

# COURSE IDENTIFICATION

The following section contains course descriptions. A course number indicates – in a general way – the difficulty and level of the student group for which the course is offered. Courses numbered 100 to 199 are primarily for freshmen; 200 to 299 for sophomores; 300 to 499 for juniors and seniors; 500 to 799 for juniors, seniors and graduate students. Students must attain sophomore standing (26 semester hours) before enrolling in any 300/400 level course. (See exception policy, p. 75.)

The number in parentheses after the course title indicates the credit in semester hours. A hyphen (-) between the numbers of a course indicates no credit will be given until all of the course sequence is successfully completed.

A colon (:) between the numbers of the course and semester hours credit indicates credit will be given as each semester of the course is completed, and they must be taken in order.

A comma (,) between the numbers of a course and semester hours credit indicates credit will be given as each semester of the course is completed.

The line following the course title and credit tells the number of lecture and laboratory hours a week. The third line gives the prerequisite, if any.

Following some course descriptions will be listed the semester in which the course is offered (fall, spring). When no semester (or semesters) is listed at the end of the course description, then in most cases that course is offered each semester during the academic year. However, students must consult with their academic advisers to ensure that a course will be offered the semester they would like to take it.

To obtain detailed information regarding a specific course, students may view the complete course syllabus for a specific course by accessing the course through the Radford University computer network.

## COURSE PREFIX INDEX

ACTG	Accounting	251
ANTH	Anthropology	252
APST	Appalachian Studies	256
ART	Art	257
ASTR	Astronomy	264
BIOL	Biology	264
BLAW	Business Law	270
CHEM	Chemistry	270
CHNS	Chinese (Mandarin)	272
CLSS	Classics	273
COED	Counselor Education	273
COMM	Communication	274
COSD	Communication Sciences and Disorders	278
CRJU	Criminal Justice	280
DNCE	Dance	283
DSN	Design	285
DSNF	Fashion	286
DSNI	Interior Design	288
DSNM	Design Merchandising	290
ECON	Economics	292
EDEC	Early Childhood Education/Early Childhood Special Education	294
EDEF	Educational Foundations	296
EDET	Educational Technology	296
EDME	Middle Education	297
EDRD	Reading	297
EDSP	Special Education	298
EDUC	Education	302
ENGL	English	305
ESHE	Exercise, Sport and Health Education	312
FDSN	Foods and Nutrition	319
FINC	Finance	320
FORL	Foreign Language	323
FREN	French	324
GEOG	Geography	325
GEOL	Geology	329
GRMN	German	332
HIST	History	333
HLTH	Health	339
HUMD	Human Development	342
INST	International Studies	342

ITEC	Computer Science and Information Science and Technology	345	PHYS	Physics	385
LATN	Latin	351	POSC	Political Science	387
LEAD	Student Leadership Program	351	PSYC	Psychology	392
MATH	Mathematics	351	RCPT	Recreation, Parks and Tourism	397
MGNT	Management	356	RELN	Religious Studies	401
MKTG	Marketing	359	SOCY	Sociology	403
MSCI	Military Science	361	SOWK	Social Work	408
MSTD	Media Studies	364	SPAN	Spanish	410
MUSC	Music	368	STAT	Statistics	412
NURS	Nursing	378	THEA	Theatre and Cinema	413
PEAC	Peace Studies	381	UNIV	University 100	417
PHIL	Philosophy	382	WMST	Women's Studies	417
PHSC	Physical Science	384			

# ALPHABETICAL LISTING OF COURSES

## ACCOUNTING

### **ACTG 211. Fundamentals of Financial Accounting.**

Three hours lecture.

*Prerequisite: Sophomore standing.*

A comprehensive introduction to the fundamental concepts and procedures in accounting for proprietorships, partnerships and corporations. Emphasis is on the user perspective. ACTG 211 is a business core requirement.

### **ACTG 212. Fundamentals of Managerial Accounting.**

Three hours lecture.

*Prerequisite: ACTG 211.*

Comprehensive introduction to the fundamental principles and procedures of accounting for managerial decision making, planning, control and performance evaluation; ACTG 212 is a business core requirements.

Note: Business majors must have completed the Pre-business Program (p. 97) and have been admitted to a business major, in addition to having completed any specific prerequisite or corequisite courses to be eligible to take 300- or 400-level accounting courses.

### **ACTG 311. Cost Accounting.**

Three hours lecture.

*Prerequisite: ACTG 212.*

Principles and procedures of determining cost in a manufacturing concern. Course devoted primarily to a study of job order, process and standard costing.

### **ACTG 312. Accounting Information Systems.**

Three hours lecture and computer lab.

*Prerequisites: ACTG 212 and ITEC 100 or ITEC 110.*

Introduces students to Accounting Information Systems (AIS). Includes hands-on use of accounting software as well as theoretical study of the various accounting modules such as general ledger, accounts receivable and

payroll. Software selections and current trends in AIS development also are discussed.

### **ACTG 313:314. Intermediate Accounting I and II.**

Three hours lecture each.

*Prerequisite: ACTG 212.*

ACTG 313 treats topics of financial accounting such as future and present value concepts, cash, receivables, short-term investments and fixed assets. ACTG 314 is a comprehensive study of corporate equity accounts, long-term investments, pensions and leases, financial statement analysis and price level reporting.

### **ACTG 401. International Accounting.**

Three hours lecture.

*Prerequisites: ACTG 212 and FINC 331.*

An introduction to the international dimensions of accounting, including the environment of international financial reporting, comparative accounting, international accounting standards, and accounting for multinational operations.

### **ACTG 411. Federal Taxation.**

Three hours lecture each.

*Prerequisite: ACTG 212.*

An introduction to the basic concepts and systems of federal income taxation applicable to individuals, corporations, and partnerships. Emphases on the role taxes play in financial and managerial decision-making.

### **ACTG 412. Advanced Taxation.**

Three hours lecture.

*Prerequisite: ACTG 411.*

Examines advanced topics relating to individual and entity taxation, tax research, exempt entities, and multi jurisdictional tax issues.

### **ACTG 413. Advanced Financial Topics.**

Three hours lecture.

*Prerequisite: ACTG 314.*

Special problems in accounting with emphasis on consolidations, parent and subsidiary

accounting, branch accounting and non-profit accounting.

**ACTG 414. Auditing. (3)**

Three hours lecture.

*Prerequisite: ACTG 313 and senior standing.*

Covers principally the attest function; the basic professional auditing standards and how they are applied by independent auditors, professional ethics, legal liability of auditors, preparation of auditing reports, and auditing techniques such as audit sampling.

**ACTG 415. Accounting Theory. (3)**

Three hours lecture.

*Prerequisite: ACTG 314.*

Study of the development of accounting theory and its conceptual framework. Further theoretical exposure to and advanced problem solving of selected accounting topics.

**ACTG 416. Governmental and Not-For-Profit Accounting. (3)**

Three hours lecture.

*Prerequisite: ACTG 313 or permission of instructor.*

Study of the theory and practice of accounting, budgeting, standard setting and financial reporting for governmental and not-for-profit organizations.

**ACTG 471. Special Topics in Accounting. (1-4)**

One to four hours lecture.

*Prerequisite: Approval of instructor.*

Examines topics of special interest in accounting not covered in current course offerings. Can be taken more than once for a maximum of four hours credit.

**ACTG 472. Independent Study. (1-4)**

Gives an individual student the opportunity to examine a topic of personal interest in depth. See "Independent Study" on p. 63.

**ACTG 488. Final Honors Project. (2-3)**

*Prerequisites: Completion of business core, enrollment in the Honors Academy, senior standing, a minimum GPA of 3.5 or higher in all courses and in accounting.*

Research project in accounting. In order to receive honors credit, a student must earn a grade of "A" or "B" for the final project. Course may not be repeated.

**ACTG 490. Accounting Internship. (3)**

*Prerequisites: The student must be a junior or senior accounting major, a cumulative GPA of 2.5 or higher and permission of the instructor.*

A one-semester program of work and study in the student's major area and/or career interest. Learning objectives, qualifications and hours of work approved by faculty coordinator and sponsoring agency. Final grade determined by supervising faculty. Graded A-F. Course may not be repeated for a better grade.

For descriptions of graduate courses, please consult the *Radford University Graduate Catalog*.

## ANTHROPOLOGY

**ANTH 120. Physical Anthropology. (3)**

Three hours lecture.

The study of physical anthropology. The focus is on the origin, development and variation of humans from a biological and anthropological perspective, and includes considerations of the human skeleton, human variation and adaptation, human evolution, primates and primate paleontology. Students who have received credit for ANTH 220 may not receive credit for ANTH 120.

**ANTH 121. Cultural Anthropology. (3)**

Three hours lecture.

Introduction to the ways anthropologists view human behavior and the methods they use. Cultures past and present and around the world are explored to study diverse adaptations humans have made. General Education credit - Social and Behavioral Sciences or International and Intercultural Studies. This course may be used to meet requirements for the minor in International Studies.

**ANTH 122. Introduction to Archaeology.**

(3)

Three hours lecture.

An introduction to the methods archaeologists use to interpret the past lifeways of prehistoric and historic human cultures is the focus of this course. Case studies of past cultures are also discussed to provide current information on these cultures and to serve as examples of archaeological research. Students who have received credit for ANTH 222 may not receive credit for ANTH 122.

**ANTH 230. Introduction to Forensic Anthropology.**

(3)

Three hours lecture.

*Prerequisite: ANTH 120, or permission of instructor.*

Serves as an introduction to the field of forensic anthropology, the identification and analysis of human remains in a legal context. It includes a brief study of the major bones of the human body, their growth, development, variation, and initial treatment and examination. Through lectures, readings, and discussions, emphasis is placed on the major methods and techniques forensic anthropologists use to identify unknown human remains for law enforcement, including preliminary discussions of determination of age, sex, ancestry, and stature from the human skeleton. It also includes discussions of determination of time since death (or postmortem interval), manner of death, as well as differentiating antemortem, perimortem, and postmortem trauma. The role of the forensic anthropologist in mass disasters and human rights abuse cases is also considered.

**ANTH 232. Forensic Archaeology.**

(3)

Three hours lecture.

*Prerequisites: ANTH 122, or permission of instructor.*

An introduction to the major methods of forensic archaeology, the application of archaeological theory and method to crime scene investigation and recovery. A focus will be on field methods for search and recovery of human remains and other forensic evidence, including mapping and geophysical remote sensing methods, initial recognition and

excavation of human and other forensic remains, and collection of soil, botanical, and entomological evidence. Through a combination of lecture and field exercises, the course will also consider the major variables which affect recognition and recovery of forensic remains, including the taphonomic effects of weathering, natural decay, water, fire, faunal and floral degradation.

**ANTH 301. Culture Change and Globalization.**

(3)

Three hours lecture.

*Prerequisite: ANTH 121.*

Examination of anthropological theories on processes of culture change, including globalization and the changes it brings to societies around the world. General Education credit - Social and Behavioral Sciences.

**ANTH 320. Human Osteology.**

(4)

Three hours lecture; three hours laboratory.

*Prerequisite: ANTH 120.*

An examination of the human skeletal system, including discussions of the nature and functions of bone, techniques for the identification of bone, and methods of study of human bone in an anthropological as well as forensic (legal) context.

**ANTH 322. Method and Theory in Archaeology.**

(4)

Two hours lecture; four hours laboratory.

*Prerequisites: ANTH 122 or permission of instructor.*

Provides advanced training in field and laboratory methods in archaeology and includes limited field excavations, training in processing and analysis of both prehistoric and historic artifact collections and the preparation of original reports summarizing these analyses. Students also receive instruction in current theoretical approaches in archaeology.

**ANTH 330. Primate Studies.**

(3)

Three hours lecture.

*Prerequisite: ANTH 120.*

A survey of both living and past primates as unique members of the animal kingdom. It includes discussions of general primate characteristics, taxonomy of living primates,

primate behavior and primate (including human) evolution.

**ANTH 332. World Prehistory. (3)**

Three hours lecture.

*Prerequisites: ANTH 122.*

A survey of the world's prehistoric cultures, from the earliest human cultures to the beginning of complex civilizations. The focus is on humans' adaptation to their environment through culture and the changes in these adaptations over time. General Education credit - Social and Behavioral Sciences.

**ANTH 333. Experiencing Cultural Diversity. (3)**

Three hours lecture.

*Prerequisite: ANTH 121.*

Provides, through lecture, discussion, and experiential exercises, an understanding of diverse cultures in the United States. Emphasis will be on developing the knowledge, attitudes and skills necessary for full participation in a diverse workplace and a diverse society. Duplicate credit will not be granted for SOCY 333. This course may be used to meet requirements for the minor in Women's Studies.

**ANTH 361. Applied Anthropology. (3)**

Three hours lecture.

*Prerequisite: ANTH 121, or permission of instructor.*

Provides an introduction to the field of applied anthropology. It covers the history, research issues, and current directions in applied anthropology, examining ways that anthropologists put their perspectives, theories, and methods to work in an applied manner to solve regional, national, and global problems.

