours per week.**

311. FICTION WORKSHOP**3 hours credit**

Students analyze in a workshop setting readings in contemporary fiction to observe techniques in craftsmanship and present their own fiction for intensive examination by workshop participants. May be taken twice for credit. **Prerequisites:** ENGL 230 or consent of instructor. **Three hours per week.**

312. POETRY WORKSHOP**3 hours credit**

Students analyze in a workshop setting readings in contemporary poetry to observe techniques in craftsmanship and present their own poetry for intensive examination by workshop participants. May be taken twice for credit. **Prerequisites:** ENGL 230 or consent of instructor. **Three hours per week.**

314. WRITER'S CRAFT**3 hours credit**

In-depth study of the creative writing process. Students develop a craft workbook that focuses on contemporary forms and strategies. Students write by assignment and develop techniques of reviewing in order to compare and contrast certain authors' aesthetics with their own creative writings. May be taken twice for credit. Cannot receive credit for both ENGL 340 and ENGL 314. **Prerequisite:** ENGL 230 or consent of instructor. **Three hours per week.**

322. LITERATURE AND FILM**3 hours credit**

The relation of film to literature as narrative, dramatic and poetic means of expression; the translation of literary works into film. **Prerequisite:** ENGL 102. **Two hours lecture and two hours screening per week. Meets General Education IA.**

335. GOTHIC FICTION**3 hours credit**

A study of the Gothic strain in English and American fiction from the late 18th through the 20th centuries—its genesis, initial manifestations, popular mutations and periodic reinvigorations. Among authors studied are Horace Walpole, Ann Radcliffe, "Monk" Lewis, Poe, James, Bram Stoker and Stephen King. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

338. GAY AND LESBIAN LITERARY STUDIES**3 hours credit**

Study of gay male and lesbian writings of the past and present, in their cultural and historical contexts. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

341. THE BIBLE AS LITERATURE**3 hours credit**

The literature of the Bible: various forms, stylistic features and relation to culture. Emphasis on the Old Testament, King James version. Cannot receive credit for both ENGL 313 and ENGL 341. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

342. WOMEN IN LITERATURE 3 hours credit

A study in literature written by American and British women, primarily during the 19th and 20th centuries. Among writers studied are Bronte, Eliot, Chopin, Wharton, Woolf, Plath, Walker. Cannot receive credit for both ENGL 309 and ENGL 342. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

344. LITERATURE OF A DECADE 3 hours credit

In-depth study of literary works of a particular decade with special emphasis on cultural and historical context. (Decade and texts selected by instructor.) May be repeated under different subtitles. **Prerequisite:** ENGL 102. **Three hours per week.**

345. SCIENCE FICTION 3 hours credit

A survey of the types and conventions of science fiction and a consideration of its persistent themes, especially the idea of utopia and dystopia. Readings include traditional works by such authors as Swift, Bellamy, Wells, Huxley and Orwell as well as popular fiction by such recent authors as Stapledon, Clarke, Bradbury, Vonnegut and LeGuin. Cannot receive credit for both ENGL 327 and ENGL 345. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

347. THE WILDERNESS IN LITERATURE 3 hours credit

A study of evolving ideas of wilderness in journals and other non-fiction, along with readings in fiction and poetry which dramatize civilized humanity's relationships with wilderness. Nineteenth and 20th century American authors including Thoreau, John Muir, Fenimore Cooper, Edward Abbey, Jack London, Faulkner, James Dickey and Gary Snyder. Cannot receive credit for both ENGL 336 and ENGL 347. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

348. NATURE IN LITERATURE 3 hours credit

Study of attitudes toward Earth's various environments in British and American nature writing, especially of the 19th and 20th centuries. Includes essays by authors such as Gilbert White, John Burroughs, Aldo Leopold, Loren Eiseley, Rachel Carson, Richard Nelson and Annie Dillard. Cannot receive credit for both ENGL 337 and ENGL 348. **Prerequisite:** ENGL 102. **Three hours lecture per week. Meets General Education IA.**

349. NORSE LITERATURE IN TRANSLATION 3 hours credit

Survey of northern European literature from the pagan era through the Middle Ages, including Germanic myths and Icelandic sagas. Supporting materials from archaeology, folklore and popular culture. Cannot receive credit for both ENGL 360 and ENGL 349. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

355. ARTHURIAN LITERATURE 3 hours credit

Survey of medieval and modern treatments of the legends of King Arthur. Celtic, English and Continental sources. Supporting materials from archaeology, folklore, mythology, fine arts, popular culture. Cannot receive credit for both ENGL 362 and ENGL 355. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

356. BRITISH LITERATURE I: BEGINNINGS TO 1800 3 hours credit

Survey of British literature from Beowulf poet to poetry of sensibility. Readings include but not limited to: *The Canterbury Tales*, Shakespeare's dramas, *Paradise Lost*, and major works by Swift, Pope and Johnson. Cannot receive credit for both ENGL 242 and ENGL 356. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

357. BRITISH LITERATURE II: 1800-1945 3 hours credit

Survey of British literature from William Blake to World War II. Readings include but not limited to: Wordsworth's *The Prelude*, Conrad's fiction, and major works by Keats, Tennyson, Browning, Joyce, Yeats and Eliot. Cannot receive credit for both ENGL 243 and ENGL 357. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

358. BRITISH LITERATURE III: 1945 TO PRESENT 3 hours credit

Survey of major British authors from 1945 to present. Readings include but not limited to the poetry of Dylan Thomas, Philip Larkin, Seamus Heaney and Ted Hughes; the plays of Caryl Churchill and Samuel Beckett; the fiction of Ishiguro, Swift, McEwan and Brookneer. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

363. WORLD LITERATURE I 3 hours credit

A study of major western and non-western cultural heritages from antiquity through the Renaissance Europe and ends with the exploration/conquest literature of the "early" Americas. This course gives you a foundation in the classics of western literature and introduces you to the classical traditions of Native American peoples, India, China and the Middle East. Cannot receive credit for both ENGL 207 and ENGL 363. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

364. WORLD LITERATURE II 3 hours credit

A study of western and non-western cultural heritages from the 17th century to contemporary works. The texts will cover various literary periods from neo-classicism and romanticism to modernism and post-modernism. The course provides a foundation in the classics of modern western literature and introduces modern non-western literature. Cannot receive credit for both ENGL 208 and ENGL 364. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

365. LITERATURE OF THE THIRD WORLD 3 hours credit

Study of Third World literature and ways it resembles and differs from Western literature in matters of theme, style or content. May include authors such as Fuentes, Garcia Marquez, Paton, Head, Achebe, Thiong'o, Hulme. Cannot receive credit for both ENGL 448 and ENGL 365. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

366. WORLD MYTHOLOGY 3 hours credit

Primitive, oriental and occidental mythology, emphasis on classical, Nordic and Judeo-Christian myths. Application of principles of myth and folklore criticism to Western literature, ancient through modern. Not open to students who have taken ENGL 326. Cannot receive credit for both ENGL 222 and ENGL 366. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

367. FOLKLORE AND FOLKLIFF 3 hours credit

Introduction to varieties of folk performance, especially verbal and literary, with attention to significance of folk groups. Methods of folklore collection, analysis, presentation and archiving. Cannot receive credit for both ENGL 222 and ENGL 367. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

368. PHILOSOPHICAL CONCEPTS IN LITERATURE 3 hours credit

An examination of a philosophical theme, such as existentialism or tragedy, as reflected in literature. Can be repeated for credit with different themes. Cannot receive credit for both ENGL 450 and ENGL 368. **Prerequisites:** ENGL 102 and a philosophy course, or consent of instructor. **Three hours per week. Meets General Education IA.**

**380. AMERICAN LITERATURE I:
BEGINNINGS TO 1860****3 hours credit**

Study of major American literature, exclusive of the novel, from the beginnings to 1860. Among writers studied are Edwards, Franklin, Hawthorne, Irving, Melville, Poe and Whitman. Cannot receive credit for both ENGL 331 and ENGL 380. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

**381. AMERICAN LITERATURE II:
1860-1945****3 hours credit**

Study of major American literature, exclusive of the novel, from the Civil War to the end of World War II (1860-1945). Among writers studied are Chopin, Crane, Dickinson, Faulkner, Gilman, Hughes, James, Jewett, Twain, Whitman and Wright. Cannot receive credit for both ENGL 332 and ENGL 381. **Pre-requisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

**382. AMERICAN LITERATURE III:
1945 TO PRESENT****3 hours credit**

A survey of major American writers from 1945 to the present, exclusive of the novel, in order to trace the growth in this country of an indigenous literature. Often, several works by each author will be examined. Authors may include Barth, Bellow, Bishop, Carver, Clifton, Dove, Ginsberg, Lowell, Mailer, Morrison, Oates, Roth, Updike. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

383. AFRICAN-AMERICAN LITERATURE**3 hours credit**

African-American literature from the Harlem Renaissance (1934) to the present, its relation to the African-American movement and the African-American experience in America. Among authors studied are Wright, Ellison, Baldwin, Kelley, Toomer, Petry, Morrison, McKay, Walker, Brooks and Jones. Cannot receive credit for both ENGL 307 and ENGL 383. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

384. NATIVE AMERICAN LITERATURE**3 hours credit**

Study of the literature that grew out of the unique perceptions and experiences of the Native Americans with particular emphasis on poetry, short stories and novels. Authors include Erdrich, Silko, Momaday, Black Elk, Welch and Ortiz. Cannot receive credit for both ENGL 328 and ENGL 384. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

385. ETHNIC LITERATURE IN AMERICA**3 hours credit**

Explores literature of America's ethnic cultures and their historical and literary contexts. Emphasizes but not limited to literature of African-, Asian-, Jewish-, Mexican- and Native-Americans. Cannot receive credit for both ENGL 449 and ENGL 385. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

**386. AMERICAN WOMEN WRITERS
OF COLOR****3 hours credit**

Study of Native American, African-American, U.S., Latina and Asian American women's writing, emphasizing 19th and 20th century issues which influenced their writing. Cannot receive credit for both ENGL 346 and ENGL 386. **Prerequisite:** ENGL 102. **Three hours lecture per week. Meets General Education IA.**

**387. LITERATURE OF THE AMERICAN WEST:
1820-PRESENT****3 hours credit**

A study of journals and travel narratives and popular, regional and historical novels of the American West. Works of writers such as Cooper, Twain, Steinbeck, Anaya, Cather and Silko. Cannot receive credit for both ENGL 329 and ENGL 387. **Pre-requisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

388. AMERICAN DRAMA**3 hours credit**

Historical survey of American drama from its beginnings to the present. Includes works by major American dramatists, such as Hellman, O'Neill, Williams, Mille and Henley. Cannot receive credit for both ENGL 350 and ENGL 388. **Prerequisite:** ENGL 102 with C or better. **Three hours per week. Meets General Education IA.**

**399. INTERNATIONAL STUDIES
IN LITERATURE****3 hours credit**

On-site study of the literature, drama, theatre, and culture of selected countries. Field study preceded by pre-tour lectures. May be taken twice for credit under different subtitles. The objective of the course is to better understand the culture and the history of a foreign country through experimental learning and intelligent mentoring. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

401. STUDIES IN FILM**3 hours credit**

Study of a director, period, genre, movement or theme in the area of film. May be repeated twice under different subtitles. Cannot receive credit for both ENGL 325 and ENGL 401. **Prerequisite:** ENGL 102. **Three hours per week.**

402. FILM HISTORY**3 hours credit**

The history of motion pictures with a focus on technical and artistic trends and the work of important artists and directors. Cannot receive credit for both ENGL 321 and ENGL 402. **Prerequisite:** ENGL 102. **Three hours per week.**

403. FILM GENRE**3 hours credit**

An introduction to the concept of film genre and to the study of specific film genres including comedies, musicals, westerns, gangster films, horror films and science fiction films. Cannot receive credit for both ENGL 324 and ENGL 403. **Prerequisite:** ENGL 102. **Three hours per week.**

405. MAJOR FILM DIRECTORS**3 hours credit**

Intensive study of individual American and foreign *auteur* directors, singly or in groups. Focus on those artists who write their own screenplays and direct their own films. May be repeated twice if different directors are studied. **Prerequisite:** ENGL 102. **Three hours per week.**

410. INDIVIDUAL AUTHORS**3 hours credit**

An intensive study of one to three writers of major stature (choice to be made by the instructor). Cannot receive credit for both ENGL 343 and ENGL 410. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

411. CHAUCER (Author)

Chaucer's major works with emphasis on *The Canterbury Tales*. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

412. MILTON (Author)**3 hours credit**

The sonnets, companion poems, essays and drama. Emphasis on *Paradise Lost*. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

413. SHAKESPEARE**3 hours credit**

A study of the major comedies and histories with an emphasis on the tragedies. Cannot receive credit for both ENGL 419 and ENGL 413. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

430. PRINCIPLES OF LINGUISTICS**3 hours credit**

Detailed study of the primary linguistic systems, including phonology, morphology, semantics, syntax and pragmatics. Introduces important sociolinguistic research concerns. As the course is designed for teachers in training, students apply those linguistic concepts to practical language learning problems. **Prerequisite:** ENGL 102. **Three hours per week.**

431. SURVEY OF MODERN ENGLISH**GRAMMAR****3 hours credit**

Study of modern English grammar accomplished through a variety of language analysis approaches, including traditional, structural and transformational. **Prerequisite:** ENGL 110, 430 or permission of instructor. **Three hours per week.**

432. LITERACY AND ESOL READING **3 hours credit**

Introduces students interested in questions of language acquisition to the theories and practices relating to learning to read in a second language or second dialect. Topics included are models for acquiring foreign language reading skills, teaching strategies for second language/dialect literacy, evaluating literacy skills, current research about acquisition of literacy skills, and political and social implications of second language/dialect literacy. **Prerequisite:** ENGL 430 or permission of instructor. **Three hours per week.**

433. LANGUAGE AND CULTURE **3 hours credit**

Linguistics approach to the peculiar relationship between a language and the cultural total of which the language is a part. Examines language variations within a community according to gender, age, geography, ethnicity, socioeconomic class and level of education. Considers the educational, political and economic implications. **Prerequisite:** ENGL 102. **Three hours per week.**

434. LITERACY AND ESOL WRITING **3 hours credit**

Introduces students interested in questions of language acquisition to the theories and practices of learning to write in a second language or second dialect. Topics include writing theory, writing strategies, evaluating writing, and writers and rhetorical concerns. Students develop a literacy project, writing materials for specific ESOL students. Cannot receive credit for both ENGL 443 and ENGL 434. **Prerequisite:** ENGL 430 or permission of instructor. **Three hours per week.**

438. BILINGUALISM **3 hours credit**

Study of what it means to be a bilingual child or adult. Explores the mind's role in bilingualism and in language acquisition. Surveys educational systems' response to language variance among students and explores the social, academic and language learning consequences of growing up bilingual in the U.S.A. **Prerequisite:** ENGL 430 or permission of instructor. **Three hours per week.**

439. SECOND LANGUAGE ACQUISITION **3 hours credit**

Introduction to second language acquisition (SLA) theory and the application of SLA theory to second/foreign language teaching practices. Explores what it means to know a language and, hence, how one learns a second language. **Prerequisite:** ENGL 110, 430 or permission of instructor. **Three hours per week.**

453. MODERN POETRY (Genre) **3 hours credit**

A study of British and American poetry from Yeats through World War II. Poets include Hopkins, Yeats, Eliot, Pound, Frost, Williams, Robinson, Crane, Stevens, Auden and Dylan Thomas. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

461. FEMINIST LITERATURE AND THEORY **3 hours credit**

A survey of the growth and transformation of feminist literature and theory from the birth of the woman's movement in the nineteenth century to contemporary cultural feminist writings. We will also investigate modern and contemporary images and representations of women in literature, film and popular culture from a critical perspective that celebrates cultural diversity and alternative viewpoints. **Prerequisites:** ENGL 102. **Three hours per week. Meets General Education IA.**

463. LITERARY ANALYSIS **3 hours credit**

Analytical approaches to literature designed to teach teachers

and prospective teachers traditional, formal, psychological, mythological and exponential analyses of narrative fiction, drama and poetry applied to the various genres. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

465. RESEARCH IN COMPOSITION **3 hours credit**

Explores current theories and research on writing process and product. Topics include: definitions of writing; rhetorical contexts; heuristics for prewriting, writing and rewriting; questions of arrangement, style, grammar, mechanics and assessment. **Prerequisite:** C or better in ENGL 102. **Three hours per week.**

466. CURRENT PROBLEMS IN COMPOSITION RESEARCH **3 hours credit**

Applies theoretical concepts from ENGL 465 to current issues in composition and rhetoric research (such as basic writing, methods of responding to student writing and audience adaptation). Emphasizes modes of research for continuing investigation of these issues. **Prerequisite:** ENGL 465 or approval of the professor. **Three hours per week.**

467. HISTORY AND THEORY OF RHETORIC **3 hours credit**

Study of how changing views of rhetoric affect public attitudes toward writing and influence writing instruction in schools and universities. Emphasizes shifting views toward style, argument and the relationship between persuasion and knowledge. Cannot receive credit for both ENGL 470 and ENGL 467. **Prerequisite:** ENGL 102. **Three hours per week.**

468. SEMINAR IN LITERARY RESEARCH **3 hours credit**

Introduces students to research methods in the study of literature and language. Guides students in the preparation of a scholarly research project. Not for graduate credit. **Prerequisites:** ENGL 102 and 12 hours of literature credits at the 300-400 level or instructor's permission. **Three hours per week.**

471. MEDIEVAL LITERATURE **3 hours credit**

A survey of literature produced in the European and Mediterranean worlds between the seventh and the 15th centuries of the Common Era. Readings include excerpts and whole works. All texts presented in modern English. Primary texts historicized and contextualized through secondary readings in history, ethnography, the arts, criticism. **Prerequisites:** ENGL 102. **Three hours per week. Meets General Education IA.**

472. ELIZABETHAN AND JACOBEAN LITERATURE (Period) **3 hours credit**

A study of major British literature, exclusive of Shakespeare, from 1500-1660. Authors include Sidney, Spenser, Donne and Milton. Cannot receive credit for both ENGL 414 and ENGL 472. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

473. RESTORATION AND 18TH CENTURY LITERATURE (Period) **3 hours credit**

A study of British literature from 1660 through the 18th century. Writers studied include Behn, Rochester, Dryden, Defoe, Swift, Pope, Johnson, Boswell, Goldsmith, Burns and Blake. Cannot receive credit for both ENGL 420 and ENGL 473. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

474. ROMANTIC LITERATURE (Period) **3 hours credit**

Study of British poetry and aesthetics from the French Revolution through the first third of the 19th century. Primary readings from Blake, Wordsworth, Coleridge, Byron, Shelley, Keats. Cannot receive credits for both ENGL 421 and ENGL 474. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

475. VICTORIAN LITERATURE (Period) 3 hours credit
 A study of major British literature during the reign of Queen Victoria. Writers studied may include Tennyson, Browning, Arnold, Carlyle, Newman and Ruskin. Cannot receive credit for both ENGL 425 and ENGL 475. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

476. BRITISH NOVEL I: BEGINNINGS TO 1800 3 hours credit
 A study of the British novel through the 18th century. Novelists studied include Defoe, Richardson, Fielding, Sterne, Smollett and Austen. Cannot receive credit for both ENGL 460 and ENGL 476. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

477. BRITISH NOVEL II: 1800-1945 3 hours credit
 A study of the British novel of the 19th and 20th centuries, with works chosen from the writings of Austen, Dickens, Thackeray, Trollope, Hardy, Conrad, D.H. Lawrence and Virginia Woolf. Cannot receive credit for both ENGL 462 and ENGL 477. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

479. CONTEMPORARY TRENDS IN BRITISH LITERATURE 3 hours credit
 Contemporary trends in British literature from 1970 to the present. Writers may include Penelope Fitzgerald, Anita Brookner, A. S. Byatt, Seamus Heaney, Geoffrey Hill, Tom Stoppard, William Trevor, Martin Amis, Graham Swift, Ian McEwan and Brian Friel. **Prerequisites:** ENGL 102. **Three hours per week. Meets General Education IA.**

480. COLONIAL AMERICAN LITERATURE (Period) 3 hours credit
 A study of American literature prior to 1820. Writers studied may include Bradford, Bradstreet, Taylor, Edwards, Franklin, Irving and Cooper. Cannot receive credit for both ENGL 426 and ENGL 480. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

481. THE AMERICAN RENAISSANCE (Period) 3 hours credit
 A study of the Transcendental Movement and literature between 1830 and 1870. Emphasis on the works of Emerson, Thoreau, Hawthorne, Melville, Whitman and Dickinson. Cannot receive credit for both ENGL 427 and ENGL 481. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

483. AMERICAN SOUTHERN RENAISSANCE 1930-1970 (Period) 3 hours credit
 A study of fiction produced in the South between 1930 and 1970. Writers may include Glasgow, Faulkner, O'Connor, Welty, Porter, Warren, Percy, Capote, Taylor, Grau, Styron and Young. Cannot receive credit for both ENGL 428 and ENGL 483. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

484. AMERICAN NOVEL I: BEGINNINGS TO 1900 3 hours credit
 A study of major American novels through 1900. Writers studied may include Crane, Hawthorne, Melville and Twain. Cannot receive credit for both ENGL 457 and ENGL 484. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

485. AMERICAN NOVEL II: 1900-1945 3 hours credit
 A study of major American novels between 1900 and World War II. Writers studied may include Cather, Faulkner, Fitzgerald, Hemingway, Hurston, James, Lewis and Wharton. Cannot receive credit for both ENGL 458 and ENGL 485. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

486. AMERICAN NOVEL III: 1945 TO PRESENT 3 hours credit
 A study of major American novels since World War II. Writers may include Pynchon, Roth, Morrison, McCarthy, Mukherjee, DeLillo, Kerouac, Nabokov. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

488. CONTEMPORARY TRENDS IN AMERICAN LITERATURE 3 hours credit
 Contemporary trends in U.S. literature from 1970 to the present. Writers may include McCarthy, DeLillo, Shepard, Tyler, Vonnegut, C. Johnson, Albee, Kincaid, Morrison, Walker, Silko. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

490. TOPICS IN ENGLISH 1-3 hours credit
 Intensive study of a literary genre, figure or period; or intensive study in language, writing or film. May be repeated for credit in different areas of study. **Prerequisite:** ENGL 102 or consent of instructor. **Meets General Education IA.**

491. TOPICS IN LINGUISTICS AND LANGUAGE LEARNING 3 hours credit
 An examination of selected topics of linguistics as they relate directly to first and second language learning. The course may focus in different semesters on such topics as phonology and language learning, syntactic theory and language learning, or discourse and language learning. This course may be repeated once under different course subtitles recorded with the registrar. **Prerequisite:** ENGL 430. **Three hours lecture per week.**

492. PRACTICUM IN ENGLISH 1-3 hours credit
 Under the close supervision of a master teacher, an advanced student in an English option interns as a teaching assistant in a lower-division course in that option. Cannot receive credit for both ENGL 442 and ENGL 492. **Prerequisites:** Nine hours of coursework in that option and approval of department chair. **Variable hours per week.**

493. INDEPENDENT STUDY 3 hours credit
 Tutorial course in any area of English. Open to junior and senior English majors with superior English grades. Permission of the department chair prior to registration. One conference weekly. May be taken twice. Not for graduate credit. Previously listed as ENGL 400.

499. ENGLISH HONORS 3 hours credit
 Independent study in an area of English leading to an honors thesis. **Prerequisite:** invitation by the Department of English.

Environmental Health Science (ENVH)

110. INTRODUCTION TO ENVIRONMENTAL SCIENCE 3 hours credit
 Introduction to the interactions of living organisms and the environment, with an emphasis on human interactions. Environmental science principles, consequences of environmental pollution, and resource depletion that leads to environmental degradation are presented. Global environmental challenges, such as global stratospheric ozone depletion, and biodiversity loss are examined, along with air and water pollution and population issues. May not be used to satisfy requirements for the environmental health science major. **Three hours per week. Meets General Education IIIB.**

210. INTRODUCTION TO ENVIRONMENTAL HEALTH SCIENCE 3 hours credit
 Introduces students to aspects of human impact on the environment and means of monitoring, controlling and regulating detrimental practices. Topics include food technology and protection; housing, industrial, occupational and recreational environments; air quality, waste management; and

water quality and pollution control programs. May be taken for biology credit by non-environmental health science majors. **Prerequisites:** BIOL 121 or 122 and CHEM 121 or acceptable equivalent. **Three hours per week.**

301. PRINCIPLES OF EPIDEMIOLOGY 3 hours credit
Introduction to basic principles, history and scope of epidemiology. Emphasis on study of patterns of diseases related to environmental factors. May be taken for biology credit by non-environmental health science majors. **Prerequisites:** ENVH 212; BIOL 212; MATH 155 or 213. **Three hours lecture per week.**

302. FOOD ASPECTS OF ENVIRONMENTAL HEALTH SCIENCE 3 hours credit
Study of food and dairy products process, handling, preparation, storage, preservation, associated illnesses and regulatory programs as they impact human health and environmental health control programs. May be taken for biology credit by non-environmental health science majors. **Prerequisite:** ENVH 210. **Three hours per week.**

310. SHELTER AND INSTITUTIONAL ENVIRONMENTS 3 hours credit
Study of environmental health problems associated with human dwellings. Emphasizes sociological and educational principles as important to problem solution. Considers environmental health problems of hospitals, nursing homes, jails, schools, colleges and other public institutions. **Prerequisite:** ENVH 301. **Three hours per week.**

320. SAFETY AND OCCUPATIONAL HEALTH 3 hours credit
Study of health and safety problems found in industry and analysis of acute and chronic diseases associated with various occupations and industrial settings. Considers Occupational Safety and Health Administration (OSHA) regulations and other federal and state mandates in depth. **Prerequisite:** ENVH 301. **Three hours per week.**

330. SOLID AND HAZARDOUS WASTE MANAGEMENT 3 hours credit
Study of the generation, collection and disposal of solid and hazardous waste materials. Considers Toxic Substance Control Act, Department of Transportation Regulation, the Resource Conservation and Recovery Act in detail. **Prerequisites:** CHEM 221. **Three hours per week.**

415. RESEARCH IN ENVIRONMENTAL HEALTH SCIENCE 3 hours credit
Research experience as an independent study under the supervision of a faculty member. **Prerequisite:** Consent of instructor. **Schedule to be arranged individually.**

420. READINGS IN ENVIRONMENTAL HEALTH SCIENCE 1-2 hours credit
Selected readings in a specific area of environmental health science. Process of gathering, interpreting and communicating specific information is emphasized. Ten pages of research report(s) are required for each credit hour. **Prerequisites:** Junior or senior standing and approval of the instructor.

425. TOXICOLOGY 3 hours credit
Introduction to basic principles, history and scope of modern environmental toxicology, and to the effects and to the mechanisms of toxicants. Includes applications to risk assessment, regulations and industry. Cross-listed with BIOL 425. May not be taken for credit if student has credit for BIOL 425. **Prerequisites:** Junior standing, eight hours of chemistry, eight hours of biology, or consent of instructor. **Three hours lecture per week.**

430. GROUND AND SURFACE WATER QUALITY 4 hours credit
Study of the science and management of ground and surface water quality. Emphasis on health effects exposure assessment, regulation and public health policy. Local, regional and global water quality issues covered. **Prerequisites:** ENVH 210, junior standing and 16 hours of science courses. **Three hours lecture, three hours laboratory per week.**

440. AIR QUALITY 4 hours credit
Study of the science and management of ambient and indoor air quality. Emphasis on health effects, exposure assessment, regulation and public health policy. Local, regional and global air quality issues covered. **Prerequisites:** ENVH 210, junior standing and 16 hours of science courses. **Three hours lecture, three hours laboratory per week.**

450. PUBLIC HEALTH ADMINISTRATION 3 hours credit
In-depth analysis of management practices and policies for environmental health programs. Considers relationship of these programs to federal and state government agencies. **Prerequisites:** ENVH 301 and either senior standing as an environmental health major or approval of program director. **Three hours per week.**

475. ENVIRONMENTAL HEALTH SCIENCE FIELD STUDIES 6 hours credit
Provides junior and senior students opportunities for field experience and work in an established environmental health science or environmental protection program. **Prerequisites:** approval of the program director the semester prior to intended course registration. **Forty hours per week for five weeks.**

490. SPECIAL TOPICS IN ENVIRONMENTAL HEALTH SCIENCE 1-4 hours credit
Study of a specific area in environmental health science. Topic varies semester to semester. May be taken for up to eight credit hours under different subtitles. **Prerequisite:** ENVH 301.