**ANTH 410. Human Origins. (3)**

Three hours lecture.

*Prerequisite: ANTH 120, junior or senior standing or permission of instructor.*

Reviews the fossil evidence for human evolution, with an emphasis on past and present scientific principles governing the study of human origins, identification and interpretation of hominid fossils in a functional context and the interaction of culture and biology in human evolutionary development. Students will also

critically examine major controversies in human evolution.

**ANTH 411. Appalachian Cultures. (3)**

Three hours lecture.

*Prerequisite: ANTH 121 or APST 200 or SOCY 110, or permission of instructor.*

Contemporary Appalachian culture; anthropological explanations of regional culture explored; causes and repercussions of culture change in Appalachia examined. General Education credit - Social and Behavioral Sciences. This course may be used to meet requirements for the minor in Appalachian Studies.

**ANTH 420. Advanced Forensic Anthropology. (4)**

Three hours lecture; three hours laboratory.

*Prerequisites: ANTH 120, 230, 320 or permission of instructor.*

Offers advanced hands-on experience and training in the identification of unknown human skeletal remains. Students will conduct skeletal analyses focusing on basic vital statistical parameters like age, sex, race, and stature. Other topics reviewed will include the role of the forensic anthropologist in crime scene investigation and recovery of skeletonized human remains, determination of time since death, skeletal trauma and pathology, and special techniques in forensic anthropology.

**ANTH 421. Anthropology of Religion. (3)**

Three hours lecture.

*Prerequisite: ANTH 121 or SOCY 110, or permission of instructor.*

Study of anthropological theories of magic, witchcraft and religion. Discusses the impact religious ideology has on other aspects of culture. Includes primitive and modern religions as examples.

**ANTH 430. Native American Cultures. (3)**

Three hours lecture.

*Prerequisite: ANTH 121 or permission of instructor.*

Study of these cultures as they existed before and at the time of European contact and as they exist today. General Education credit - Social and Behavioral Sciences.



**ANTH 441. Anthropological Theory. (3)**

Three hours lecture.

*Prerequisites: ANTH 120, ANTH 121 or permission of instructor.*

Study of anthropological theories which provide explanations for cultural variation and for the modes of analysis used when studying cultures. The major anthropological schools of thought and the issues they raise in the study of cultures are discussed.

**ANTH 451. Latin American Cultures. (3)**

Three hours lecture.

*Prerequisite: ANTH 121 or permission of instructor.*

Study of the diverse ways in which the native peoples of Latin America make their living, structure their societies and conceive of themselves and their worlds, as viewed through the anthropological literature. General Education credit - Social and Behavioral Sciences.

**ANTH 461. Applied Anthropology Experience. (3)**

Two hours lecture; two hours field.

*Prerequisite: ANTH 121, 361 or permission of instructor.*

Provides advanced-level study of the ways that anthropological perspectives, theories, and methods are applied in practice to solve regional, national, and global problems, and practical experience through participation in a hands-on fieldwork project in applied anthropology designed to enhance advanced study.

**ANTH 471. Economic & Environmental Anthropology. (3)**

Three hours lecture.

*Prerequisite: ANTH 121 or permission of instructor.*

Examination of anthropological theories on economic organization and behavior, and related environmental issues, for societies around the world. Cross-cultural study of economic diversity using cases from the anthropological and archaeological literature. General Education credit - Social and Behavioral Sciences.

**ANTH 480. Practicing Ethnographic Methods. (4)**

Two hours lecture; two hours field.

*Prerequisite: ANTH 121 or permission of instructor.*

A research project of the student's own choosing is carried through from entree into a local cultural scene through analysis of data and writing an ethnography. The course promotes understanding of anthropological method and perspective for viewing people and situations. This course may be used to meet requirements for the minor in Appalachian Studies.

**ANTH 481. Political Anthropology. (3)**

Three hours lecture.

*Prerequisite: ANTH 121 or permission of instructor.*

Cross-cultural study of political organization, leadership and conflict resolution in small-scale, non-Western societies. Examination of anthropological theories on political organization to evaluate case studies from anthropological and archaeological literature. General Education credit - Social and Behavioral Sciences.

**ANTH 482. Quantitative and Computer Methods in Anthropology. (4)**

Two hours lecture; four hours laboratory.

*Prerequisites: ANTH 120, 121, and 122, or permission of instructor.*

Through hands-on training with real and demonstrative data sets, students will learn a wide range of quantitative analytical techniques most frequently used in the field. Course topics include basic computer methods, concepts of sampling and probability, and univariate and multivariate statistical analyses.

**ANTH 488. Final Honors Project. (2-3)**

*Prerequisites: Enrollment in the Honors Academy, completion of all other Honors Academy requirements, a minimum 3.5 cumulative GPA and in all sociology and anthropology courses or permission of instructor.*

Students conduct research and write a thesis for a bachelor's degree with honors in

anthropology. In order to receive honors credit, the student must receive a grade of "A" or "B" for the thesis. Course may not be repeated.

**ANTH 492. Field School in Archaeology. (6)**

Field course: 40 hours a week.

*Prerequisites: ANTH 122 and permission of instructor.*

Emphasis on practical field experience in archaeology. Surveys and excavations are conducted on both prehistoric and historic sites and students learn the mapping, recording and field artifact identification techniques that are the basis of archaeology. Summer. No more than a total of nine hours of credit from ANTH 492, ANTH 493, ANTH 498, and ANTH 499, may be counted toward the 41 hours for the anthropology major.

**ANTH 493. Practicum in Anthropology. (1-6)**

Field or laboratory course; variable hours per week.

*Prerequisites: ANTH 120, 121, 122, or permission of instructor.*

Provides experience in all aspects of a field or laboratory research project in cultural anthropology, physical anthropology or archaeology. Students participate in research design, fieldwork, analysis, and writing, or a subset of these stages, for a particular project. It is taught when field sites or laboratory work are available. It may be repeated when topics vary, for a maximum of 12 hours credit. No more than a total of nine hours credit from ANTH 492, ANTH 493, ANTH 498, and ANTH 499, may be counted toward the 41 hours for the anthropology major.

**ANTH 495. Anthropology Seminar. (1-4)**

Meets one to four hours weekly.

*Prerequisite: ANTH 121 or permission of instructor.*

Reading and/or research focusing on specialized subject matter in anthropology, selected by departmental staff. May be repeated for the major for a total of eight hours credit when topics differ. Only four hours may be applied to minor requirements. Depending

upon the topic, this course may be used to meet requirements for the minor in Appalachian Studies.

**ANTH 497. Senior Seminar in Anthropology. (3)**

Three hours seminar.

*Prerequisites: Senior standing; completion of all Anthropology core requirements or permission of instructor.*

Serves as the capstone experience for anthropology majors. Students will revisit the basic concepts, theories and methods of anthropology and interconnect them to demonstrate and learn more about the complexity of the discipline.

**ANTH 498. Independent Study. (1-6)**

See "Independent Study" on p. 63.

No more than a total of nine hours credit from ANTH 492, ANTH 493, ANTH 498, and ANTH 499, may be counted toward the 41 hours for the anthropology minor. Offered as required.

**ANTH 499. Internship. (3-12)**

*Prerequisites: Students must complete 12 hours of anthropology and have permission of the department chair.*

Students must get approval of the department on the proposed program and agency in the semester preceding that in which the internship is anticipated. The course may carry three to 12 hours credit a semester and may be repeated to a maximum of 12 hours credit. No more than a total of 9 hours credit from ANTH 492, ANTH 493, ANTH 498, and ANTH 499 may be counted toward the 41 hours for the anthropology major. Offered as required.

**APPALACHIAN STUDIES**

**APST 200. Introducing Appalachia. (3)**

Three hours lecture.

Introduces the Appalachian Mountain region through a survey of its geography, history, cultures, lifestyles, and the arts. Readings, discussions, and multi-media presentations on the above topics will be supplemented



by library and field research. The class is designed to create an overall awareness and appreciation of life in Appalachia. Required for Appalachian Studies minor. Approved for General Education credit - Area 8.

**APST 460/560. Seminar: Current Issues in Appalachian Studies (3)**  
Three hours lecture.

This seminar focuses on a designated topic of current interest in Appalachian Studies and is designed to give students in-depth exposure both in the classroom and in the field. Topic examples include mountaintop removal, coalfield labor practices, cultural attachment to place, Appalachian-Scottish-Irish connections, Appalachia and the media. The course will serve as a capstone for the Appalachian Studies minor and as a complement for a variety of majors. May be repeated for credit when content differs. Required for Appalachian Studies minor.

**APST 480. Appalachian Studies Internship. (3-15)**

*Prerequisites: Nine semester hours from ANTH 411, ENGL 447, HIST 310 or APST 460 and three semester hours from one of the following: ANTH 480, ENGL 446, GEOG 320; junior or senior standing; 2.0 minimum overall grade point average and supervisor approval.*

Each hour of credit will require a total of forty hours on the job. Course counts up to three hours toward fulfillment of course requirements for an Appalachian Studies minor. One-semester internship with public or private agency in Appalachia. Student will receive academic and agency supervision. The course will be graded on a pass/fail basis.

**APST 490. Summer Workshop: Appalachia in the Cinema. (3)**

*Prerequisite: Permission of instructor.*

Films related to Appalachia used as stimulus for lectures and discussions of issues of importance to the region. Each workshop focuses on one of four subject areas - political issues, historical issues, folklore and culture or economic development. Workshop may be repeated by taking the course once in each

of the subject matter areas. Pass/fail grading. Offered only in summer. May be taken for credit a maximum of four times.

**APST 495. Topical Seminar in Appalachian Studies. (1-4)**

*Prerequisite: ANTH 411 or ENGL 447 or HIST 310 or permission of instructor.*

Will vary as topics vary.

**APST 498. Independent Study. (1-6)**

Will vary as topics vary. See "Independent Study" on page 63.

## ART

In the Art course descriptions, please note the following course designations: courses listed as 2-D are Two Dimensional studio courses; courses listed as 3-D are Three Dimensional studio courses; courses listed as AH are Art History courses; and courses listed MS are Museum Studies.

**ART 101. 2-Dimensional Art Foundations. (3)**

Four hours lecture, demonstration, exercises, studio projects and critiques regarding two dimensional principles and elements of design including color theory. Recommended to be taken before any other studio art course.

**ART 102. 3-Dimensional Art Foundations. (3)**

Four hours lecture, demonstration, exercises, studio projects, and critiques regarding 3 dimensional design elements and principles. Recommended to be taken before any other studio art courses.

**ART 110. Basic Computer Skills for the Fine Artist. (3)**

Two hours lecture; two hours laboratory.

Students will gain a basic working knowledge of various computer programs as tools for art making. Hands-on computer production and basic skill acquisition will be balanced with an awareness of the human interface between machine and user. Lectures will introduce theories, films, and ideas on how technology

affects changes in the fine arts and society at large. Students will not only gain technical skills but methods of thinking and reflecting on how electronic technology, sound, sight and motion influence the fine arts field.

**ART 111. Art Appreciation. (3)**

Three hours lecture.

An introduction to the visual arts designed to develop students' visual awareness. General Education credit - Fine Arts.

**ART 204. Sculpture. (3)**

One hour lecture, demonstration or critique; three hours studio. (3-D)

Explores basic sculptural concepts and methods. May be taken twice for a total of six hours credit.

**ART 205. Drawing. (3)**

One hour demonstration, lecture or critique; three hours studio. (2-D)

Introduction to visual concepts. Development of skills needed to produce expressive drawings. May be taken twice for a total of six hours credit.

**ART 207. Ceramics. (3)**

One hour demonstration, lecture or critique; three hours studio. (3-D)

Introduction to hand building and wheel throwing skills; techniques of glaze formulation, development and application. May be taken twice for a total of six hours credit.

**ART 212. 2-D Media, Materials, and Techniques for the Classroom. (3)**

Two hours lecture; two hours laboratory. (2-D)

*Prerequisite: Sophomore standing for Art Ed majors; prerequisite may be waived for education majors outside the visual arts department.*

Demonstrations, exercises, studio projects, which explore the elements and principles of design and media and techniques used in the production of two-dimensional art for future classroom practitioner.

**ART 213. 3-D Media, Materials, and Techniques for the Classroom. (3)**

Two hours lecture; two hours laboratory. (3-D)

*Prerequisite: Sophomore standing for Art Ed majors; prerequisite may be waived for education majors outside the visual arts department.*

Demonstrations, exercises, studio projects, which explore the elements and principles of design and media and techniques used in the production of three-dimensional art for the future classroom practitioner.

**ART 215. Art History Survey: Prehistory to Gothic. (3)**

Three hours lecture. (AH)

A survey of art through a study of styles, iconography, media, and terminology within a broad cultural context. The course covers prehistory through Gothic, with emphasis on western art. General Education credit - Fine Arts.

**ART 216. Art History Survey: Renaissance to Contemporary. (3)**

Three hours lecture. (AH)

A survey of art through a study of styles, iconography, media, and terminology within a broad cultural context. The course covers the Renaissance through the 20th century, with an emphasis on western art. General Education credit - Fine Arts.

**ART 220. Painting. (3)**

One hour lecture, demonstration or critique; three hours studio. (2-D)

Introduction to the basic concepts of oil painting. Development of the skills needed to produce effective, expressive paintings. May be taken twice for a total of six hours credit.

**ART 225. Watercolor Techniques. (3)**

One hour lecture, demonstration or critique; three hours studio. (2-D)

Introduction to the basic concepts of watercolor painting. Development of skills needed to produce effective, expressive watercolors. May be taken twice for a total of six hours credit.

**ART 241. Elementary Art Education Theory and Practice.** (3)

Two hours lecture, two hours laboratory. History, philosophy, principles, practices, and materials of teaching art in public elementary schools. ART 241 replaces ART 440 and credit cannot be duplicated.

**ART 242. Secondary Art Education Theory and Practice.** (3)

Two hours lecture, two hours laboratory. History, philosophy, principles, practices, and materials of teaching art in public secondary schools. ART 242 replaces ART 441 and credit cannot be duplicated.

**ART 250. Photography.** (3)

One hour lecture, three hours laboratory. (2-D)  
Introduction to basic black and white art photography. Use of camera and darkroom equipment. Film exposure and development. Development of printing skills. Analysis of aesthetic criteria and examination of historical figures.

**ART 280. Introduction to Graphic Design.** (3)

One hour lecture, demonstration or critique; three hours lab. (2-D)  
Introduces basic design theory, current materials and technologies of graphic design.

**ART 281. Graphic Design Production Techniques.** (3)

One hour lecture, demonstration or critique; three hours lab. (2-D)  
*Prerequisite:* ART 280.  
Development of design problem solving skills and current electronic file pre-press preparation. Basic production for professional and desktop printing.

**ART 282. Typography and Layout Design.** (3)

One hour lecture; three hours lab. (2-D)  
*Prerequisites:* ART 280, or permission of instructor.  
A study of design aesthetics, the visual organization of information and use of basic letter forms, typographic contrast, hierarchy

of information, major type families and typographic grids. Projects allow students to experiment with type from a variety of approaches and examine its possibilities as expressive form in relation to syntax and visual communication.

**ART 302. Exhibition Fundamentals.** (3)

Three hours lecture or seminar. (MS)  
Investigates the management of the visual arts. An upper level course intended for students seeking a concentration in art history and museum studies.

**ART 303. Jewelry and Metalworking.** (3)

One hour lecture, demonstration or critique; three hours studio. (3-D)  
Introduction to techniques such as forming, stone setting, surface embellishment and casting. Emphasis on creative design and craftsmanship.

**ART 305. Figure Drawing.** (3)

One hour demonstration, lecture or critique; three hours studio. (2-D)  
*Prerequisite:* ART 205.

Introduction to figure drawing starting with basic studies of anatomy and concluding with practice in skills that develop expressive drawings using the figure. May be taken twice for a total of six hours credit.

**ART 311. Digital Photography for the Fine Arts.** (3)

One hour lecture, demonstration or critique; three hours studio. (2-D or 3-D, consult professor for distinction)  
*Prerequisites:* ART 250 or permission of instructor.

Provides the technical skills needed for art students to explore digital options in photographic image making. Besides digital manipulation and printing of photographs, students will explore several methods of digital presentation such as CD-Rom portfolios and simple web exhibitions. Another option is preparing photographic images for video editing and animation. Includes basic understanding and use of the digital camera. Digital cameras are recommended, but not required.

**ART 323. Printmaking. (3)**

One hour lecture, demonstration or critique; three hours studio. (2-D)

History of printmaking and development of skills essential to expressive and effective printmaking in one of the traditional printing techniques: intaglio, lithography, relief and silk-screening. Experiences in historical and contemporary processes and materials. May be taken twice for a total of six hours credit.

**ART 325. Advanced Watercolor****Techniques. (3)**

One hour lecture, demonstration or critique; three hours studio. (2-D)

*Prerequisite:* ART 225.

Advanced studio problems in watercolor techniques. May be taken multiple times for credit.

**ART 340. Clinical Experience in Art Education. (3)**

Three hours assigned clinical experience in public school per week, two hours lecture per week. Combined study and art classroom assistance experience in art education. ART 340 replaces ART 240 and credit cannot be duplicated.

**ART 350. Advanced Photography. (3)**

One hour lecture, three hours laboratory. (2-D)

Advanced work with cameras and equipment used in black and white art photography. Sequential imagery, panoramas, multiple printing and advanced darkroom techniques. May be taken multiple times for credit.

**ART 360. Video Art (3)**

One hour lecture; three hours studio.

Deals with the experimental nature of video as an art form, its history, and its unique approach to technology. Video production will also involve new digital/computer technology and multimedia presentation. Students will experiment with a variety of approaches and produce a final product for exhibition.

**ART 366. Art History Travel Study.**

**(AH) (3-6)**

An academic course involving domestic and/or international travel. Students will participate in the discussion of works of art and architecture. One of the goals of the course is to allow students to understand better and relate to another culture by experiencing it firsthand. May be taken again for credit with different topics or areas of study. General Education credit - Fine Arts.

**ART 370. Animation Art. (3)**

One hour lecture; three hours studio. (2-D or 3-D, consult professor for distinction)

Explores animation as a means of creative expression for the visual artist. Various methods (involving the use of paper cell, cut out, clay and electronic tools) are utilized within the framework of contemporary animation art processes. May be taken multiple times for credit.

**ART 371. Three Dimensional Computer Art. (3)**

One hour lecture, demonstration or critique; three hours lab (3-D)

*Prerequisite:* Art 280, 281 or permission of instructor.

Production for print, web, and video of 3-D digital art and animation. May be taken twice for a total of six hours credit.

**ART 380. Intermediate Graphic Design. (3)**

One hour lecture, demonstration or critique; three hours lab. (2-D)

*Prerequisite:* ART 280, 281 or permission of instructor.

Visual problem solving for graphic designers encompassing illustration, photography, and typography in a page layout for print media. Client relations, presentation and professional practice for graphic designers.

**ART 381. Graphic Design for the Web. (3)**

One hour lecture, three hours lab (2D)

*Prerequisite: ART 280 and 281 or permission of the instructor.*

Visual problem solving for graphic designers relating to illustration, typography, page layout and site design for the web.

**ART 403. Advanced Jewelry and Metalworking. (3)**

One hour lecture, demonstration or critique; three hours studio. (3-D)

*Prerequisite: ART 303.*

Continued development in metalworking with emphasis on design and craftsmanship. May be taken multiple times for credit.

**ART 404. Advanced Sculpture. (3)**

One hour lecture, demonstration or critique; three hours studio. (3-D)

*Prerequisite: ART 204.*

Exploration of advanced concepts and methods of sculpture. May be taken multiple times for credit.

**ART 405. Advanced Drawing. (3)**

One hour lecture, demonstration or critique; three hours studio. (2-D)

*Prerequisite: ART 305.*

Builds upon the fundamental competencies acquired in ART 205 and ART 305 by developing drawing behaviors of a more expressive nature and higher technical level. May be taken multiple times for credit.

**ART 406. Selected Topics in Studio Art. (3)**

One hour lecture, demonstration or critique; three hours studio. (2-D or 3-D depending upon topic, consult with professor.)

An in-depth study of a specialized studio activity that is not a significant part of the content of a regularly scheduled studio course. May be taken multiple times for credit.

**ART 407. Advanced Ceramics. (3)**

One hour lecture, demonstration or critique; three hours studio. (3-D)

*Prerequisite: ART 207.*

Emphasis on original glazes and clay bodies and kiln firing techniques. May be taken multiple times for credit.

**ART 412. Late 18th and 19th Century Art. (3)**

Three hours lecture. (AH)

A study of European trends in art of the late 18th and 19th centuries.

**ART 414. Packaging and 3-D Design. (3)**

One hour lecture, demonstration or critique; three hours studio.

*Prerequisites: ART 280 and 281 or permission of instructor.*

Assignments in packaging and 3-D design for commercial and/or personal development. May be taken multiple times for credit.

**ART 415. Illustration. (3)**

One hour lecture, demonstration or critique; three hours studio.

*Prerequisites ART 280 and 281 or permission of instructor.*

2-D traditional and/or electronic illustrative problems and solutions for commercial or personal development. May be taken multiple times for credit.

**ART 420. Advanced Painting. (3)**

One hour lecture, demonstration or critique; three hours studio. (2-D)

*Prerequisite: ART 220 or ART 320.*

Emphasis on building visual and aesthetic skills for the development of paintings of a high level of technical and artistic merit. May be taken multiple times for credit.

**ART 422. Art of the Ancient World. (3)**

Three hours lecture. (AH)

A study of the art and architecture of the ancient Near East, Egypt, the Aegean, Greece and Rome.

**ART 423. Advanced Printmaking - Graphics. (3)**

One hour lecture, demonstration or critique; three hours studio. (2-D)

*Prerequisite: ART 323.*

History of printmaking; advanced exercises in traditional and contemporary printmaking techniques, processes, and materials. May be taken multiple times for credit.



- ART 424. Medieval Art.** (3)  
Three hours lecture. (AH)  
Exploration of the origins, evolution, themes, and visual characteristics of European art of the early Christian through Gothic periods.
- ART 427. Special Topics in Art History.** (3)  
Three hours lecture. (AH)  
Historical study of an art topic that may not be a significant part of the content in regularly taught art history courses. May be taken multiple times for credit. General Education credit - Fine Arts. Depending upon the topic, this course may be used to meet requirements for the minor in Appalachian Studies or Women's Studies.
- ART 428. Twentieth Century Art.** (3)  
Three hours lecture. (AH)  
Study of the development of the visual arts of the 20th century emphasizing chronological evolution, themes, and visual forms.
- ART 429. History of Graphic Design.** (3)  
Three hours lecture. (AH)  
Prerequisites: ART 280 and 281 or permission of instructor.  
A one-semester survey of key points in the historical development of the graphic design field.
- ART 437. Technology, Art, and Vision.** (3)  
Three hours lecture. (AH)  
*Prerequisites: None*  
Throughout history artists have explored the technological, philosophical, and scientific advancements of their age to create new ways of seeing and perceiving. This course explores how artists experiment with new technologies to challenge our perceptions of reality, question the role technology plays in our society as well as explore new methods and theories of image making.
- ART 444. History of American Architecture.** (3)  
Three hours lecture. (AH)  
The study of American architecture emphasizing the international and multi-cultural influences on the development of various styles, as well as the social, technological and environmental forces affecting that development.
- ART 445. American Art: Colonial Period to 1945.** (3)  
Three hours lecture. (AH)  
Lecture course in art history covering American art from the Colonial Period to 1945.
- ART 462. Renaissance Art.** (3)  
Three hours lecture. (AH)  
An examination of the rebirth of the visual arts in Europe in the 14th, 15th and 16th centuries.
- ART446. The History of Art History: Methods and Theory** (3)  
Three hours lecture. (AH)  
Art historians use a variety of critical methodologies in their work. The dominant theories of analysis have changed over time, sometimes in response to developments in other fields and sometimes in response to changes in art. This course will familiarize students with these theories and methods, focusing on the ways in which art historians arrive at their interpretations.
- ART 480. Publication Design.** (3)  
One hour lecture, demonstration or critique; three hours lab. (2-D)  
*Prerequisite: ART 281 and ART 282, or permission of instructor.*  
Graphic design of large and/or complex publications such as annual reports and coordinated print pieces, books, and technical manuals for professional offset print reproduction. Extensive practice in electronic file preparation with management of large and complex layouts and high resolution images.



**ART 481. Advanced Graphic Design Production Techniques. (3)**

*Prerequisites: ART 281, senior standing, or permission of instructor.*

Advanced version of ART 281: Graphic Design Production Techniques and focuses on the professional development of the student's portfolio, time management, software, and presentation skills. It is targeted to the motivated senior level graphic designer. The class meets on a TBA schedule, usually five times during the course of the semester. The student is given a list of projects in Adobe Illustrator and Adobe Photoshop, then must meet the deadlines for finished work, which is presented during scheduled critiques. This class will also be offered for graduate credit.

**ART 482. Baroque and Rococo Art. (3)**

Three hours lecture. (AH)

A study of the styles and themes of 17th- and early 18th-century Western European art.

**ART 483. Portfolio Preparation and Studio Management for Graphic Designers. (3)**

One hour lecture, three hours lab. (2-D)

*Prerequisites: ART 280, 281 and 381 or permission of the instructor.*

Graphic design issues relating to personal web sites, CD portfolio and related print materials, as well as the organization and business practices of professional working environments.

**ART 484. Graphic Design Seminar. (1)**

One hour seminar.

*Prerequisites: ART 280, ART 281, and senior standing.*

Focuses on a variety of topics and trends in graphic design. Emphasis will be placed on professional level research, presentation, and discussion in a group atmosphere.