495. INTERNSHIP IN ENVIRONMENTAL HEALTH SCIENCE 1-6 hours credit
Professional work experience in environmental health science. **Prerequisites:** Junior standing, environmental health major and approval of advisor. **Three hours work per week per credit hour.**

French (FREN)

101. ELEMENTARY FRENCH I 3 hours credit
Beginning spoken and written French with emphasis on the sound system and the basic structures of the language. **Three hours per week. Meets General Education IB.**

102. ELEMENTARY FRENCH II 3 hours credit
Continuation of skill development in spoken and written French with further study of major structures. **Prerequisite:** FREN 101 or at least one year of high school French. **Three hours per week. Meets General Education IB.**

105. OPTIONAL PRACTICUM CREDIT 1 hour credit
Optional credit for supplementary oral and written exercise in the language laboratory or in workshop sessions to complement the work in FREN 101. **Prerequisite:** Registration in FREN 101 or permission of department chair. **Two hours per week.**

106. OPTIONAL PRACTICUM CREDIT 1 hour credit
Optional credit for supplementary oral and written exercise in the language laboratory or in workshop sessions to complement the work in FREN 102. **Prerequisite:** Registration in FREN 102 or permission of department chair. **Two hours per week.**

201. INTERMEDIATE FRENCH 3 hours credit

Continued development and refinement of language skills with emphasis on reading, writing and vocabulary development. **Prerequisite:** FREN 102 or at least two years of high school French. **Three hours per week. Meets General Education IB.**

202. INTERMEDIATE AND APPLIED FRENCH 3 hours credit

Continued development, refinement and application of language skills with emphasis on reading, writing and vocabulary development. Satisfies the language requirement for English majors. **Prerequisite:** FREN 201 or at least three years of high school French. **Three hours per week. Meets General Education IB.**

205. OPTIONAL PRACTICUM CREDIT 1 hour credit

Optional credit for supplementary oral and written exercise in the language laboratory or in workshop sessions to complement the work in FREN 201. **Prerequisite:** Registration in FREN 201 or permission of department chair. **Two hours per week.**

206. OPTIONAL PRACTICUM CREDIT 1 hour credit

Optional credit for supplementary oral and written exercise in the language laboratory or in workshop sessions to complement the work in FREN 202. **Prerequisite:** Registration in FREN 202 or permission of department chair. **Two hours per week.**

300. TOPICS IN FRENCH LITERATURE 3 hours credit

Study of an author, period, movement, genre or theme in French. Topic may vary semester to semester. May be repeated once with new content. **Prerequisite:** FREN 310 or permission of department chair. **Three hours per week.**

303. READING SKILLS AND STRATEGIES IN FRENCH 3 hours credit

Development of reading skills and strategies using authentic texts. Emphasis on reading for specific purposes and continued acquisition of vocabulary. **Prerequisite:** FREN 202. **Three hours per week.**

305. SHORT FICTION IN FRANCE IN TRANSLATION 3 hours credit

Survey of the short story in French literature from the 16th through 20th centuries with works by Marguerite de Navarre, Voltaire, Merimee, Balzac, Maupassant, Camus, Sartre and Marguerite Duras among others. **Prerequisite:** ENGL 102. **Three hours per week. Meets General Education IA.**

310. FRENCH GRAMMAR AND COMPOSITION 3 hours credit

Intensive review and application of grammar using exercises, compositions, dictation and papers to strengthen proficiency in writing. Continued acquisition of vocabulary and oral skills. **Prerequisite:** FREN 202 or equivalent experience. **Three hours per week.**

312. FRENCH CONVERSATION 3 hours credit

Proficiency-based conversation focusing on the refinement of listening and speaking skills and vocabulary acquisition through role playing, small group and class discussion, oral reports and presentations. Introduction to phonetics. **Prerequisite:** FREN 202 or equivalent experience. **Three hours per week.**

316. FRENCH CULTURE AND CIVILIZATION I 3 hours credit

Study of French civilization tracing major historical, cultural and artistic themes from the 16th to the 18th century. **Prerequisite:** FREN 303 or equivalent experience. **Three hours per week.**

317. FRENCH CULTURE AND CIVILIZATION II 3 hours credit

Study of French civilization tracing major historical, cultural and artistic themes from the 18th to the 20th century. **Prerequisite:** FREN 303 or equivalent experience. **Three hours per week.**

322. FRENCH FOR BUSINESS 3 hours credit

Intensive review of conversational skills and grammatical structures within the context of business, technology and everyday life. **Prerequisite:** FREN 202 or equivalent experience. **Three hours per week.**

325. FRANCOPHONE CULTURE THROUGH LITERATURE 3 hours credit

A selection of short fiction, poetry and drama in French from the 19th and 20th centuries, centering on major cultural themes such as religion, chauvinism, honor, the family, etc. in the French-speaking world. **Prerequisite:** FREN 303, 310. **Three hours per week. Meets General Education IA.**

350. THE RISE AND FALL OF SENSUALITY FROM THE MIDDLE AGES TO 1700 3 hours credit

The theme of sensuality in major works from the Middle Ages to the Enlightenment: medieval conflict, humanistic synthesis, classic rigidity. ("Song of Roland," Lays of Marie de France, Essays-Montaigne, Gargantua-Rabelais, Racine, Corneille, Moliere.) Taught in English. **Prerequisite:** ENGL 102 or consent of department chair. **Three hours per week. Meets General Education IA.**

351. FRENCH LITERATURE OF PROTEST IN TRANSLATION (1700-1970) 3 hours credit

Study of the emergence of France as a nation through the revolutionary literature of 1789, the intense emotionalism of the romantics, the realist observations and the existential absurd of France today. Open to all. Taught in English. **Prerequisite:** ENGL 102 or consent of department chair. **Three hours per week. Meets General Education IA.**

401. ADVANCED COMPOSITION AND MORPHOLOGY 3 hours credit

Synthesis on an intense, advanced level of all of the principles of morphology, syntax, sentence development and sentence structure through translation and detailed composition. **Prerequisite:** FREN 310 or consent of department chair. **Three hours per week.**

402. ADVANCED CONVERSATION 3 hours credit

Provides greater flexibility in the spoken language by intense oral practice to correct the defects of pronunciation and diction through phonetics. **Prerequisite:** FREN 312 or consent of department chair. **Three hours per week.**

405. SPECIAL PROBLEMS IN FRENCH 1-6 hours credit

Individual study of special areas in French linguistics or in French literature with the advice and direction from a member of the department. May be repeated with new content. **Prerequisite:** Consent of department chair.

480. SENIOR SEMINAR 1-3 hours credit

For senior French majors. Research encompassing several areas of French life and culture, language and literature is brought to bear upon a single theme or issue. **Prerequisite:** Senior standing.

General Studies (GENL)

001. NEW STUDENT SEMINAR 0 hours credit

Orients new students to the university experience. Required of all new students with fewer than 24 hours of university credit. **Nine to 13 hours per semester.**

090. EFFECTIVE STUDY TECHNIQUES 0 hours credit

Presentation and practice of a variety of established study methods: note taking, time management, concentration, memorizing, test taking and report writing. May be offered for two hours per week all semester or for three hours per week for 10 weeks. Offered on an S/U basis, for internal credit only.

101. HUMAN SEXUALITY 3 hours credit

Study of the human sexual nature, with emphasis on the biological, philosophical, psychological and sociological aspects of human sexuality. Team-taught by faculty from two or more disciplines. Students may not receive credit for both this course and PSYC 325. **Three hours per week. (P/F)**

110. PERSONAL CAREER PLANNING 2 hours credit

The career search process. Goal oriented toward the planned process of selecting a major or occupational direction. The history, theory, philosophy and economics of the world of work. Occupational testing, decision making, values clarification skills and guest lectures employed. Recommended for freshmen, sophomores and undeclared majors. **Three hours per week.**

120. COLLEGE READING SKILLS 3 hours credit

Extensive practice in reading, analyzing and critically evaluating non-fiction texts. The student will outline and summarize articles and books through written and oral methods. Techniques of reading comprehension will be discussed and practiced. Projects will relate the skills of this class to the readings in the student's other courses. **Three hours per week.**

130. MATHEMATICAL FOUNDATIONS 0 hours credit

Enhances foundational skills in mathematics. Course consists of four components: computation, introductory algebra, intermediate algebra and formal geometry. Students may enroll in this course to complete state-mandated high school math requirements. **Three hours per week.**

150. SELECTED TOPICS**IN DEVELOPMENTAL EDUCATION 1-3 hours credit**

Innovative approaches to developmental education. Provides opportunities for curricular experimentation in the developmental studies areas of reading behavior, writing, foundational math skills and critical thinking.

152. RESIDENCE HALL LEADERSHIP 1 hour credit

An examination of models of community development with special emphasis on residence halls. Interactive problem-solving emphasized. **Prerequisite:** Selection into Resident Assistant Program. **Two hours per week for eight weeks.**

191. SPECIAL TOPICS: TV, COLLEGE OF THE AIR COURSES 1-3 hours credit

Study of a specific academic area. Topic may vary semester to semester. Course may be repeated under different subtitles.

Geography - Human (GEOG)

100. INTRODUCTION TO HUMAN GEOGRAPHY 3 hours credit

Introduction to the variable human character of the earth. Contemporary world problems such as population, growth, economic development, urbanization, resource utilization and human alteration of the natural environment are examined from a locational perspective. **Three hours per week. Meets General Education IIB.**

101. WORLD GEOGRAPHY 3 hours credit

A geographic study of selected countries and regions emphasizing their physical and cultural characteristics. Special attention to contemporary issues/problems. **Three hours per week. Meets General Education IIB.**

199. CONSERVATION AND RESOURCE MANAGEMENT 3 hours credit

Examination of the nature, supply, distribution and use of selected natural resources. Emphasis on practical and efficient utilization of soils, farmland, water, forests, energy and mineral resources. **Three hours per week.**

202. CULTURAL GEOGRAPHY 3 hours credit

Examination of some of the basic concepts of human geography. Emphasis on such subjects as cultural origins and diffusion, perception, settlement forms and the relationship between humans, their culture and the physical environment. **Three hours per week. Meets General Education IIB.**

203. ECONOMIC GEOGRAPHY 3 hours credit

Analysis of the locational factors explaining the geographic distribution of economic activity: rural and urban land use, cities, industry, transport and trade, economic development. **Three hours per week. Meets General Education IIB**

220. HUMANS AND THE ENVIRONMENT 4 hours credit

Interdisciplinary laboratory course in conjunction with the departments of Biology and Chemistry designed for non-science majors to develop awareness of ways earth's environment is influenced by human activities and effects of the environment on human society. Cannot be repeated for credit in the Biology or Chemistry departments; cannot be used to satisfy course requirements within the major. For students in the Honors Program. **Three hours lecture, two hours laboratory per week.**

301. WORLD REGIONS 3 hours credit

Examination of contemporary patterns of life in selected areas of the world from a regional viewpoint. Attention given to the physical environment, resource use, economic activities, demographic and sociocultural characteristics and regional problems. **Prerequisite:** GEOG 100 or 105 or consent of instructor. **Three hours per week. Meets General Education IIB.**

302. GEOGRAPHY OF THE UNITED STATES AND CANADA 3 hours credit

Analysis of contemporary patterns of American and Canadian life from a regional perspective. Major topics include the physical environment, resource and land use, economic activities, demographic and sociocultural characteristics, and regional problems. **Prerequisite:** GEOG 100 or 105 or consent of instructor. **Three hours per week.**

308. PRINCIPLES OF PLANNING 3 hours credit

Analysis of the theory and practice of planning at various spatial levels (local, regional, state and federal). Emphasis on planning processes, responsibilities of professional planners, and detailed examination of contemporary issues like control of sprawl and coastal zone management. Cannot receive credit for both GEOG 208 and GEOG 308. **Prerequisite:** Junior standing or consent of instructor. **Three hours per week.**

310. REGIONAL GEOGRAPHY OF EUROPE 3 hours credit

Regional analysis of contemporary geographic patterns of Europe. Emphasis on physical, economic and political patterns and regional problems. **Prerequisite:** GEOG 100 or 105 or consent of instructor. **Three hours per week.**

399. INTERNATIONAL FIELD STUDY 3-6 hours credit

On-site study of the geography, history and culture of selected countries. Pre-tour lectures and other activities required. May be repeated once for credit. **Prerequisite:** Consent of instructor.

402. ENVIRONMENTAL PLANNING 3 hours credit

Translation of responsible environmental policies and principles into practical land-use regulations and local and regional

planning tools. Emphasis on the landscape and land-use dimensions of environmental planning. **Prerequisite:** GEOG 308 or consent of instructor. **Three hours per week including three one-day field trips.**

404. RURAL SETTLEMENT AND LAND USE **3 hours credit**

Analysis of the economic, demographic and spatial patterns of the rural United States. Special attention given to the problems and potentialities of non-metropolitan areas and to land use planning. **Prerequisite:** GEOG 203 or consent of instructor. **Three hours per week.**

406. REGIONAL PLANNING **3 hours credit**

Analysis of the spatial incidence of economic growth. Emphasis on the spatial dimension as an important consideration in the theory and practice of economic development planning. **Prerequisite:** GEOG 203 or consent of instructor. **Three hours per week.**

408. URBAN PLANNING **3 hours credit**

Examination of theories and policies related to urban development and land use planning, along with techniques for evaluation. Assessment of the urban planning process with case studies. **Prerequisite:** GEOG 308 or consent of instructor. **Three hours per week.**

415. SELECTED PROBLEMS **3 hours credit**

Independent study permitting research or in-depth work on a selected topic to be indicated on student's transcript. May be taken twice for credit under different subtitles. Intended for seniors with 18 or more hours in geography. **Prerequisite:** Consent of department review committee.

422. READINGS IN GEOGRAPHY **3 hours credit**

Permits in-depth study of a selected topic to be indicated on student's transcript. May be taken twice for credit under different subtitles. Intended for seniors with 18 or more hours in geography. **Prerequisite:** Consent of department review committee.

450. TOPICS IN GEOGRAPHY **3 hours credit**

Analysis of a selected systematic/regional topic to be entered on the student's transcript. May be taken three times for credit under different subtitles. **Prerequisite:** Consent of instructor. **Three hours per week.**

460. INTERNSHIP **1-3 hours credit**

Provides students with opportunities to apply geographic/planning theory, techniques and knowledge as practicing professionals. Intended for seniors with 18 or more hours in geography. Cannot be used to satisfy requirements for the major. **Prerequisite:** Approval of the department. **Three hours per week for each credit hour. (P/F)**

499. GEOGRAPHY HONORS **6 hours credit**

Two-semester independent study leading to preparation of an honors thesis and graduation with honors in geography. Students may enroll by invitation of the department only. Specific topic indicated on the student's transcript.

Geography - Methodology (GEOG)

200. APPLICATIONS IN GEOGRAPHIC INFORMATION SYSTEMS **3 hours credit**

Introduction to the current practices in GIS, focusing on their application in the sciences, the development of public policy and business. Basic theory and practice is supported by hands-on experience with major desktop GIS software packages such as ArcView and MapInfo. **Prerequisites:** Sophomore standing and consent of instructor. **Two hours lecture, two hours laboratory per week.**

204. SPATIAL ANALYSIS **4 hours credit**

Introduction to the basic principles of quantitative analysis in geography. Emphasis on the geographic applications of various techniques rather than on the underlying statistical theory. **Prerequisites:** Completion of departmental math requirement or consent of instructor. **Four hours per week.**

318. LOCAL FIELD COURSE **3 hours credit**

Familiarizes students with some of the basic field techniques of geography. Land use field studies and mapping of the rural and urban areas of eastern Maryland scheduled for Sundays. **Prerequisite:** Twelve hours in geography or consent of instructor. **Four hours per week including five one-day field trips.**

319. GEOGRAPHIC INFORMATION SYSTEMS **4 hours credit**

Study of automated information handling using geographically referenced data to support spatial analysis. Consideration of and experience in the collection, storage and display of computer manipulated data. Includes hands-on experience with a variety of commercial software GIS packages. **Prerequisites:** COSC 116 or equivalent, nine hours in geography or consent of instructor. **Three hours lecture, one two-hour laboratory per week.**

320. CARTOGRAPHIC VISUALIZATION **3 hours credit**

Theory and application of cartographic principles and practices to advanced cartographic design. Lectures emphasize theory and principles. Laboratory provides practical experience in designing maps. **Prerequisite:** GEOG 200 or 319 or consent of instructor. **Two hours lecture and one two hour lab per week.**

321. REMOTE SENSING OF THE ENVIRONMENT **3 hours credit**

Analysis of satellite imagery of the earth's surface. Includes techniques necessary for collection, storage and processing of digital images to analyze environmental problems. **Prerequisite:** Twelve hours in geography or consent of instructor. **Two hours lecture, one two-hour laboratory per week.**

335. COMPUTER CARTOGRAPHY **3 hours credit**

Theory and application of computer graphics to cartography. Emphasis on writing programs which produce computer-generated maps and which apply computer graphics to the solution of geographic problems. **Prerequisites:** GEOG 320, COSC 116, or consent of instructor. **Three hours per week.**

414. RESEARCH AND WRITING **3 hours credit**

Development of research methods in geography. Topics include formulation of problems, establishment of hypotheses, development of structures for testing hypotheses and practice with forms of geographic presentation. Maps, numerical and field methods are used. **Cannot receive credit for both GEOG 300 and GEOG 414. Prerequisites:** Twelve hours of geography, including completion of GEOG 204 or consent of instructor. **Three hours per week.**

415. SELECTED PROBLEMS **3 hours credit**

Independent study permitting research or in-depth work on a selected topic to be indicated on the student's transcript. May be taken twice for credit under different subtitles. Intended for seniors with 18 or more hours in geography. **Prerequisite:** Consent of department review committee.

419. ADVANCED GEOGRAPHIC INFORMATION SYSTEMS **4 hours credit**

Study of current theories and development trends in GIS technology. Emphasis on hands-on working knowledge utilizing ARC/INFO software. **Prerequisite:** COSC 120 and GEOG 319 or consent of instructor. **Three one-hour lectures, one two-hour laboratory per week.**

422. READINGS IN GEOGRAPHY 3 hours credit

Permits in-depth study of a selected topic to be indicated on student's transcript. May be taken twice for credit under different subtitles. Intended for seniors with 18 or more hours in geography. **Prerequisite:** Consent of department review committee.

450. TOPICS IN GEOGRAPHY 3 hours credit

Analysis of a selected systematic/regional topic to be entered on student's transcript. May be taken three times for credit under different subtitles. **Prerequisite:** Consent of instructor. **Three hours per week.**

460. INTERNSHIP 1-3 hours credit

Provides students with opportunities to apply geographic/planning theory, techniques and knowledge as practicing professionals. Intended for seniors with 18 or more hours in geography. Cannot be used to satisfy requirements for the major. **Prerequisite:** Approval of the department. **Three hours per week for each credit hour. (P/F)**

475. FIELD PROBLEMS IN GEOGRAPHY 3-6 hours credit

Geographic research field experience. Development of a research proposal, collection and analysis of data and the integration of such in a formal research paper. **Prerequisite:** Consent of instructor.

Geography - Physical (GEOG)

104. EARTH AND SPACE SCIENCE 4 hours credit

An introductory course in earth and space science for prospective elementary school teachers. An examination of the physical character of the Earth and its place in the solar system. Students can not receive credit for both GEOG 104 and GEOG 105. **Prerequisite:** Intended for elementary education majors. **Three hours lecture and one two-hour lab per week. Meets General Education IIIA or IIIB.**

105. INTRODUCTION TO PHYSICAL GEOGRAPHY 4 hours credit

Introduction to the variable physical character of the earth. Treatment of weather, climate, soil, vegetation, landforms and oceanic circulation with emphasis on processes, interrelationships and distributional patterns. **Three hours lecture, one two-hour laboratory per week. Meets General Education IIIA or IIIB.**

107. WEATHER AND HUMAN AFFAIRS 3 hours credit

Comprehensive introduction to weather and its effects on our everyday lives. Influence of human activity on the atmosphere: acid rain, ozone depletion, global warming, nuclear winter. **Three hours per week. Meets General Education IIIB.**

201. PHYSICAL GEOGRAPHY/WEATHER AND CLIMATE 4 hours credit

Examination of weather and climate with emphasis on processes and distributional patterns. Interrelationships between climatic controls stressed. **Three hours lecture, one two-hour laboratory per week. Meets General Education IIIA or IIIB.**

401. SOIL, WATER AND ENVIRONMENT 3 hours credit

Study of the role of soil and water in the physical environment and practices used in analyzing and managing these resources. **Prerequisite:** GEOL 103 or 105 or consent of instructor. **Two one-hour lectures; one two-hour laboratory or one field trip per week.**

410. METEOROLOGY 3 hours credit

Analysis of physical processes and dynamics of the atmosphere. Topics include upper atmospheric flow, forecasting

and severe weather. **Prerequisite:** GEOG 201 or consent of instructor. **Three hours per week.**

411. GEOMORPHOLOGY 3 hours credit

The scientific study of landscapes and the forces that shape them. **Prerequisite:** GEOL 103 or consent of instructor. **Three hours per week; optional field trips.**

413. APPLIED CLIMATOLOGY 3 hours credit

Analysis of the impact of climate on the physical environment and human behavior. Topics include climatic change, contemporary climatic problems and the influence of climate on agriculture, and energy use. **Prerequisite:** GEOG 201 or consent of instructor. **Three hours per week.**

415. SELECTED PROBLEMS 3 hours credit

Independent study permitting research or in-depth work on a selected topic to be indicated on student's transcript. May be taken twice for credit under different subtitles. Intended for seniors with 18 or more hours in geography. **Prerequisite:** Consent of department review committee.

422. READINGS IN GEOGRAPHY 3 hours credit

Permits in-depth study of selected topics to be indicated on student's transcript. May be taken twice for credit under different subtitles. Intended for seniors with 18 or more hours in geography. **Prerequisite:** Consent of department review committee.

450. TOPICS IN GEOGRAPHY 3 hours credit

Analysis of a selected systematic/regional topic to be entered on student's transcript. May be taken three times for credit under different subtitles. **Prerequisite:** Consent of instructor. **Three hours per week.**

460. INTERNSHIP 1-3 hours credit

Provides students with opportunities to apply geographic/planning theory, techniques and knowledge as practicing professionals. Intended for seniors with 18 or more hours in geography. May not be used to satisfy requirements for the major. **Prerequisite:** Approval of the department. **Three hours per week for each credit hour. (P/F)**

499. GEOGRAPHY HONORS 6 hours credit

Two-semester independent study leading to preparation of an honors thesis and graduation with honors in geography. Students may enroll by invitation of the department only. Specific topic indicated on the student's transcript.

Geology (GEOL)

103. INTRODUCTION TO PHYSICAL GEOLOGY 4 hours credit

Introduction to the nature and character of the Earth's crust and the geological processes that generate and shape landform features. Topics include minerals, rocks, earth structure and plate tectonics, geological processes and associated landforms. **Three one-hour lectures and one two-hour laboratory per week. Meets General Education IIIA or IIIB.**

German (GERM)

101. ELEMENTARY GERMAN I 3 hours credit

Beginning spoken and written German with emphasis on the sound system and the basic structures of the language. **Three hours per week. Meets General Education IB.**

102. ELEMENTARY GERMAN II 3 hours credit

Continued skill development in spoken and written German with further study of major structures. **Prerequisite:** GERM 101 or at least one year of high school German. **Three hours per week. Meets General Education IB.**

105. OPTIONAL PRACTICUM CREDIT 1 hour credit

Optional credit for supplementary oral and written exercise in the language laboratory or in workshop sessions to complement the work in GERM 101. **Prerequisite:** Registration in GERM 101 or permission of department chair. **Two hours per week.**

106. OPTIONAL PRACTICUM CREDIT 1 hour credit

Optional credit for supplementary oral and written exercise in the language laboratory or in workshop sessions to complement the work done in GERM 102. **Prerequisite:** Registration in GERM 102 or permission of department chair. **Two hours per week.**

201. INTERMEDIATE GERMAN 3 hours credit

Continued development and refinement of language skills with emphasis on reading, writing and vocabulary development. **Prerequisite:** GERM 102 or at least two years of high school German. **Three hours per week. Meets General Education IB.**

202. INTERMEDIATE AND APPLIED GERMAN 3 hours credit

Continued development, refinement and application of language skills with emphasis on reading, writing and vocabulary development. Satisfies the language requirement for English majors. **Prerequisite:** GERM 201 or at least three years of high school German. **Three hours per week. Meets General Education IB.**

205. OPTIONAL PRACTICUM CREDIT 1 hour credit

Optional credit for supplementary oral and written exercise in the language laboratory or in workshop sessions to complement the work done in GERM 201. **Prerequisite:** Registration in GERM 201 or permission of department chair. **Two hours per week.**

206. OPTIONAL PRACTICUM CREDIT 1 hour credit

Optional credit for supplementary oral and written exercise in the language laboratory or in workshop sessions to complement the work done in GERM 202. **Prerequisite:** Registration in GERM 202 or permission of department chair. **Two hours per week.**

310. ORAL AND WRITTEN COMPOSITION 3 hours credit

Develops facility to sustain oral and written discussion in German. Students practice the basic patterns of German syntax and develop vocabulary by preparing frequent oral and written compositions. **Prerequisite:** GERM 202 or equivalent experience. **Three hours per week.**

312. GERMAN CONVERSATION 3 hours credit

Develops confidence and correctness in spoken German through practice in pronunciation, dialogues, discussions and oral reports and presentations. **Prerequisite:** GERM 202 or equivalent experience. **Three hours per week.**

350. GERMAN SHORT STORIES 3 hours credit

Survey of the German short story (Deutsche Novelle) from the 18th century to the present (in translation). A study of this new form of German fiction from its inception in the 18th century through the 20th. **Prerequisite:** C or better in ENGL 102. **Three hours per week. Meets General Education IA.**

405. SPECIAL PROBLEMS IN GERMAN 1-3 hours credit

Individual study of special areas in German linguistics, literature or culture with the advice and direction from a member of the department. May be repeated with new content. **Prerequisite:** GERM 202 or equivalent experience and consent of department chair.

Health (HLTH)

101. BASIC HEALTH 3 hours credit

Factors involved in maintaining and improving personal health; analysis of individual health problems. **Two hours per week.**

102. FIRST AID AND SAFETY 1 hour credit

Introduction to basic information and skills required to administer care in emergency situations. Students may be certified in community CPR and first aid by the American Red Cross. Cannot receive credit for both HLTH 102 and 201. **Two hours per week.**

301. CONTEMPORARY PROBLEMS IN HEALTH EDUCATION 3 hours credit

Provides preparation for public school teaching in areas such as sex education, drug use and abuse and other current health problems. Involves curriculum planning, methods and materials. **Three hours per week. (spring semester only)**

401. COMMUNITY HEALTH 3 hours credit

Study of the factors involved in improving public health, including a survey of community health problems and resources and the role of the teacher in community health. **Three hours per week.**

410. STRESS AND STRESS MANAGEMENT 3 hours credit

Provides an understanding of the nature of the stress response and the practical application of stress management techniques. Major topics include the psychophysiology of stress, the role of stress in disease, social engineering, cognitive reappraisal and relaxation training. Useful for personal growth and professional application. **Prerequisites:** BIOL 215, 216. **Three hours per week. (fall semester only)**

History (HIST)

101, 102. WORLD CIVILIZATIONS 3 hours credit each

Examination of global progress in major civilizations from prehistoric times to the present emphasizing the economic, social, cultural, intellectual and political trends motivating human beings. **Three hours per week. Meets General Education IIA.**

201, 202. HISTORY OF THE UNITED STATES 3 hours credit each

Survey of the political, economic, social and cultural factors that have shaped the pattern of life in the United States. Particular problems examined in the light of their sources and historical development. HIST 201 goes through 1865 and HIST 202 from 1865 to the present. **Three hours per week. Meets General Education IIB.**

210. INTRODUCTION TO WORLD RELIGIONS 3 hours credit

Introductory survey of the historical development of world religions. Specific examples drawn from such diverse cultural traditions as ancient Babylonian, Judeo-Christian, imperial Chinese and modern American religious movements. Fertility gods and spirits of nature, augury, omens, possession and prophecy are among the topics analyzed. **Prerequisites:** HIST 101, 102. **Three hours per week. Meets General Education IIB.**

213. INTRODUCTION TO GENDER STUDIES 3 hours credit

Examines the historic roots of gender studies, how various disciplines approach gender issues and how concepts of gender affect lives. May not be taken for credit if student has credit for IDIS 213. **Prerequisites:** HIST 102. **Three hours lecture per week. Meets General Education IIB.**

215. TOPICS IN HISTORY**3 hours credit**

Historical study of particular periods; groups; economic, intellectual and/or social movements; and institutions. May be taken twice under different course titles recorded with the registrar. **Three hours per week. Meets General Education IIB.**

225. HOLOCAUST: THE EXTERMINATION OF THE EUROPEAN JEWS**3 hours credit**

Examination of European anti-Semitism from its origins to its culmination in the Holocaust; major emphasis on the treatment of Jews by Nazi Germany and on the reaction of Jews and the outside world to this treatment. **Three hours per week. Meets General Education IIB.**

300. THE HISTORIC ARCHAEOLOGY OF MARYLAND'S EASTERN SHORE**3 hours credit**

Introduction to the theory and methodology of historic archaeology. Interdependence of documentary and archaeological evidence stressed. Examines material culture of the period 1600-1850 for the lower Eastern Shore region and relates developments within the region to the general themes influencing the Anglo-American community as a whole. **Three hours per week. Meets General Education IIB.**

301. HISTORY OF AMERICAN BUILDINGS**3 hours credit**

Survey of the history of American building traditions, considering construction, form and style in historical, social, economic and cultural contexts. **Prerequisites:** HIST 101, 102. **Three hours per week. Meets General Education IIB.**

302. COLONIAL AND REVOLUTIONARY AMERICA (1607-1783)**3 hours credit**

Detailed study of foundations of American civilization. Economic, political, social, cultural and religious factors are emphasized. Consideration of English policy and the revolution are included. **Three hours per week. Meets General Education IIB.**

306. THE EMERGENCE OF A NEW NATION: U.S. (1789-1860)**3 hours credit**

Covers such topics as the new government and its policies, nationalism and economic expansion, the common man and the new democracy, social ferment and reform movements, Manifest Destiny, wars and sectional crises. **Prerequisites:** HIST 201, 202. **Three hours per week. Meets General Education IIB.**

308. SECTIONAL CONFLICT AND CIVIL WAR**3 hours credit**

Study of the origins, development and outcome of the struggle between the North and South to the end of the Civil War. Emphasis on the clash of national and sectional interests and the course of the military conflict to its conclusion. **Three hours per week. Meets General Education IIB.**

309. RECONSTRUCTION AND GILDED AGE**3 hours credit**

Study of the policies and application of presidential and congressional reconstruction; examination of the influence of the post-Civil War industrial boom on politics and society. **Three hours per week. Meets General Education IIB.**

310. HISTORY OF ENGLAND TO 1702**3 hours credit**

Survey of England from Roman times through the reign of William and Mary emphasizing political, legal, economic, social and cultural institutions and trends. **Prerequisites:** HIST 101, 102. **Three hours per week. Meets General Education IIB.**

311. HISTORY OF ENGLAND AND GREAT BRITAIN, 1702 TO THE PRESENT**3 hours credit**

Survey of England and Great Britain from the reign of Queen Anne to the present, emphasizing institutional growth and

development, the expansion of the empire and Britain's rise to a major world power. **Prerequisite:** HIST 101, 102. **Three hours per week. Meets General Education IIB.**

312. HISTORY OF IRELAND IN MODERN TIMES**3 hours credit**

Introduction to the cultural, political, economic and social growth and problems in Ireland since circa 1500. Emphasis is on the development of Ireland's nationalism, separate and distinct from Great Britain with which it was entwined and involved for so many generations. Attention focuses on the history and problems in Northern Ireland and its position in the United Kingdom. **Prerequisite:** HIST 102. **Three hours per week. Meets General Education IIB.**

318. HISTORY OF THE ANCIENT NEAR EAST**3 hours credit**

Survey of social, political and religious institutions of the ancient Mesopotamian civilizations of the Sumerians, Babylonians, Hebrews, Assyrians, Hittites and Dynastic Egypt, with emphasis on cultural contributions. **Prerequisites:** HIST 101, 102. **Three hours per week. Meets General Education IIB.**

319. ROMAN HISTORY**3 hours credit**

Portrays the rise of Rome from city-state to empire. Emphasis on social and cultural achievements from eighth century B.C. to fourth century A.D. **Prerequisites:** HIST 101, 102. **Three hours per week. Meets General Education IIB.**

320. HISTORY OF THE EARLY CHRISTIAN CHURCH**3 hours credit**

Traces the history of Christianity from its origins in Jerusalem to its full organization in the reign of the emperor Justinian. Focus on the rise of episcopal authority, the origins and popular appeal of monasticism and the early papacy. Includes selections from the New Testament, the church fathers of the East and Saint Augustine. **Prerequisite:** HIST 101. **Three hours per week. Meets General Education IIB.**

321. HISTORY OF MEDIEVAL EUROPE**3 hours credit**

Survey of culture and institutions of eastern and western Europe from the Age of Constantine to the end of the Hundred Years' War and the fall of Constantinople to the Turks. **Prerequisites:** HIST 101, 102. **Three hours per week. Meets General Education IIB.**