**ART 486. World Art Outside the European Tradition. (3)**

Three hours lecture/discussion. (AH)

A study in recognizing, understanding, and appreciating the art and architecture of one or more culture(s) outside the European tradition from a non-Eurocentric point of view. A focus on art forms as multireferential. The

content of the course will vary depending on the culture(s) studied. May be repeated for credit with different topics with permission of the instructor.

**ART 488. Final Honors Project. (2-3)**

*Prerequisite: Enrollment in the Honors Academy, completion of all other Honors Academy requirements, major in art, senior standing at beginning of semester in which project is to be completed, a minimum 3.5 GPA overall and in art.*

This project and the topic to be explored will be determined by the student, the faculty member with whom the student works and the student's major program area. (Honors project may be a written or performance-based project.) In order to receive honors credit, a student must earn a grade of "A" or "B" for the final project. Course may not be repeated or retaken.

**ART 490. Graphic Design Practicum. (15)**

*Prerequisites: ART 380 and/or permission of a departmental committee, senior standing and a 2.75 overall average. (2-D)*

A one-semester, full-time apprenticeship in one or more professional graphic design settings, such as an advertising, printing, or design firm. Individual arrangement and supervision.

**ART 491. Museum Studies. (MS) (3)**

*Prerequisite: ART 302 or permission of instructor.*

Acquaints student with all aspects of museology: administration, curatorial responsibilities, design, and educational and basic conservation techniques through weekly topical lectures and a hands-on lab experience.

**ART 492. Museum Practicum. (MS) (3)**

*Prerequisite: ART 491: Museum Studies, with a "C" or better.*

Designed to integrate academic knowledge with hands-on field experience in an on-campus museum facility and to put into practice knowledge and theories essential for competency in museum work.

**ART 493. Museum Internship. (MS) (3-6)**

*Prerequisite: ART 491.*

Integrates academic knowledge with hands-on field experience in an off-campus museum facility and puts into practice knowledge and theories essential for competency in museum work. May be repeated for credit.

**ART 494. Internship. (3 or 6)**

*Prerequisite: Junior standing, 3.0 GPA in concentration, and permission of instructor.*

In close collaboration with a supervising professor the student will arrange outside employment working in their field concentration, such as Graphic Design or Jewelry. By working in an actual job situation, the student will gain valuable real world experience, portfolio work, and possible future job contacts. May be taken only once for credit.

**ART 498. Independent Studies. (1-6)**

See "Independent Study" on p. 63.

For descriptions of graduate art courses, please consult the *Radford University Graduate Catalog*.

## **ASTRONOMY**

**ASTR 111. General Astronomy I. (4)**

Three hours lecture; two hours laboratory.

Survey of astronomy from ancient cultures to present day, nature of light and gravity, telescopes and astronomical observations, evolution and dynamics of Earth and our solar system. General Education credit - Physical and Natural Sciences

**ASTR 112. General Astronomy II. (4)**

Three hours lecture; two hours laboratory.

Stellar evolution and nucleosynthesis, the universe beyond the solar system and the cosmic distance ladder, black holes and other exotic objects, galaxies, origin and evolution of our universe. General Education credit - Physical and Natural Sciences

**ASTR 421. Solar System Astronomy. (3)**

Three hours lecture.

*Prerequisites: ASTR 111, 112 and PHYS 112 or 222.*

Application of astronomical concepts and techniques to solid astronomical bodies; study of meteorites, impact craters and ring systems; basic orbital mechanics.

**ASTR 422. Galactic Astronomy and Cosmology. (3)**

*Prerequisites: ASTR 111, 112 and PHYS 112 or 222.*

Three hours lecture.

Application of astronomical concepts and techniques to the structure and evolution of galaxies and other large-scale structures; cosmology, including the origin and evolution of our universe.

## **BIOLOGY**

**BIOL 103. Environmental Biology. (4)**

Three hours lecture; two hours laboratory.

For any student who is not a Biology major. An introduction to how the natural world works and of the scientific methods used to study the natural world. Emphasis is on the study of ecology and the process and products of evolution. Applications are made to the importance of biological diversity, and the impact of humans on the natural world and the methods used to understand and ameliorate such impacts. BIOL 103 is not a prerequisite for upper level study in Biology. Biology majors should take BIOL 131. Students who are not Biology majors but need to take upper level Biology courses should take BIOL 105. BIOL 103 has been approved for General Education credit in the Physical and Natural Sciences Area of the curriculum.

**BIOL 104. Human Biology. (4)**

Three hours lecture; two hours laboratory.

For students who are not Biology majors. An introduction to the basic principles of biology,

with emphasis on human beings as biological organisms. Humans will be considered as products of evolution, as physiological systems, as reproducing entities, as members of their ecosystem, and as biological engineers able to change other organisms. The nature of scientific investigation will be stressed and current applications to biological technology and its effect on society will be considered. BIOL 104 is not a prerequisite for upper level study in Biology. Biology majors should take BIOL 131. Student who are not Biology majors but need to take upper level Biology courses should take BIOL 105. This course has been approved for General Education credit in the Physical and Natural Sciences Area of the curriculum.

**BIOL 105. Biology for Health Sciences. (4)**

Three hours lecture; two hours laboratory. Intended for any student who is not a Biology major, but who needs to take microbiology or human anatomy courses for their majors. Students who are not Biology majors must pass BIOL 105 prior to taking Microbiology (BIOL 334), Human Structure and Function (BIOL 310, 311), or Human Anatomy and Physiology (BIOL 322). An introduction to the basic processes of life and science. Emphasis is on scientific investigation and processes common to most organisms including humans: cellular structures and functions, mechanisms of inheritance, and mechanisms of adaptation. Applications are made to genetic technologies, human disorders, and bioethics. Students receiving credit for BIOL 105 may not also receive credit for BIOL 122. BIOL 105 has been approved for General Education credit in the Physical and Natural Sciences Area of the curriculum. (Replaces BIOL 101. Students cannot receive credit for both BIOL 101 and BIOL 105).

**BIOL 131. Ecology and Adaptation. (4)**

Three hours lecture; three hours laboratory. A study of the distribution, abundance, and diversity of organisms in nature. The laboratory component will teach basic laboratory skills while enhancing students' ability to conduct field sampling, observational studies,

and experiments. This is the first course in a four-course sequence intended for biology and other science majors. This core sequence serves as a foundation and prerequisite for further study in biology.

**BIOL 132. Biology of Cells and Microorganisms. (4)**

Three hours lecture; three hours laboratory. A study of life at the molecular and cellular level. Topics include the chemistry of life, metabolism, cell structure, cell membranes, cell communication, the basis of multicellularity, and a survey of unicellular organisms. The laboratory component will teach basic laboratory skills while enhancing students' ability to plan experiments. This is the second course in a four-course sequence intended for biology and other science majors. This core sequence serves as a foundation and prerequisite for further study in biology.

**BIOL 160. Introductory Seminar in Biology. (2)**

Two hours seminar. Designed for students new to the Biology major, this is a seminar course that will discuss various professional skills needed to succeed in the major. Topics may include: introduction to scientific literature, discussions of career options, and expectations for biology majors.

**BIOL 215. Plants and Society. (4)**

Three hours lecture; three hours laboratory. *Prerequisites: BIOL 131 or BIOL 232 or 4 hours of biology.*

An interdisciplinary exploration into the vital role plants and plant products play in human society. Throughout recorded history, humans have depended on plants as sources of foods, beverages, herbs and spices, medicinal and recreational drugs, wood and textiles, and other products. This course explores plant structure, growth, and nutrition; the diversity and evolutionary relationships of organisms traditionally studied by botanists; techniques for growing and producing plant products; plant breeding and genetic modification; and conservation of plant-based resources. Emphasis on the origins, history, morphology and chemistry of plants of economic importance.

**BIOL 216. General Zoology. (4)**

Three hours lecture, three hours laboratory.

*Prerequisites:* BIOL 103 or BIOL 131.

Introduces classification, nomenclature, structure, function, development and evolution of the nonphotosynthetic protists and the major animal phyla.

**BIOL 221. Genetics. (4)**

Three hours lecture; three hours laboratory.

*Prerequisites:* BIOL 231, or a "B" or better in BIOL 105.

Examines Mendelian genetics, chromosomal structure and distribution, genetic interactions, sex and inheritance, probability and statistics, linkage, allelism and immunity, molecular genetics and gene populations. Students cannot earn credit for both BIOL 221 and BIOL 341.

**BIOL 222. Cell Biology. (4)**

Three hours lecture; three hours laboratory.

*Prerequisite:* CHEM 102 and either BIOL 105 or BIOL 132:231.

Introduction to the cell, the fundamental unit of biological organization of the five kingdoms of organisms. Structure and function of the cell described, analyzed and integrated. Emphasis on the basic physiochemical phenomena important in understanding structural organization and metabolic cellular processes. Students cannot earn credit for both BIOL 222 and BIOL 345.

**BIOL 231. Genetics, Evolution and Development. (4)**

Three hours lecture; three hours laboratory.

*Prerequisite:* BIOL 132.

An introduction to the basic principles of genetics, microevolution, molecular biological techniques, and developmental biology. Topics include classical Mendelian genetics, cytogenetics, molecular genetic analysis, bioinformatics and genomics, microevolution, phylogenetics analysis, and plant and animal development. Laboratory experiments and projects apply course concepts and scientific methodology to biological research questions. This is the third course in a four-course sequence intended for biology and other science majors. This core sequence serves as a

foundation and prerequisite for further study in biology.

**BIOL 232. Organismal Biology. (4)**

Three hours lecture; three hours laboratory.

*Prerequisites:* BIOL 131, BIOL 132, and BIOL 231.

A phylogenetic approach to the study of organismal structure and function, with emphasis on the anatomy, physiology, and diversity of major groups of plants, animals, and selected protists and fungi. Topics include functional organization and body plans, reproduction, growth, development, regulation, nutrition, and transport. Laboratory experiments and projects apply course concepts and scientific methodology to biological research questions. This is the final course in a four-course sequence intended for biology and other science majors and serves to integrate topics and skills introduced in earlier core courses. The core sequence serves as a foundation and prerequisite for further study in biology.

**BIOL 301. Bioethics. (2)**

Two hours lecture.

Examines the historical, social, cultural, and philosophical bases of various bioethical controversies. Students will analyze the assumptions underlying positions, the arguments presented in defense of these positions, and the possibility of resolving conflicts that arise over the issues involved.

**BIOL 302. Science, Technology and Society. (2)**

Two hours lecture.

Provides an introduction to science and technology studies emphasizing the nature of science, the process of discovery, the relationship between science and technology, and the interrelationships between science, technology and society.

**BIOL 310, 311. Human Structure and Function I and II. (4,4)**

Three hours lecture; three hours laboratory.

*Prerequisites:* BIOL 105 or BIOL 132:231.

Focuses on the structure of the human body and the physiological mechanisms used to maintain homeostasis. Designed to meet

the needs of students preparing for careers in physical therapy, athletic training, or any other area requiring two four credit courses in human anatomy and physiology. Biology 310 fulfills the anatomy and physiology requirement for Communication Sciences and Disorders majors. Students receiving credit for Biology 322 may not receive credit for Biology 310 or 311.

**BIOL 322. Human Anatomy and Physiology.** (6)

Five hours lecture; three hours laboratory.

*Prerequisite: BIOL 105 or BIOL 132:231.*

Focuses on structure of the human body and the physiological mechanisms used to maintain homeostasis. Designed to meet needs of science, paramedical, nutrition, dance and physical education students. Lecture devoted to physiological processes; laboratory major vehicle for presenting structure. Students may receive credit for only BIOL 322, or BIOL 310 and BIOL 311.

**BIOL 334. Microbiology.** (4)

Three hours lecture; three hours laboratory.

*Prerequisite: BIOL 105 or BIOL 132:231.*

Fundamentals of microbiology including the morphology and taxonomy of the major groups of microorganisms including viruses. Discussions of the growth, cultivation, reproduction, effects of physical and chemical agents and transmission of disease.

**BIOL 337. Immunology.** (4)

Three hours lecture; three hours laboratory.

*Prerequisite: BIOL 132: 232.*

Explores basic principles such as cells and molecules of the immune system, humoral and cellular immunity, serology, diseases caused by immune responses and current applications of immunologic procedures.

**BIOL 351. Comparative Animal Physiology.** (4)

Three hours lecture; three hours laboratory.

*Prerequisite: BIOL 132:231:232; or BIOL 105 and permission of instructor.*

A comparative approach to animal physiology: physical and chemical properties of animal systems, respiration, circulation,

osmoregulation, neural and endocrine functions. Emphasis on homeostatic mechanisms.

**BIOL 353/PSYC 353. Comparative Behavior.** (3)

Two hours lecture; two hours laboratory.