322. RENAISSANCE TO REVOLUTION (1450-1815)**3 hours credit**

European developments from the Age of Exploration through the French Revolution, emphasizing the development of early nationalism, absolutism, colonialism, capitalism, the middle classes, religious wars, cultural change and scientific thought. **Prerequisites:** HIST 101, 102. **Three hours per week. Meets General Education IIB.**

323. EUROPE IN THE NINETEENTH CENTURY**3 hours credit**

Analysis of developments from the time of Napoleon to 1900 with emphasis on the industrial revolution and imperialism. Considers reorganization of the European state system and origins of the great ideological conflicts. **Prerequisites:** HIST 101, 102. **Three hours per week. Meets General Education IIB.**

324. GERMAN HISTORY SINCE 1815**3 hours credit**

History of German-speaking Europe from the Napoleonic period to the present concentrating on the problems of German nationalism within the framework of modern European society. Social, economic and cultural developments also emphasized. **Prerequisites:** HIST 101 and 102. **Three hours per week. Meets General Education IIB.**

325. HISTORY OF EUROPEAN REVOLUTIONS SINCE 1815 **3 hours credit**

Examination of representative revolutions since the time of Napoleon. Assesses the influence of the French revolution on 19th century uprisings; explores the changed character of revolutions in the 20th century; attempts to construct a revolutionary model. **Prerequisites:** HIST 101, 102. **Three hours per week. Meets General Education IIB.**

326. THE FRENCH REVOLUTION AND NAPOLEON, 1789-1815 **3 hours credit**

Study of the French Revolution and the Napoleonic period. **Prerequisites:** HIST 101, 102. **Three hours per week. Meets General Education IIB.**

327. THE HABSBURG EMPIRE, 1740-1918 **3 hours credit**

Examination of the Habsburg lands and peoples emphasizing the political, cultural, economic, dynastic and ethnic problems of the monarchy. **Prerequisites:** HIST 101, 102. **Three hours per week. Meets General Education IIB.**

330. PROSEMINAR IN HISTORY **3 hours credit**

Survey of selected historians and their philosophies of history. Guides students in the preparation of a formal research paper using primary and secondary sources. Required of history majors; may be taken by any student who has satisfactorily completed HIST 101, 102 and 201 or 202. **Three hours per week. Meets General Education IIB.**

332. NATIONAL HISTORY OF MEXICO **3 hours credit**

Development of the Mexican nation with special attention to the war for independence, Caudillo government, reform movement, the dictatorship of Porfirio Diaz and the Revolution of 1910. United States-Mexican diplomatic relations examined. **Three hours per week. Meets General Education IIB.**

333. THE ABC POWERS **3 hours credit**

Study of the three South American powers—Argentina, Brazil and Chile—with special emphasis on their constitutional development. Close review of their relationships with the United States. **Three hours per week. Meets General Education IIB.**

334. LATIN AMERICAN INSTITUTIONS **3 hours credit**

Study of the major institutions developed in Latin America during the colonial and national periods. **Three hours per week. Meets General Education IIB.**

340. HISTORY OF AFRICA TO 1870 **3 hours credit**

Development of indigenous political and social institutions leading to the formation of states and empires. The slave trade and the onset of European imperialism emphasized. **Prerequisites:** HIST 101, 102. **Three hours per week. Meets General Education IIB.**

341. HISTORY OF AFRICA: 1870-PRESENT **3 hours credit**

Emphasizes the history and politics of imperialism from the "scramble" for Africa to decolonization. Emphasis on the interaction of African and European institutions. **Prerequisites:** HIST 101, 102. **Three hours per week. Meets General Education IIB.**

350. THE MIDDLE EAST TO 1800 **3 hours credit**

Survey of the political, social and economical history of the Middle East from the rule of Islam to the 19th century. Emphasis on the rise and decline of the Arab Caliphates, Persia and the Ottomans. **Prerequisites:** HIST 101, 102. **Three hours per week. Meets General Education IIB.**

355. THE MIDDLE EAST SINCE 1800 **3 hours credit**

History of the strategic region from the beginnings of nationalism through the fall of the Ottoman Empire to the current existence of independent states. Emphasis on the

historical understanding of the modern situation. **Prerequisites:** HIST 101, 102. **Three hours per week. Meets General Education IIB.**

362. CHINESE CIVILIZATION **3 hours credit**

Chinese civilization from its origins in the Bronze Age to the rise of nationalism and communism in the 20th century. Attention divided equally between political and cultural history, emphasizing the development of traditional institutions in Chinese society, as well as art, literature, religion and philosophy. **Three hours per week. Meets General Education IIB.**

363. JAPANESE CIVILIZATION **3 hours credit**

Japanese culture and political development from the Familial Age to the present. Equal emphasis on politics, economics, art and architecture, drama and literature, philosophy, and religion as persistent and evolving traditions. **Three hours per week. Meets General Education IIB.**

364. MODERN JAPAN **3 hours credit**

Economic, social, cultural and political study of the evolution of Japan from a traditional, isolated and closed society to a Westernized superpower. Emphasis on the 19th and 20th centuries. **Prerequisite:** HIST 102. **Three hours per week. Meets General Education IIB.**

370. GREEK HISTORY **3 hours credit**

Historical survey of classical Greek civilization, including political, socioeconomic and religious institutions. Particular emphasis on cultural and artistic aspects of Hellenic civilization. **Prerequisites:** HIST 101, 102. **Three hours per week. Meets General Education IIB.**

371. INTRODUCTION TO CLASSICAL MYTHOLOGY **3 hours credit**

Introduces the student to major figures in classical Greek and Roman mythology and demonstrates the interconnectedness of classical mythology and history from ancient times until the present. A general knowledge of classical mythology is indispensable for an understanding of social and political history of both the ancient and modern worlds. Also, without this knowledge, much of literature and art, past and present, would remain unintelligible. **Prerequisite:** HIST 101. **Three hours per week. Meets General Education IIB.**

375. TOPICS IN AMERICAN STUDIES **3 hours credit**

Historical study of a particular aspect of American society and culture. May be taken twice under different course titles recorded with the registrar. **Three hours per week. Meets General Education IIB.**

376. VIOLENCE AND NONVIOLENCE IN AMERICA **3 hours credit**

Explores the paradoxical history of violence and nonviolence in America through lectures, readings and films. **Prerequisite:** HIST 101, 102. **Three hours per week.**

377. WOMEN IN EARLY AMERICAN HISTORY **3 hours credit**

Examines the role of women in U.S. history from Colonial times to 1890, with particular attention to the family and to traditional politics, economic and cultural institutions. **Prerequisite:** HIST 102. **Three hours per week. Meets General Education IIB.**

378. WOMEN IN MODERN AMERICA **3 hours credit**

Charts the course of the women's movement in 20th-century America, examining the relationship between organized feminism and changes in public and private lives of women from different class, racial and ethnic backgrounds. **Prerequisite:** HIST 102. **Three hours per week. Meets General Education IIB.**

379. WOMEN AND FAMILY IN EUROPE AND THE UNITED STATES 3 hours credit

Explores a variety of themes in the history of women and the family during the 19th and 20th centuries. Themes studied include women and religion, middle-class female values, the working-class experience, feminism, and gender roles in various political and cultural contexts. **Prerequisite:** HIST 102. **Three hours lecture per week. Meets General Education IIB.**

380. THE AMERICAN MILITARY EXPERIENCE 3 hours credit

Military history enables students to understand better the role played by the armed forces in American society today through a study of the origins and development of military institutions, traditions and practices in the United States, 1775 to the present. **Three hours per week. Meets General Education IIB.**

382. AMERICAN RELIGIOUS HISTORY 3 hours credit
Survey of religious developments in America from pre-European settlement to the 20th century. Special attention to relationships among social, cultural and religious changes. **Prerequisites:** HIST 101, 102. **Three hours per week. Meets General Education IIB.**

383. HISTORY OF AMERICAN ENTERPRISE 3 hours credit

Study of the development of the American entrepreneurial spirit and its influence on culture, society and politics from the European heritage to the present. **Three hours per week. Meets General Education IIB.**

384. NATIVE AMERICAN HISTORY 3 hours credit

Explores Native American history before contact with Europeans, through struggles with the emerging new nation, forced reservations and Indian activism, to current status of tribal members. Examines the political, economic, social and cultural aspects of Native Americans. **Prerequisite:** HIST 102. **Three hours per week. Meets General Education IIB.**

386. AMERICAN WILDERNESS EXPERIENCE 3 hours credit

Study of historical factors that contributed to attitudes toward wilderness and preservation efforts. Particular emphasis on American thought with special attention to Thoreau, Cole, Muir and Leopold. **Prerequisite:** HIST 102. **Three hours per week. Meets General Education IIB.**

387. RACISM AND DISCRIMINATION 3 hours credit

Multiperspective historical examination of the nature, origins and growth of racism and discrimination in America, with particular emphasis on the 20th century. **Prerequisites:** HIST 201, 202. **Three hours per week.**

388. CIVIL RIGHTS IN AMERICAN HISTORY 3 hours credit

History of civil rights in America from the colonial period to the present; emphasis on the application of civil rights legislation to African-Americans and Indians and expansion to include women and others. **Prerequisites:** HIST 201, 202. **Three hours per week.**

389. ENVIRONMENTAL HISTORY 3 hours credit

History of rural and urban land use. Topics include the rise of the public lands movement and environmentalism in the United States, the history of ecology and the cultural roots of the modern environmental crisis. **Prerequisite:** HIST 101 and 102. **Three hours per week. Meets General Education IIB.**

390. STUDIES IN WESTERN EUROPE 3 hours credit

Focused study on particular periods, places, trends or problems in Western Europe. May be taken twice under different course titles recorded with the registrar. **Prerequisite:** HIST 102. **Three hours per week. Meets General Education IIB.**

395. MATERIAL CULTURE STUDIES IN AMERICAN HISTORY 3 hours credit

Introduction to the specialized study of the American past through examination of cultural artifacts and documents relating to them. **Prerequisite:** HIST 201. **Three hours per week.**

399. INTERNATIONAL FIELD STUDY 3-6 hours credit

On-site study of the geography, history and culture of selected countries. Work in the field preceded by pre-tour lectures. May be taken twice for credit under different subtitles. **Prerequisite:** Consent of instructor. **Meets General Education IIB.**

400. HISTORY OF MARYLAND 3 hours credit

Study of Maryland history and government from the colonial period to present. Places special stress on the leaders, institutions and contributions made in Maryland and by Maryland to the nation. **Three hours per week. Meets General Education IIB.**

401. HISTORY OF U.S. FOREIGN RELATIONS 3 hours credit

Historical study of U.S. foreign relations from independence to the present, focusing on the global impact of the nation as an economic, cultural, political and military superpower. **Prerequisites:** HIST 201, 202. **Three hours per week.**

405. THE UNITED STATES IN THE TWENTIETH CENTURY I 3 hours credit

Populism to 1932. Study of the political, economic, intellectual and social problems attending America's rise to world power late in the 19th century, involvement in World War I, the changes attending that conflict and the problems of the 1920s. **Prerequisites:** HIST 201, 202. **Three hours per week.**

406. THE UNITED STATES IN THE TWENTIETH CENTURY II 3 hours credit

F.D. Roosevelt to the present. Study of the efforts of the United States to resolve the complex problems of the 1930s intensified by the Great Depression, its involvement in World War II and struggles to maintain peace in the post-war world. **Prerequisites:** HIST 201, 202. **Three hours per week.**

407. THE WESTWARD MOVEMENT 3 hours credit

Study of the westward movement from the Atlantic to the Trans-Allegheny and Trans-Mississippi West, with emphasis upon the influence of the frontiers in shaping American civilization. **Three hours per week. Meets General Education IIB.**

408. HISTORY OF THE SOUTH 3 hours credit

History of the South from the colonial period to the present, covering developments in politics, economics, culture and society. **Three hours per week. Meets General Education IIB.**

412, 413. SOCIAL AND CULTURAL HISTORY OF THE UNITED STATES I and II 3 hours credit each

Studies of American thought as reflected by the people and leaders. Development of American heritage from the colonial period to the present, emphasizing the intellectual, social, religious and economic movements. The first course covers from the colonial period to reconstruction and the second course from about 1876 to present. **Three hours per week. Meets General Education IIB.**

415 HISTORY AND FILM 3 hours credit

Examines the impact of film on the study and understanding of history. Includes a study of how film has been used to portray 20th century events, how it has captured major events on film and how its power can be used to manipulate public opinion. Documentaries, narrative films and scholarly works will be used as resources. **Prerequisite:** HIST 101, 102. **Three hours per week. Meets General Education requirement II-B.**

417. HISTORY OF SCIENCE AND TECHNOLOGY**3 hours credit**

Survey of evolution of scientific achievements and technology in the Western world, with particular emphasis on the cultural, economic and social implications of these developments. **Prerequisites:** HIST 101, 102. **Three hours per week. Meets General Education IIB.**

421. EUROPE IN THE TWENTIETH CENTURY WORLD**3 hours credit**

Study of the economic, social, intellectual and political development of Europe, viewed in the context of world wars, depression and conflicting political ideologies, showing the decline of European dominance and the rise of America and Asia. **Prerequisites:** HIST 101, 102. **Three hours per week. Meets General Education IIB.**

423. IMPERIAL RUSSIA**3 hours credit**

Study of the Russia empire from Peter the Great to the 1917 revolution focusing on the political, economic and social developments, Russia's expansion and the conditions that led to revolution. **Prerequisites:** HIST 101, 102. **Three hours per week. Meets General Education IIB.**

424. MODERN RUSSIA**3 hours credit**

Survey of the 20th century Russia and the Soviet Union, emphasizing the growth to global power, continuity and change, and the inherent problems that led to Soviet collapse and the rise of a new Russia. **Prerequisites:** HIST 101, 102. **Three hours per week. Meets General Education IIB.**

430. READINGS IN HISTORY**3 hours credit**

Readings course for students who have achieved above average in at least 18 hours of history courses. May be taken twice under different course titles recorded with the registrar. **Prerequisite:** Permission of department chair. **Three hours per week. Meets General Education IIB.**

435. SENIOR THESIS**3 hours credit**

Individual research and preparation of a thesis by history majors. Topic to be approved by department chair. **Three hours per week.**

440. MINORITY GROUPS IN UNITED STATES HISTORY**3 hours credit**

Attention to the role and contribution of minority groups in general, with special emphasis on some of the larger and older minority groups. **Three hours per week. Meets General Education IIB.**

445. AFRICAN-AMERICAN HISTORY**3 hours credit**

Study of the life and role of the African-American from the colonial period to the present. **Three hours per week. Meets General Education IIB.**

446. READINGS IN AFRICAN-AMERICAN HISTORY**3 hours credit**

Introduction to past and current literature on African-Americans from 1619 to the present. Students critique, evaluate and discuss readings that depict various facets of the African experience in America. **Prerequisite:** HIST 202. **Three hours per week.**

451. WORLD WAR I**3 hours credit**

Study of the events that occurred during World War I, from the assassination of Franz Ferdinand at Sarajevo to the peace of 1919. Emphasis on political developments, social and intellectual implications of the war, and its significance in shaping the 20th century. Cannot receive credit for both HIST 381 and HIST 451. **Prerequisite:** HIST 102. **Three hours per week. Meets General Education IIB.**

452. THE SECOND WORLD WAR: A GLOBAL HISTORY**3 hours credit**

The Second World War has shaped the contemporary world as no other 20th century event has. Through discussion and study of texts and film, this course examines the global political, military and economic aspects of the conflict as well as its social and cultural impact. **Prerequisite:** HIST 101 and 102. **Three hours per week. Meets General Education requirement II-B.**

453. THE COLD WAR:**A GLOBAL HISTORY****3 hours credit**

After 1945 the fierce rivalry between the United States and the Soviet Union threatened the world with nuclear destruction and dominated global politics for almost 50 years. This course examines the political and cultural impact of the Cold War on the United States, Europe and the developing world. **Prerequisite:** HIST 101, 102. **Three hours per week. Meets General Education requirement II-B.**

460. HISTORY OF CHINA SINCE 1800**3 hours credit**

The revolutionary transformation of China from the 19th century to the present, with emphasis on the impact of imperialism, the profound effects of Western technology and foreign policy wrought by the history of its relations with the West. **Prerequisites:** HIST 101, 102. **Three hours per week. Meets General Education IIB.**

470. HISTORY OF THE EARLY ROMAN EMPIRE**3 hours credit**

Study of particular institutions and movements in Roman history. Emphasis on family history and social and religious trends during the early imperial period of Roman history. **Prerequisites:** HIST 101, 102. **Three hours per week. Meets General Education IIB.**

472. STUDIES IN CLASSICAL ARCHAEOLOGY**3 hours credit**

Assorted topics and archaeological sites of the ancient Mediterranean world (Crete, Greece and Italy). May be taken twice under different subtitles. **Prerequisites:** HIST 101, 102. **Three hours per week. Meets General Education IIB.**

474. HISTORY OF ANCIENT EGYPT**3 hours credit**

Intensive study of three eras of Egyptian history: the Pyramid Age, the chaotic Middle Kingdom and New Kingdom Absolutism. Emphasis on cultural, religious and artistic contributions. **Prerequisite:** HIST 101. **Three hours per week. Meets General Education IIB.**

478. ANCIENT MILITARY HISTORY**3 hours credit**

Explores the history of the great battles and campaigns of antiquity. Emphasis is placed on developments in strategy and tactics, the lives of the men in the ranks, the careers of leaders, and the decisive nature of these conflicts on the course of history. Special attention is given to the interaction between military realities and the functioning of society as a whole. **Prerequisite:** HIST 101. **Three hours per week. Meets General Education requirement II-B.**

480. MUSEUM STUDIES**3 hours credit**

Work experience course that invites students to learn techniques of museology. Students work in cooperation with various local or regional museums under the supervision and direction of a museum curator. May be taken twice with the consent of the instructor. **Prerequisite:** Written approval of department chair to register. **Three hours per week. Meets General Education IIB.**

490. STUDIES IN HISTORY**3 hours credit**

Intensive historical study of particular periods and groups, economic, intellectual, cultural, social movements and/or institutions. May be taken twice under different course titles

recorded with the registrar. **Prerequisite:** Consent of department chair. **Three hours per week. Meets General Education IIB.**

499. HONORS **3 hours credit**
Independent study, research and conferences undertaken by history majors for departmental honors at the invitation of the department. May not be taken on a pass/no credit basis. **Prerequisites:** Approval of department, 21 hours of coursework in history including HIST 330, minimum 3.5 average in history.

Interdisciplinary Studies (IDIS)

100. FRESHMAN SEMINAR **3 hours credit**
Focus on themes, issues and questions of importance in the liberal arts and sciences. Students must co-register for three General Education courses designated as part of the General Education learning community. Meets the objectives of the college orientation seminar. May be repeated once for credit. **Three hours per week.**

111. HONORS CORE I—CRITICAL THINKING AND WRITING **3 hours credit**
First course in the Bellavance Honors Program core curriculum. Processes for developing and supporting beliefs with clear, unambiguous arguments and evaluating the soundness of the arguments. Practice in reasoning, presentation of sound arguments in oral and written form, and analysis of the use of language to influence thought. **Prerequisite:** Honors Program student. **Three hours per week. Meets General Education IB only when taken in sequence with IDIS 112, 211 and 212.**

112. HONORS CORE II—THE WESTERN INTELLECTUAL TRADITION I **3 hours credit**
Second course in the Honors core curriculum. Scrutiny of major intellectual texts which have shaped Western civilization from classical Greece to the Renaissance in order to examine a central issue or idea these texts in part address. **Prerequisite:** IDIS 111. **Three hours per week. Meets General Education IIB only when taken in sequence with IDIS 112, 211 and 212.**

211. HONORS CORE III—THE WESTERN INTELLECTUAL TRADITION II **3 hours credit**
Third course in the Honors core curriculum. Continued examination of major texts of Western culture from the 17th century to the present in order to explore a central issue or idea these texts in part address. **Prerequisites:** IDIS 111, 112. **Three hours per week. Meets General Education IA only when taken in sequence with IDIS 112, 211 and 212.**

212. HONORS CORE IV—SCIENTIFIC KNOWLEDGE **3 hours credit**
Fourth course in the Honors core curriculum. Analysis and discussion of a single problem in science. Students examine the relationships asserted between data and conclusions, suggest alternate hypotheses and design laboratory procedures that test the conclusions drawn. Students also examine the social and ethical implications of scientific findings. **Prerequisites:** IDIS 111, 112, 211. **Three hours per week. Meets General Education IIB only when taken in sequence with IDIS 112, 211 and 212.**

213. INTRODUCTION TO GENDER STUDIES **3 hours credit**
Examines the historic roots of gender studies, how various disciplines approach gender issues and how concepts of gender affect lives. May not be taken for credit if student has credit for HIST 213. **Prerequisite:** HIST 102. **Three hours lecture per week. Meets General Education IIB.**

250. COMPARATIVE RELIGIONS **3 hours credit**
Comprehensive overview of major religious traditions, including Judaism, Islam, Christianity, Hinduism, Buddhism, Taoism and religions of the ancient world. Focus on structural concepts such as the experience of the sacred, the roles of myth and symbolic systems, cosmologies and definitions of the religious community. **Three hours per week.**

260. ENVIRONMENTAL PERSPECTIVES **3 hours credit**
Survey of environmental issues in a wide range of disciplines. Team taught by two to three professors representing at least two of the following schools: the Fulton School, the Henson School and the Perdue School. The course covers one environmental topic in depth from the perspective of different disciplines. May be taken twice under different course topics recorded with the Registrar. **Three hours per week.**

278. INTERDISCIPLINARY GENERAL EDUCATION: HUMANITIES **3 hours credit**
Introductory-level General Education interdisciplinary course offered through the cooperation of at least two departments. Topic varies semester to semester. Develops students' abilities to integrate and synthesize ideas about the beauty and truth embodied in the traditional disciplines of the humanities. Students may use only one of the following courses to satisfy General Education IB requirements: IDIS 278 or 478. **Three hours per week. Meets General Education IB.**

279. INTERDISCIPLINARY GENERAL EDUCATION: SOCIAL SCIENCE **3 hours credit**
Introductory-level General Education interdisciplinary course offered through the cooperation of at least two departments. Topic varies semester to semester. Develops students' abilities to integrate and synthesize ideas about the interaction of humans in the social world. Students may use only one of the following courses to satisfy General Education IIB requirements: IDIS 279 or 479. **Three hours per week. Meets General Education IB.**

280. SPECIAL TOPICS IN INTERDISCIPLINARY STUDIES **1-6 hours credit**
Interdisciplinary seminar with content varying semester to semester. May be repeated under different titles for a maximum of six hours. **One to six hours per week.**

285. INTRODUCTION TO THE CREATIVE ARTS **3 hours credit**
Introduces the basic elements, principles, processes, materials, and inherent qualities of dance, music, theatre, and the visual arts. A team-teaching approach focuses on experiential learning and creativity. Students are required, as a class, to create an integrative arts performance project. **Three hours per week.**

300. SERVICE LEARNING SEMINAR **1 hour credit**
Explores relationships between service and companion courses using a service learning model. Twenty hours of service and one hour seminar every other week. **Prerequisite:** Consent of instructor. **Two hours per week.**

311. HONORS INTERDISCIPLINARY SEMINAR **3 hours credit**
Examines an interdisciplinary topic of broad scope and significance. Open to all Honors students; required for those pursuing the General Honors degree designation. May be repeated under different topics. **Prerequisites:** Sophomore standing, permission of Honors director. **Three hours per week.**

424. CURRENT TOPICS IN CONFLICT **3 hours credit**
In-depth, interdisciplinary examination of a current case of domestic or international conflict through investigation of its economic, sociocultural, political and historical roots, and

exploration of the philosophical, political and sociocultural aspects of its resolution. **Prerequisites:** SOCI 225 or POSC 409, junior/senior class standing. **Three hours per week.**

478. INTERDISCIPLINARY GENERAL EDUCATION: HUMANITIES 3 hours credit

Upper-level General Education interdisciplinary course offered through the cooperation of at least two departments. Topic varies semester to semester. Expands students' abilities to integrate and synthesize ideas about the beauty and truth embodied in the traditional disciplines of the humanities. Students may use only one of the following courses to satisfy General Education IB requirements: IDIS 278 or 478. **Prerequisites:** Junior standing. **Three hours per week. Meets General Education IB.**

479. INTERDISCIPLINARY GENERAL EDUCATION: SOCIAL SCIENCE 3 hours credit

Upper-level General Education interdisciplinary course offered through the cooperation of at least two departments. Topic varies semester to semester. Expands students' abilities to integrate and synthesize ideas about the interactions of humans in the social world. Students may use only one of the following courses to satisfy General Education IIB requirement: IDIS 279 or 479. **Prerequisite:** Junior standing. **Three hours per week. Meets General Education IB.**

480. INTERNSHIP IN ENVIRONMENTAL STUDIES 3-6 hours credit

Provides opportunities to apply theory, principles and knowledge within a practical experience in a local, state, federal or private organization. Major paper and journal required. **Prerequisite:** Written permission of environmental studies advisor. **Eight hours a week for 14 weeks or equivalent.**

485. WOMEN'S STUDIES/GENDER STUDIES INTERDISCIPLINARY CAPSTONE SEMINAR 3 hours credit

Examines the central issues and questions in women's studies/gender studies from a contemporary perspective. Addresses the constructs of masculinity and femininity in psychology, education, philosophy, history, English, sociology and art. Readings, lectures and discussion provide a theoretical framework for capstone projects in spring semester. **Pre-requisite:** Completion of 12 credits in the minor. **Three hours per week.**

490. HONORS THESIS PREPARATION 1 hour credit

Taken in the semester preceding the writing of an Honors thesis. Students select a thesis mentor and committee, do preliminary research on their subject and write a prospectus approved by their thesis committee. Required for students pursuing the General Honors degree designation. **Pre-requisite:** Completion of the Honors core curriculum. **One hour per week. (P/F)**

495. HONORS SENIOR THESIS 3 hours credit

Thesis in major field of study. Required for students pursuing the General Honors degree designation. **Prerequisite:** IDIS 490. **Three hours per week.**

497. UNDERGRADUATE RESEARCH 3 hours credit

Independent student research under the supervision of the Liberal Studies Coordinator. Students will have the opportunity to study a topic in depth and design their own research project to add to that area's body of knowledge. Specific topics are indicated on student transcripts. Public presentation required. **Prerequisite:** Junior standing, permission of Liberal Studies Coordinator. **Three hours per week.**

Latin (LATN)

101. ELEMENTARY LATIN I 3 hours credit

Introductory study of the Latin language with emphasis on basic structures including a history of Latin language from the classical period to medieval Latin. **Three hours per week. Meets General Education IB.**

102. ELEMENTARY LATIN II 3 hours credit

Continuation of the beginning study of the Latin language with on-going emphasis on basic structures, translation and the history of the Latin language. **Prerequisite:** LATN 101 or at least one year of high school Latin. **Three hours per week. Meets General Education IB.**

Leisure Studies (LEIS)

201. INTRODUCTION TO LEISURE STUDIES 3 hours credit

Introduction to the concept of leisure dealing with a broad range of issues, concerns, facts and relationships. Study of various conceptualizations of leisure and their implications for humans. **Three hours per week.**

301. THEORIES OF LEISURE 3 hours credit

Grounds the student in the theoretical approaches to leisure that inform this discipline. Looks closely at the classical humanist identification of leisure as humanity's highest good and at a selection of contemporary theories that provide research models. Emphasis also on the multidisciplinary nature of leisure issues including their expression in some modern fiction. **Prerequisite:** LEIS 201. **Three hours per week.**

305. LEISURE AND SPECIAL POPULATIONS 3 hours credit

Examination of the specific leisure interests and needs of special populations including the disadvantaged, handicapped, aged and others. Minimum of 10 hours volunteer work required. **Prerequisite:** Sophomore standing. **Three hours per week.**

400. LEISURE SERVICE DELIVERY SYSTEM 3 hours credit

Study of the processes involved in providing leisure services through a systems perspective. Emphasis on the inter-relationships among the participants, the agencies or organizations and the social and physical environment. **Prerequisite:** LEIS 201. **Three hours per week.**

401. LEISURE AND POLICY 3 hours credit

Provides an understanding of the processes at work in formulating and implementing leisure policies in both the public and private sectors. **Prerequisite:** LEIS 201. **Three hours per week.**

402. PROGRAM PLANNING IN THERAPEUTIC RECREATION 3 hours credit

Focus on practical application of therapeutic recreation techniques to basic programming for mentally and physically disabled populations in order to enhance their lifestyles. Prepares students for National Council for Therapeutic Recreation certification. **Prerequisite:** LEIS 201 or consent of department chair. **Three hours per week.**

403. THERAPEUTIC RECREATION LEADERSHIP 3 hours credit

Focus on technical skills staff members in therapeutic recreation (TR) programs can use to implement, promote, organize and evaluate their programs. For upper-level undergraduates and practitioners in the field or related fields. Prepares students for the National Council for Therapeutic Recreational Certification (NCTRC). **Prerequisite:** LEIS 402. **Three hours per week.**

Management Information Systems (ISMN)

111. BUSINESS MICROCOMPUTER USE 1 hour credit
Laboratory course that familiarizes students with current end-user software such as word processors, spreadsheets and databases. **Two hours per week.**

211. INFORMATION SYSTEMS CONCEPTS FOR MANAGEMENT 3 hours credit
Introduction to computer-based information systems. Emphasis on the support of organizational operations and management. Computer-based productivity tools used. Students may not receive credit for more than one of the following: ISMN 211, ISMN 370, BUAD 370. **Prerequisite:** ISMN 111. **Three hours per week.**

301. BUSINESS APPLICATIONS DEVELOPMENT 3 hours credit
Introduction to the development of business applications using software development languages and tools commonly used in industry. Topics include design and implementation of user interfaces, business process automation and data stores. **Prerequisite:** ISMN 211. **Three hours per week.**

338. SPECIAL TOPICS 3 hours credit
Advanced study of varying information systems topics based on students' interests and needs. May be repeated once for credit under different subtitle. May substitute for a MIS major elective. **Prerequisite:** Varies by topic. **Three hours per week.**

385. TELECOMMUNICATION SYSTEMS MANAGEMENT 3 hours credit
Concepts and characteristics of telecommunication systems including distributive networks, concentrators and multiplexors, remote terminals, modems and processors. Examination of control hardware and software systems. **Prerequisite:** ISMN 211. **Three hours per week.**

386. DATABASE MANAGEMENT SYSTEMS 3 hours credit
Study of the design, implementation and application of database management systems. Examination of several commercially available systems. **Prerequisite:** ISMN 301. **Three hours per week.**

395. ADVANCED MANAGEMENT SUPPORT SYSTEMS 3 hours credit
Study of computerized technologies developed to support managerial decision-making. Topics include decision support systems, expert systems, neural computing, artificial intelligence and integration of these technologies. **Prerequisite:** ISMN 211. **Three hours per week.**

455. ADVANCED MICROCOMPUTER APPLICATIONS IN BUSINESS 3 hours credit
Advanced study of microcomputer applications in business with extensive coverage of database management, decision support and operating systems and the use of standard business software. **Prerequisites:** ISMN 211. **Three hours per week.**

465. GLOBAL INFORMATION TECHNOLOGY MANAGEMENT 3 hours credit
Analysis of challenges facing business professionals in an increasingly global, technological environment. Emphasis on infrastructure, standards, regulations, and related technological and political issues. **Prerequisite:** ISMN 211. **Three hours per week.**

475. INFORMATION SYSTEMS ANALYSIS AND DESIGN 3 hours credit
Analysis of the methods and techniques for conducting a systems project with a goal of computerizing a particular busi-

ness function. **Prerequisites:** ISMN 301, 385, 386. **Three hours per week.**

476. INFORMATION SYSTEMS DEVELOPMENT AND IMPLEMENTATION 3 hours credit
Design, implementation, and documentation of an information system. The development project is in the form of field-study or in-depth case-study. Successful completion of this course satisfies the ABE requirement. **Prerequisite:** ISMN 475. **Three hours per week.**

480. SEMINAR IN MANAGEMENT INFORMATION SYSTEMS 3 hours credit
Study of major research findings, case studies and current issues relevant to management in the era of computer-based information systems and use of standard business software. **Prerequisites:** Junior MIS major. **Three hours per week.**

485. TELECOMMUNICATION SYSTEMS MANAGEMENT II: ADVANCED PC NETWORKING 3 hours credit
Advanced study of implementing, administering and troubleshooting PC networking that incorporates major network operating systems. Assists students working toward entry-level vendor certification in the category of major network operating systems and its management. **Prerequisite:** ISMN 385. **Three hours per week.**

490. MANAGEMENT INFORMATION SYSTEMS INTERNSHIP 3 hours credit
Professional work experience in information systems. Placement and approval by department chair required. May be used as substitute for major elective ISMN 476 with approval of department chair. **Prerequisite:** ISMN 301, 385, 386; consent of instructor prior to registration. **Three hours per week.**

494. DIRECTED STUDY IN MANAGEMENT INFORMATION SYSTEMS 1-3 hours credit
Intensive research or study of a selected topic in management information systems. May be used as an management information systems elective if approved by the department chair. May be repeated once for credit under different subtitles. **Prerequisites:** Junior standing and consent of instructor prior to registration.