*Prerequisites: PSYC 121; and either BIOL 103 or BIOL 131.*

Study of animal behavior from viewpoints of zoology, ethology and comparative psychology. Emphasis on review of animal phyla for sensory capacities, motor capabilities and coordinating mechanisms; classification of behavioral traits; analysis of instinctive behavior, learned behavior, social behavior, animal communications and evolutionary significance of social organization.

**BIOL 361. Parasitology.** (4)

Three hours lecture; three hours laboratory.

*Prerequisite: BIOL 231 or BIOL 232 or a "B" or better in BIOL 105.*

Studies of the anatomy, systematics, ecology and life cycles of the major parasitic groups, including the protistans. Emphasis on parasites of humans.

**BIOL 380. Ornithology.** (4)

Two hours lecture, four hours laboratory.

*Prerequisite: Eight credits of Biology or permission of instructor.*

Offered as an integrated lecture and laboratory/field study emphasizing the evolution, anatomy, physiology, identification, behavior, and ecology of birds. At least one weekend field trip will be scheduled.

**BIOL 390. Conservation Biology.** (3)

Three hours lecture.

*Prerequisite: BIOL 231; or BIOL 103 and either BIOL 104 or BIOL 105.*

Examines the importance of biodiversity to the global environment. Students will gain an appreciation of the complexity of biotic communities associated with important ecosystems and will examine man's role in influencing these communities. Current controversies regarding species preservation will be explored through readings and discussion.



- BIOL 392. Pollution Biology.** (4)  
Three hours lecture, three hours lab.  
*Prerequisites:* Eight credits of Biology and eight credits of Chemistry, or permission of instructor.  
Designed to provide Biology majors with an understanding of important pollution problems facing society, and to provide the student with practical experience in environmental sampling and analysis.
- BIOL 401, 402, 403. Medical Technology.** (31)  
*Prerequisites:* Senior standing in Biology, Medical Technology Concentration, and acceptance into a clinical internship by a program-affiliated or -associated hospital.  
A 12-month clinical internship working in one of the hospitals affiliated/associated with Radford University. Students study various clinical phases of medical technology with daily lectures and laboratory classes taught by pathologists and medical technologists at the hospital.
- BIOL 405. Histology.** (4)  
Three hours lecture; three hours laboratory.  
*Prerequisite:* BIOL 132:231:232 or BIOL 322..  
Introduction to components, arrangement and adaptations of animal tissues with special emphasis on mammalian tissues and mammalian organ systems.
- BIOL 423. General Ecology.** (4)  
Three hours lecture; three hours laboratory.  
*Prerequisites:* BIOL 232.  
An integrated field and laboratory study of living organisms and how they are affected by living and nonliving factors in their environment. Emphasis on the study of natural populations and communities and factors governing their distribution and abundance.
- BIOL 425. Evolution.** (3)  
Three hours lecture.  
*Prerequisite:* BIOL 231 and BIOL 232.  
Introduction to modern hypotheses on the mechanisms of genetic change in populations, speciation, evolution of societies, origins of higher taxa, causes of extinctions and modern approaches to classification. Concepts will be applied to a discussion of human evolution.
- BIOL 430. Developmental Biology.** (4)  
Three hours lecture; three hours laboratory.  
*Prerequisite:* BIOL 231.  
An introduction to the molecular, physiological, and morphological events of developmental systems with emphasis on vertebrates. Topics include gene expression, gametogenesis, fertilization, early development, organogenesis, cellular differentiation and interaction, hormonal control, and teratology. Laboratory will involve a comparative morphological study of embryos of the starfish, frog, chick, and pig, as well as experimental analyses of development.
- BIOL 450. Molecular Biology.** (4)  
Three hours lecture, three hours laboratory.  
*Prerequisites:* CHEM 102; and any one of the following: BIOL 221, BIOL 222, BIOL 334, or BIOL (CHEM) 471.  
Covers the structure and function of deoxyribonucleic acid (DNA), the flow of information from DNA to ribonucleic acid (RNA) to protein, and the regulation of gene function in prokaryotic and eukaryotic cells. Laboratories will focus on the techniques and application of recombinant DNA technology, including cloning and DNA fingerprinting.
- BIOL 460. Advanced Seminar in Biology.** (2)  
Two hours seminar.  
*Prerequisites:* BIOL 131, BIOL 132, BIOL 160, BIOL 231, and BIOL 232.  
Explores various biological topics with a focus on critical and analytical reading of primary biological literature sources and developing and using scientific writing skills.
- BIOL 462. Invertebrate Zoology.** (4)  
Three hours lecture; three hours laboratory.  
*Prerequisite:* BIOL 131:132:231:232.  
Survey of the structure, function and relationships of members of the major groups of invertebrate animals. Laboratory studies will include experience in identification techniques as well as traditional investigation of comparative anatomy. Some field studies included.



**BIOL 464. Vertebrate Zoology. (4)**

Two hours lecture; four hours laboratory.

*Prerequisite: 131:132:231:232.*

An introduction to vertebrate zoology including an examination of origin; class characteristics; evolution; and adaptations of body form, locomotion, feeding, protective, spacing, social, reproductive, activity cycles and special adaptations for various types of habitats. Emphasis on collection, preservation and identification of vertebrates.

**BIOL/CHEM 471:472.**

**Biochemistry. (4:3)**

471, four hours lecture; 472, three hours lecture.

*Prerequisites: BIOL 105 or BIOL 121 or BIOL 132; CHEM 302.*

Study of the main classes of biomolecules, cellular organism, enzyme action, bioenergetics, metabolic pathways and the flow of genetic information.

**BIOL 476. Field Botany. (4)**

Three hours lecture; three hours laboratory.

*Prerequisite: BIOL 131 and BIOL 232.*

An integrated lecture and field/laboratory course focusing on the identification, classification, and evolutionary relationships of vascular plants in the eastern United States, with emphasis on the Virginia flora and field and herbarium techniques.

**BIOL 481. Special Topics in Biology. (1-6)**

One to six hours of lecture and/or laboratory.

*Prerequisites: 4 credits of Biology and permission of instructor.*

Course outline available each time course offered. Interested students should consult department chairperson for information about registering.

**BIOL 488. Final Honors Project. (2-3)**

*Prerequisites: Enrollment in the Honors Academy, completion of all other Honors Academy requirements, a 3.5 GPA in all courses and in biology.*

See "Honors Academy" on p. 92. In order to receive honors credit, a student must earn a grade of "A" or "B" for the final project. Course may not be repeated.

**BIOL 491. Directed Study and Research. (1-6)**

*Prerequisites: 8 credits in Biology, permission of instructor, approval by the Biology Department Chair and a minimum GPA of 2.5 in Biology courses.*

An introduction to research or other forms of scholarly study in biology under the close supervision of a faculty member. Because the instructor has the primary responsibility for designing the content of this course, no research proposal is required from the student. A total maximum of six credit hours of Biology 491/492 may be applied to the Biology major; any additional credit hours will apply as University electives.

**BIOL 492. Undergraduate Research. (1-6)**

*Prerequisites: 8 credits in Biology, permission of instructor, approval by the Biology Department Curriculum Committee and minimum GPA of 2.5 in Biology courses.*

Independent research or other scholarly study in biology carried out under the supervision of a faculty member. Because the student has the primary responsibility for designing the content of this course, she or he must prepare a formal research proposal to be approved by the Biology Department Curriculum Committee prior to registration. A total maximum of six credit hours of Biology 491/492 may be applied to the Biology major; any additional credit hours will apply as University electives.

**BIOL 495. Internship in Biology. (6)**

*Prerequisites: 16 credit hours of Biology or other laboratory science, 2.5 or higher GPA in Biology courses, successful completion of Success Seminars for Interns offered by the Office of Experiential Learning, permission of the department chair.*

Application of skills and concepts learned in the classroom and laboratory in a real world situation through full- or part-time placement in a professional setting with a company or organization doing work in some area of biology. Students will be supervised by both the internship site personnel and by a biology faculty member. A total of 6 credit hours of internship may be applied to the biology major.

## BUSINESS LAW

### **BLAW 203. Legal Environment of Business.**

(3)

Three hours lecture.

A survey of the legal system of the United States of America. Civil procedure, tort law, administrative law and criminal law are briefly surveyed. Areas of the law studied in more depth include contracts, government regulation, international law and agency. Business ethics and diversity are emphasized in much of the topical coverage. (Does not include coverage of the Uniform Commercial Code.)

### **BLAW 304. Business Law I.**

(3)

Three hours lecture.

*Prerequisite:* BLAW 203.

The course is an in-depth study of the Uniform Commercial Code, Articles 2, 2a, 3, 4, 6, 7 and 9, bankruptcy, the CISG and other business law topics frequently addressed on the CPA examination.

### **BLAW 305. Business Law II.**

(3)

Three hours lecture.

*Prerequisite:* BLAW 203.

An in-depth study of the laws affecting business organizations, property, wills, trusts and estates and insurance. In addition, other areas of the law affecting business may be covered as these areas emerge and as time permits.

### **BLAW 306. Entertainment Law.**

(3)

Three hours lecture.

*Prerequisite:* BLAW 203 or permission of instructor.

Provides a study of the legal aspects of the entertainment industry. Particular attention will be paid to contracts and contract implications, copyright law, and licensing concerns. Union issues, agency, and international implications will also be addressed.

## CHEMISTRY

### **CHEM 101:102 or 103. General Chemistry.**

(4:4)

Three hours lecture; three hours laboratory.

Introduction to principles and applications of

chemistry. Students whose major requires upper-level chemistry courses must take CHEM 101:102. Others may take CHEM 101:102 or CHEM 101:103 to satisfy either the two-semester sequence required by their major or the general education science requirement. A student may receive a maximum of 8 hours credit for General Chemistry. CHEM 101 includes measurements, stoichiometry, atomic and molecular structure, chemical bonding, gases, and solutions. CHEM 102 includes additional chemical bonding topics, crystal lattices, kinetics, chemical equilibria, acidbase chemistry, electrochemistry, and radiochemistry. CHEM 103 is divided equally between inorganic and organic/biochemistry topics. CHEM 103 is designed primarily for nursing majors and nonscience majors. General Education credit - Physical and Natural Sciences.

### **CHEM 115. Chemistry of the Environment.**

(4)

Three hours lecture; three hours laboratory.

The most fundamental concepts and techniques of chemistry will be presented by emphasizing the applications of chemistry in our lives and the impact of chemistry on society and the environment. General Education credit - Physical and Natural Sciences. Credit will not be given for both CHEM 100 and CHEM 101 or CHEM 115. CHEM 101 and 102 are the prerequisites for all upper-level courses in chemistry.

### **CHEM 120. Chemistry of Life.**

(4)

Three hours lecture; three hours laboratory.

The most basic concepts and techniques of general, organic, and biochemistry will be presented by concentrating on the chemistry necessary to understand living systems. General education credit – Physical and Natural Sciences.

### **CHEM 201. Quantitative Analysis.**

(4)

Two hours lecture; six hours laboratory.

*Prerequisite:* CHEM 102.

Introduction to the theory and mathematics of analytical chemistry; included are statistical analysis of data, gravimetric and volumetric methods of analysis.

**CHEM 215. Environmental Chemistry.**

(3)

Three hours lecture.

*Prerequisite: CHEM 102 or 103*

The chemical nature of major environmental problems, including their sources and possible solutions. Major topics include acid deposition, global warming, ozone depletion, air pollution, photochemical smog, water pollution, solid waste disposal, recycling, and alternatives to fossil fuels.

**CHEM 216. Inorganic Chemistry.**

(3)

Three hours lecture.

*Prerequisite: CHEM 102*

A descriptive inorganic chemistry course of the main group elements and transition metals. Other topics include: atoms, bonding, solid state structures, acid-base theories, and redox reactions.

**CHEM 301:302. Organic Chemistry.**

(4:4)

Three hours lecture; three hours laboratory.

*Prerequisite: CHEM 102.*

Study of the physical and chemical properties of organic compounds.

**CHEM 401:402. Physical Chemistry.**

(3:3)

Three hours lecture.

*Prerequisites: CHEM 102; MATH 152; PHYS 112 or 222.*

*Corequisite: MATH 251 or 255.*

A study of the states of matter, thermodynamics, chemical kinetics, chemical equilibria, solutions and electrochemistry.

**CHEM 403:404. Integrated Laboratory.**

(3:3)

One hour lecture; six hours laboratory.

*Corequisites: The corequisite for CHEM 403 is CHEM 401; the corequisite for CHEM 404 is CHEM 402.*

Intensive capstone laboratory experience for chemistry majors. Students will conduct "research style" experiments that require extensive use of the literature, advanced instrumentation, new techniques in data acquisition and analysis, detailed technical reports and oral presentations. The course will help students develop a unified scientific approach

to problem solving that can then be used across various chemistry subdisciplines.

**CHEM 416. Advanced Inorganic Chemistry.**

(3)

Three hours lecture.

*Prerequisite: CHEM 216*

Study of the chemistry of the transition elements. (To be taught once every two years.)

**CHEM 421. Polymer Chemistry.**

(3)

Three hours lecture.