Mathematics (MATH)

Three units of high school mathematics (including Algebra II and geometry) or college algebra is a prerequisite for all math courses.

102. COLLEGE ALGEBRA AND TRIGONOMETRY 4 hours credit
Applications-oriented college algebra and trigonometry course for students planning to study science or additional mathematics. Emphasizes computational, qualitative, visual and symbolic approaches. Topics include functions and graphs; exponential, logarithmic and trigonometric functions; and difference equations. Credit may not be received for more than one of the following: MATH 102, 118, 122. **Prerequisite:** High school Algebra II and plane geometry. **Four hours per week. Meets General Education IIIB or IIIC.**

103, 104. FUNDAMENTAL CONCEPTS I, II 3 hours credit
For prospective elementary school teachers, the course provides a thorough understanding of the mathematical concepts covered in grades one through eight. Moves through the mathematical content into the ability to explain the mathematical ideas and relationships. Emphasizes the ability to explain the concepts in everyday language appropriate for the listener, using correct vocabulary, and the ability to demonstrate these ideas using physical models and/or activities. Use of technology is required. Includes non-routine problem solving. **Three hours per week each. MATH 103 does not meet General Education; MATH 104 is a con-**

tinuation of MATH 103 and meets General Education IIIB or IIIC.

110. FINITE MATHEMATICS **3 hours credit**
Introduction to functions, graphs, linear programming, probability, computing and additional topics as time permits. For students in the behavioral, biological, management and social sciences. **Prerequisite:** High school Algebra II and plane geometry. **Three hours per week. Meets General Education IIIB or IIIC.**

144. ENVIRONMENTAL MATHEMATICS **3 hours credit**
Systems approach to environmental concepts and problems. A principal tool is the Odum diagrammatic systems language, translated into flow equations which are then implemented by computer models. **Prerequisite:** High school Algebra II and plane geometry. **Three hours per week. Meets General Education IIIB or IIIC.**

155. MODERN STATISTICS WITH COMPUTER ANALYSIS **3 hours credit**
Descriptive and inferential analysis of raw data, emphasizing appropriate assumptions, computer use and interpretation. Consideration of parametric and nonparametric methods and comparison of their powers. Intended for students in the social and natural sciences. Credit may not be received for more than one: MATH 151, 155 or 213. **Prerequisite:** High school Algebra II and plane geometry. **Three hours per week. Meets General Education IIIB or IIIC.**

160. INTRODUCTION TO APPLIED CALCULUS **3 hours credit**
Introductory study of differential and integral calculus with emphasis on techniques and applications. For students in the biological, management, social and behavioral sciences. **Prerequisite:** High school Algebra II and plane geometry. **Three hours per week. Meets General Education IIIB or IIIC.**

165. INTRODUCTION TO MATHEMATICAL MODELING **3 hours credit**
Study of the fundamentals of mathematical modeling, including standard functions, qualitative aspects of graphs, rate of change, changing scales, finding perfect fits, looking for good fits and modeling activities. This course may be delivered over the Internet; students will be notified of this in the *Registration Bulletin*. In this case, interaction would primarily be via asynchronous discussions in threaded conference area, similar to an Internet newsgroup. **Prerequisite:** High school Algebra II or MATH 102. **Three hours per week. Meets General Education IIIB or IIIC.**

200. MATHEMATICS AND CULTURE **3 hours credit**
Promotes appreciation of the beauty and structure of mathematics and its role in culture. Mathematical concepts are applied to societal and environmental issues and problems. **Prerequisite:** ENGL 101, high school Algebra II and plane geometry. **Three hours per week. Meets General Education IIIB or IIIC.**

201, 202. CALCULUS I, II **4 hours credit each**
Introduction to analytic geometry, limits, continuity, derivatives of elementary functions, applications of the derivative, integrals, infinite series, applications and techniques of integration. MATH 202 is a continuation of 201. **Prerequisite:** Trigonometry and MATH 102 or equivalent. **Four hours per week each. Meet General Education IIIB or IIIC.**

210. INTRODUCTION TO DISCRETE MATHEMATICS **3 hours credit**
Introduction to basic techniques and modes of reasoning for discrete problem solving. Set theory, recurrence relations, counting, graphs and lattices. **Prerequisites:** MATH 102 or equivalent. **Three hours per week. Meets General Education IIIB or IIIC.**

213. STATISTICAL THINKING **4 hours credit**
Descriptive and inferential analysis of data, emphasizing appropriate assumptions, computer use, and interpretation. Parametric and non parametric methods will be compared and contrasted throughout the course. May not be taken for credit if student has credit for MATH 151 or 155. **Prerequisite:** MATH 160 or 201. **Three hours lecture, two hours laboratory per week.**

306. LINEAR ALGEBRA **3 hours credit**
Basic concepts of vector spaces, linear transformations, matrices, determinants and systems of linear equations. **Prerequisite:** MATH 202. **Three hours per week.**

309. MATHEMATICAL PHYSICS **3 hours credit**
Survey of the most important mathematical tools of classical physics. Topics include coordinate systems, complex algebra, matrix algebra, Fourier series and applications, differential equations (wave equation, Schrodinger's equation), and vector calculus (gradient, divergence, curl, Stokes' and Green's theorems). Credit may not be received for both MATH/PHYS 309. **Corequisites:** PHYS 223, MATH 310. **Four hours lecture/activity per week.**

310. CALCULUS III **4 hours credit**
Arc length, indeterminate forms, Euclidean spaces, functions of several variables, partial differentiation, multiple integrals. **Prerequisite:** MATH 202. **Four hours per week.**

311. DIFFERENTIAL EQUATIONS I **4 hours credit**
Solutions of 1st and 2nd order equations and their applications: separable, exact, homogeneous, linear. Numerical and series solutions of ordinary and partial differential equations. **Prerequisite:** MATH 310. **Four hours per week.**

313. SURVEY DESIGN AND SAMPLING **3 hours credit**
Peculiarities of sampling and inference commonly encountered in business, the social sciences and natural resources management. Methods for selecting the sample from an existing population and ways for circumventing various difficulties. **Prerequisite:** Statistics course. **Three hours per week. Meets General Education IIIB or IIIC.**

314. INTERMEDIATE APPLIED STATISTICS **3 hours credit**
Optimal allocation of sampling units to treatments in order to provide the highest accuracy and lowest cost. Designs compared and contrasted for advantages and disadvantages. Introduces standard computer packages (SPSS, BMD, Minitab, etc.). **Prerequisite:** Statistics course. **Three hours per week. Meets General Education IIIB or IIIC.**

362. MATHEMATICAL FOUNDATIONS OF COMPUTER SCIENCE **3 hours credit**
Applications of discrete mathematics to computer science and introduction to the theory of computation. Topics include automata and formal languages, computability by Turing machines and recursive functions, undecidability and computational complexity. Cross-listed as COSC 362. **Prerequisite:** COSC 120, MATH 210. **Three hours per week.**

380. INTERNSHIP **3 hours credit**
Students work under supervisors in a local firm or public institution in conjunction with an advisor from the math department. Cross-listed with COSC 380. MATH/COSC 380 may be taken twice for a maximum of six credits, but used only once toward a major in mathematics or computer science. **Pre-requisite:** Approval of department chair. **Eight-to-ten hours per week. (P/F)**

390. UNDERGRADUATE RESEARCH PROJECT **1-3 hours credit**
Offers study of some area of the mathematical sciences in more depth than is possible in the usual classroom setting. Students work on a project under the direction of faculty

members. **Prerequisite:** Department chair and research committee approval. (P/F)

402. THEORY OF NUMBERS **3 hours credit**
Basic concepts: integers, prime numbers, divisibility, congruencies and residues. **Prerequisite:** MATH 210 and/or 306 (both recommended). **Three hours per week. Meets General Education IIIB or IIIC.**

406. GEOMETRIC STRUCTURES **3 hours credit**
Axiomatic development of incidence, ordered incidence, affine and absolute geometries; investigation of Euclidean and non-Euclidean geometries. **Prerequisite:** MATH 210. **Three hours per week. Meets General Education IIIB or IIIC.**

409. ADVANCED MATHEMATICAL PHYSICS **3 hours credit**
Survey of the more advanced topics in mathematical physics. Topics include linear operators, complex variables, partial differential equations, Hilbert space and group theory and calculus of variations. **Prerequisites:** MATH 309, 311. **Three hours lecture per week.**

413. MATHEMATICAL STATISTICS I **3 hours credit**
Axioms and algebra of probability, discrete and continuous random variables, multivariate distributions, limit theorems. **Prerequisites:** MATH 213, 310. **Three hours per week.**

414. MATHEMATICAL STATISTICS II **3 hours credit**
Methods of estimating, properties of estimator, hypothesis testing, linear models, least squares, analysis of variance, enumerative data, nonparametric statistics. **Prerequisite:** MATH 413. **Three hours per week.**

441. ABSTRACT ALGEBRA I **3 hours credit**
Introduction to the theory of groups, rings, integral domains and fields, including basic properties of polynomials. **Prerequisite:** MATH 210 and/or 306 (both recommended). **Three hours per week. Meets General Education IIIB or IIIC.**

442. ABSTRACT ALGEBRA II **3 hours credit**
Modern abstract algebra including such topics as rings, polynomials and fields. Other topics may include algebraic coding, Boolean algebras, symmetry and mathematical crystallography, applications of finite fields to computer science. **Prerequisite:** MATH 441. **Three hours per week.**

451. ANALYSIS I **3 hours credit**
Modern abstract analysis including topology of the real number system, sequences, continuity and differentiability. **Prerequisites:** MATH 202, 210. **Three hours per week.**

452. ANALYSIS II **3 hours credit**
Modern abstract analysis including such topics as convergence of infinite series, sequences of functions, metric spaces, integration, topology of the real number system and continuity. **Prerequisite:** MATH 451. **Three hours per week.**

460. OPERATIONS RESEARCH **3 hours credit**
Introduction to the fundamental problems of operations research. Topics include mathematical programming, network analysis, simulation, probabilistic decision models, queuing and inventory models. **Prerequisite or Corequisite:** MATH 306. **Three hours per week.**

465. MATHEMATICAL MODELS AND APPLICATIONS **3 hours credit**
Mathematical basis for model building; examples of simple models for uncomplicated systems in biology, psychology, business and other fields; finite Markov process; models for growth process. **Prerequisite or Corequisite:** MATH 306. **Three hours per week.**

471. NUMERICAL METHODS **3 hours credit**
Interpolation, functional approximation, numerical differentiation and integration, non-linear equations, systems of linear equations, analysis of error. **Prerequisite:** MATH 311, programming experience. **Three hours per week.**

475. INTRODUCTION TO DYNAMICS AND CHAOS **3 hours credit**
Introduction to mathematical dynamics and chaos. Topics include orbits, bifurcations, Cantor sets and horseshoes, symbolic dynamics, fractal dimension, notions of stability, flows and chaos. Includes motivation and historical perspectives, as well as examples of fundamental maps studied in dynamics and applications of dynamics. **Prerequisite:** MATH 311. **Three hours per week.**

480. HISTORY OF MATHEMATICS **3 hours credit**
Study of the chronological development of mathematics with emphasis on both the mathematical concepts and the principal contributors to the development of those concepts. **Prerequisite:** MATH 202 or 210 (both recommended). **Three hours per week.**

482. COMPUTER GRAPHICS **3 hours credit**
Generate and manipulate graphic information using the computer. Emphasis on the analysis of fundamental problems associated with these activities and on the structured design of solutions. Cross-listed with COSC 482. May not be taken for credit if student has credit for COSC 482. **Prerequisites:** COSC 120 and MATH 306. **Three hours per week.**

490. SPECIAL TOPICS **3 hours credit**
Enables study in specialized areas such as complex variables, logic, non-Euclidean geometry or other topics suggested by faculty or students. May be taken twice under different titles recorded by the registrar. **Prerequisite:** (For most topics) MATH 306, 310. **Three hours per week.**

493. ADVANCED TOPICS IN STATISTICS **3 hours credit**
Study in specialized areas of statistics such as time series, stochastic processes, quality control designs and analyses or other topics suggested by faculty or students. May be repeated once under different subtitles recorded by the registrar. **Prerequisites:** MATH 213 (or equivalent proficiency in statistics) and permission of instructor. **Three hours per week.**

495. DIRECTED CONSULTING **4 hours credit**
Provides teams of 3-12 students with experience in using mathematical and computing tools to solve real-world problems posed by a client organization, such as a research institute, business or industry. Combines individual and group work and requires presentation of a written and oral report to the client organization and the department. Cross-listed with COSC 495. MATH/COSC 495 may be taken twice for a maximum of eight credit hours, but used only once toward a major in mathematics or computer science. **Prerequisite:** Invitation by the department. **Four hours per week. (P/F)**

Clinical Laboratory Science/ Medical Technology (MDTC)

101. SAFETY IN THE BIOLOGICAL, CHEMICAL AND CLINICAL LABORATORY **1 hour credit**
Review of laboratory safety. Summary of government laws and regulatory bodies and their effect on lab policy. Illustrations of proper procedures for laboratory hazards. Topics include chemicals, infectious microbes, animals, fire, electrical equipment, radiation, glassware and compressed gases. Training in the use of safety equipment, protective clothing and general first aid. Student may not earn credit for both MDTC 101 and BIOL 115. **One hour per week.**

201. MEDICAL PHYSIOLOGY

4 hours credit

Presentation of human physiology at the cell and organ levels to include the nervous, skeletomuscular, cardiovascular, excretory, digestive, respiratory and endocrine systems. Emphasis on normal function and medical relevance. **Prerequisite:** General biology or BIOL 122. **Three hours lecture, two hours laboratory per week.**

300. PRINCIPLES OF CLINICAL LABORATORY SCIENCE

4 hours credit

Introduction to clinical laboratory science including use of laboratory equipment, safety, ethics, diagnostic and prognostic use of testing, specimen collection and handling, statistics, quality assurance and quality control, microscopy, particle counting techniques, components of blood, WBC differentiation, spectrophotometry, methods comparison, lab math, lab computerization, and professional communication methods. **Prerequisites:** CHEM 121, 122; BIOL 101, 121, 122 or 215. **Three hours lecture, two hours lab per week.**

301. HEMATOLOGY I

4 hours credit

Hematopoiesis, red blood cell production and destruction, non-neoplastic leukocyte disorders and lupus erythematosus; blood cell metabolism and hemoglobin synthesis. Laboratory focuses on normal/abnormal patient differentiation using CBC, microscopic analysis and clinical correlations. **Prerequisite:** MDTC 300 and permission of instructor. **Three hours lecture, three hours laboratory per week.**

311. CLINICAL MICROBIOLOGY I

4 hours credit

Study of bacterial disease and diagnostic methods through review of bacterial physiology and biochemistry as related to lab identification protocols. Emphasizes bacterial isolation from anatomical sites in both compromised and normal hosts and studies antibiotics by modes of action and susceptibility patterns. **Prerequisite:** MDTC 300, BIOL 323 and permission of instructor. **Three hours lecture, three hours laboratory per week.**

331. DIAGNOSTIC IMMUNOLOGY

4 hours credit

Basic biology and pathological disorders of the human system are reviewed. Presentation and performance of medical laboratory and techniques for clinical diagnosis utilizing immunochemical, molecular and automated techniques. **Prerequisite:** CHEM 121, 122, BIOL 121 and 122 or BIOL 215 and 216. **Three hours lecture and three hours lab per week.**

341. CLINICAL BIOCHEMISTRY I

5 hours credit

Clinical analytes assayed on a routine basis in the clinical chemistry laboratory. Normal physiology and change of analyte in disease are presented related to carbohydrate, protein and mineral metabolism, liver, cardiac and pancreatic function, enzymology, electrolyte and acid-base balance; blood gases; body fluid analysis; and evaluation of kidney function via chemical and microscopic methods. **Prerequisite:** CHEM 321; BIOL 121 and 122, or 215 and 216, or BIOL 101 and MDTC 201; and MDTC 300. **Four hours lecture, three hours laboratory per week.**

401. HEMATOLOGY II

3 hours credit

Lymphomas, leukemias, myeloproliferative and myelodysplastic syndromes, plasma cell dyscrasias, special hematology procedures and hemostasis. Topics include cytochemical staining, coagulation assays, bleeding disorders and quality control. **Prerequisites:** MDTC 301, permission of instructor. **Two hours lecture, three hours laboratory per week.**

402. HEMATOLOGY III

3 hours credit

Advanced instruction and laboratory experience in hematology and coagulation. Lecture and laboratory conducted in a clinical laboratory under the supervision of registered laboratory scientists. Students apply knowledge of prerequisite

coursework to the daily operation of the hematology laboratory. **Prerequisites:** MDTC 301, 401. **Five hours lecture, 35 hours laboratory per week.**

403. URINE AND BODY FLUID ANALYSIS

1 hour credit

Advanced study of the physical, chemical and microscopic analysis of urine and body fluids under the supervision of registered laboratory scientists in a clinical setting. Students apply knowledge of prerequisite coursework to daily operation to include instrumentation, quality assurance and significance of normal and abnormal results. **Prerequisites:** MDTC 341 and consent of instructor. **Five hours lecture, 35 hours laboratory per week.**

411. CLINICAL MICROBIOLOGY II

4 hours credit

Study of human viral, fungal and parasitic pathogens. Emphasis on body sites where these pathogens cause disease and on microscopic, biochemical and molecular methods utilized to identify them. Parasitology includes life cycles with emphasis on human acquisition. **Prerequisites:** MDTC 311, permission of instructor. **Three hours lecture, three hours laboratory per week.**

412. CLINICAL MICROBIOLOGY III

3 hours credit

Advanced study of clinical microbiology conducted in a clinical setting under the supervision of registered laboratory scientists. Students apply knowledge of prerequisite courses to the operation of automated equipment, processing and interpretation of routine, fungal and mycobacterial cultures, antimicrobial susceptibility testing, virology, parasitology specimens and quality control. **Prerequisites:** MDTC 311, 411 and consent of instructor. **Five hours lecture, 35 hours laboratory per week.**

413. CLINICAL IMMUNOLOGY

1 hour credit

Advanced study of diagnostic immunology in a clinical setting under the supervision of registered laboratory scientists. Students apply knowledge of prerequisite coursework to problems of instrumentation, quality assurance and significance of normal and abnormal results. **Prerequisites:** MDTC 411, BIOL 333 and consent of instructor. **Five hours lecture, 35 hours laboratory per week.**

431. INTRODUCTION

TO TRANSFUSION SERVICES

3 hours credit

Lecture and laboratory related to the study of blood group antigens, antibodies and transfusion therapy. Topics include antigen typing, atypical antibody identification, donor screening and phlebotomy, component preparation and therapy, cell metabolism and preservation, HLA typing and paternity testing, quality control, hazards of transfusion and medicolegal issues. **Prerequisite:** BIOL 333, MDTC 301. **Two hours lecture, three hours laboratory per week.**

432. CLINICAL PRACTICE

IN TRANSFUSION SERVICES

3 hours credit

Advanced instruction and laboratory experience in immunohematology. Lecture and laboratory conducted in a transfusion service under the supervision of registered laboratory scientists. Students apply knowledge of prerequisite coursework to the daily operation of a transfusion service laboratory including component therapy, cellular antigen and antibody identification and compatibility testing, transfusion risks, and quality control. **Prerequisite:** MDTC 431. **Three hours lecture, 35 hours laboratory per week.**

441. CLINICAL BIOCHEMISTRY II

4 hours credit

Advanced clinical chemistry topics including immunochemistry, radioactivity, chromatography, toxicology, therapeutic drug monitoring, quality control and method evaluation. Emphasis related to human endocrinology, gastric and muscle function, genetic defects, vitamin and lipid metabolism. **Prerequisite:** MDTC 341. **Three hours lecture, three hours laboratory per week.**

442. AUTOMATED CLINICAL CHEMISTRY 2 hours credit

Advanced study of clinical chemistry, respiratory therapy and computer operations in a clinical setting under the supervision of registered laboratory scientists. Students apply knowledge from prerequisite courses to the operation of automated and manual equipment, troubleshooting, assessment of normal and abnormal values as related to routine analyte pathology, assurance of accuracy and precision of laboratory data. **Prerequisites:** MDTC 341, 441. **Five hours lecture, 35 hours laboratory per week.**

443. SPECIAL CLINICAL CHEMISTRY 3 hours credit

Advanced instruction and laboratory experience in specialized clinical chemistry. Lecture and laboratory conducted in a clinical laboratory under the supervision of registered laboratory scientists. Students apply knowledge of prerequisite coursework to the daily operation of the clinical laboratory to include operation of automated and manual equipment, troubleshooting, assessment of normal and abnormal laboratory data as related to pathology for analytes measured on a non-routine basis. Study of specialized procedures involving endocrinology and therapeutic drug monitoring. **Prerequisites:** MDTC 341, 441. **Five hours lecture, 35 hours laboratory per week.**

461. ORGANIZATION AND MANAGEMENT OF THE LABORATORY 2 hours credit

Lecture and practical applications of theories of management and administration to the organization of the clinical laboratory. A unit on education including educational theory, adult education and continuing education. Students prepare written reports on projects concerning these topics throughout the course. Topics include medicolegal issues, impacts of federal regulations on health care, and budget and finance. **Prerequisite:** Permission of instructor. **Two hours lecture.**

471. CLINICAL SEMINAR 1 hour credit

Case studies and examples of "classes" of disease that exemplify the "total" laboratory picture for the student. Physician lectures as well as interdisciplinary and clinical conferences. **Prerequisite:** Permission of instructor. **One hour lecture per week.**

490. INDEPENDENT STUDY 1-3 hours credit

Intensive study in a specific area of medical laboratory technology negotiated between student and faculty member. May be taken twice under different course subtitles recorded with the registrar. **Prerequisite:** Permission of instructor. **Lecture, laboratory hours per week depend on topic.**

Military Science (MISC)**105. ORGANIZATIONAL LEADERSHIP I 1 hour credit**

Concepts of leadership and management skills at basic organizational levels covered; practical exercises employing leadership concepts used; interpersonal communications, decision-making/problem-solving processes and confidence-building skills stressed. **One hour per week.**

106. ORGANIZATIONAL LEADERSHIP II 1 hour credit

Highlights organization of the Army, fundamentals of leadership, first aid and problem-solving techniques. Covers thorough orientation to map reading and land navigation. Includes involvement in the spring awards ceremony, providing freshmen military science students their first exposure to drill and ceremonies. Includes field trip that tests leadership fundamentals by giving each student an opportunity to be in charge of a 10-12 person group as they negotiate a series of obstacles. The field trip also enhances group decision-making skills. **Prerequisite:** MISC 105 or consent of chair. **One hour per week.**

205. MILITARY SKILLS I 2 hours credit

Introduces students to basic soldier skills as they apply to life-leadership situations. Emphasis on physical fitness and diet/nutrition reinforces "health as a lifestyle." Drills, ceremonies and management simulations teach teamwork and group dynamics in both the leader and follower roles. Includes mandatory weekly drill and one field training exercise. **Prerequisite:** MISC 105 or 106 or consent of chair. **Three hours per week.**

206. MILITARY SKILLS II 2 hours credit

Focuses on developing communication and leadership skills in students. Emphasis on military skills, including small unit tactics, drill and ceremonies, and map reading. Written and oral communications skills tested and improved. Mandatory weekly drills and occasional field trips. **Prerequisite:** MISC 205 or consent of chair. **Three hours per week.**

290. INDIVIDUAL DIRECTED STUDIES 1-2 hours credit

Students in basic ROTC course explore military science topics in depth. Students outline projects with department chair. May be repeated for a maximum of six credits. **Prerequisite:** Consent of department chair.

301. PHYSICAL TRAINING LEADERSHIP 1 hour credit

Prepares cadets for participating in and conducting Army physical training sessions. Emphasizes proper conduct of exercises, formation runs and handling formations. Students must take the Army physical fitness test monthly. May be taken twice for credit. **Prerequisite:** Eligibility for admission to ROTC advanced course. **Three hours per week.**

305. APPLIED LEADERSHIP I 3 hours credit

Military leader's role in today's Army. Emphasis on military drill, basic weapons familiarity and basic military skills. Stresses knowledge of small unit leadership positions. Mandatory weekly drill. **Prerequisites:** MISC 105, 106, 205, 206; or Basic Camp; or consent of instructor. **Five hours per week.**

306. APPLIED LEADERSHIP II 3 hours credit

Completes cadets' preparation for ROTC advanced camp. Covers military tactics at squad and platoon levels, land navigation and military skills. Mandatory weekly drill. **Prerequisite:** MISC 305. **Five hours per week.**

310. SMALL UNIT LEADERSHIP 1 hour credit

Supplemental, concurrent practicum for MISC 306. Students practice military, tactical and leadership skills in a series of weekend field exercises in preparation for ROTC advanced camp. **Prerequisite:** Admission to advanced ROTC course. **Hours variable, three weekend training exercises.**

405. MILITARY MANAGEMENT I 3 hours credit

Emphasis on leadership assignments, effective management of resources, preparation, conduct, evaluation of training and military professional ethics. Prepares cadets for leadership assignments in the Army. Mandatory physical training and weekly drill. **Prerequisite:** MISC 306. **Seven hours per week.**

406. MILITARY MANAGEMENT II 3 hours credit

Focuses on military professional ethics, military law, officer development, counseling techniques, individual leadership assignments and preparation for commissioning as a second lieutenant in the United States Army. Mandatory physical training and drill. **Prerequisite:** MISC 405. **Seven hours per week.**

410. MILITARY MANAGEMENT LAB 2 hours credit

In-depth exploration of military staff skills. Topics include decision-making, mission analysis, staff estimates and staff studies. Cadets practice in a lab setting and plan and review cadet battalion activities. **Prerequisite:** Assignment to cadet battalion staff. **Three hours per week.**

490. ADVANCED INDIVIDUAL DIRECTED STUDIES 1-3 hours credit

Students in advanced ROTC course meet contractual requirements through in-depth study of military science topics. Outline projects with department chair. May be repeated for a maximum of three credits. **Prerequisite:** Consent of the department chair.

Modern Foreign Languages (MDFL)

101. ELEMENTARY LANGUAGE STUDY I 3 hours credit
Exploration and study of languages not normally in the fixed curriculum. May be repeated once under a different subtitle. **Three hours per week. Meets General Education IB.**

102. ELEMENTARY LANGUAGE STUDY II
Second semester opportunity for exploration and study of languages not normally offered in the fixed curriculum. May be repeated once under a different subtitle. **Three hours per week. Meets General Education IB.**

111. ELEMENTARY SIGN LANGUAGE I 3 hours credit
Beginning study of American Sign Language including the culture of deaf people. **Three hours per week. Meets General Education IB.**

112. ELEMENTARY SIGN LANGUAGE II 3 hours credit
Continuation of skill development and vocabulary and sign acquisition of American Sign Language including the culture of deaf people. **Prerequisite:** MDFL 111 or one year of high school sign language or equivalent experience. **Three hours per week. Meets General Education IB.**

241. THE FRENCH PEOPLE 3 hours credit
Study of contemporary French culture. The uniqueness of French mentality is studied through the language, the traditions and customs of the people. Taught in English. **Three hours per week. Meets General Education IB.**

245. THE GERMAN PEOPLE 3 hours credit
Cross-cultural approach to the study of the German culture through the language, traditions and the lifestyle of the people. Taught in English. **Three hours per week. Meets General Education IB.**

246. THE RUSSIAN PEOPLE 3 hours credit
Focus on the people of Russia. Major topics include culture, politics, nationalism, health care, education, religion, ethnic conflict. Provides students with a well rounded view of Russian society as it exists today. Taught in English. **Three hours per week. Meets General Education IB.**

248. STUDIES IN CONTEMPORARY CULTURES 3 hours credit
Exploration and study of the ways of life and contemporary culture of peoples of the industrialized world not normally studied as a part of the fixed curriculum. May be repeated once under a different subtitle. Taught in English. **Three hours per week. Meets General Education IB.**

300. STUDIES IN FRENCH LITERATURE IN TRANSLATION 3 hours credit
Study of an author, period, movement, genre or theme. Topic varies semester to semester. Taught in English. May be repeated once with new content and different subtitle. **Prerequisite:** ENGL 102 or consent of department chair. **Three hours per week. Meets General Education IA.**

399. INTERNATIONAL FIELD STUDY 1-6 hours credit
On-site study of the geography, history and culture of selected foreign countries. Work in field preceded by pre-tour lectures. May be repeated with new content and different subtitle.