*Prerequisite: CHEM 302.*

An introduction and overview of polymers including synthesis, chemistry, properties, significance, and manufacturing processes.

**CHEM 424. Instrumental Methods of Analysis.**

(4)

Two hours lecture; six hours laboratory.

*Prerequisite: CHEM 102.*

Theoretical principles, design, construction, applications, and operation of standard laboratory instruments.

**CHEM 441/PHYS 441. Electronics for Scientists.**

(3)

2 hours lecture; 4 hours laboratory.

*Prerequisite: CHEM 102; PHYS 112 or 222; MATH 152 or 155.*

Introduction to analog and digital circuit design appropriate for many scientific disciplines including chemistry, computer science, physics, biology, and geology. Focus will be on analog electronics including basic electronic circuit design, use of transducers, operational amplifiers, and wave forming circuits.

**CHEM 451. Qualitative Organic Analysis.**

(3)

One hour lecture; six hours laboratory.

*Prerequisite: CHEM 302.*

Introduction to qualitative analysis of organic compounds and separation of organic mixtures.

**CHEM 461. Advanced Organic Chemistry.**

(3)

Three hours lecture.

*Prerequisite: CHEM 302.*

Study of advanced topics in organic chemistry.

**CHEM/BIOL 471:472.****Biochemistry. (4:3)**

CHEM 471, four hours lecture; CHEM 472, three hours lecture.

*Prerequisites: BIOL 105 or BIOL 121 or BIOL 131; CHEM 302.*

Study of the main classes of biomolecules, cellular organization, enzyme action, bioenergetics, and the flow of genetic information.

**CHEM/BIOL 474. Biochemistry****Laboratory. (1)**

Three hours laboratory.

*Prerequisite or corequisite: CHEM 471 or BIOL 471.*

Experience in isolating and determining properties of biochemical materials using important techniques of biochemical analysis.

**CHEM 480. Selected Topics in Chemistry. (1-3)**

One to three hours lecture.

*Prerequisites: CHEM 102 and five semester hours of additional chemistry courses. Additional prerequisites may be required depending on course topic.*

Course is designed for science majors in their junior or senior year who wish to pursue advanced chemical subjects or to study recent advances in chemistry. The specific topic will be selected each time the course is taught.

**CHEM 481, 482. Undergraduate Research. (1-3)**

*Prerequisites: CHEM 301 and junior standing.*

A laboratory course designed for students wishing to pursue an independent research project.

**CHEM 488. Honors Thesis. (2-3)**

*Prerequisite: Enrollment in the Honors Program, completion of all other Honors Program requirements, a 3.5 GPA in all courses and in chemistry.*

See Honors Academy on p. 92. In order to receive honors credit, a student must earn a grade of "A" or "B" for the honors thesis. Course may not be repeated.

**CHEM 498/PHYS 498. Independent Study (1-6)**

*Prerequisites: CHEM 102 or 103 and MATH 152.*

See "Independent Study" on page 63.

**COLLEGE OF HEALTH AND HUMAN SERVICES****CHHS 475. Global Perspectives in Health and Human Services. (3)**

*Prerequisite: Consult Program Director. Open to all students and majors.*

Seminar and field experience focusing on international health issues as they related to political, social, cultural, ecological and economic factors in selected international/intercultural settings.

**CHINESE****CHNS 101. Elementary Chinese I. (4)**

Four hours lecture and language practice.

*Prerequisites: 2.75 GPA and approval by the Chair of the Department of Foreign Languages and Literatures.*

Balanced emphasis is on listening, speaking, reading, and writing for beginners. General Education credit – International and Intercultural Studies.

**CHNS 102. Elementary Chinese II. (4)**

Four hours lecture and language practice.

*Prerequisites: 2.75 GPA and CHNS 101 with a grade of "C" or better.*

A continuation of Elementary Chinese I with a balanced emphasis on listening, speaking, reading, and writing. General Education credit – International and Intercultural Studies.

**CHNS 201. Intermediate Chinese I. (4)**

Four hours lecture and language practice.

*Prerequisites: CHNS 101 and 102 with a grade of "C" or better, and approval by the Chair of the Department of Foreign Languages and Literatures.*

A continuation of Elementary Chinese I and II with a balanced emphasis on listening,

speaking, reading, and writing. General Education credit – International and Intercultural Studies.

**CHNS 202. Intermediate Chinese II. (4)**

Four hours lecture and language practice.

*Prerequisites: CHNS 101, 102, and 201 with a grade of “C” or better, and approval by the Chair of the Department of Foreign Languages and Literatures.*

A continuation of Intermediate Chinese I with a balanced emphasis on listening, speaking, reading, and writing. General Education credit – International and Intercultural Studies.

**CHNS 301. Transitional Mandarin Chinese Language and Culture. (4)**

Four hours lecture and language practice.

*Prerequisites: CHNS 101, 102, 201, 202 with a grade of “C” or better, and approval by the Chair of the Department of Foreign Languages and Literatures.*

A continuation of Intermediate Chinese II with a balanced emphasis on listening, speaking, reading, writing, and culture. This class is taught mostly in Chinese.

## CLASSICS

**CLSS 110. Classical Mythology. (3)**

Three hours lecture.

Study of Greek and Roman mythology, the role of mythology in classical antiquity and the influence of classical mythology upon Western culture. Satisfies optional three-hour general education credit in Humanities.

**CLSS 120. Etymology. (3)**

Three hours lecture.

A vocabulary-building course with study of Latin and Greek stems, prefixes and suffixes in English derivatives.

**CLSS 210. Greek Literature in Translation. (3)**

Three hours lecture.

*Prerequisites: ENGL 101 and 102.*

Study of masterpieces of ancient Greek literature, including epic, drama, history and

philosophy. General Education credit - Humanities.

**CLSS 220. Latin Literature in Translation. (3)**

Three hours lecture.

*Prerequisites: ENGL 101 and 102.*

Study of masterpieces of Latin literature, including epic and other poetry, drama, historiography, satire and oratory. General Education credit - Humanities.

**CLSS 460. Special Topics. (3)**

Three hours lecture.

Study of various aspects of ancient Greek and Roman civilization. The topic will vary each time taught. May be taken twice for credit with different topics.

## COUNSELOR EDUCATION

**COED 260. Seminar in Career Development. (2)**

Instructs students in educational and occupational development and leads toward vocational maturity through presentations and discussions of varied topics including current aspects of young adult development and educational and career awareness and decision-making.

**COED 261. Highlander Internship**

(1-3 or a total of 6 credits)

*Prerequisite: COED 260 (Formerly EDCS 260.)*

Through experiential learning, the Highlander Internship exposes students to the world of work. The internship helps them clarify a course of study and links academic knowledge, skills and abilities to the realities of the world of work. The course results in practice career-related work experience involving a minimum of 40 to 120 contact hours (40 contact hours per credit hour) of internship experiences and the creation of a career development portfolio. Internship sites will be approved agency, business, or industry sites. Internship sites shall be selected in COED 260: Seminar in Career Development. The course can be repeated up to a maximum of 6 credit hours.



**COED 270. Student-Athlete Career Education and Development Seminar. (2)**

Designed to provide student athletes with a career educational approach that will lead to increased understanding of career development, educational and career awareness, and career decision-making.

**COED 450. Instructing the First Year Student. (2)**

A course which examines students throughout their first semester of higher education as they acclimate to the university environment by focusing on models of student development theory, personal management techniques, and methods of classroom instruction. This course will examine who first-semester students are and what academic and personal issues they will confront during their transition to higher education. The course will instruct student leaders on various models of classroom management techniques to be used within the UNIV 100 classroom, and will develop mentoring skills through assessment of leadership abilities.

## **COMMUNICATION**

**COMM 114. Public Speaking. (3)**

Three hours lecture/performance.  
Techniques and fundamentals of public speaking, methods for improving poise and confidence, delivery, construction of speeches and critical evaluation of speeches and speakers. For students who wish to improve their ability to communicate in public. General Education credit – Communication

**COMM 225. Introduction to Public Relations. (3)**

Three hours lecture/discussion.  
Principles, history and practice of public relations in business, educational institutions, social welfare organizations, government and military services. Students who have taken COMM 226 may not receive credit for COMM 225.

**COMM 230. Communication Theory. (3)**

Three hours lecture/discussion.  
A survey of communication theories in a variety of contexts. Includes study of interpersonal, group, persuasive, organizational, rhetorical, mass media, and intercultural theory. This is a core course required of all students majoring in the School of Communication.

**COMM 231. Research Methods in Communication. (3)**

Three hours lecture/participation.  
*Prerequisites: COMM 230.*  
An overview of research methods necessary for understanding and performing communication research in a variety of contexts. Includes methods of basic research, survey construction, experimental techniques and qualitative analysis.

**COMM 235. Writing for Public Relations. (3)**

Three hours lecture/performance.  
*Prerequisite: COMM 225 or permission of instructor.*  
Provides students with the theory and technical knowledge necessary to produce messages as professional communicators. Students will develop skills in a variety of writing formats and learn to utilize desktop publishing and graphics software in the production of messages. Students who have previously received credit for COMM 236 may not receive credit for this course.

**COMM 240. Teamwork and Communication. (3)**

Three hours lecture/performance.  
Development of communication skills in the context of teams in organizational and professional settings. Students study the structure of effective teamwork, group process, problem solving, and leadership. General Education credit – Communication.

**COMM 250. Interpersonal Communication. (3)**

Three hours lecture/participation.  
Improves understanding of internal communication environments; enhances ability to communicate with others. Emphasis on



theory and research through experiential projects and examination of communication process used by class itself. General Education credit – Communication.

**COMM 314. Organizational Communication. (3)**

Three hours lecture/discussion.

*Prerequisites: MSTD 130 and COMM 230, or permission of instructor.*

An intensive consideration of the role of human communication in organizational effectiveness. Emphasizes both theory and practice and focuses on information exchange, behavior regulation, negotiation and conflict management as examples of fundamental communication practices.

**COMM 327/MSTD 327/POSC 327. Politics and the Media. (3)**

Three hours lecture/discussion.

*Prerequisites: POSC 120 and MSTD 130 and COMM 230, or permission of instructor.*

Modern mass media as actors in the political arena, with an emphasis on how elections and policy making are affected by the mass media.

**COMM 332. Argumentation and Advocacy. (3)**

Three hours lecture/performance.

*Prerequisites: MSTD 130 and COMM 230, or permission of instructor.*

Emphasis on the development and application of critical thinking and argumentation techniques, including argument development, use of evidence, reasoning and argumentation strategies. In-class practice debates facilitate implementation of critical thinking strategies by students.

**COMM 333. Persuasion. (3)**

Three hours lecture/performance.

*Prerequisites: MSTD 130 and COMM 230, or permission of instructor.*

Modification of attitudes and behavior through purposeful oral communication. Techniques studied include generation of attention and interest, motivational devices, persuasive campaigns and development of credibility.

**COMM 406. Communication Skills Tutoring. (3)**

Three hours lecture/participation.

*Prerequisites: MSTD 130 and COMM 230, or permission of instructor.*

Principles and methods of training clients in the improvement of communication skills in such areas as public speaking, group discussion and listening. Applied component of the course provides supervised consultation and tutoring experience. May be repeated once for undergraduate credit. Students who have previously received credit for SPCH 400 may receive only three hours of credit for COMM 406.

**COMM 408. Public Relations Case Studies. (3)**

Three hours lecture/discussion.

*Prerequisites: MSTD 130 and, COMM 230 and COMM 225, or permission of instructor.*

Case studies and typical public relations problems in industry, labor, education, government, social welfare and trade associations. Planning and preparation of communication materials for various media; applications of public relations techniques. Students who have previously received credit for SPCH 410 may not receive credit for COMM 408.

**COMM 411. Public Relations Media and Campaigns. (3)**

Three hours lecture/discussion.

*Prerequisites: MSTD 130, COMM 230, COMM 225 and either COMM 235 or MSTD 104.*

Use of media to achieve motivation within various target audiences; theory and nature of materials emanating from a public relations department or counseling firm; practical analysis and development of specialized communication materials to gain reaction and support from specialized groups.

**COMM 413. Political Communication. (3)**

Three hours lecture/discussion.

*Prerequisites: MSTD 130 and COMM 230, or permission of instructor.*

Contemporary theories and practices of political communication. Examines the structure

and function of political messages, the strategic dissemination of political messages and the effects of those messages on corporate, social, professional and cultural institutions.

**COMM 414. Critical Analysis of Public Discourse. (3)**

Three hours lecture/discussion.

*Prerequisite: MSTD 130 and COMM 230, or permission of instructor.*

This course focuses on the creation, consumption, and evaluation of public discourse. As such, its main concerns are the sources of messages, the audiences for messages, the contexts in which the messages are produced, the messages themselves, and the confluence of all four to create a rhetorical reality.

**COMM 415. Communication Training and Development. (3)**

Three hours lecture/discussion/participation.