Music (MUSA, MUSC)

MUSA

100. UNIVERSITY CHORALE 1 hour credit
Non-auditioned ensemble of mixed SATB voices which performs a variety of choral literature from all music periods and styles. Membership open to all students. Some singing ability and understanding of musical notation expected. **Two hours per week.**

101. UNIVERSITY BAND 1 hour credit
Non-auditioned ensemble open to all University wind and percussion students who wish to continue their performance experience at the university level. Performances include select athletic events, on-campus functions and special activities. **Two hours per week.**

102. JAZZ ENSEMBLE 1 hour credit
Study and performance of a variety of jazz styles ranging from the "Big Band" sound to contemporary and "fusion" forms and development of jazz improvisation skills. Membership open to all students. **Prerequisite:** Strong performance background, sight-reading skills, comprehensive musicianship preferred. **Two hours per week.**

103. CHAMBER MUSIC ENSEMBLES 1 hour credit
Study, rehearsal and performance of selected works for small ensembles, both vocal and instrumental (designated by the department for any given semester). Advanced students with prior performing experience and full-time undergraduate students only. **Prerequisites:** Audition, approval of the instructor/department in writing. **Two hours per week.**

105. SYMPHONY ORCHESTRA 1 hour credit
Study and performance of standard orchestral literature and contemporary compositions. Membership required of string majors; open to wind and percussion students by audition. **Four hours per week.**

106. CHAMBER CHOIR 1 hour credit
Selected choral ensemble whose members assume individual responsibility for professionalism, commitment, awareness of musical objectives and excellence in performance. Attendance at all rehearsals mandatory; outside preparation required to equalize differing levels of ability. Required for voice majors; open to all students by audition only. **Four hours per week.**

107. WIND ENSEMBLE 1 hour credit
Select ensemble of wind and percussion instrumentalists. Performance of "chamber" and "large" ensemble repertoire spanning all musical epochs. Required of instrumental music majors; open to non-majors by audition only. Attendance at all rehearsals and performances mandatory. **Four hours per week.**

108. CLASS VOICE I 2 hours credit
Introduction to vocal techniques through voice placement, breathing, tone production and diction. Recommended for the general student as well as students interested in musical theatre and communication arts. Includes introduction to art song literature and musical theatre repertoire. **Two hours per week.**

131. ACCOMPANYING 1 hour credit
Designed for ensemble work in instrumental and vocal studies. Four semesters required for majors with keyboard emphasis. **Prerequisite:** Permission of instructor. **Two hours per week.**

138. APPLIED MUSIC I 1-2 hours credit
Study of fundamental skills appropriate to the instrument or voice with survey of basic literature. **Prerequisite:** Entrance audition, permission of chair. **One half-hour meeting per week per credit.**

139. APPLIED MUSIC II 1-2 hours credit
Continues MUSC 138 with study of fundamental voice or instrument skills and survey of relevant literature. **Prerequisite:** Successful panel evaluation at the conclusion of MUSC 138. **One half-hour meeting per week per credit.**

205, 206. CLASS PIANO I AND II 2 hours credit each
Group piano instruction with individual help, to develop fundamental piano techniques and pianistic style through acquaintance with a wide variety of piano literature. Each course may be repeated once for credit. **Prerequisite:** MUSC 200 or equivalent; Piano I a prerequisite to Piano II. **Two hours per week.**

209, 210. CLASS GUITAR I AND II 1 hour credit each
Fundamentals of six-string guitar techniques, chords and basic classical guitar using musical notation, accompaniment styles, melodies and appropriate literature. Each may be repeated once for credit. **Prerequisite:** MUSC 200 or approval of instructor; Guitar I a prerequisite to Guitar II. **Two hours per week.**

213. SINGER'S DICTION I 1 hour credit
Introduction to the international phonetic alphabet (IPA) and the application of English and Italian diction to contemporary English and 18th century Italian art song literature. Required for vocal track. **Corequisite:** Applied voice study. **Two hours per week.**

214. SINGER'S DICTION II 1 hour credit
Continued study of diction through application of the international phonetic alphabet (IPA) and German and French diction to German "Lieder" and French "Melodie." Required for vocal track. **Prerequisite:** MUSA 213. **Corequisite:** Applied voice study. **Two hours lab per week.**

238. APPLIED MUSIC III 1-2 hours credit
Continues MUSC 139 with study of fundamental voice or instrument skills and survey of relevant literature. **Prerequisite:** Successful panel evaluation at the conclusion of MUSC 139. **One half-hour meeting per week per credit.**

239. APPLIED MUSIC IV 1-2 hours credit
Continues MUSC 238 with study of fundamental voice or instrument skills and survey of relevant literature. **Prerequisite:** Successful panel evaluation at the conclusion of MUSC 238. **One half-hour meeting per week per credit.**

315, 316. CLASS PIANO III AND IV 2 hours credit each
Continuation of skills developed in Piano I and II plus keyboard harmony through simple modulation, transposition, improvisation and accompaniment techniques and ensemble playing. **Prerequisites:** MUSC 200, 205, 206 or equivalent proficiency level as determined by instructor. Piano III is a prerequisite for Piano IV. **Three hours per week.**

338. APPLIED MUSIC V 1-2 hours credit
Continues MUSC 239 with study of fundamental voice or instrumental skills and survey of relevant literature. **Prerequisite:** Successful panel evaluation at the conclusion of MUSC 239. **One half-hour meeting per week per credit.**

339. APPLIED MUSIC VI 1-2 hours credit
Continuation of MUSC 338. **Prerequisite:** Successful panel evaluation at the conclusion of MUSC 338, permission to prepare for a public recital. **One half-hour meeting per week per credit.**

390. DIRECTED INDEPENDENT STUDY 1-3 hours credit
Tutorial for students who need and are qualified to do specialized independent study in areas not covered by courses offered in any semester. May include research in a selected musical form, composer or style, individual study and completion of specified exercises in one area of music theory

or composition, or individual study of an instrument to develop specialized performance skills; all projects culminating in appropriate evaluation. May be repeated for a maximum of six credits. **Prerequisite:** Approval in writing of department chair and supervising faculty member prior to registration, with the area of work to be specified in writing.

411. APPLIED MUSIC I 1-2 hours credit
An advanced course in performance techniques using a wide variety of literature. A solo recital (alone or sharing a program with other students) encompassing music of many styles and periods is a required culmination. Students will elect one performing medium (piano or voice or organ or other instrument) and must have completed the fourth course in the sequence for the instrument as a prerequisite. Each course may be repeated for credit once.

412. APPLIED MUSIC II 1-2 hours credit
Advanced course in performing techniques using a wide variety of literature. A solo recital (alone or sharing a program with other students) encompassing music of many styles and periods as a required culmination. Students elect one performing medium (piano, voice, organ or other instrument) and must have completed the fourth course in the sequence for the instrument as a prerequisite. Each course may be repeated once for credit.

417, 418. CLASS PIANO V AND VI 2 hours credit each
Continuation of technical and performance skills from Piano IV. For students who require additional study for applied music or for those who wish to continue study below the applied music level.

438. APPLIED MUSIC VII 1-2 hours credit
Continues MUSC 339 with study of fundamental voice or instrument skills and survey of relevant literature. **Prerequisite:** Successful panel evaluation at the conclusion of MUSC 339. **One half-hour meeting per week per credit.**

439. APPLIED MUSIC VIII 1-2 hours credit
Continuation of MUSC 438 with a concentration on selected literature appropriate for a public recital. Must be approved by chair. **Prerequisite:** Successful panel evaluation at the conclusion of MUSC 339. **One half-hour meeting per week per credit.**

MUSC

111. THE DEVELOPMENT OF POPULAR MUSIC IN AMERICAN CULTURE 3 hours credit
Popular music from the Revolutionary War to present examined in light of social, political, cultural and technological influence and change. **Three hours per week. Meets General Education IB.**

112. CREATIVITY AND ELECTRONIC/ ACOUSTIC MUSIC 3 hours credit
Stylistic, technical and intuitive aspects of music examined through listening, discussion and creative exercises. Students explore their creative potential in music and are familiarized with newer techniques of composition including synthesized music. **Three hours per week. Meets General Education IB.**

114. MUSIC APPRECIATION 3 hours credit
Historical survey of musical styles and forms from the Renaissance, Baroque, Classical and Romantic periods to the music of the 20th century. Required of music majors; open to the general student. **Three hours per week. Meets General Education IB.**

115. EXPLORING AND ENJOYING MUSIC 3 hours credit
Examines the perceptive listening and understanding of the great classics in music. Students introduced to each work

through filmstrips, recordings and other audiovisual materials. Open to the general student. **Three hours per week. Meets General Education IB.**

200. MUSIC FUNDAMENTALS 3 hours credit
 Develops understanding of musical notation and skills in reading and performing music by singing, playing the piano and various other instruments, studying harmony and melody. Emphasis is placed on the use of music in the general education classroom. Required for elementary education majors. **Three hours per week. Meets General Education IB.**

201. INTRODUCTION TO MUSIC THEORY 3 hours credit
 Principles of music construction based on a historical perspective of music theory in Western culture. Emphasis on the nature of modes and/or tonal centers and the organization of melody, harmony and voice utilizing basic elements of keys, scales, chords, notation and ear training. Prepares students to enter Theory I. Students may not receive credit for both MUSC 120 and 201. **Three hours per week. Meets General Education IB.**

203. THEORY I 4 hours credit
 Investigate and study the foundation of accepted trends in theory and tonal harmony in Western art music. Presents a comprehensive and practical set of tools for understanding music with emphasis upon actual music practices which relate to pitch, rhythm, harmony and structural concepts. Develops practical ear training/sight-singing skills through the use of computer-based technology and traditional methods. **Prerequisite:** MUSC 201. **Five hours per week.**

204. THEORY II 4 hours credit
 Continuation of Theory I with additional emphasis on advanced diatonic progressions, principles of voice leading, non-harmonic tones, finite structures and progressive concepts of modulation. Drill in two-part and three-part writing and analysis. Lab experience assists further development of ear training and sight signing skills through computer-based instruction and traditional methods. **Prerequisite:** MUSC 203. **Five hours per week.**

215. INSTRUMENTAL TECHNIQUES- WOODWINDS 1 hour credit
 Introduction of traditional woodwind instruments and their development in the Western culture. Basic cognitive and psychomotor techniques involving instrument handling, embouchure, breathing, articulation and fingering combinations are discussed, practiced and demonstrated. **Prerequisite:** Music major or approval of instructor. **Two lab hours per week.**

216. INSTRUMENTAL TECHNIQUES- PERCUSSION 1 hour credit
 Introduction to traditional percussion instruments and their development in Western culture. Basic cognitive and psychomotor techniques that involve proper handling and traditional performance practices are discussed, practiced and demonstrated. **Prerequisite:** Music major or approval of instructor. **Two lab hours per week.**

217. INSTRUMENTAL TECHNIQUES- STRINGS 1 hour credit
 Introduction to traditional orchestral string instruments and their development in Western culture. Basic cognitive and psychomotor techniques involving instrument handling, bowing, finger patterns and shifting are discussed, practiced and demonstrated. **Prerequisite:** Music major or approval of instructor. **Two lab hours per week.**

218. INSTRUMENTAL TECHNIQUES- BRASS 1 hour credit
 Introduction to traditional brass instruments and their

development in Western culture. Basic cognitive and psychomotor techniques that involve embouchure, breathing, articulation, fingering combinations and tone production are discussed, practiced and demonstrated. **Prerequisite:** Music major or approval of instructor. **Two lab hours per week.**

303. THEORY III 4 hours credit
 Transition from 18th into 19th century composition practices. Study of advanced chromaticism with emphasis upon tertian harmonic progressions, remote key relationships, secondary chord functions, altered and borrowed chords, augmented-sixth function and enharmonic relationships. Drill in four-part writing and analysis. Advanced sight reading and ear training, with progressive three- and four-part melodic dictation as related to the keyboard and computer-assisted technology. **Prerequisite:** MUSC 204. **Five hours per week.**

304. THEORY IV 4 hours credit
 Emphasis upon late 19th through 20th century composition practices. Investigation of the expansion of tertian and tonal relations. Detailed study of interval class sets, set theory, serialist pandiatonicism, aleatory techniques, electronic music and new metric and timbral resources. Advanced study in computer-assisted ear training, atonal melodic dictation and sight singing. **Prerequisite:** MUSC 303. **Five hours per week.**

305, 306. MUSIC HISTORY I AND II 3 hours credit each
 Music from earliest times to the present, including changing theories of form and composition. Analysis and comparison of prevailing styles in music by representative composers. Music History I covers ancient music through early Baroque. Music History II covers the mature Baroque period through the present, including music of non-Western cultures. **Prerequisite:** MUSC 114 or consent of instructor. **Three hours per week.**

309. CHORAL TECHNIQUES AND METHODS 2 hours credit
 Study of rehearsal techniques for developing appropriate diction, tone, production, intonation, phrasing and interpretation in a choral ensemble. Explores the examination of materials, methods and procedures in organizing school choral ensembles. **Prerequisite:** MUSA 108. **Two hours per week.**

310. CONDUCTING AND SCORE READING 2 hours credit
 Application of basic conducting patterns in expressing a variety of styles, dynamics and tempi; analysis of conductor's score and rehearsal techniques in both choral and instrumental music. **Prerequisite:** Music major. **Two hours per week.**

322. ARTS ADMINISTRATION 3 hours credit
 Introduction to administrative skills for fine and performing arts: programming, budget, public relations, audience development, fund raising and case studies of arts organizations. **Prerequisite:** Department chair approval. **Three hours per week.**

330. INTRODUCTION TO COMPOSITION 3 hours credit
 Study of compositional techniques utilized from the turn of the 20th century until WWII, through analysis, listening, readings and compositional exercises. Final project to include a completed composition to be performed. Once a month, a mandatory, two-hour seminar is held with guest and student presentations with discussion of topics such as current issues, aesthetics, etc. **Prerequisites:** MUSC 200 or 201 or approval of instructor. **Three hours lecture per week.**

403. THE HISTORY OF THE PIANOFORTE AND ITS LITERATURE 3 hours credit
 Comprehensive study of the piano and its predecessors. Traces the history of keyboard instruments, emphasizing the ways in which the development of the instruments interacted with the development of keyboard literature and performance practices. Includes familiarization with the principal keyboard composers,

performers and instrument makers from earliest times to the present. **Prerequisites:** MUSC 200, 110, 114 or approval of instructor. **Three hours per week.**

406. THEORY OF ELECTRONIC MUSIC 3 hours credit
Theoretical approach to the practical application of music synthesis through reading, listening, analysis and studio experience. **Prerequisite:** MUSC 112 or permission of instructor. **Three hours per week.**

408. MODERN MUSIC 3 hours credit
Emergence of new developments from late romantic music through serial and electronic music, including influences of jazz and consideration of social forces and current world events. **Prerequisite:** MUSC 114 or equivalent. **Three hours per week.**

409. INTRODUCTION TO ETHNOMUSICOLOGY 3 hours credit
Study of music of world cultures not associated with the traditional study of Western art music with emphasis on the musics of Eastern Europe; the Near, Middle and Far East; Africa; the Pacific Islands; and native America. **Prerequisites:** MUSC 114 or 110 and 200 or approval of instructor. **Three hours per week.**

410. CHURCH MUSIC 3 hours credit
Designed for the practicing or potential church musician. A practical course dealing with all aspects of the church music program. **Prerequisite:** Approval of instructor. **Three hours per week.**

413. ADVANCED CONDUCTING 2 hours credit
Continues MUSC 310 with review and refinement of skills in conducting. Students develop a common language in which cognitive understanding and psychomotor skills can be aesthetically communicated to an ensemble via the conducting gesture. **Prerequisite:** MUSC 310. **Two hours per week.**

416. AMERICAN MUSIC 3 hours credit
Analysis of musical forces and styles as they reflect the nation's development and America's unique contributions to the growth of music as an art form. **Prerequisite:** MUSC 114 or equivalent. **Three hours per week.**

419. OPERA WORKSHOP 3 hours credit
Musical interpretation and dramatic preparation and performance of vocal repertoire including chamber operas, operatic scenes and short operas from various musical periods. Prior acting training and stage experience recommended. Open to advanced singers; enrollment by audition only. **Three hours per week.**

420. HISTORY OF THE ART SONG 3 hours credit
Study of the history, interpretation and poetic content of Italian, French, German and English art song from the Baroque period to the present. Requires score study as well as textual and musical analysis of representative works with emphasis on compositional styles and performance practices. **Prerequisite:** MUSC 314 or permission of instructor. **Three hours per week.**

422. INTERNSHIP IN ARTS ADMINISTRATION 6-12 hours credit
Training in local, regional or national arts organizations; selected areas of programming, budget, fund raising, audience development and public relations. May be taken once. **Prerequisites:** MUSC 322, department chair approval. **Twenty to 40 hours per week. (P/F)**

425. MUSICAL FORM AND ANALYSIS 3 hours credit
Study of the organizing principles of musical composition and their application to the most prevalent forms through the sonata-allegro and fugue. Analysis of music literature illustrating the basic vocal and instrumental forms and some original

composition in these forms. **Prerequisite or corequisite:** MUSC 303. **Three hours per week.**

426. ARRANGING FOR VOICES AND INSTRUMENTS 3 hours credit
Fundamental techniques of scoring for various cappella and accompanied voice combinations, special characteristics of each choir of instruments, range of voices, selection on suitable literature for treatment in different ensembles, with considerations of style. **Prerequisite or corequisite:** MUSC 304. **Three hours per week.**

427. COUNTERPOINT 3 hours credit
Upper-level elective theory course based on traditional species of counterpoint pedagogy. Emphasis on principles of melodic construction and part-writing. **Prerequisite:** MUSC 204. **Three hours per week.**

428. MAINSTREAMING THE SPECIAL LEARNER IN MUSIC 3 hours credit
Consideration of types of special learners, educational requirements under the law, classroom management and musical activities adapted to special learners. Degree credit allowed for one of the following: EDUC 467, 480 or MUSC 428. **Three hours of lecture per week.**

430. CONTEMPORARY COMPOSITIONAL TECHNIQUES 3 hours credit
Study of post WWII compositional techniques through analysis, readings and original compositions. Once per month, a two-hour composition/theory seminar is offered with guest and student presentations and discussion of topics such as current issues, aesthetics, etc. **Prerequisite:** MUSC 303 or 330 or approval of instructor. **Three hours lecture per week.**

435. CHORAL LITERATURE 3 hours credit
Class investigation and evaluation of choral music for all voice combinations appropriate for elementary school through senior high school and adult ensembles. **Prerequisite:** Approval of instructor. **Three hours per week.**

440. MODERN MARCHING BAND: TECHNIQUES AND MATERIALS 3 hours credit
Detailed work-survey of traditional marching band styles and their adaptation to current trends. **Prerequisite:** Approval of instructor. **Three hours per week.**

441. INSTRUMENTAL LITERATURE 3 hours credit
Class investigation and evaluation of new methods and materials for bands, orchestras and instrumental ensembles. **Prerequisite:** Approval of instructor. **Three hours per week.**

442. MUSIC IN THE RENAISSANCE 3 hours credit
Study of musical forms of the 15th and 16th centuries. Emphasis on Renaissance settings of the mass, the motet, secular music and the development of the Italian madrigal. **Prerequisite:** MUSC 114. **Three hours per week.**

443. MUSIC IN THE BAROQUE PERIOD 3 hours credit
Study of Baroque music from Monteverdi through Bach and Handel. Emphasis on formal and stylistic developments in both sacred and secular music and the evolution of idiomatic writing and instrumental composition. **Prerequisite:** MUSC 114. **Three hours per week.**

444. MUSIC IN THE CLASSICAL PERIOD 3 hours credit
Study of stylistic elements of repertoire from the Mannheim, Viennese and north German traditions through the works of Haydn, Mozart and Beethoven. Emphasis on the development of major instrumental forms and operatic genres. **Prerequisite:** MUSC 114. **Three hours per week.**

445. MUSIC IN THE ROMANTIC PERIOD 3 hours credit
Study of the development of instrumental genres from late

Beethoven through the symphonic poems of Liszt. Emphasis on the art songs and operatic developments from Von Weber to Verdi and Wagner. **Prerequisite:** MUSC 114. **Three hours per week.**

450. STUDIES IN MUSIC 3 hours credit
Study of a single composer, musical form, performance medium or technique, or topic in music education. Topic varies semester to semester. May be taken twice for credit. Possible prerequisite(s) listed according to topic by semester. **Three hours per week.**

490. DIRECTED INDEPENDENT STUDY 1-3 hours credit
Tutorial in any area of music; open to seniors and graduate students. May include continuation of a skills development program begun in the lower-level independent study course, or any type of individual research in music not normally included in courses offered by the department, or individual study of an area needed for teacher certification but not offered by the department in the current semester. Approval in writing of department chair and supervising faculty member prior to registration, with the area of study to be specified in writing. May be repeated for a maximum of six credits.

497. UNDERGRADUATE RESEARCH 1-3 hours credit
Designed to encourage students to pursue an important area of original research in either music history, theory, composition or performance. Allows student to study a subject area in more depth than possible in the traditional classroom setting. Public presentation required. May be repeated for a maximum of six credits. **Prerequisite:** Approval of instructor. **One to three hours per week.**

Nursing (NURS)

309. FOUNDATIONS OF PROFESSIONAL NURSING 3 hours credit
Study of concepts and theories of nursing science in the framework of current health needs including ethical, legal, economic, political and historical perspectives. Explores the role of the nurse emphasizing clinical interventions in health care. Highlights professional communication and critical thinking. **Prerequisites:** BIOL 211, 334; PSYC 300; admission to major. **Three hours per week.**

310. NURSING CARE OF ADULTS I 3 hours credit
Theory related to nursing care of adults with common health problems who need to maintain or regain optimal levels of functioning. Emphasizes problem solving through use of a variety of resources; examines trends and issues relevant to health care in rural communities. **Prerequisites:** NURS 309, 319 (prereq/coreq); BIOL 217, 334; CHEM 121, 122; PSYC 300 or admission to the B.S./M.S. nursing track. **Three hours per week.**

311. NURSING CARE OF ADULTS I CLINICAL 3 hours credit
Application of beginning health assessment skills, nursing knowledge and concepts from the biological and behavioral sciences. Students provide nursing care to adults with common health alterations in acute and long-term care settings and examine trends in gerontological nursing. **Prerequisites:** BIOL 217, 334; CHEM 121, 122; PSYC 300 or admission to B.S./M.S. nursing track. **Corequisites:** NURS 309, 310, 319. **Nine hours per week.**

319. HEALTH ASSESSMENT 3 hours credit
Functional health assessment of individuals from adolescence through older adulthood. Students practice health assessment skills in clinical settings with people of varied ages, social, cultural and economic backgrounds. **Prerequisites:** BIOL 334; CHEM 121, 122; NURS 309 (prereq/coreq); PSYC 300 or admission to the B.S./M.S. nursing track. **Five hours per week.**

322. WELLNESS NURSING 3 hours credit
Focus on concepts of professional nursing in rural areas with an emphasis on health promotion. Concepts include ethical, legal, political, economic and cultural influences. Explores the process of clinical reasoning and professional communication in the provision of nursing care. **Prerequisites:** Admission to B.S./M.S. nursing track; BIOL 334. **Corequisite:** NURS 323. **Three hours per week.**

323. WELLNESS NURSING CLINICAL 1 hour credit
Application of clinical reasoning skills and health promotion principles of nursing care in rural areas. **Corequisite:** NURS 322. **Three hours per week.**

325. LIFE AND DEATH ISSUES IN HEALTH CARE: THE ETHICAL PERSPECTIVE 3 hours credit
Identification, analysis and evaluation of contemporary problems that have resulted from new breakthroughs in biomedicine. Topics include physician-patient relationship, euthanasia, social control, experimentation, genetic engineering, the health care system. Emphasis on developing an ethical framework to deal with these and future biomedical issues. Students cannot receive credit for both NURS 325 and PHIL 315. **Three hours per week. Meets General Education IB.**

329. RESEARCH METHODS IN NURSING 3 hours credit
Provides an understanding of the research process with opportunities to develop critical analysis skills in reading current nursing research and opportunities for conducting limited clinical research projects at a beginning level. **Prerequisites:** NURS 309, MATH 155 or admission to the B.S./M.S. nursing track. **Three hours per week.**

350. NURSING CARE OF ADULTS II 3 hours credit
Advanced study of the theory necessary for providing nursing care to seriously ill adults from illness through rehabilitation and recovery. Examines trends in provision of critical and rehabilitative care in rural settings and selected issues related to women's health. **Prerequisites:** NURS 310, 311, 319, 329 (prereq/coreq). **Three hours per week.**

351. NURSING CARE OF ADULTS II CLINICAL 3 hours credit
Advanced clinical course in caring for adults as they progress from serious illness through rehabilitation and recovery. Clinical sites include acute care, specialty rotations (ICU, ER, CCU), home health agencies and rehabilitation settings. **Prerequisites:** NURS 310, 311, 319. **Corequisites:** NURS 329, 350. **Nine hours per week.**

360. NURSING CARE OF CHILDREN AND ADOLESCENTS: A FAMILY CENTERED APPROACH 3 hours credit
Study of theory related to nursing care of children and adolescents with acute and chronic disorders. Integrates concepts from previous courses in the natural, behavioral and nursing sciences and introduces theories of structure, development and function of families. **Prerequisites:** NURS 310, 311, 319, 329 (prereq/coreq). **Corequisite:** NURS 361. **Three hours per week.**

361. CARE OF CHILDREN AND ADOLESCENTS CLINICAL 3 hours credit
Prepares beginning practitioners to provide nursing care to children, adolescents and their families in a variety of rural health settings. Clinical practice will be guided by the objectives of Healthy People 2000. **Prerequisites:** NURS 310, 311, 319. **Pre/ or Corequisites:** NURS 329. **Corequisite:** 360. **Nine hours per week.**

370. MATERNAL NEWBORN NURSING: A FAMILY CENTERED APPROACH 3 hours credit
Study of theory related to nursing care of childbearing families in rural communities. Explores social and health care issues

related to changing needs of women across the life span.
Prerequisites: NURS 310, 311, 319, 329 (prereq/coreq).
Corequisite: NURS 371. **Three hours per week.**

**371. MATERNAL NEWBORN
 NURSING CLINICAL 3 hours credit**

Provides nursing care to the child-bearing family in primary and acute care settings. Applies selected theories related to structure, development and function of families. Clinical practice will be guided by the objectives of Healthy People 2000.
Prerequisites: NURS 310, 311, 319. **Corequisites:** NURS 329, 370. **Nine hours per week.**

380. PSYCHIATRIC-MENTAL HEALTH 3 hours credit

Study of theory related to the prevention and nursing care of individuals and families with psychosocial problems. Focuses on communication with clients in community and hospital settings with emphasis on mental illness in rural areas. Considers mental health needs of all age groups with special regard for cultural differences. **Prerequisites:** PSYC 302; NURS 310, 311, 319, 329 (prereq/coreq). **Three hours per week.**

**381. PSYCHIATRIC-MENTAL HEALTH
 CLINICAL 3 hours credit**

Clinical application of nursing theory and process focused on the prevention and nursing care of psychosocial problems in individuals and families. Focus on therapeutic communication with clients in a psychiatric hospital and clients with psychosocial needs in the community. **Prerequisites:** PSYC 302; NURS 310,311,319, 329. **Corequisite:** NURS 380. **Nine hours per week.**

405. NURSING EXTERN SEMINAR 3 hours credit

Supervised practicum to assist students in applying the nursing process. Explores concerns of the beginning practitioner including role conflict and role transition, clarification of values and reality shock. Students refine skills in assertiveness, clinical decision making, application of change theory and conflict resolution, and participate in activities of employed registered nurses. **Prerequisite:** NURS 351 with a C or better. **Co-requisite:** Placement in a health care agency with one-to-one RN preceptorship and clinical contact of 30 hours per week.

415. SPECIAL TOPICS IN NURSING 1-3 hours credit

Study of a selected area of nursing. Topics may vary semester to semester. Provides an opportunity for curriculum innovation or meeting the special needs or interests of undergraduate and graduate students. May be repeated for credit under different subtitles. **One to three hours lecture, zero to two hours laboratory per week.**

**422. NURSING OF CHILDBEARING AND
 CHILDREARING FAMILIES 3 hours credit**

Focus on nursing care to childbearing and childrearing families, and exploration of current, applicable research. Self-care and participation of family members emphasized. Topics include conditions that place the client at risk and selected acute and chronic childhood disorders. **Prerequisites:** NURS 310, 311, 319, 322, 323; BIOL 334. **Corequisite:** NURS 423. **Three hours per week.**

**423. NURSING OF CHILDBEARING AND
 CHILDREARING FAMILIES CLINICAL 3 hours credit**

Focus on use of nursing process with childbearing and childrearing families in rural community settings and in acute care settings, both rural and urban. Emphasis on assisting clients in promoting, maintaining and/or regaining health. Students focus on clinical practice as they develop knowledge, psychomotor skills and professional values. Developmental and family theories stressed. **Prerequisites:** NURS 310, 311, 319, 322, 323; BIOL 334. **Corequisite:** NURS 422. **Nine hours per week.**

**430. COMMUNITY HEALTH NURSING:
 A RURAL PERSPECTIVE 3 hours credit**

Focus on the theory of health of families, aggregated and communities with complex needs. Explores political, ethical, legal and sociocultural climates and theory related to the health care needs of an aging population. **Prerequisites:** NURS 329, 351, 361, 371, 381, 431 (coreq). **Three hours per week.**

**431. COMMUNITY HEALTH NURSING PRACTICUM:
 A RURAL PERSPECTIVE 3 hours credit**

Prepares beginning practitioners to work with families, aggregates and communities in rural settings. Clinical practice guided by the objectives of Healthy People 2000 and the use of critical thinking skills. **Prerequisites:** NURS 351, 361, 371, 329, 381. **Corequisite:** NURS 430. **Three hours per week.**

440. SENIOR SEMINAR 3 hours credit

Provides a conceptual understanding of leadership and management processes in the health care system. Explores past, present and emerging roles of the professional nurse including political, economic and professional issues. **Prerequisite:** Completion of all required 300-level NURS courses. **Three hours per week.**

441. INTERNSHIP 3 hours credit

Precepted practicum with emphasis on application of nursing process, theory and skills in nurse generalist practice. Integrated nursing knowledge, values and skills in caring for groups of clients while developing leadership and management strategies. **Prerequisites:** NURS 351, 361, 371, 329, 381. **Corequisites:** NURS 440. **Nine hours per week.**

**442. NURSING LEADERSHIP AND
 MANAGEMENT 2 hours credit**

Explores roles in nursing within the health care system with particular emphasis on leadership and management functions. Provides students with a conceptual understanding of the social, political, legislative and economic forces shaping the U.S. health care system and its impact on the rural environment. **Prerequisites:** NURS 310, 311, 319, 322, 323, 329, 350, 351, 422, 423; BIOL 334. **Pre/corequisites:** NURS 380, 381, 430, 431, 443. **Two hours per week.**

**443. NURSING LEADERSHIP
 PRACTICUM 2 hours credit**

Emphasizes integration of nursing knowledge, values and skills in caring for groups of clients. Students experience various professional nursing roles and apply leadership and management strategies. **Prerequisites:** NURS 310, 311, 319, 322, 323, 329, 350, 351, 422, 423; BIOL 334. **Pre/corequisites:** NURS 380, 381, 430, 431, 442. **Six hours per week.**

454. HEALTH EDUCATION OF CLIENTS 3 hours credit

Theoretical content and practical application of the principles and methodologies of effective health education of individuals, families and groups. Emphasis on use of the teaching-learning process in assisting client adaptation and promoting quality health care. Through use of a micro-teaching laboratory the student can demonstrate and analyze a variety of teaching skills. Development of teaching plans, behavioral objectives and evaluation tools also stressed. **Three hours per week.**

456. PHARMACOTHERAPEUTICS 3 hours credit

Nursing interventions relating to application of pharmacotherapeutic principles in assisting client adaptation in primary, secondary and tertiary health care settings. Special emphasis on drug interactions, drug dependence, toxicology. **Three hours lecture per week.**

**457. CULTURAL CONSIDERATIONS
 IN NURSING 2 hours credit**

A basis for application of concepts, theories and methodologies from transcultural nursing to the practice of the health

professional. Particular emphasis on the influence of culture on human response to health and illness. **Prerequisite:** Junior standing/consent of instructor. **Two hours per week.**

480. PHYSICAL ASSESSMENT 3 hours credit
Holistic approach to the evaluation of an adult client's level of wellness from biological, psychological, sociological and cultural perspectives. Emphasis on preparing students with the beginning knowledge and skills necessary to perform a physical examination. **Three hours lecture-demonstration, two hours independent practice per week.**

485. SCHOOL HEALTH 3 hours credit
Current issues relevant to the health of school-age children and adolescents. Topics include roles of teachers and health professionals, current health problems and approaches to specific health problems. Intended for students in education and health-related professions. **Prerequisite:** PSYC 300/ EDUC 300/consent of instructor. **Three hours per week.**

490. INDEPENDENT STUDY 1-3 hours credit
Intensive study in a specific area of nursing agreed upon by the student and faculty member. Open to senior and graduate students. May be taken twice under different course subtitles recorded with the registrar. **Prerequisite:** Written consent of instructor who will direct the study, chair of the department and director of the graduate program in nursing, if graduate credit is sought.

Philosophy (PHIL)

101. INTRODUCTION TO PHILOSOPHY 3 hours credit
Invites students to philosophize, asking and creatively responding to basic questions about human existence which are usually left unasked, e.g., are we free, what is the self, what value should we live for? **Three hours per week. Meets General Education IB.**

103. CRITICAL THINKING 3 hours credit
Develops abilities to reason effectively, analyze problems, identify issues, critically evaluate evidence, argue logically and reach and defend justifiable conclusions. **Three hours per week. Meets General Education IB.**

202. INTRODUCTION TO SYMBOLIC LOGIC 3 hours credit
Provides a basic introduction to logic, emphasizing modern symbolic methods. Nature of formal deductive proof is given special attention. **Three hours per week. Meets General Education IB.**

203. ETHICS 3 hours credit
Helps students develop a personal framework for ethical action. Emphasis on identification of ethical theories; applications to contemporary problems utilized as exercises to strengthen each student's own ethical position. **Three hours per week. Meets General Education IB.**

206. CONTEMPORARY MORAL ISSUES 3 hours credit
Examines the major moral and political problems of our age as encountered in the areas of politics, law, business, criminal justice, etc. Students develop political and moral frameworks from which to analyze and evaluate the issues. **Three hours per week. Meets General Education IB.**

209. PHILOSOPHY AND CULTURE 3 hours credit
A reflection on the significance of culture and the difficulties posed when one seeks to translate other cultural perspectives into one's own world view. Emphasis is on cultivating knowledge of particular cultures outside the American scene, as well as on the struggle within our own nation to form a culture in which inter-cultural relationships can flourish. **Three hours per week. Meets General Education IB.**

220. WORK AND THE PUBLIC GOOD 3 hours credit
Discussion of work, career, vocation in light of the public good. Analyzes the crisis of meaning that work presents in a post-industrial society. Uncovers the underlying essence of one's life work as it relates to the public good through discussion of specific fields of work and related ethical problems. **Three hours lecture per week. Meets General Education IB.**

300. PHILOSOPHY OF THE ARTS 3 hours credit
Analysis of the complexity of problems concerning the nature of beauty and artistic value. Topics include attempts to define "the aesthetically pleasing," the role of formal and sensuous components in a work of art, the relationships of art to emotions and to intellect, the debate about the "moral" component of art, the dialogue between the artist and the beholder, the nature of value judgments and role of the critic. **Three hours per week. Meets General Education IB.**

301. VIOLENCE AND NONVIOLENCE 3 hours credit
Explores and analyzes the philosophical meaning of violence and nonviolence, the ethics of just and unjust wars, and the moral efficacy of pacifism. Applies to issues such as capital punishment, nonviolent resistance and specific wars. **Three hours per week. Meets General Education IB.**

303. THE PHILOSOPHY OF EDUCATION 3 hours credit
Addresses questions regarding the meaning and purpose of education such as: Can virtue be taught and learned? What is the role of education in a pluralistic culture and democratic society? What does the search for truth involve and how can teachers and students collaborate in it? **Three hours per week. Meets General Education IB.**

304. PHILOSOPHY OF HUMAN NATURE 3 hours credit
Exploration of the various dimensions of human experience, from the active life of work and politics to the contemplative life of philosophy and religion. Comparisons and contrasts of modern frameworks such as behaviorism, existentialism and Marxism with the classical and medieval views of human nature. Cannot receive credit for both PHIL 215 and 304. **Three hours per week. Meets General Education IB.**

305. POLITICAL PHILOSOPHY 3 hours credit
Examines political reality as the public place where people come together to speak and act, freely and equally, and thereby become more fully human. Students develop a model of political speech and action (from a dialogue with the tradition) and apply that model to contemporary political problems. **Prerequisite:** One philosophy course/consent of instructor. **Three hours per week.**

306. ANIMALS AND ETHICS 3 hours credit
Examines fundamental moral questions concerning our interactions with non-human animals. Attention to what we can know about the mental and emotional capacities of animals, to whether animals have rights, and to human-animal relationships. **Three hours per week.**

308. ANCIENT PHILOSOPHY 3 hours credit
Study of philosophy in the Greco-Roman world from the Presocratics to the Neo-Platonists. Special emphasis on Plato and Aristotle. **Prerequisite:** One philosophy course/consent of instructor. **Three hours per week.**

309. MEDIEVAL PHILOSOPHY 3 hours credit
The absorption of Greek philosophical concepts by Christianity, Judaism and Islam. Study of the great medieval systems constructed to strengthen revealed religions and the skeptical revolts against them. Augustine to the medieval mystics. **Prerequisite:** One philosophy course/consent of instructor. **Three hours per week.**

- 310. PHILOSOPHICAL TOPICS** **3 hours credit**
Examines in depth a philosophical theme or problem. Content varies semester to semester. May be repeated under different subtitles. **Three hours per week.**
- 311. MODERN PHILOSOPHY** **3 hours credit**
Surveys the development of philosophy from the Renaissance to the 19th century and includes a study of Descartes, Hume, Kant and Hegel. Cannot receive credit for both PHIL 302 and 311. **Prerequisite:** One philosophy course/consent of instructor. **Three hours per week.**
- 312. EASTERN PHILOSOPHIES** **3 hours credit**
Philosophical view of our four major Eastern thought systems (Confucianism, Taoism, Hinduism, Buddhism). Emphasis on the problems of what it is to be a self and how the self is related to other selves, nature and a transcendent ground of being. Concludes by examining some contemporary attempts to integrate Eastern visions and concepts into Western philosophy. **Three hours per week. Meets General Education IB.**
- 313. STUDIES IN THE HISTORY OF PHILOSOPHY** **3 hours credit**
Intensive study of a major thinker, period or theme in the history of philosophy. May be repeated for credit under different subtitles. **Prerequisite:** One philosophy course. **Three hours per week.**
- 314. SEMINAR IN THE HISTORY OF PHILOSOPHY** **3 hours credit**
Intensive study of an issue or theme that traces its development throughout the history of philosophy. **Prerequisites:** Two philosophy courses and consent of instructor. **Three hours per week.**
- 315. LIFE AND DEATH ISSUES IN HEALTH CARE: THE ETHICAL PERSPECTIVE** **3 hours credit**
Identification, analysis and evaluation of contemporary problems resulting from the new breakthroughs in biomedicine. Topics include physician-patient relationship, euthanasia, experimentation, social control, genetic engineering, the health care system. Emphasis on developing an ethical framework to deal with these and future biomedical issues. Students cannot receive credit for both NURS 325 and PHIL 315. **Three hours per week. Meets General Education IB.**
- 316. PHILOSOPHY AND FEMINISM** **3 hours credit**
Examines the theoretical basis of several traditions which define women as "other" or "special" or "different from" the human standard (male), along with some of the social and personal consequences this has. Also looks at contemporary redefinitions of what it is to be female/male/human and the rights and obligations that logically follow from legal and social recognition of woman's full humanity. **Three hours per week. Meets General Education IB.**
- 318. ENVIRONMENTAL RESPONSIBILITY** **3 hours credit**
Focus on two central questions: How does our manner of encountering non-human entities affect how they become meaningful for us? How might we best formulate our obligations to the earth's diverse ecosystems and the creatures populating them? Satisfies General Education IB. **Three hours per week. Meets General Education IB.**
- 319. LAW AND MORALITY** **3 hours credit**
Examination of the philosophical issues that arise in thinking about the law, such as: What is the relationship between morality and the law? What kind of equality does the Constitution guarantee? What makes an act a crime? Classic and contemporary theories of law, as well as recent legal cases, are also discussed. **Three hours per week. Meets General Education IB.**
- 321. LOVE, MARRIAGE AND FAMILY: PHILOSOPHICAL REFLECTIONS** **3 hours credit**
Examines the nature of friendship, romantic love, parental responsibility and the relationship of sexuality and love. Special emphasis given to the moral responsibilities involved in these areas of life. **Three hours per week. Meets General Education IB.**
- 322. EXISTENTIALISM** **3 hours credit**
Close look at the basic human problems of self, God and others as seen from the existentialist perspective. Major themes of alienation, authenticity, freedom, commitment and dread are traced from their roots in the 19th century philosophies of Kierkegaard and Nietzsche to contemporary expressions by Sartre, Camus, Heidegger and Buber, et al. Cannot receive credit for both PHIL 322 and 403. **Prerequisite:** One philosophy course or consent of instructor. **Three hours per week.**
- 325. PHILOSOPHY OF RELIGION** **3 hours credit**
Promotes understanding of religious experience by focusing on a variety of its aspects, such as worship, prayer, vocation, mysticism, secularity and the encounter with evil. **Prerequisite:** One philosophy course or consent of instructor. **Three hours per week.**
- 326. A PHILOSOPHY OF REVERENCE** **3 hours credit**
Studies Plato's text, the *Republic*, and its major themes: the nature of wisdom, justice, art, good government, the soul and obedience to transcendent values. **Prerequisite:** One philosophy course or consent of instructor. **Three hours lecture per week.**
- 328. TRAGIC AND COMIC VIEWS OF LIFE** **3 hours credit**
Examines various kinds of comic experience. Special attention given to the relationship between tragedy and comedy and to absurdist and religious views about the meaning of human life as a whole. **Prerequisite:** One philosophy course or consent of instructor. **Three hours lecture per week.**
- 330. THEORY OF KNOWLEDGE** **3 hours credit**
Examines the sources, types, methods, structure and validity of knowledge. A study is made of classical, modern and contemporary sources of meaning, truth and perception giving students an acquaintance with, and appreciation of, the scope and limits of knowledge. **Prerequisite:** One philosophy course or consent of instructor. **Three hours per week.**
- 335. PHILOSOPHY OF SCIENCE** **3 hours credit**
Critical examination of the philosophical problems common to the natural sciences, such as the nature of scientific laws and theories, and problems involved in scientific explanation. Cannot receive credit for both PHIL 335 and 406. **Prerequisite:** One philosophy course or consent of instructor. **Three hours per week.**
- 399. HONORS INTERDISCIPLINARY STUDIES** **3 hours credit**
Examines topics of broad trans-disciplinary scope and interest in conjunction with one or more other departments. Cross-listed with the departments of Sociology and Political Science; may be taken twice for credit under different subtitles. **Prerequisite:** Permission of Honors Program director. **Three hours per week.**
- 402. THE PROBLEM OF GOD** **3 hours credit**
Involves students in thinking through the ultimate questions philosophy asks about God's nature and existence. Attention given to a variety of themes, including the relationship between God and nature, the personhood of God, atheism and the meaningfulness of human speech about God. **Prerequisite:** One philosophy course or consent of instructor. **Three hours per week.**

405. CONTEMPORARY CONTINENTAL PHILOSOPHY 3 hours credit

Treats questions raised by philosophers writing in the wake of Heidegger and the existentialist tradition. Areas of discussion include feminism, foundationalism, embodiment, psychoanalysis, deconstruction, epistemology, ethics and theology. **Prerequisites:** Two philosophy courses or consent of instructor. **Three hours per week.**

408. METAPHYSICS 3 hours credit

Examines a variety of philosophical theories which propose a portrait of reality as a whole and are evaluated in terms of their ability to respond to ultimate questions we raise about being, matter and the absolute. Considers whether it is possible for us to achieve a comprehensive knowledge of reality. Cannot receive credit for both PHIL 306 and 408. **Prerequisite:** Two philosophy courses or consent of instructor. **Three hours per week.**

450. PHILOSOPHICAL CONCEPTS IN LITERATURE 3 hours credit

Examines a philosophical theme (e.g., existentialism, tragedy) as reflected in works of literature. Theme varies semester to semester. **Prerequisites:** ENGL 101, 102 and one philosophy course or consent of instructor. **Three hours per week.**

475. SEMINAR IN PHILOSOPHY 3 hours credit

Offers advanced students in philosophy an opportunity to research and reflect on an issue or theme more thoroughly and intensely than is possible in an ordinary course. Content varies semester to semester. May be repeated for credit with faculty approval. **Prerequisite:** Consent of instructor. **Three hours per week.**

490. INDEPENDENT STUDY 1-3 hours credit

Tutorial course in a specific problem of philosophy, a particular philosopher or a particular period of philosophy. Open to junior and senior students, conditional on faculty member's consent. May be repeated for credit with faculty approval. **Up to three hours per week.**

Physical Education (PHEC)

103. SELF-DEFENSE 1 hour credit

Application of knowledge of pressure points and leverages in the protection of one's self. **Two hours per week. (P/F)**

105. BEGINNING SWIMMING 1 hour credit

Fundamental skills of swimming with emphasis on basic stroke and safety techniques. **Two hours per week. (P/F; fall semester only)**

106. PERSONALIZED HEALTH/FITNESS 3 hours credit

Study and practice of principles that affect human health. Emphases on physical fitness, stress management, nutrition and weight control with specific personalized techniques for optimizing health. **Four hours per week. Meets General Education IV.**

107. PERSONALIZED HEALTH/FITNESS II 1 hour credit

Provides students opportunities to explore additional physical activity experiences to achieve the health/fitness goals established in PHEC 106. **Prerequisite:** PHEC 106. **Two hours laboratory per week. (P/F)**

108. CORE CONCEPTS IN PHYSICAL EDUCATION 3 hours credit

Study and practice of fitness and sport movement principles. Emphasis on demonstrating, implementing and assessing fitness components (cardiorespiratory endurance, muscular strength and endurance, flexibility and body composition). Provides physical education professionals with skills and knowledge for lifelong wellness activities. **Two hours lecture, three hours laboratory per week.**

121. BASKETBALL 1 hour credit

Fundamental skills, techniques, rules and strategy of basketball. **Two hours per week. (P/F; spring semester only)**

123. BEGINNING GOLF 1 hour credit

Fundamental skills, techniques, rules and strategy of golf. **Two hours per week. (P/F)**

125. RACQUETBALL 1 hour credit

Fundamental skills, rules and strategy of racquetball techniques. **Two hours per week. (P/F)**

126. BEGINNING TENNIS 1 hour credit

Fundamental skills, techniques, rules and strategy of tennis. **Two hours per week. (P/F)**

146. VOLLEYBALL 1 hour credit

Fundamental skills, techniques, rules and strategy of volleyball. **Two hours per week. (P/F)**

147. BADMINTON 1 hour credit

Fundamental skills, techniques, rules and strategy of badminton. **Two hours per week. (P/F)**

150. INTERMEDIATE TENNIS 1 hour credit

Thorough coverage of intermediate skills, strategy, rules and scoring through participation in the sport. **Two hours per week. (P/F)**

170. INTERMEDIATE SWIMMING 1 hour credit

Refines and increases the student's fundamental skills of swimming. Covers crawl stroke, elementary backstroke, breast stroke, sidestroke, inverted breast stroke, back crawl stroke, trudgeon, double trudgeon, trudgeon crawl, butterfly stroke and basic diving skills. **Prerequisite:** Beginning swimming/ equivalent skill level. **Two hours laboratory. (P/F)**

185. INTRODUCTION TO ATHLETIC TRAINING 1 hour credit

Introduction to the educational and professional requirements necessary to become a certified athletic trainer. Exposure to the daily operations of an athletic training facility and the job responsibilities of all members of a sports medicine team. **Two hours lecture per week for first seven weeks of semester.**

203. LIFEGUARD TRAINING 1 hour credit

Study and application of the most current aquatic standards and techniques with emphasis on professionalism, prevention, surveillance, victim recognition, equipment-based rescues, CPR and aquatic-specific first aid training. American Red Cross certification awarded to those who meet requirements. **Prerequisite American Red Cross specifications:** 500-meter swim using breaststroke, sidestroke and freestyle; two minutes treading water using legs only; retrieval of an object from a minimum of 7 feet of water. **Two and a half hours per week.**

205. WATER SAFETY INSTRUCTOR 2 hours credit

Preparation for teaching aquatic skills. Emphasis on skill development, learning theories, teaching methods and aquatic safety. **Prerequisite:** Satisfaction of American Red Cross Level VI entry standards. **Two and a half hours per week.**

210. SCUBA DIVING 3 hours credit

Fundamental skills, techniques, knowledge and laws of scuba diving. Emphasis on safety and recreational diving. **Prerequisite:** PHEC 105/equivalent skill level. **Three hours per week.**

229. TECHNIQUES AND STRATEGIES OF ADVANCED GYMNASTICS 1 hour credit

Application of basic tumbling skills and fundamentals of gymnastics. Analysis of teaching methods, lesson planning and progression. Emphasis on advanced skills and organization. **Two and one-half hours per week.**

235. FOUNDATIONS OF PHYSICAL EDUCATION 3 hours credit

Introduction to the historical and philosophical foundations of physical education, fitness and sport. Includes instructional and self-assessment strategies in preparation for engagement in professional practice. **Three hours per week.**

237. EXERCISE LEADERSHIP 3 hours credit

Comparison of fitness programs currently offered in community settings. Emphasis on leading exercise for individuals and groups within these settings. Credit cannot be received for both PHEC 237 and PHEC 482. **Prerequisite:** PHEC 108. **Three hours per week.**

240. TECHNIQUES AND STRATEGIES OF AQUATIC PROGRAMS 1 hour credit

Application of fundamental skills in basic swimming strokes, diving skills and water safety. Analysis of teaching methods, history and introduction to scope of aquatics and aquatic programming. **Prerequisite:** Intermediate swimming ability. **Two and one-half hours per week. (fall semester only)**

260. TEAM SPORTS ACTIVITIES 3 hours credit

Overview of selected sports and activities designed for group participation. Emphasis on knowledge and competencies which prepare students to become effective teachers of physical activities. Cannot receive credit for both PHEC 344 and 260. **Three hours per week. (spring semester only)**

261. INDIVIDUAL AND DUAL-SPORT ACTIVITIES 3 hours credit

Overview of a number of individual activities and sports. Emphasis on knowledge and competencies which prepare students to become effective teachers of physical activities. Cannot receive credit for both PHEC 345 and 261. **Three hours per week.**

275. INSTRUCTIONAL STRATEGIES FOR PHYSICAL EDUCATION 3 hours credit

Introduction to management and organization strategies specific to teaching physical education in grades K-12. Content includes rationale for skill progressions, scope and sequence of physical education curriculum, and program planning. **Prerequisite:** PSYC 101. **Three hours per week. (spring semester only)**

290. SELECTED STUDIES IN PHYSICAL EDUCATION 1-2 hours credit

Provides opportunities for short-term needs of students and/or faculty. Affords avenue for course experimentation and innovation at the introductory level. May be repeated under different subtitles for a maximum of six credits.

291. INDEPENDENT STUDY 1-3 hours credit

Independent study of issues in physical education. May be repeated for a maximum of six hours. **Prerequisite:** Consent of instructor and department chair.

313. PREVENTION AND TREATMENT OF ATHLETIC INJURIES 3 hours credit

Analysis of the importance of training in preventing injuries, diagnosis and treatment of injuries, first aid techniques and procedures. **Three hours per week. (fall semester only)**

317. NUTRITION, HEALTH AND HUMAN PERFORMANCE 3 hours credit

Examines human metabolism in relation to health and human performance. Analysis of nutrient pathways from ingestion, digestion, absorption and utilization provides the foundation for an understanding of nutrition, weight control, eating disorders and thermoregulatory processes. **Prerequisite:** BIOL 217. **Three hours per week.**

320. ATHLETIC TRAINING PROCEDURES 2 hours credit

Detailed procedures necessary for completion of athletic injury evaluation and documentation. **Prerequisites:** PHEC 185, 313, admission to the Athletic Training Education Program. **Two hours per week.**

330. ATHLETIC COACHING 3 hours credit

Introduction to the principles and practices of coaching. Emphasis on educational and motivational variables present in the medium of athletics. **Prerequisite:** PSYC 101. **Three hours per week. (spring semester only)**

340. ADAPTED PHYSICAL EDUCATION 3 hours credit

Survey of types of individuals who could benefit from individualized physical education, with the study of corrective and recreational activities appropriate for teaching the handicapped. Teaching methods, class organization and program planning. **Prerequisite:** PHEC 250 or consent of instructor. **Two lectures, one one-hour laboratory per week.**

350. MEASUREMENT AND EVALUATION IN PHYSICAL EDUCATION 3 hours credit

Process of evaluation in physical education using basic concepts found in simple statistical procedures. Development of the ability to read and evaluate current research literature within the discipline. Practical experience in administering and evaluating physical tests. **Prerequisite:** High school Algebra I or equivalent. **Three hours per week.**

352. MOTOR LEARNING 3 hours credit

Study of motor skill performance and learning. Topics include information processing, motor programs, individual differences, transfer, practice organization and feedback. Credit cannot be received for both PHEC 352 and 255. **Prerequisite:** PSYC 101, junior standing or consent of instructor. **Three hours per week.**

369. CAMPING AND BACKPACKING 3 hours credit

Instruction, preparation and participation in camping and backpacking activities. Emphasizes knowledge, skills and attitudes for outdoor pursuits and encourages awareness and respect for the natural environment. **Prerequisite:** HLTH 102. **Three hours per week. (fall semester only)**

370. CAMP LEADERSHIP 3 hours credit

Study of the history, objectives and trends of organized camping, organization of resident camps, techniques of camps counseling, program planning and camp program activities and an introduction to campcraft skills. **Three hours per week. (spring semester only)**

375. THERAPEUTIC EXERCISE IN ATHLETIC TRAINING 4 hours credit

Theories and concepts essential in conditioning, reconditioning and rehabilitation of athletic injuries. Students gain an understanding of trauma and the healing process and how these affect decisions made in the initiation and progression of a rehabilitation program. **Prerequisites:** PHEC 313, BIOL 215, 216 or consent of instructor. **Three hours lecture, two hours laboratory per week.**

380. THERAPEUTIC MODALITIES 4 hours credit

Study of modalities used in athletic training. Topics include physics, physiological effects, indications and contraindications, and ways pain interpretation affects the modality chosen. **Prerequisites:** BIOL 215, 216, PHEC 313 or consent of instructor. **Three hours lecture, two hours laboratory per week.**

381. ASSESSMENT OF THE UPPER BODY 3 hour credit

Teaches detailed evaluation skills necessary for assessment of upper body athletic injuries. **Prerequisite:** PHEC 185, 313 or consent of instructor. **Three hours per week.**

382. ASSESSMENT OF THE LOWER BODY 3 hours credit

Teaches detailed evaluation skills necessary for assessment of lower body athletic injuries. **Prerequisite:** PHEC 185, 313 or consent of instructor. **Three hours per week.**

406. ADMINISTRATION AND ORGANIZATION 3 hours credit

Problems of administration structure and procedures, program planning, organization of physical education classes and departments, and organization of athletic programs. **Prerequisite:** PHEC 250 or consent of instructor. **Three hours per week. (fall semester only)**

407. ADMINISTRATION AND ORGANIZATION FOR ATHLETIC TRAINING 3 hours credit

Develops an understanding of administrative structure, policies and procedures for athletic training programs in various settings. **Prerequisites:** PHEC 185, 313 or consent of instructor. **Three hours per week.**

408. MOVEMENT EDUCATION 3 hours credit

Analysis of the elements of human movement with practical applications to the teaching of physical education in grades K-12. Methods, materials, historical development, readings, practice. **Prerequisite:** PHEC 250 or consent of instructor. **Three hours per week.**

413. ADVANCED TRAINING AND SPORTS MEDICINE 3 hours credit

Develops advanced knowledge of athletic injuries after the student has completed PHEC 313 or an equivalent. **Three hours per week. (spring semester only)**

414. GENERAL MEDICAL CONDITIONING IN ATHLETIC TRAINING 3 hours credit

Teaches detailed evaluation skills necessary for assessment and recognition of general medical conditions and pharmacologic applications of the physically active. **Prerequisites:** PHEC 313, 381, 382 and admission to the Athletic Training Education Program. **Three hours per week.**

415. CLINICAL ROTATION IN ATHLETIC TRAINING 3 hours credit

Exposes students to clinical situations which enhance their understanding of the etiologies pertaining to injuries, both athletic and non-athletic. Topics include recognition, treatment, care and rehabilitation of injuries. **Prerequisites:** PHEC 313, 413; HLTH 201. **Two hours lecture, seven hours clinical per week. (spring semester only)**

432. EXERCISE PHYSIOLOGY 4 hours credit

In-depth study of changes that occur due to acute and chronic exercise. Emphasis on circulatory, nervous and muscular systems. **Prerequisites:** BIOL 215, 216. **Five hours per week.**

433. KINESIOLOGY 4 hours credit

Examination of the structure and function of the human body and the mechanical principles affecting its movement. Review of the musculoskeletal system followed by an in-depth study of how human movement occurs. Presentation of nomenclature of the body planes, axes and movement. **Prerequisites:** PHEC 432. **Five hours per week.**

435. ADMINISTRATION AND EVALUATION OF FITNESS PROGRAMS 3 hours credit

Examines the program planning, implementation and evaluation process within the health fitness area. Students will review various health promotion models, needs assessment and evaluation techniques, and marketing strategies designed for fitness programs. **Prerequisite:** PHEC 332. **Three hours per week.**

451. PSYCHOSOCIAL ASPECTS OF PHYSICAL EDUCATION 3 hours credit

Interaction of physical education (sports) with the psychology and sociological development of the individual. **Prerequisite:** PSYC 101 or consent of instructor. **Three hours per week.**

462. EXERCISE PHYSIOLOGY, AGING AND SPECIAL POPULATIONS 3 hours credit

In-depth study of changes that occur due to acute and chronic exercise and the influence of aging on these processes. Examination of bioenergetics, fuel metabolism, neuromuscular, endocrine and cardiorespiratory physiology with emphasis on differences among those individuals with various medical conditions. **Prerequisite:** PHEC 432. **Three hours per week.**

472. ADVENTURE-BASED LEADERSHIP EDUCATION 3 hours credit

Introduces students to experiential, adventure-based education. Students study and practice principles and theories of leadership education within a cooperative learning approach. May be offered for graduate credit. Cannot receive credit for both PHEC 372 and PHEC 472. **Prerequisites:** HLTH 102, junior standing. **Three hours per week.**

479. PRACTICUM 3-12 hours credit

Supervised internship or field placement in the area of human movement studies providing opportunities for experiential learning at an advanced level. Students pursue full-time professional assignments with an agency or organization which provides services related to the students' preparation in physical education. Credit for the practicum may range from three to 12 credits per semester, depending upon the experience. May be repeated for a total of 12 credit hours. **Prerequisites:** Senior status, completion of all core requirements.

480. SEMINAR 1 hour credit

Complements the practicum experience (PHEC 479). Students meet weekly to consider problems and issues encountered in the practicum. Encourages the synthesis of theory and practice through specific assignments and exercises chosen by the instructor. **Prerequisites:** Senior status, completion of core requirements. **One hour per week.**

481. STRESS TESTING AND EXERCISE PRESCRIPTION 3 hours credit

Presents practical as well as theoretical knowledge about the various modes and protocols used in graded exercise testing, basic electrocardiography and exercise prescription based on testing results. **Prerequisites:** PHEC 432, 433. **Three hours lecture per week. (fall semester only)**

490. SELECTED TOPICS IN PHYSICAL EDUCATION 1-3 hours credit

Provides opportunities for short-term needs and interest of students/faculty. Affords avenue for curriculum experimentation and innovation at an advanced level. Student may earn a maximum of six credits. **Prerequisite:** Consent of instructor.

491. INDEPENDENT STUDY 1-3 hours credit

Advanced independent study of issues in physical education. May be repeated for a maximum of six hours. **Prerequisite:** Consent of instructor and department chair.