*Prerequisites: MSTD 130 and COMM 230, or permission of instructor.*

The study of internal and external communication training and consulting in business, education, government, and other professional environments. Instruction focuses on developing, proposing, conducting, and evaluating communication training and development programs.

**COMM 416. Business and Professional Communication. (3)**

Three hours lecture/participation.

*Prerequisites: MSTD 130 and, COMM 230, or permission of instructor.*

This course is designed to provide for students' advanced preparation in business and professional communication skills. Emphasis is placed on practical experience in designing and implementing message strategies. Subjects covered include interviewing, formal informative and persuasive presentation by individuals and groups, written message construction, interpersonal communication in the workplace, giving and receiving criticism, and presentation of oneself in professional/social settings.

**COMM 430. Crisis Management and Communication. (3)**

Three hours lecture/discussion.

*Prerequisite: MSTD 130 and COMM 230 and COMM 225, or permission of instructor.*

Focuses on the public relations theory, management concepts, information management, problem solving, and communication management that are central to individuals and organizations succeeding in the management of a crisis situation.

**COMM 433. Communication and Social Change. (3)**

Three hours lecture/discussion.

*Prerequisites: MSTD 130 and COMM 230, or permission of instructor.*

Introduction to rhetorical theory through study and analysis of selected pieces of public address or social movements.

**COMM 438. Communication Internship. (1-12)**

*Prerequisites: MSTD 130, COMM 230, 75 hours of college credit completed, and in good academic standing. Must be a Communication major.*

The internship is a capstone experience in which students apply knowledge and skills learned in the classroom under the supervision of a communication professional in an approved organization. No more than 6 hours of internship credit may be used to meet requirements for the major. Applications and policy statements are available from the School of Communication. Students must consult with their academic adviser before applying, obtain School approval and meet application deadlines. Students wishing to count COMM 438 toward completion of major requirements must take this class for a grade (not pass/fail).

**COMM 439. Communication and Leadership. (3)**

Three hours lecture/participation.

*Prerequisites: MSTD 130 and COMM 230, or permission of instructor.* An introduction to the study and practice of leadership from a communication perspective. Analysis of major theories and research in leadership

with primary emphasis on application in real-world settings. Through discussions and participation in group activities, students explore leadership concepts and theories, analyze their personal leadership styles, and develop leadership communication skills.

**COMM 440. Listening and Nonverbal Communication. (3)**

Three hours lecture /discussion.

*Prerequisites: MSTD 130 and COMM 230, or permission of instructor.*

Emphasis on theoretical and practical considerations of human awareness and attention, perception and reception of auditory, visual and nonverbal codifications, processing, reception and representation of the spoken word (psycholinguistics), image formation and visualization, as well as other semiotic processes such as kinesics, proxemics, paralinguistics, haptics, and chronemics. Explores audience reception in personal as well as mediated contexts in terms of recent developments in brain/main research and theory.

**COMM 457. Diversity in Communication. (3)**

Three hours lecture/discussion.

*Prerequisites: MSTD 130 and, COMM 230, or permission of instructor.*

The impact of ethnicity, age, gender, and other aspects of diversity on communication, particularly in organizations. This course may be used to meet requirements for the minor in Women's Studies.

**COMM 459. Communication in Conflict Management. (3)**

Three hours lecture/discussion/field experience.

*Prerequisites: MSTD 130 and COMM 230, or permission of instructor.*

Addresses the nature of conflict between people as it is manifested in communicative interaction in varied contexts, within individuals, between individuals, between groups and between organizational and social entities. It deals with both competitive and, especially, cooperative communication genres as well as strategies of conflict intervention and mediation.

**COMM 460. Special Topics. (1-4)**

One four-hour(s) lecture/performance.

*Prerequisites: MSTD 130 and COMM 230, or permission of instructor.*

Emphasis on selected topics in communication not covered in current course offerings. Can be taken more than once for a maximum of 12 hours credit.

**COMM 465. Communication and Health Care. (3)**

Three hours lecture/discussion.

*Prerequisites: MSTD 130 and COMM 230, or permission of instructor.*

Survey of research findings and theoretic models relevant to communication practices and health care at interpersonal, group, organizational and social levels.

**COMM 488. Final Honors Project. (2-3)**

*Prerequisites: MSTD 130, COMM 230, Enrollment in the Honors Academy, completion of all other Honors Academy requirements, a minimum of 3.5 GPA in all courses and in Communication.*

Project and topic to be determined by the student, the faculty member with whom the student works, and the School. In order to receive honors credit, a student must earn a grade of "A" or "B" for the final project.

Course may not be repeated.

**COMM 498. Independent Study. (1-6)**

One to six hours.

*Prerequisites: MSTD 130, COMM 230 or permission of instructor.*

No more than six hours of Independent Study may be taken toward graduation. May be taken for honors credit with permission of the Honors Program. May be taken for letter grade or pass/fail. Independent study course proposals must be approved by the School of Communication curriculum committee prior to the deadline for adding courses in the term in which the study is to be undertaken.

For a complete listing of graduate courses, refer to the *Radford University Graduate Catalog*.

## COMMUNICATION SCIENCES AND DISORDERS

### **COSD 221. Introduction to American Sign Language (ASL) and Deaf Culture.**

(3)

Three hours lecture.

An introduction to the language and culture of the Deaf community in the United States, with an emphasis on the study and practice of basic ASL skills.

### **COSD 222. American Sign Language (ASL) II.**

(3)

Three hours lecture.

*Prerequisite: COSD 221*

For professionals serving deaf/hard of hearing (D/HH) individuals. Includes deaf culture, functional language and legal issues in deaf education. Develops skills necessary to communicate using American Sign Language (ASL). Builds on basic ASL skills.

### **COSD 223. American Sign Language (ASL) III.**

(3)

Three hours lecture.

*Prerequisite: COSD 222*

For professionals serving deaf/hard of hearing (D/HH). Includes deaf culture, the impact of cross-cultural perspectives on D/HH children, language in the Deaf Education classroom, linguistic impact of educational placement options for D/HH children, and functional language proficiency to describe/identify things, tell about life activities, and instruct D/HH children.

### **COSD (EDSP) 225. Communication Processes, Development, and Disorders.**

(3)

Three hours lecture.

Introduces students to professions that serve persons with communication disorders with the causes, nature, symptoms, and management of speech, language, and hearing disorders. Information regarding the normal speech, language, and hearing processes will also be reviewed. Information regarding the referral process, identification, and prevention will also be covered.

### **COSD 301. Anatomy and Physiology of the Speech/Language/Hearing Mechanism.**

(4)

Four hours lecture.

*Prerequisite: Junior standing and COSD major.*

Study of the anatomy and physiology of the speech/language/hearing mechanism.

### **COSD 315. Language Science and Technology.**

(3)

Three hours lecture.

*Prerequisite: Junior standing.*

An introductory study of human language processing and performance, the use and variations of language in society, and the role of computer technology in conventional and alternative communication.

### **COSD 316. Hearing Science.**

(3)

Three hours lecture.

*Prerequisites: Junior standing or permission of instructor.*

Introduction to the study of the physics of sound, anatomy and physiology of the auditory system, and psychoacoustics.

### **COSD 330. Introduction to Audiology.**

(3)

Three hours lecture.

*Prerequisites: COSD 316.*

Provides the anatomical, physiological, embryologic, developmental and acoustic foundations for the study of hearing screening procedures, hearing evaluation measures, and measures of hearing handicap. Students will learn about auditory disorders common to all ages and related medical and non-medical management approaches. Students will be exposed to basic hearing conservation and prevention of hearing loss. Selected hearing screening procedures and use of a wide range of clinical equipment, including amplification and sensory devices, will be addressed.

### **COSD 401/510. Neuroanatomy in Communication Disorders.**

(3)

Three hours lecture.

*Prerequisites: Senior standing and COSD major.*

An in-depth study of the neurological structures

and functions related to normal speech, language, and hearing processes and communication disorders. Cross-listed with COSD 510.

**COSD 403/511. Public School Methods in a Diverse Society. (3)**

Three hours lecture.

*Prerequisite: COSD 315.*

A study of clinical delivery and administration of services to the communicatively disordered children and adolescents in the culturally diverse school setting, including current regulations and issues. Must be taken for Virginia Teacher Certification. (Previously offered as COSD 603 and 503).

**COSD 416. Topics in Speech-Language-Hearing. (3)**

Three hours lecture.

*Prerequisite: Senior class standing, or permission of instructor.*

Specialized knowledge in speech-language pathology and/or audiology relevant to the prevention, assessment and/or intervention for communication disorders will be offered. Topics will vary, but may include speech and language disorders, central auditory processing disorders, and cognitive disorders.

**COSD 421. Language Development: Birth to Five Years. (4)**

Three hours lecture.

*Prerequisite: COSD 315 or enrollment in the Teacher of Hearing Impaired certification program.*

A study of normal language development from birth through five years of age. Students cannot receive credit for this course if they have previously taken COSD 321.

**COSD 422/512. Audiologic Rehabilitation. (3)**

Three hours lecture.

*Prerequisite: COSD 330 or enrollment in the Teacher of Hearing Impaired certification program.*

An in-depth study of sensory devices and intervention approaches for children with hearing loss. Cross-listed with COSD 512.

**COSD 425. Later Language Development. (3)**

Three hours lecture.

*Prerequisite: COSD 421*

A study of spoken and written language development during the school years and into adulthood. Students cannot receive credit for this course if they have previously taken COSD 325.

**COSD 438. Phonetics. (3)**

Three hours lecture.

*Prerequisite: Senior standing or permission of instructor.*

Introduction to phonetic principles; transcription using the International Phonetic Alphabet. Student cannot receive credit for this course if they have previously taken COSD 311.

**COSD 453. Speech-Language Disorders: Prevention, Assessment and Intervention. (4)**

Four hours lecture.

Introduction to clinical practice in communication disorders. Emphasis on prevention, basic skills, ethics, assessment measures, and intervention. A minimum of 20 hours of supervised clinical observation is required.

**COSD 488. Final Honors Project. (3)**

*Prerequisites: Completion of COSD general education requirements; enrollment in Honors Academy: completion of all other Honors Academy requirements; minimum 3.5 GPA in all courses and in COSD.*

To earn a bachelor's degree with honors, a COSD student must conduct a faculty-directed research professional inquiry project. In order to receive honors credit, a student must earn a grade of "A" or "B" for the final project. Course may not be repeated or retaken.

**COSD 498. Independent Study. (1-6)**

Subject to approval of the Communication Sciences and Disorders Department the semester before it is to be taken. Students may take no more than two Independent Studies, with no more than three hours of credit per study. See "Independent Study" on p. 63 .



For descriptions of graduate courses, consult the *Radford University Graduate Catalog*.

## CRIMINAL JUSTICE

### **CRJU 100. Introduction to Criminal Justice.**

(3)

Three hours lecture.

Survey of the American criminal justice system and processes. Crime, criminal law, law enforcement, prosecution, adjudication, corrections and juvenile justice.

### **CRJU 150. Crime, Law & Justice.**

(3)

Three hours lecture.

*Prerequisites:* Declared major or minor in criminal justice.

Introduces students to key concepts in the study of criminal justice. Topics will include crime and social control, the role of criminal law, the nature of justice, and a survey of the criminal justice process. In addition, special attention will be devoted to the conduct of basic criminal research.

### **CRJU 233. Courts and the Criminal Process.**

(3)

Three hours lecture.

An examination of the steps in the process followed in most criminal courts and the legal rules relating to each step. The manner in which judges are selected in the American legal system and the organization of state and federal courts will also be examined.

### **CRJU 235. Police and Society.**

(3)

Three hours lecture.

This course is designed to examine the psychological, sociological, and philosophical role of the police as it relates to such topics as social conflict, criminal behavior, police brutality, police corruption, and stress.

### **CRJU 238. Corrections.**

(3)

Three hours lecture.

A comprehensive overview of the field of corrections, with special emphasis on community-based corrections as alternatives to institutionalization.

### **CRJU 290. Seminar.**

(3)

Three hours lecture.

*Prerequisite:* CRJU 100 or CRJU 150.

Concentrated study of specific area of criminal justice. May be taken multiple times for credit as long as course content varies.

### **CRJU 312. Security Administration and Crime Prevention.**

(3)

Three hours lecture.

*Prerequisite:* CRJU 100 or CRJU 150.

An introduction to private security administration and crime prevention measures utilized by industrial, commercial and community agencies.

### **CRJU 315. Constitutional Rights and the Criminally Accused.**

(3)

Three hours lecture.

*Prerequisite:* CRJU 100 or CRJU 150.

A study of legal rules and procedures that are essential to the criminal judicial process.

### **CRJU 320. Criminal Investigative Theory.**

(3)

Three hours lecture.

*Prerequisite:* CRJU 100 or CRJU 150.

A study of criminal investigative theory essential to the solution of crime, including crime scene, processing, interviewing and crime-specific solution strategies.

### **CRJU 330. Deviant Sexual Behavior and Criminal Activity.**

(3)

Three hours lecture.

*Prerequisite:* CRJU 100 or CRJU 150.