Physics (PHYS)**100. PHYSICS IN THE MODERN WORLD** 4 hours credit

Survey of major areas of physics. Topics include motion, forces, waves, light, sound, heat, electricity, magnetism, quantum phenomena and relativity. One-semester course intended for non-science majors. Not open to students with credit in PHYS 121 or 211 or 221. **Three hours lecture, one two-hour lab per week. Meets General Education IIIA or IIIB.**

101. PHYSICAL SCIENCE**4 hours credit**

Introduces students to the fundamental concepts of the physical sciences. The course will emphasize practical applications, especially those which integrate all of the natural sciences. Credit may not be received for both CHEM 101 and PHYS 101. **Prerequisite:** MATH 103 or 104 or college algebra. **Three hours lecture and two hours lab per week.**

107. OBSERVATIONAL ASTRONOMY**1 hour credit**

Introduction to the use of various tools to study celestial objects, including experience with telescopes, spectrosopes, a planetarium and microcomputers. **Prerequisite:** PHYS 106. **One two-hour lab per week plus some night observations.**

108. INTRODUCTION TO ASTRONOMY**4 hours credit**

Survey of modern astronomy for non-science majors. Basic physics concepts utilized to study the night sky, light, optics and telescopes, planets, the moon and sun, stars nebulae, galaxies and the universe. Some night observations required. May not be taken for credit if student already has credit for PHYS 106. **Three hours lecture, one two-hour lab per week. Meets General Education IIIA or IIIB.**

111. INTRODUCTION TO ENGINEERING AND PHYSICS**1 hour credit**

Required for first semester freshmen students who have declared a physics and/or engineering major. This option is open also to any freshman expressing an interest in physics and/or engineering. Must be concurrently registered for the appropriate section of the New Student Experience Seminar. **Corequisite:** GENL 001. **Two hours per week.**

121. GENERAL PHYSICS I**4 hours credit**

Introduction to Newtonian mechanics and applications. Topics include kinematics, dynamics, rotational motion, equilibrium, conservation laws and fluids. Not intended for physics or chemistry majors. **Prerequisite:** College algebra. **Three hours lecture, one two-hour lab per week. Meets General Education IIIA or IIIB.**

123. GENERAL PHYSICS II**4 hours credit**

Continuation of general physics. Topics include basic concepts of electricity and magnetism, wave motion, optics and modern physics. **Prerequisite:** PHYS 121. **Three hours lecture, one two-hour lab per week. Meets General Education IIIB.**

211. MAJOR CONCEPTS IN PHYSICS**3 hours credit**

Integrated study of the major concepts of physics designed as a first course for physics and related majors. Topics drawn from classical mechanics, electromagnetism, quantum mechanics and relativity. **Corequisite:** MATH 201. **Four hours lecture/activity per week.**

221. PHYSICS I**4 hours credit**

Introductory course in mechanics for students majoring in physics, chemistry and engineering. Topics include single particle kinematics and dynamics, multiparticle systems, rotational motion, oscillations, waves and sound. Spring section intended for physics majors. **Prerequisite:** MATH 201. **Six hours lecture/activity per week. Meets General Education IIIA and IIIB.**

223. PHYSICS II**4 hours credit**

Continuation of introductory physics. Topics include: electrostatics, current and resistance, DC and AC circuit analysis, magnetic fields, induction, electromagnetic waves and geometrical and wave optics. **Prerequisites:** PHYS 221; MATH 202 (prereq/coreq). **Six hours lecture/activity per week.**

309. MATHEMATICAL PHYSICS**3 hours credit**

Survey of the most important mathematical tools of classical physics. Topics include coordinate systems, complex algebra,

matrix algebra, Fourier series and applications, differential equations (wave equation, Schrodinger's equation) and vector calculus (gradient, divergence, curl, Stoke's theorem, Green's theorem). Credit may not be received for both MATH/PHYS 309. **Corequisites:** PHYS 223, MATH 310. **Four hours lecture/activity per week.**

311. ELECTRICAL CIRCUITS AND ELECTRONICS**4 hours credit**

Survey of basic principles of electric circuits and modern electronics. Topics include AC and DC circuits, Thevenin's and Norton's theorems, transient analysis, power supplies, diodes and transistors, operational amplifiers and an introduction to circuit simulation programs. **Prerequisite:** PHYS 223. **Corequisite:** MATH 311. **Three hours lecture, one three-hour lab per week.**

313. INTRODUCTION TO MODERN PHYSICS**3 hours credit**

Survey of physics concepts developed since 1880. Topics include blackbody radiation, photoelectric effect, special relativity, quantization, uncertainty principle and introductory atomic, nuclear and solid state physics. **Prerequisite:** PHYS 223. **Four hours lecture/activity per week.**

314. MECHANICS**3 hours credit**

Theory and application of Newtonian mechanics with an introduction to the Lagrange formalism. Major topics include kinematics and dynamics of single particles and systems of particles, rigid bodies, noninertial reference frames and the simple harmonic oscillator. **Prerequisites:** PHYS 223, MATH 311. **Four hours lecture/activity per week.**

315. ELECTRICITY AND MAGNETISM**3 hours credit**

Study of electricity and magnetism. Topics include Coulomb's law, electric and magnetic fields, electromagnetic induction, Maxwell's equations and an introduction to electromagnetic waves. **Prerequisites:** PHYS 223, MATH 311. **Four hours lecture/activity per week.**

316. INTRODUCTION TO QUANTUM MECHANICS**3 hours credit**

Introduction to the principles of quantum mechanics. Topics include wave mechanics, Schrodinger's equation, Fourier techniques, operator formalism, correspondence and uncertainty principles, harmonic oscillator and hydrogen atom. **Prerequisites:** PHYS 313, 314. **Four hours lecture/activity per week.**

317. ASTROPHYSICS AND STELLAR ASTRONOMY**3 hours credit**

Physical and mathematical principles applied to the study of astronomy, binary stars, stellar structure and evolution, galactic and extragalactic astronomy, quasars and cosmology. No prior knowledge of astronomy required. **Prerequisite:** PHYS 223. **Four hours lecture/activity per week.**

318. SEMICONDUCTOR PHYSICS**3 hours credit**

Mathematical treatment of the theory of conduction in solids with particular attention to semiconductors. Topics include band theory of solids, conduction in metals and crystals, intrinsic and extrinsic semiconductors, two-terminal and three-terminal devices. **Prerequisites:** PHYS 313, MATH 311. **Four hours lecture/activity per week.**

319. THERMODYNAMICS AND STATISTICAL MECHANICS**3 hours credit**

Introduction to statistical mechanics and thermodynamics. Topics include laws of thermodynamics, paramagnetism, heat capacity of solids, perfect classical gas, phase equilibria and perfect quantal gas. **Prerequisites:** PHYS 309, 314. **Three hours lecture per week.**

320. WAVE OPTICS **3 hours credit**
 Study of light as a wave phenomenon. Topics include nature of light, propagation, reflection, refraction, interference, diffraction, lasers and holography. **Prerequisites:** PHYS 223, MATH 311. **Four hours lecture/activity per week.**

321. ANALOG ELECTRONICS **3 hours credit**
 Study of analog electronic devices and systems. Topics include operational amplifiers, active filters, oscillators and function generators, linear integrated circuits. **Prerequisite:** PHYS 311. **Four hours lecture/activity per week.**

322. DIGITAL ELECTRONICS **4 hours credit**
 Study of the basic concepts of digital electronics, with emphasis on modern TTL and CMOS integrated circuits. Topics include gates, combinational and sequential logic circuits, flip-flops, counters, shift registers, multiplexers, decoders and multivibrators. **Prerequisite or Corequisite:** PHYS 223. **Three hours lecture, one three-hour lab per week.**

407. SENIOR LABORATORY **3 hours credit**
 Exploration of physics through experimentation. Topics include atomic, nuclear and solid state physics; electricity and magnetism, mechanics, optics; and thermodynamics. **Prerequisites:** PHYS 311, 313. **Four hours lecture/activity per week.**

410. ADVANCED MATHEMATICAL PHYSICS **3 hours credit**
 Survey of advanced mathematical topics used in physics, including linear operators, functions of a complex variable, partial differential equations, Hilbert spaces and group theory. **Prerequisites:** PHYS 309, MATH 311. **Four hours lecture/activity per week.**

411. MICROPROCESSOR ARCHITECTURE **3 hours credit**
 Study of the basic architecture and design of common integrated circuit microprocessors. Emphasis on the electrical operating characteristics, supporting electronics, interfacing and instruction sets. Laboratory experiments include study of the bus structures, timing, addressing and input/output of one or more microprocessors. Simple machine language routines developed. **Prerequisite:** PHYS 322. **Four hours lecture/activity per week.**

412. MICROCOMPUTER INTERFACING **3 hours credit**
 Advanced study in techniques of interfacing microcomputers to monitor and control external devices. Topics include parallel and serial ports; analog-to-digital and digital-to-analog converters; measurement of temperature, light and motion; motor control; telecommunications. Laboratory experiments include building interfaces and developing the associated software. **Prerequisite:** PHYS 321, 411. **Four hours lecture/activity per week.**

414. ADVANCED MECHANICS **3 hours credit**
 Advanced study of Newtonian mechanics based on concepts introduced in PHYS 314. Topics include Lagrangian and Hamiltonian formalism, calculus of variations, rigid bodies, small oscillations, fluid mechanics. **Prerequisite:** PHYS 314. **Three hours lecture per week.**

450. INTERNSHIP/CO-OP IN PHYSICS **3 hours credit**
 Work experience in which qualified students use knowledge of physics in a professional setting. Students summarize experiences in written reports with seminar presentations. **Prerequisites:** Twenty hours of physics, consent of instructor. **Six hours per week.**

475. RESEARCH IN MICROCOMPUTER PHYSICS **3 hours credit**
 Students work on individual research project involving practical application of microcomputers to an actual problem in the

laboratory or off campus. May involve advanced study of interfacing and software development; intended to provide challenges similar to those faced in industrial situations. Topics include computer-aided manufacture (CAM), process control, robotics and environmental monitoring. Written report, seminar presentation required. **Prerequisite:** PHYS 412. **Three hours per week.**

490. RESEARCH IN PHYSICS **3 hours credit**
 Research project in one of the areas of physics chosen, designed and carried out by student with the advice and approval of a faculty member. Actual work may be carried out at off-campus sites. Written report, seminar presentation required. **Prerequisites:** Forty hours of physics, senior standing, department approval.

499. SPECIAL TOPICS IN PHYSICS **3 hours credit**
 Study of a specific area of physics. Topic varies semester to semester. May be taken twice for credit. **Three hours lecture per week or lab-lecture equivalent.**

Political Science (POSC)

101. INTRODUCTION TO POLITICS AND GOVERNMENT **3 hours credit**
 Introduction to the study of political science that discusses the nature of politics, the role of government in society and the processes involved in the governing of humans. **Three hours per week. Meets General Education IIB.**

102. CONTEMPORARY ISSUES **3 hours credit**
 Examines how the American political system responds to major issues facing the nation. The politics of recent issues such as civil rights, Watergate, the environment and the energy crisis, along with current issues, discussed in detail. **Three hours per week. Meets General Education IIB.**

110. AMERICAN NATIONAL GOVERNMENT **3 hours credit**
 Comprehensive examination of the American political process which analyzes the role of the Constitution, the organization and function of the presidency, Congress, Supreme Court, political parties and interest groups and the distribution of power within American society. **Three hours per week. Meets General Education IIB.**

200. POLITICAL IDEOLOGIES **3 hours credit**
 Analysis of political ideologies, emphasizing their role as both justifications for and radical critiques of existing social, economic and political structures and processes. Covers a number of ideologies, including fascism, liberalism, socialism and communism. **Three hours per week. Meets General Education IIB.**

202. STATE AND LOCAL GOVERNMENT IN THE UNITED STATES **3 hours credit**
 Examination of state and local governments in terms of how political power is organized and policies adopted. Focuses on forms of governing that encourage citizen participation. **Three hours per week. Meets General Education IIB.**

204. TOPICS IN POLITICAL SCIENCE **3 hours credit**
 Analysis of recent international or national issues which helps students understand the complex contemporary political environment. May be taken twice under different course titles recorded with the registrar. **Three hours per week. Meets General Education IIB.**

210. INTRODUCTION TO INTERNATIONAL RELATIONS **3 hours credit**
 Introduces students to contemporary issues in world affairs: state creation and "failed" states, balance of power, wars, nuclear proliferation and arms control. Addresses global trade,

monetary, development and environmental problems, as well as regional integration and the role of the World Bank and MNCs. Examines the use of international law, diplomatic negotiation and the UN to resolve international conflicts. **Three hours per week. Meets General Education IIB.**

212. INTRODUCTION TO AFRICAN POLITICS 3 hours credit
Introduction to the political economy of Sub-Saharan Africa. Focus on ideas and historical forces that have shaped Africa's political institutions and its economic and social structures. **Three hours per week. Meets General Education IIB.**

215. AMERICAN FOREIGN POLICY 3 hours credit
Emphasizes areas of foreign policy: the individuals, organizations and procedures involved in foreign policy making; the major approaches of U.S. foreign policy; and current issues. **Three hours per week. Meets General Education IIB.**

230. JUDICIAL PROCESS AND POLITICS 3 hours credit
Examines the structure and role of courts in the American political process. State and federal court systems and the role of judges are explored. Emphasis is on how courts function within the legal and political environment while acting as policy makers. **Three hours per week.**

260. POLITICS OF THE CHESAPEAKE BAY 3 hours credit
Practical look at the politics in the management, use and regulation of the Chesapeake Bay. Focus on the interdisciplinary nature of problem solving and the establishment and implementation of environmental policy for the Chesapeake Bay and its watershed. Comparison with Coastal Bays included. **Three hours per week. Meets General Education IIB.**

300. METHODS OF EMPIRICAL POLITICAL ANALYSIS 4 hours credit
Focuses on student-developed research projects that utilize the scientific method and the collection and analysis of quantitative data, especially public opinion polls. The use of computers and statistics in political science research emphasized. **Prerequisites:** POSC 101 or 110, junior/senior standing. **Three hours lecture, one two-hour laboratory per week.**

301. POLITICAL PARTIES AND PRESSURE GROUPS 3 hours credit
Descriptive and analytical examination of American political parties and pressure groups with attention to political socialization and voting behavior. **Prerequisite:** POSC 101 or 110. **Three hours per week.**

310. COMPARATIVE EUROPEAN GOVERNMENT 3 hours credit
Comparative study of the government systems, political processes, leadership, political parties, elections and current political issues in Britain, France and Germany and an overview of the European community. **Prerequisite:** POSC 101 or 110. **Three hours per week.**

311. COMPARATIVE GOVERNMENT OF DEVELOPING NATIONS 3 hours credit
Comparative study of the historical backgrounds, ideological foundations, leadership, opposition groups, political processes and current issues in the governmental systems of selected developing countries. **Prerequisite:** POSC 101 or 110. **Three hours per week.**

312. INTERNATIONAL RELATIONS OF SOUTHERN AFRICA 3 hours credit
Focuses on the struggle for political and economic independence in South Africa, Namibia, Angola, Mozambique and Zimbabwe since World War II. Concentrates on the dominance of South Africa in the region along with the role of

multinational corporations, the United States, Soviet Union and Cuba in regional politics. **Prerequisite:** POSC 101 or 210. **Three hours per week.**

315. THE PRESIDENCY IN AMERICAN POLITICS 3 hours credit
Helps students develop a deeper understanding of the American presidency's relationship to other governmental and non-governmental institutions in the American political system. Particular attention paid to the implications and consequences of these relationships for democratic society. **Prerequisite:** POSC 101 or 110. **Three hours per week.**

320. PUBLIC POLICY ANALYSIS 3 hours credit
In-depth study of the governmental decision-making process within the American federal government. Provides students with an explanation of the primary governmental activities associated with the basic steps in the policy-making process. Some of these steps include policy formulation, implementation and evaluation. **Prerequisite:** POSC 101 or 110. **Three hours per week.**

330. AMERICAN CONSTITUTIONAL DEVELOPMENT 3 hours credit
Study of the principles, nature and meaning of the U.S. Constitution as determined by the holdings and opinion of the Supreme Court. Emphasis on the historical development of the Constitution and a study and analysis of the U.S. court system, judicial review, separation of powers, commerce powers and powers of Congress and the president. **Prerequisite:** POSC 101 or 110. **Three hours per week.**

340. POLITICAL SCIENCE INTERNSHIP 3-9 hours credit
Helps students learn about political behavior and policy problems as participant-observers in a government organization at the national, state or local level. **Prerequisite:** POSC 101 or 110, permission of instructor. (P/F)

341. POLITICAL SCIENCE INTERNSHIP SEMINAR 3 hours credit
Places an intern's work experience within a broader, analytical perspective. Interns thoroughly examine existing research on the relevant governmental agency and relate the findings of this research to their own internship experiences. Designed to be taken with POSC 340. **Prerequisite:** POSC 101 or 110, permission of instructor.

350. REVOLUTION AND POLITICAL CHANGE 3 hours credit
Explores the nature of political change in general and revolutionary change in particular. Approached both philosophically and empirically to generate theories of revolutionary change and to develop understanding of specific historical and contemporary cases of revolution. **Prerequisite:** POSC 101 or 110. **Three hours per week.**

360. ENVIRONMENTAL POLICY 3 hours credit
Overview of national and global environmental policies in the U.S. Examines individual policies including their content, their adoption, the regulatory process and their effect on environmental quality. Role of the political actors and the political process in environmental policy-making explored. **Prerequisite:** Junior standing. **Three hours per week. Meets General Education IIB.**

370. DEMOCRACY 3 hours credit
Explores both the idea of democracy and its possibilities for realization in human society. Advocates and critics of democracy, both old and contemporary, are examined. **Prerequisite:** POSC 101 or 110. **Three hours lecture per week.**

390. INTERNATIONAL FIELD STUDY 3-6 hours credit

On-site study of the politics, history, economy and culture of selected countries. Work in the field preceded by pre-tour lectures and readings. May be repeated once for credit. Number of credits offered to be determined by the department.

399. HONORS INTERDISCIPLINARY 3 hours credit

Examines topics of broad trans-disciplinary scope and interest in conjunction with one or more other departments. **Three hours per week.**

401. POLITICAL THEORY 3 hours credit

Survey of political thought based on the analysis of ideas of modern theorists, including the historical setting of major theories, their impact on political institutions and social changes and their contemporary significance. **Prerequisite:** POSC 101 or 110. **Three hours per week.**

409. CAUSES OF WAR 3 hours credit

Explores theoretical explanations of international conflict. Major questions addressed are: What are the primary causes of war? How may war be prevented? **Prerequisite:** Junior/senior standing. **Three hours per week. Meets General Education IIB.**

411. INTERNATIONAL LAW 3 hours credit

Survey of the general principles and specific rules of international law as well as its recent trends and its relations to other aspects of international affairs. **Prerequisite:** POSC 101 or 110. **Three hours per week.**

415. THE UNITED NATIONS SYSTEM 3 hours credit

Examines the history and evolution of the UN system. Focuses on the role of the UN in settling international disputes, providing international order and security, promoting decolonization, promoting human and political rights, and providing for economic and social development around the world. **Prerequisite:** POSC 101 or 110. **Three hours per week.**

417. RUSSIA AND THE SOVIET UNION 3 hours credit

Political development of Russia from the Bolshevik Revolution and Stalinism through the Gorbachev period and collapse of the U.S.S.R. Emphasis on government structure, parties, ideology, political conflict and change. Exploration of political, social, economic, environmental and foreign policy problems of the new Russian state. **Prerequisites:** POSC 101 or 110, junior/senior standing. **Three hours per week.**

430. THE CONGRESS IN AMERICAN POLITICS 3 hours credit

Analysis of the structural characteristics and functions of the United States Congress. Factors influencing congressional decision making and the importance of Congress in American political process discussed. **Prerequisite:** POSC 101 or 110. **Three hours per week.**

440. PUBLIC ADMINISTRATION 3 hours credit

Study of the basic characteristics of modern American governmental bureaucracies, as well as the important issues public administrators face. Exploration of administrative and organizational theories. **Prerequisite:** POSC 101 or 110. **Three hours per week.**

450. CIVIL RIGHTS AND LIBERTIES 3 hours credit

Explores civil rights and liberties of the individual under the United States constitution, including freedom of religion, speech, press, right to privacy, and race and sex discrimination. **Prerequisite:** POSC 101 or 110. **Three hours lecture per week.**

460. ENVIRONMENTAL LAW 3 hours credit

Introduction to the legal system and principles of environmental law. Explores the nature and sources of environmental problems, evolution of the law and the legal system's response

to environmental problems. Examines laws, regulations and court decisions designed to control specific environmental problems; protect public health, safety and resources; and provide international environmental controls. Students use the case study method of legal analysis. **Prerequisite:** Junior standing. **Three hours per week.**

480. STUDIES IN POLITICAL SCIENCE 3 hours credit

Intensive study of a specialized area of inquiry within the major subfields of political science: American government, international relations, comparative government, political theory and public policy. May be taken twice under different subtitles recorded with the registrar. **Prerequisites:** POSC 101 or 110, junior/senior class standing. **Three hours per week.**

490. INDIVIDUAL RESEARCH 1-3 hours credit

Advanced students pursue their own research project under the direction of a faculty member, or assist a faculty member in a research project. Involves in-depth reading program or the collection and analysis of data from primary sources. May be repeated for a maximum of six credits with faculty approval; credit beyond three hours requires approval of the department chair.

Psychology (PSYC)

101. GENERAL PSYCHOLOGY 3 hours credit

Survey of general principles underlying human behavior including study of the nervous system, perception, learning, emotion and personality. Experimental findings are applied to practical situations. **Three hours per week. Meets General Education IIB.**

211. PSYCHOLOGY AND SCIENTIFIC INFERENCE 3 hours credit

Designed for psychology majors. Topics include principles of experimental design, logic of hypotheses testing, reasoning through issues in psychology and effective critical thinking. **Prerequisite:** PSYC 101. **Three hours per week.**

215. PSYCHOLOGY APPLIED TO DAILY LIVING 3 hours credit

Designed to help students use psychology in their everyday lives so that they may understand and influence their own behavior and the behavior of others. Methods and techniques of behavior change discussed. **Prerequisite:** PSYC 101. **Three hours per week.**

220. PSYCHOLOGICAL STATISTICS 3 hours credit

Methods of design of psychological experiments and analysis of data. **Prerequisite or corequisite:** PSYC 211. **Three hours per week.**

300. DEVELOPMENTAL PSYCHOLOGY 3 hours credit

Survey of the characteristics of and theories explaining the physical, intellectual, social and emotional development of individuals throughout the life span. **Prerequisite:** PSYC 101 or consent of instructor. **Three hours per week.**

301. BIOLOGICAL BASIS OF BEHAVIOR 3 hours credit

Introduction to the biological basis of behavior with emphasis on the anatomy and physiology of nerve cells and the nervous system, the effects of drugs on the nervous system, and other introductory topics. **Prerequisites:** PSYC 101 and 211. **Three hours lecture per week.**

302. ABNORMAL PSYCHOLOGY 3 hours credit

Survey of the etiology, diagnosis and prognosis of neuroses, psychoses, psychosomatic disorders, transient situational maladjustments and personality disorders, with discussions of various treatment approaches. **Prerequisite:** PSYC 101. **Three hours per week.**

304. EXPERIMENTAL PSYCHOLOGY 4 hours credit
Study of the experimental method and its application to psychological research in both animals and humans. **Prerequisites:** PSYC 211, 220. **Three hours lecture, two hours laboratory per week.**

305. PSYCHOLOGY OF LEARNING 3 hours credit
Survey of the basic experimental facts and research related to learning. **Prerequisite:** PSYC 211, 301. **Three hours per week.**

306. SOCIAL PSYCHOLOGY 3 hours credit
Study of group behavior of humans with emphasis on the relation of the individual to the group. Mass reaction and judgement, group control and group influence on the individual area considered. **Prerequisites:** PSYC 101, 211. **Three hours per week.**

313. DRUGS AND BEHAVIOR 3 hours credit
Examination of the use and misuse of drugs, both legal and illegal, from biological, historical, psychological, and social perspectives. **Prerequisite:** PSYC 101. **Three hours per week.**

320. PSYCHOLOGY OF INFANCY AND CHILDHOOD 3 hours credit
In-depth study of the implications of and issues surrounding the physical, intellectual, social and emotional development of children from conception to adolescence. **Prerequisites:** PSYC 101. **Three hours per week.**

321. PSYCHOLOGY OF ADOLESCENCE 3 hours credit
Study of physical, emotional and social development of the adolescent. **Prerequisite:** PSYC 101. **Three hours per week.**

322. PSYCHOLOGY OF AGING 3 hours credit
Study of selected topics in human development from early adulthood through old age. **Prerequisite:** PSYC 101. **Ten hours of volunteer work with the elderly per semester, three hours lecture per week.**

323. PSYCHOLOGY OF DEATH AND DYING 3 hours credit
Exploration of attitudes and behaviors related to death. Topics include the dying patient, suicide, bereavement, ethical issues, the funeral, etc. Emphasis on developing an understanding of self and death. **Prerequisite:** PSYC 101. **Three hours per week.**

325. PSYCHOLOGY OF SEXUALITY 3 hours credit
Introduction to the psychological theories and social research concerning human sexuality. Topics include gender roles, sexual attitudes and mores, sexual health, sexual abuse and other current issues. **Prerequisite:** PSYC 101. **Three hours per week.**

333. EFFECTIVE PARENTING 3 hours credit
Offers practical techniques for dealing with children, including effective communication with children of all ages and techniques for coping with inappropriate behavior in children. **Prerequisite:** PSYC 101. **Three hours per week.**

334. PSYCHOLOGY OF WOMEN 3 hours credit
Study of sex roles, sex differences, the causes of psychological problems of women and some methods of coping with the rapidly changing roles of both men and women. **Prerequisite:** PSYC 101. **Three hours per week.**

335. BASIC HELPING RELATIONS 3 hours credit
Focuses on counseling as a communication process. Topics include counseling relationships, verbal/non-verbal communication, helping stages and therapeutic intervention strategies. **Prerequisite:** PSYC 101. **Three hours per week.**

336. PSYCHOLOGY OF MEN 3 hours credit
Study of the psychological effects of the cultural roles assigned to males and of the impact of the transitions confronting men in the roles they assume. **Prerequisite:** PSYC 101. **Three hours per week.**

360. CLINICAL/COUNSELING PSYCHOLOGY 3 hours credit
Introduction to methods, techniques and theories in the practice of clinical/counseling psychology in a variety of settings. Current problems and issues confronting clinical and counseling psychologists are investigated. **Prerequisite:** PSYC 101. **Three hours per week.**

370. PSYCHOLOGY AND THE CRIMINAL JUSTICE SYSTEM 3 hours credit
Survey of the criminal justice system and its relationship to psychology. Topics include theories of crime; criminal personality; and roles of the victim, police officer, lawyers, judges, psychologists and special groups. Emphasis on sexual assault, crimes against children and the insanity defense. **Prerequisite:** PSYC 101. **Three hours per week.**

401. PHYSIOLOGICAL PSYCHOLOGY 3 hours credit
Presentation of advanced topics on physiological psychology including the morphological, neurochemical and physiological bases of behavior. Students may not receive credit for both PSYC 312 and 401. **Prerequisites:** PSYC 211 and 301. **Three hours per week.**

403. MEASUREMENT AND EVALUATION IN PSYCHOLOGY 3 hours credit
Coverage of correlational techniques, reliability and validity. Psychological tests and questionnaires considered in terms of their measurement assumptions and utility. **Prerequisite:** PSYC 220 or consent of instructor. **Three hours per week.**

406. PSYCHOLOGY OF ATTITUDES AND ATTITUDE CHANGE 3 hours credit
Concerned with how attitudes are formed, measured and changed. Emphasis on the classical theories and new approaches to attitude formulation and change. **Prerequisite:** PSYC 306 or consent of instructor. **Three hours per week.**

407. PSYCHOLOGY OF PERSONALITY 3 hours credit
Survey of major theoretical approaches to the origin and development of human personality. **Prerequisite:** PSYC 101. **Three hours per week.**

408. HISTORY AND SYSTEMS IN PSYCHOLOGY 3 hours credit
Study of basic integrating theories of psychology. **Prerequisite:** PSYC 211, 405 or 407 or consent of instructor. **Three hours per week.**

409. ENVIRONMENTAL PSYCHOLOGY 3 hours credit
Study of the effects of the environment on human behavior. Consideration given to such topics as organizational structure and climate, architecture, population density and urban stress. **Prerequisite:** PSYC 101. **Three hours per week.**

410. MULTICULTURAL ISSUES 3 hours credit
A study of the psychological impact of major cultural groups on the behavior, attitudes, thoughts and beliefs of individuals. **Prerequisites:** PSYC 101 and junior status. **Three hours lecture per week.**

415. MOTIVATION AND EMOTION 3 hours credit
Survey of experimental findings and theory of processes that energize and direct behavior. **Prerequisites:** PSYC 211, 301. **Three hours per week.**

423. DEVELOPMENTAL DISABILITIES 3 hours credit
Study of children who vary from the norm, including those with physical disabilities, mental disabilities and socio-emotional disturbances. **Prerequisite:** PSYC 320. **Three hours per week.**

430. APPLIED BEHAVIOR ANALYSIS 3 hours credit
Provides both a theoretical and data driven approach to behavioral engineering in the areas of industry, sports, education and behavior change in the areas covered under clinical psychology. **Prerequisite:** PSYC 101. **Three hours per week.**

445. COGNITIVE PSYCHOLOGY 3 hours credit
Study of human cognitive processing. Topics include perception, attention, memory, problem solving, language, reasoning and decision making. **Prerequisite:** PSYC 211. **Three hours per week.**

450. SENSATION AND PERCEPTION 3 hours credit
Study of human sensory and perceptual systems with emphasis on vision. Perception treated from a physiological, behavioral and cognitive point of view. **Prerequisites:** PSYC 211, 301. **Three hours per week.**

465. PRINCIPLES AND TECHNIQUES OF GROUP THERAPY 3 hours credit
Study of principles and techniques of group counseling/psychotherapy and their application. Includes a review of the psychological and historical development of group therapy and a study of the pertinent research. Discussions and role playing are important elements of this course. **Prerequisite:** Advanced standing. **Three hours per week.**

480. ART, PSYCHOLOGY AND VISUAL PERCEPTION 3 hours credit
Students use principles of psychology and visual perception to develop increased understanding of the visual arts. Students cannot receive credit for both ART 480 and PSYC 480. **Prerequisites:** PSYC 101, a minimum total of six semester hours in art or psychology. **Three hours per week.**

485. PSYCHOLOGY PRACTICUM 3 hours credit
Provides psychology majors with training experience in a variety of clinical settings. Students may earn no more than six hours in undergraduate practicum courses. **Prerequisites:** Junior/senior psychology majors only and consent of instructor. **Minimum of two hours per week supervision, eight hours per week of field work.**

490. INDIVIDUAL DIRECTED STUDY 1-3 hours credit
Enables advanced students to pursue, through observation, experimentation or library research, a topic of their choosing. May be repeated for a maximum of six credits. **Prerequisite:** Consent of department chair.

495. SELECTED TOPICS IN PSYCHOLOGY 1-3 hours credit
Intensive study in a psychological therapeutic technique, person, developmental period or theory. May be repeated in different areas of study for a maximum of six hours credit.

Respiratory Therapy (RESP)

210. FOUNDATION STUDIES IN RESPIRATORY THERAPY 3 hours credit
Introduction to respiratory therapy with emphasis on the physiologic basis of respiratory care. Covers basic principles, procedures and practices utilized in the profession. **Three hours lecture per week.**

300. SPECIAL TOPICS IN RESPIRATORY CARE 1-4 hours credit
Study of a selected area of respiratory care. Topic may vary semester to semester. Provides opportunity for curriculum innovation or meeting the special needs or interests of students. May be taken twice for credit under different subtitles. **Prerequisite:** Sophomore standing.

301. PATIENT CARE PROCEDURES 4 hours credit
Introduction to basic respiratory therapy procedures commonly utilized in providing patient care. Opportunity for practicing selected skills provided in the respiratory care laboratory. **Prerequisite:** Junior status, completion of General Education requirements, or consent of instructor. **Corequisites:** RESP 302, 303. **Three hours lecture, two hours laboratory per week.**

302. BASIC RESPIRATORY PROCEDURES/ CLINICAL PRACTICUM 5 hours credit
Provides basic skills necessary for the application of medical gases, aerosol and humidity therapy, chest physiotherapy, airway management, incentive spirometry, intermittent positive pressure breathing, arterial blood gases, and cleaning and sterilization. **Prerequisites:** Admission to respiratory therapy major, junior status, completion of General Education and core requirements. **Supervised experience: one hour lecture, nine hours clinical practice per week.**

303. CARDIOPULMONARY PHYSIOLOGY 3 hours credit
Study of cardiopulmonary physiology with emphasis on fluid and electrolyte balance, carbon dioxide and oxygen transport, acid-base regulation and the clinical significance of each. **Prerequisites:** Admission to respiratory therapy major, junior status, completion of General Education requirements, or consent of instructor. **Three hours lecture per week.**

304. CARDIOPULMONARY DISEASE 3 hours credit
Provides a pathophysiological presentation of cardiopulmonary disease and gives the student practitioner an understanding of disorders of cardiopulmonary structure and function as related to the clinical setting. A symptom/problem-based focus along with the development of decision trees and algorithms will assist students in understanding the pathophysiology of cardiopulmonary problems. This approach will provide the core of basic sciences and merge it with clinical subjects to reinforce learning through the acquisition of critical thinking skills based on broad, yet specific understanding of the clinical and pathologic aspects of cardiopulmonary dysfunction. **Prerequisite:** RESP 303 with C or better, or consent of instructor. **Three hours per week.**

321. ADVANCED RESPIRATORY CARE 4 hours credit
In-depth study of topics related to respiratory therapy in the critical care setting with laboratory experiences. Emphasis on mechanical ventilation, airway management, cardiopulmonary monitoring and cardiopulmonary assessment. **Three hours lecture, two hours laboratory per week.**

322. PHARMACOLOGY 3 hours credit
Investigation of pharmaceutical preparations employed in current medical practice with emphasis on those relevant to the respiratory care practitioner. **Prerequisites:** RESP 301, 302, 303 with C or better, or consent of instructor. **Three hours lecture per week.**

323. CLINICAL PRACTICUM II 5 hours credit
Supervised clinical experience in a variety of critical and noncritical settings designed to reinforce primary skills and develop secondary skills necessary for the practice of respiratory care. **Prerequisites:** Junior status; completion of RESP 210, 301, 302 and 303 with C or better, or consent of instructor. **Supervised experience: one hour lecture, nine hours clinical practice per week.**

400. FUNDAMENTALS OF RESPIRATORY CARE RESEARCH 2 hours credit

Introduction to the fundamentals of research related to the profession of respiratory care. The course is designed to enhance communication skills of undergraduate respiratory therapy students for the purpose of writing and presenting research related to respiratory care. **Prerequisite:** Senior status or consent of instructor. **Two hours per week.**

401. NEONATAL AND PEDIATRIC RESPIRATORY CARE 3 hours credit

Survey of current techniques employed in the respiratory treatment of children from birth through adolescence. Special attention to neonatal physiology and abnormalities requiring respiratory care and to the pulmonary significance of select childhood diseases. **Prerequisites:** Senior status, completion of RESP 322 with C or better, or consent of instructor. **Two hours lecture, two hours laboratory per week.**

402. CARDIOPULMONARY DIAGNOSTICS AND REHABILITATION 4 hours credit

Study of the theory and techniques of cardiopulmonary diagnostic procedures, interpretations and clinical applications, as well as an overview of rehabilitative respiratory care techniques. **Prerequisites:** Senior status, completion of junior level respiratory therapy courses with a C or better, or consent of instructor. **Three hours lecture, three hours clinical practice per week.**

403. CLINICAL PRACTICUM III 5 hours credit

Supervised clinical experience in critical settings with special rotations through areas focusing on intensive care techniques and neonatal/pediatric respiratory care. **Prerequisites:** Senior status, completion of RESP 200- and 300-level courses with a C or better, or consent of instructor. **Supervised experience: one hour lecture, nine hours clinical practice per week.**

404. MANAGEMENT PRACTICES IN HEALTH SERVICES 3 hours credit

Prepares students for managerial challenges encountered by leaders and the health care practitioners in health service organizations. Topics include managerial theory, personnel interviewing, selection and maintenance, quality control, audits and budget preparation. **Prerequisites:** Senior status, completion of RESP 322 with C or better, or consent of instructor. **Three hours lecture per week.**

420. RESPIRATORY CARE SEMINAR 3 hours credit

Study of the pathophysiology of diseases affecting the cardiopulmonary system with attention to common treatment. Small group discussion, case studies, computer simulations and frequent physician input allows students opportunity to test treatment ideas, challenge current regimes and understand the importance of appropriate respiratory care. **Prerequisites:** Senior status; completion of RESP 401, 402, 403, 404 with C or better, or consent of instructor. **Two hours lecture, two hours laboratory per week.**

421. STUDY IN RESPIRATORY CARE 2 hours credit

Faculty-guided study of an aspect of respiratory care of special interest to the student. **Prerequisites:** Senior status; completion of RESP 401, 402, 403, 404 with C or better, or consent of instructor. **One hour lecture, two hours practicum per week.**

422. MANAGEMENT SPECIALIZATION 4 hours credit

Clinical practice in respiratory care management or other appropriate administration. Topics include medical legal aspects, employee scheduling, J.C.A.H. standard and audits, budget preparation and maintenance, and employee conferences. **Prerequisites:** Senior status; completion of RESP 401, 402, 403, 404 with C or better, or consent of instructor. **Three hours lecture, two hours practicum per week.**

423. EDUCATION SPECIALIZATION 4 hours credit

Experience in didactic and clinical instruction and departmental in-service education. Design, presentation and evaluation of lecture programs. **Prerequisites:** Senior status; completion of RESP 401, 402, 403, 404 with C or better, or consent of instructor. **Two hours lecture, four hours practicum per week.**

424. CRITICAL CARE SPECIALIZATION 5 hours credit

Clinical experience in critical care areas designed to refine skills in patient assessment, data collection and clinical decision making. Patient rounds with cardiopulmonary specialists. **Prerequisites:** Senior status; completion of RESP 401, 402, 403 and 404 with C or better, or consent of instructor. **Supervised experience: 10 hours per week.**

425. DIAGNOSTICS SPECIALIZATION 3 hours credit

Emphasis on sophisticated cardiopulmonary monitoring including Advanced Cardiac Life Support (certification offered). **Prerequisites:** Senior status; completion of RESP 401, 402, 403, 404 with C or better, or consent of instructor. **Two hours lecture, two hours laboratory per week.**

490. INDEPENDENT STUDY 1-3 hours credit

Intensive study in a specific area of respiratory care negotiated between student and faculty member. May be taken twice under different course subtitles recorded with the registrar. **Prerequisite:** Permission of instructor who will direct the study. **One to three hours per week.**

Russian (RUSS)

101. ELEMENTARY RUSSIAN I 3 hours credit

Beginning spoken and written Russian with emphasis on the alphabet, sound system, basic structures of the language and contemporary culture. **Three hours per week. Meets General Education IB.**

102. ELEMENTARY RUSSIAN II 3 hours credit

Continued development of listening, speaking, reading and writing in Russian with further study of major grammatical structures and contemporary culture. **Prerequisite:** RUSS 101 or at least one year of high school Russian. **Three hours per week. Meets General Education IB.**

201. INTERMEDIATE RUSSIAN 3 hours credit

Continued development and refinement of language skills as well as exposure to contemporary culture. **Prerequisite:** RUSS 102 or at least two years of high school Russian. **Meets General Education requirement IB. Three hours per week.**

Science (SCIE)

110. INTEGRATED SCIENCE I 4 hours credit

Introduces principles common to biology, physics, chemistry, earth science and astronomy and appropriate mathematical concepts. Activities include laboratories, field experiences and computer exercises. **Six hours per week lectures and activities. Meets General Education IIIA or IIIB.**

210. INTEGRATED SCIENCE II 4 hours credit

Continues the SCIE 110 study of the principles of natural order through examination of the laws of conservation, energy, motion and thermodynamics. Individual and group activities include laboratories, field experiences and computer exercises. Required of MCTP students. **Prerequisites:** SCIE 110. **Six hours per week. Meets General Education IIIB.**

310. INTEGRATED SCIENCE III 4 hours credit

Continues SCIE 210 study of the principles of natural order through examination of the laws of thermodynamics, cosmic evolution and evolution of life. Individual and group activities

include laboratories, field experiences and computer exercises. Required of MCTP students. **Prerequisite:** SCIE 210. **Six hours per week.**

Social Science (SOSC)

300. SOCIAL SCIENCE INTERN PROGRAM 3 hours credit

Work study program with the primary emphasis on practical experiences to be learned while working with a governmental or community agency on the local, state or national level. **Prerequisite:** Junior or senior class standing with a major in history, political science, sociology or social science and approval of directors.

400. CURRENT PROBLEMS 3 hours credit

Study made of either general or special topics of our times, considered from the historic aspect and the present social and cultural setting in which they occur. **Three hours per week.**

499. HONORS 3 hours credit

Independent study, research and conferences undertaken by social science majors for department honors at the invitation of the department. May not be taken on a pass/no credit basis. **Prerequisites:** Approval of department, 21 hours of work in social science completed, minimum 3.5 average in social sciences.

Social Work (SOWK)

200. INTRODUCTION TO SOCIAL WORK AND SOCIAL WELFARE 3 hours credit

Introduction to social work as a profession. Examination of the social welfare system as society's response to human need and structure for delivery of social services. Overview of fields of social welfare service and social work roles in each field. Twenty-five hours of volunteer service in a social agency required. **Three hours per week.**

220. BASIC INTERVIEWING: SKILLS AND TECHNIQUES 3 hours credit

Develop basic interviewing skills for assessing, goal setting and intervention for use in home service and social work settings. Emphasis on skill application with diverse populations and student exploration of personal values and belief systems. **Three hours per week.**

300. HUMAN BEHAVIOR IN THE SOCIAL ENVIRONMENT I 3 hours credit

Interrelationship of biological and psychosocial factors in human development throughout the life span. Examines dynamics of human behavior in a social context, with beginning level social assessment DSM diagnosis. **Prerequisite:** SOWK 200, BIOL 101, SOCI 101, PSYC 101, or consent of instructor. **Three hours per week.**

302. HUMAN BEHAVIOR IN THE SOCIAL ENVIRONMENT II 3 hours credit

Study of human behavior as affected by race, class, gender and sexual orientation. Attention to the experience of oppression and its impact on families and groups. Strategies to bring about social change in organizations and communities considered. **Prerequisites:** SOWK 200, 300. **Three hours per week.**

305. SOCIAL WELFARE POLICY 3 hours credit

Historical and analytical overview of social welfare policy in the United States. Selective examination of contemporary programs and services; analysis of policies; issues and problems; evaluation of programs and services for effectiveness. **Prerequisite:** SOWK 200 or consent of instructor. **Three hours per week.**

315. SOCIAL WORK RESEARCH 3 hours credit

Introduction to quantitative and qualitative research methodologies, designs for evaluation of practice and program evaluation. **Prerequisite:** SOWK 200 or consent of instructor. MATH 155 recommended. **Three hours per week.**

320. SOCIAL WORK PRACTICE I 3 hours credit

First of three practice courses preparing students for a generalist approach to social work practice. Emphasis on knowledge, values, ethics and skills needed to develop effective helping relationships. Includes basic theories for intervention with focus on micro level problem solving and basic interview skills. **Prerequisites:** SOWK 200, 220, 300. **Three hours per week.**

350. SOCIAL WORK WITH OLDER PEOPLE 3 hours credit

Study of older Americans and of the programs and policies designed to support them. Review of social work practice skills in providing direct service to older people. **Prerequisite:** SOWK 200 or consent of instructor. **Three hours per week.**

400. SOCIAL WORK PRACTICE II 3 hours credit

Second of three practice courses preparing students for a generalist approach to social work practice. Expands basic knowledge, values, ethics and skills, with emphasis on mezzo level problem solving. Includes theories and techniques for planning, assessment and advocacy for family and small group intervention. **Prerequisites:** SOWK 315, 320. **Corequisite:** SOWK 406 or 407. **Three hours per week.**

405. FIELD INSTRUCTION IN SOCIAL WORK I 5 hours credit

Supervised experience in a social welfare agency with emphasis on methods and techniques of generalist social work practice. Opportunity to apply theory and develop skills in delivery of social services. **Prerequisites:** SOWK 302, 315, 320 and approval of the department. **Corequisites:** SOWK 400, 406. **Two working days per week. (P/F)**

406. FIELD INSTRUCTION SEMINAR I 1 hour credit

Weekly on-campus seminar concurrent with Field Instruction I. Small group discussion of field experience with related written assignments. **Prerequisite:** SOWK 320. **Corequisites:** SOWK 400, 405. **One hour per week.**

407. FIELD INSTRUCTION IN SOCIAL WORK II 5 hours credit

Continuation of direct experience in the delivery of social services within an assigned agency. Increased emphasis on assessment, intervention and evaluation skills of generalist social work. **Prerequisites:** SOWK 405, 406. **Corequisites:** SOWK 408, 410. **Two working days per week. (P/F)**

408. FIELD INSTRUCTION SEMINAR II 1 hour credit

Weekly on-campus seminar concurrent with Field Instruction II. Small group discussion of field experience with related written assignments. **Prerequisites:** SOWK 405, 406. **Corequisite:** SOWK 407. **One hour per week.**

410. SOCIAL WORK PRACTICE III 3 hours credit

Third of three practice courses preparing students for a generalist approach to social work. Expands basic knowledge, values, ethics and skills, with emphasis on macro level problem solving. Includes theories and techniques needed for practice within an organizational and/or community context. **Prerequisite:** SOWK 400. **Corequisite:** SOWK 407 or 408. **Three hours per week.**

450. SOCIAL WORK WITH FAMILIES AND CHILDREN 3 hours credit

Survey of child welfare services and examination of current policies in social work for children and their families.

Consideration of practice issues in protective services, in-home services to families and substitute care including adoption and foster care. **Prerequisite:** SOWK 200 or consent of instructor. **Three hours per week.**

455. SUBSTANCE ABUSE: ISSUES AND SERVICES **3 hours credit**
Study of alcohol and drug abuse. Topics include theoretical perspectives on abuse, pharmacological characteristics of commonly abused substances, and stages of dependence and addiction. Overview of societal response to substance abuse including law enforcement, treatment, rehabilitation and prevention. **Prerequisite:** SOWK 300 or consent of instructor. **Three hours per week.**

460. SOCIAL WORK IN CORRECTIONS **3 hours credit**
Social work interventions in a variety of correctional settings. Focuses on professional role in court and correctional procedures within institutional and community-based programs. **Prerequisite:** SOWK 200 or consent of instructor. **Three hours per week.**

465. SOCIAL WORK IN HEALTH CARE **3 hours credit**
Explores the role of social work practice in various health care settings. Emphasis on the changing concepts of health and illness. Evaluates the nature of health care organizations, funding mechanisms and ethical dilemmas in social work health care. **Prerequisite:** SOWK 300 or consent of instructor. **Three hours per week.**

470. SOCIAL WORK IN MENTAL HEALTH **3 hours credit**
Investigates the role of the social work profession within the mental health delivery system utilizing a generalist social work approach. Social work and mental health concepts, policies, research methods and program development examined in social service agencies, community mental health facilities and institutional accommodations. **Prerequisite:** SOWK 300 or consent of instructor. **Three hours per week.**

475. SOCIAL WORK WITH PERSONS WHO HAVE DISABILITIES **3 hours credit**
Overview of physical, social and emotional implications of disabilities within the context of generalist social work practice. Topics include sensitivity to discrimination in society, laws and services available, and personal and family adjustment to disability. **Prerequisite:** SOWK 200. **Three hours per week.**

484. SOCIAL WORK AND THE LAW **3 hours credit**
Study of social welfare, family, consumer law and the legal authority of social agencies to make regulations. Guidelines for court testimony and rules of evidence presented. **Prerequisite:** SOWK 200 or consent of instructor. **Three hours per week.**

490. INDIVIDUAL DIRECTED STUDY **1-3 hours credit**
Enables advanced students to pursue topics of their own choosing with the guidance and supervision of the faculty. Should not duplicate any course already offered by the department. **Prerequisite:** Senior standing.

499. SPECIAL TOPICS **1-3 hours credit**
Provides opportunities for investigating special themes or issues of interest to students and the social work profession. May be repeated once under a different subtitle. **Prerequisite:** SOWK 200 or consent of instructor. **Three hours per week.**

Sociology (SOCI)

101. INTRODUCTION TO SOCIOLOGY **3 hours credit**
Identification and analysis of basic concepts of sociology; study of interrelatedness of structures, systems and institutions, and of the social processes by which society evolves. **Three hours per week. Meets General Education IIB.**

201. SOCIAL PROBLEMS **3 hours credit**
Analysis of selected social problems in contemporary society. Emphasis on sociological understanding of the processes by which social problems are defined. **Meets General Education IIB.**

216. SOCIOLOGY OF GENDER **3 hours credit**
Study of the social positions and expectations assigned to people on the basis of gender. Stresses the central place of gender roles in social organization and considers the implications of any major role changes. **Three hours per week. Meets General Education IIB.**

225. SOCIOLOGY OF CONFLICT AND NONVIOLENCE **3 hours credit**
Seeks answers to questions about why humans use violence to resolve conflict and what social forces produce conflict in the family, ethnic and racial groups, economic groups and nation states. Explores nature and practice of non-violent conflict resolution. **Three hours per week. Meets General Education IIB.**

301. STUDIES IN SOCIOLOGY **3 hours credit**
Selected areas in varied subfields of sociology. May be repeated under different subtitles. **Three hours per week. Meets General Education IIB.**

304. SOCIAL INEQUALITY **3 hours credit**
Analysis of the variety of class and rank structures found in both past and contemporary societies. Special attention focused on the determinants of social class as well as the related issues of social mobility and changes in class position of both individuals and groups. Additional emphasis on identifying both attitudinal and behavioral consequences of class position. **Three hours per week. Meets General Education IIB.**

305. SOCIOLOGY OF LAW **3 hours credit**
Study of formal legal statements as communications both reflecting and influencing life in society. Selected examples of the conflict between legality and social reality, with attention to both substantive and procedural issues of law; consideration of possible solutions. **Three hours per week. Meets General Education IIB.**

309. RESEARCH I, SOCIAL RESEARCH METHODS **3 hours credit**
Introduction to social science research methods. Emphasis on research design, including formulation of questions, conceptualization, measurement, sampling and involvement in practical research activity. **Three hours per week. Meets General Education IIB.**

310. RESEARCH II, STATISTICAL METHODS **3 hours credit**
Advanced training in social science research methods. Emphasis on data analysis, including organization of data for computer processing, hypothesis testing and simple causal modeling. **Three one-hour lectures, one two-hour laboratory per week. Meets General Education IIB.**

313. CRIMINOLOGY AND PENOLOGY **3 hours credit**
Consideration of crime and delinquency as forms of deviant behavior; examination of social causes, social reactions and applicable sociological theories. **Meets General Education IIB.**

315. URBAN SOCIOLOGY **3 hours credit**
Study of the origin, character and significance of urban communities. Analyzes the ecology and social organizations of cities, the phenomenon of urban and metropolitan development, and the resulting lifestyles, problems and trends. **Three hours per week. Meets General Education IIB.**

316. THE FAMILY**3 hours credit**

Consideration of the family as a socially recognized intimate group with a significant place in the life of the individual and society. Emphasis on the impact of changing social conditions on sexuality, love, marriage, parenthood, childhood and other dimensions of intimate relationships. **Three hours per week. Meets General Education IIB.**

318. SOCIOLOGY OF RELIGION**3 hours credit**

Examination of humanity's quest for religious meaning as a social activity with social consequences. Considers the place of religion in different kinds of societies, past, present and future. **Three hours per week. Meets General Education IIB.**

319. SOCIAL CHANGE**AND SOCIAL PLANNING****3 hours credit**

Explores why whole societies like the United States change. Compares contemporary industrial and developing countries by critically examining classical and current theories of sociocultural change. Considers strategies for purposive changing of a society. **Three hours per week. Meets General Education IIB.**

320. SOCIAL MOVEMENTS**3 hours credit**

In-depth study of contemporary social movements, such as the Black Muslims, Gay Liberation, the Women's Movement, the aged, youth and radical right. **Meets General Education IIB.**

322. POPULATION STUDIES**3 hours credit**

Introduction to social demography. Topics include world and U.S. population trends, components of demographic change (fertility, mortality, migration), population policy and demographic aspects of contemporary social issues. **Meets General Education IIB.**

324. COMMUNITY SOCIOLOGY**3 hours credit**

Investigation of communities as social systems emphasizing current directions in community research. **Three hours per week. Meets General Education IIB.**

326. SOCIAL INTERACTION**3 hours credit**

Study of human behavior as social interaction. Emphasis on symbolic communication and its relationship to the concept of self. **Meets General Education IIB.**

329. MEDICAL SOCIOLOGY**3 hours credit**

Study of social factors involved in health and illness emphasizing the institution of medicine in American society. **Three hours per week. Meets General Education IIB.**

330. DEATH, DISEASE AND SOCIETY**3 hours credit**

Analysis of changing patterns of causation and distribution of death and disease. Major emphasis given to the study of suicide and homicide. **Three hours per week. Meets General Education IIB.**

331. RACIAL AND CULTURAL MINORITIES**3 hours credit**

Study of ethnic differences that produce prejudice, stereotypes and discrimination and of the social processes employed by dominant and minority groups. **Three hours per week. Meets General Education IIB.**

334. SOCIOLOGY OF MENTAL HEALTH**3 hours credit**

Study of sociocultural factors in mental health and illness emphasizing social causation and patterns of distribution. **Three hours per week. Meets General Education IIB.**

335. SYSTEMS OF HEALTH CARE DELIVERY**3 hours credit**

Analysis of the institution of health care and its delivery. Major emphasis on the diversity of organization in this institution in

differing social systems. **Three hours per week. Meets General Education IIB.**

344. COMPLEX ORGANIZATIONS**3 hours credit**

Analysis of the emergence of modern bureaucratic structure, emphasizing institutionalization, patterns of authority and impact on personality. **Meets General Education IIB.**

361. AGING AND SOCIETY**3 hours credit**

Examination of the aging process from the sociological perspective. Emphasis on the position of the elderly in contemporary society and on age-roles associated with stages in the process of aging such as childhood, adolescence, adulthood and old age. **Meets General Education IIB.**

363. WOMEN IN DEVELOPMENT**3 hours credit**

Explores women's roles in processes of economic, political and social development in today's societies from a global perspective. This course is designed to review theoretical and analytical work in these areas as well as case studies to examine the particular effects of more general trends associated with the sociological study of women in development. **Prerequisite:** Junior standing or permission of the instructor. **Three hours per week. Meets General Education IIB.**

390. SOCIOLOGY OF THE ENVIRONMENT**3 hours credit**

Examines the environment as a social product. Uses the sociological perspective to explain how environmental problems are structurally created. Focuses on mining and forestry to illustrate how environmental degradation, disease, death and disability are produced. **Three hours per week. Meets General Education IIB.**

401. SPECIAL TOPICS**3 hours credit**

Reserved for courses approved as experimental responses to student interest or community need. May be repeated once under a different subtitle. **Meets General Education IIB.**

409. SOCIOLOGY OF EDUCATION**3 hours credit**

Analysis of public education as a bureaucratic social institution, the countervailing community power structure and the professional role of the educator. **Three hours per week. Meets General Education IIB.**

416. INDIVIDUAL DIRECTED STUDY**3 hours credit**

Advanced study in an area of sociology. May be repeated once under a different subtitle. **Prerequisite:** Consent of instructor who will direct the study. **Three hours per week.**

421. THEORY I, FOUNDATIONS OF SOCIOLOGICAL THEORY**3 hours credit**

Analysis of the historical antecedents and contemporary profiles of sociological theory emphasizing major figures and dominant paradigms. **Prerequisite:** SOCI 101 or consent of instructor. **Three hours per week.**

422. THEORY II, CONTEMPORARY SOCIOLOGICAL THEORY**3 hours credit**

Analysis of the current state and future directions of sociological theory. **Prerequisite:** SOCI 101 or consent of instructor. **Three hours per week.**

431. SENIOR SEMINAR**3 hours credit**

Seminar experience for senior students with emphasis on social theory, problems and research. **Prerequisite:** Fifteen hours of sociology or consent of instructor. **Three hours per week.**

460. RESEARCH PRACTICUM**3 hours credit**

Applies social research methods to a specific research project which includes hypothesis formulation, research design, data collection and data analysis. **Prerequisite:** SOCI 309 or consent of instructor. **Three hours per week.**

495. INDEPENDENT STUDY FOR DEPARTMENT HONORS 3 hours credit
Independent study undertaken for departmental honors at the invitation of the department. **Prerequisites:** Approval of chair, consent of instructor who will direct the study.

Spanish (SPAN)

101. ELEMENTARY SPANISH I 3 hours credit
Beginning spoken and written Spanish with emphasis on the sound system and the basic structures of the language. **Three hours per week. Meets General Education IB.**

102. ELEMENTARY SPANISH II 3 hours credit
Continued skill development in spoken and written Spanish with further study of major structures. **Prerequisite:** SPAN 101 or at least one year of high school Spanish. **Three hours per week. Meets General Education IB.**

105. OPTIONAL PRACTICUM CREDIT 1 hour credit
Optional credit for supplementary oral and written exercise in the language laboratory or in workshop sessions to complement the work in SPAN 101. **Prerequisite:** Registration in SPAN 101 or permission of department chair. **Two hours per week.**

106. OPTIONAL PRACTICUM CREDIT 1 hour credit
Optional credit for supplementary oral and written exercise in the language laboratory or in workshop sessions to complement the work in SPAN 102. **Prerequisite:** Registration in SPAN 102 or permission of department chair. **Two hours per week.**

201. INTERMEDIATE SPANISH 3 hours credit
Continued development and refinement of language skills with emphasis on reading, writing and vocabulary development. **Prerequisite:** SPAN 102 or at least two years of high school Spanish. **Three hours per week. Meets General Education IB.**

202. SPANISH IN REVIEW 3 hours credit
Refinement and application of language skills by exploring diverse forms of expression in Spanish. Satisfies the language requirement for English majors. **Prerequisite:** SPAN 201 or at least three years of high school Spanish. **Three hours per week. Meets General Education IB.**

205. OPTIONAL PRACTICUM CREDIT 1 hour credit
Optional credit for supplementary oral and written exercise in the language laboratory or in workshop sessions to complement the work in SPAN 201. **Prerequisite:** Registration in SPAN 201 or permission of department chair. **Two hours per week.**

206. OPTIONAL PRACTICUM CREDIT 1 hour credit
Optional credit for supplementary oral and written exercise in the language laboratory or in workshop sessions to complement the work in SPAN 202. **Prerequisite:** Registration in SPAN 202 or permission of department chair. **Two hours per week.**

300. TOPICS IN SPANISH 3 hours credit
Study of an author, period, movement, genre or theme. Topic varies semester to semester. May be repeated once with new content. **Prerequisite:** Consent of instructor. **Three hours per week.**

310. ORAL AND WRITTEN COMPOSITION 3 hours credit
Develops facility to sustain oral and written discussion in Spanish. Students practice the basic patterns of Spanish syntax and develop vocabulary by preparing frequent oral and written compositions. **Prerequisite:** SPAN 202 or equivalent experience. **Three hours per week.**

312. CONVERSATION 3 hours credit
Develops confidence and correctness in spoken Spanish through practice in conversation, reports and discussions. **Prerequisite:** SPAN 202 or equivalent experience. **Three hours per week.**

315. ELEMENTS OF SPANISH CULTURE 3 hours credit
Study of the dominant cultural patterns in Spanish life including the themes of religion, family relationships and festivals and the dilemmas of work-leisure, sports-cruelty and honor-death through prose, drama and other selected material. **Prerequisite:** SPAN 310. **Three hours per week.**

316. ELEMENTS OF LATIN AMERICAN CULTURE 3 hours credit
Study of key cultural patterns with particular attention to the results of the transplantation to the New World. The major vehicle of examination is the written word in prose, drama and other selected materials. **Prerequisite:** SPAN 310. **Three hours per week.**

322. SPANISH FOR BUSINESS 3 hours credit
Develops the ability to use Spanish to conduct business in both the U.S. and abroad. Provides a solid foundation in the vocabulary and discourse related to the modern business office, economics, management, marketing, banking and other aspects of a business environment. **Prerequisite:** SPAN 310. **Three hours per week.**

330. HISPANIC LITERATURE IN TRANSLATION 3 hours credit
Reading, analysis and discussion of some of the classic works of Spanish and Latin American literature. Taught in English. **Three hours per week. Meets General Education IA.**

335. SURVEY OF SPANISH LITERATURE 3 hours credit
A survey of the foundational literary texts, authors and movements from the Middle Ages through contemporary Spain. **Prerequisite:** SPAN 310. **Three hours per week. Meets General Education IA.**

336. SURVEY OF LATIN AMERICAN LITERATURE 3 hours credit
Study of the evolution of Latin American literature. Provides students with the opportunity to read, analyze, discuss and write about seminal works by representative writers from each literary movement and genre. **Prerequisite:** SPAN 310. **Three hours per week. Meets General Education IA.**

400. ADVANCED STYLISTICS AND ORAL EXPRESSION 3 hours credit
Refinement and sophistication of written and oral expression in Spanish. **Prerequisite:** SPAN 310 or equivalent experience. **Three hours per week.**

403. HISPANIC CULTURE THROUGH LITERATURE 3 hours credit
Study of modern Spanish and Spanish American literature within its cultural context. Students will explore the literary text as cultural document including the roles of Afro-Hispanics, indigenous peoples, religion, women, politics and poverty in the formation of Hispanic cultures. Cannot receive credit for both SPAN 325 and SPAN 403. **Prerequisites:** SPAN 335 or 336 or equivalent experience. **Three hours per week.**

405. SPECIAL PROBLEMS ON SPANISH 1-6 hours credit
Individual study of special areas in Spanish linguistics such as phonetics and diction, the history and evolution of the language, or in Spanish and Latin American literature with advice and direction from a member of the department. May be repeated with new content. **Prerequisite:** Consent of department chair.

410. TOPICS IN HISPANIC LITERATURE 3 hours credit
In-depth study of a particular writer, work, theme or movement in Spanish and/or Latin American literature. **Prerequisite:** SPAN 335 and 336 or equivalent experience. **Three hours per week.**

480. SENIOR SEMINAR 1-3 hours credit
For senior Spanish majors. Research encompassing several areas of Spanish life and culture, language and literature is brought to bear upon a single theme or issue. **Prerequisite:** Senior standing.