Introduces students to the world of the sexually deviant criminal. Emphasis is placed on understanding the various types of offense behavior, victim issues, investigative methods and techniques, and treatment of the sex offender.

### **CRJU 341. Introduction to Forensic Science.**

(3)

Three hours lecture.

*Prerequisite:* CRJU 320.

Study of the application of biological and physical sciences in the legal system. The course introduces the student to the principles and methods of a forensic laboratory. (Students may not receive credit for both CRJU 241 and CRJU 341.)



**CRJU 345. Historical Perspectives on Criminal Justice.**

(3)

Three hours lecture.

*Prerequisite: CRJU 100 or CRJU 150.*

Provides both an overview of the historical ideas about justice in the western tradition and of the development of the criminal justice system in the United States in the context of social and political history.

**CRJU 350. Ethical and Moral Issues in Criminal Justice.**

(3)

Three hours lecture.

*Prerequisites: CRJU 100 or CRJU 150, CRJU 233, CRJU 235, and CRJU 238.*

Introduces students to theoretical and applied criminal justice professional ethical norms and standards as they relate to criminal justice decision making processes in discretion, due process, truthfulness, corruption, and discrimination.

**CRJU 360. Criminal Law and Evidence.**

(3)

Three hours lecture.

*Prerequisite: CRJU 100 or CRJU 150.*

The examination of criminal laws and rules of evidence; origins, definition, scope and impact upon the criminal justice practitioner.

**CRJU 365. Diversity Issues in the Criminal Justice System.**

(3)

Three hours lecture.

*Prerequisites: CRJU 100 or CRJU 150, and SOCY 110; or enrollment in the Women's Studies Program.*

Provides an overview of gender, race, and ethnicity issues as related to criminal justice. Major emphasis will be on developing a student understanding of cross-cultural variation; feminist thought and its impact on justice; and the effects that gender and race have on the lives of people within the context of contemporary issues of justice. This course may be used to meet requirements for the minor in Women's Studies.

**CRJU 375. Criminal Justice Management.**

(3)

Three hours lecture.

*Prerequisite: CRJU 100 or CRJU 150.*

Designed to explore in-depth the major management and organizational issues that impact on criminal justice administration in the United States. A critical view of the major problems and issues confronted by contemporary criminal justice administrators will be considered.

**CRJU 380. Rural Crime and Law Enforcement.**

(3)

Three hours lecture.

*Prerequisite: CRJU 100 or CRJU 150.*

Introduces students to the aspects of crime that are unique to rural areas as well as the specific challenges for rural criminal justice agencies with an emphasis on law enforcement organizations.

**CRJU 410. Juvenile Justice.**

(3)

Three hours lecture.

*Prerequisite: CRJU 100 or CRJU 150; recommended SOCY 444.*

Covers the study and function of the juvenile justice system, the process within the system and the youth who become involved in these processes.

**CRJU 430. Comparative Criminal Justice Systems.**

(3)

Three hours lecture.

*Pre- or-corequisites: CRJU 100 or CRJU 150, and CRJU 365.*

Examines the major criminal justice systems of the world, detailing history, culture, policy, and operation of police, corrections, and judiciary.

**CRJU 439. Community-Based Corrections.**

(3)

Three hours lecture.

*Prerequisite: CRJU 238.*

Designed to examine the variety of correctional services available in the community, as alternatives to incarceration. Emphasis will be placed on probation and parole, as well as

the range of intermediate sanctions (including, but not limited to, programs such as boot camps, drug courts, electronic monitoring, etc.).

**CRJU 445. Juvenile Corrections. (3)**  
**Three hours lecture.**

*Prerequisites: CRJU 100 or CRJU 150, and CRJU 238.*

Introduces students to key concepts in the area of juvenile corrections. Topics include key differences between the juvenile justice system and the adult system, diversion programs targeting juveniles, sanctions for juvenile offenders, juvenile inmate characteristics, and issues related to juvenile corrections such as privatization of juvenile corrections.

**CRJU 475. Crime and Criminal Behavior. (3)**

Three hours lecture.

*Prerequisites: CRJU 100 or CRJU 150, and junior and senior standing.*

Focuses on the ways in which explanations of criminal behavior influence and are reflected in public policy and in the workings of the criminal justice system.

**CRJU 481. Forensic Evidence. (3)**

Three hours lecture/lab.

*Prerequisite: CRJU 241 or CRJU 341.*

Designed to introduce the student to the major concepts of law and evidence. The topics for discussion will include, but are not limited to: kinds of evidence, burden of proof, admission and exclusion of evidence, relevancy, witnesses, documentary evidence, judicial notice, the hearsay rule and its exceptions, and the best evidence rule. Students will be assigned a mock trial project.

**CRJU 483. Criminal Justice Experiential Learning. (3)**

*Prerequisites: CRJU 100 or CRJU 150; CRJU 233; CRJU 235; CRJU 238; junior or senior standing; minimum of 3.0 GPA (overall and in Criminal Justice coursework); permission of instructor.*

*Corequisite: CRJU 484*

The student will complete a field experience related to criminal justice. Students will be

expected to integrate their field experiences with the body of criminal justice theory to produce a scholarly research project. This course must be taken concurrently with CRJU 484 (Criminal Justice Internship).

**CRJU 484. Internship in Criminal Justice. (6-15)**

Field placement.

*Prerequisites: CRJU 100 or CRJU 150; junior or senior standing, with minimum 2.5 grade point average; faculty approval.*

Placement of student with criminal justice agency with academic supervision. Graded pass/fail. Does not fulfill CRJU elective requirement. This course may be taken concurrently with CRJU 483. CRJU 484 may count for 3-12 credit hours for student concurrently enrolled in CRJU 483.

**CRJU 485. Research Methods in Criminal Justice. (3)**

Three hours lecture.

*Prerequisites: CRJU 100 or CRJU 150; senior standing; STAT 200.*

Introduces students to social science research methodology involved in conducting original research. Research skills include qualitative and quantitative research methodologies. Other skills will include, but are not limited to, oral communication, intensive writing, computer operations, and statistical model applications.

**CRJU 488. Final Honors Project. (2-3)**

*Prerequisites: Enrollment in Honors Program, completion of all other Honors Program requirements, a minimum 3.5 GPA in all courses and in criminal justice.*

Project and topic to be explored determined by the student, the faculty member with whom he or she works and the student's major department. Topics may include any of the basic fields offered within the field of criminal justice: law enforcement and administration; criminology and the courts; or probation, parole and corrections. In order to receive honors credit, a student must earn a grade of "A" or "B" for the final project. Course may not be repeated.

**CRJU 490. Seminar.** (3)  
Three hours lecture.  
*Prerequisites:* CRJU 100 or CRJU 150, and junior standing.  
Concentrated study on specific areas of criminal justice. May be taken again for credit as often as course content varies.

**CRJU 495. Critical Perspectives in Criminal Justice.** (3)  
Three hours lecture.  
*Prerequisites:* CRJU 100 or CRJU 150; senior standing.  
Designed to emphasize a variety of applied and synthesizing skills, including oral communication, intensive writing, and service learning. Decision making skills and ethics will also be emphasized in the area of public policy.

**CRJU 498. Independent Study.** (1-3)  
*Prerequisites:* Nine hours of CRJU courses and permission of instructor.  
Students must obtain approval of department on proposed program in semester preceding that in which independent study is anticipated. Course may carry one to three hours credit a semester and may be taken for up to six semester hours credit. Offered as needed. See "Independent Study" on p. 63.

For a complete list of graduate courses, please consult the *Radford University Graduate Catalog*.

## DANCE

**DNCE 105. Beginning Ballet.** (2)  
Four hours technique. (TQ)  
Theory as well as barre and centre practice, including basic adagio and allegro technique. May be taken for a total of six semester hours of credit.

**DNCE 111. Dance Appreciation.** (3)  
Three hours lecture. (TH)  
Promotes understanding and appreciation of dance and its various roles in societies of past and present. General Education credit - Fine Arts.

**DNCE 120. Dance Improvisation.** (1)  
Provides the opportunity for creative exploration, reflection and discussion on the basic dance compositional elements, time, space and design. As an introduction to the creative process, improvisation provides experiences in making quick solutions to compositional problems. May be taken for a total of three semester hours of credit.

**DNCE 131. Beginning Modern Dance.** (2)  
Four hours technique. (TQ)  
Fundamentals of movement, rhythm, form and design. Technique and compositional studies progressing in difficulty. May be taken for a total of six semester hours of credit.

**DNCE 180. Jazz Dance.** (2)  
Four hours technique. (TQ)  
Technique in jazz dance progressing in difficulty as to length and complexity of exercises. May be taken for a total of six semester hours credit.

**DNCE 201. Intermediate Pointe Technique.** (2)  
Four hours technique. (TQ)  
Concentrates on the very basic essentials of pointe technique, using specific exercises to develop strength, proper placement and correct execution. May be taken multiple times for credit.

**DNCE 205. Low-Intermediate Ballet.** (2)  
Four hours technique. (TQ)  
Barre and centre practice developing in difficulty as to length and complexity of exercises. Includes adagio and allegro technique. May be taken for a total of eight semester hours of credit.

**DNCE 210. Introduction to Pilates.** (2)  
Covers fundamental theoretical and movement principles of the Pilates Method, including studio work in the Pilates Method of mat exercises and the Universal Reformer. Strengthens and stretches the total body, emphasizing control from the core center or powerhouse. Students learn to protect the body in all movement forms by developing a

strong link between the physical and the mental aspects of movement and applying them to daily activity. May be taken for a total of four semester hours of credit.

**DNCE 220. Dance Composition. (1)**

One hour. (PR)

*Prerequisite: One semester of either DNCE 131, DNCE 231 or permission of instructor.*

Provides opportunity for creative exploration and analysis of principles of dance composition through improvisation and problem solving. Informal presentation of student works may be included. May be taken for a total of three semester hours of credit.

**DNCE 231. Intermediate Modern Dance. (2)**

Four hours technique. (TQ)

Movement experiences and techniques progressing in difficulty. Implementation of principles and techniques of choreography in individual and group compositions. May be taken for a total of 12 semester hours of credit.

**DNCE 260. Rehearsal and Performance. (1)**

Four hours. (PR)

*Prerequisite: Approval of Dance Department faculty.*

For students with ability in dance and a desire to participate in dance as a performing art. Includes participation in master classes, lecture-demonstrations, faculty concerts, student-choreographed works, and performances on and off campus. Dancers enrolled in this course must be concurrently enrolled in a dance technique class such as ballet, modern dance or jazz. May be taken multiple times for credit.

**DNCE 280. Intermediate Jazz Dance. (2)**

Four hours technique. (TQ)

Provides continued development of the body as an instrument for jazz dance expression with emphasis on technique, style and compositional form. May be taken multiple times for credit.

**DNCE 305. High-Intermediate Ballet. (3)**

Six hours technique. (TQ)

Barre and centre practice; adagio and allegro techniques progressing in difficulty. May be taken multiple times for credit.

**DNCE 320. Choreographic Studies. (2)**

Four hours. (PR)

*Prerequisite: One semester of DNCE 220.*

Choreographic studies in dance. Development of solo, duo or group composition in dance for analysis and critical appraisal. Formal production of student works may be included. Those repeating the class for credit will select a problem with emphasis on form, style, accompaniment and communication of dance as an art form. Written report of the dance problem to include description of movement, music and technical aspects of production. May be taken for a total of six semester hours of credit. Spring.

**DNCE 331. High-Intermediate Modern Dance. (3)**

Six hours technique. (TQ)

Intensive study of modern dance technique for preprofessional levels emphasizing correctness of execution and expressiveness. May be taken multiple times for credit.

**DNCE 360. Dance Production. (3)**

Two hours lecture; two hours laboratory. (TH)

Principles of preparation for a dance production, including costuming for dance, make-up for dance, organization and management. Offers experience in practical application of principles through work on a dance production. Fall, alternate years.

**DNCE 366. Travel Study. (1-12)**

Academic study involving domestic and/or international travel. May be taken again for credit with different topics or areas of study. General Education credit - Fine Arts.

**DNCE 370. Creative Dance for Children. (3)**

Three hours lecture. (TH)

Presents theory and methodology for creative dance in elementary education. Explores the

nature of dance as a creative, aesthetic and movement experience which can integrate with other academic subjects. Provides experience with lesson plans, varied ages, developmental levels and field experience provide pedagogical knowledge and skills. Applicable to public schools, studios and recreation programs.

**DNCE 400. Special Topics. (1-3)**

Two to six hours technique. (TQ)  
Consideration of various technical, theoretical or stylistic topics in dance. Offered on demand. May be taken multiple times for credit.

**DNCE 401. Advanced Pointe Technique. (2)**

Four hours technique. (TQ)  
Development of classical ballet skill en pointe. May be taken multiple times for credit.

**DNCE 405. Advanced Ballet. (3)**

Six hours technique. (TQ)  
Barre and centre practice, including adagio and allegro techniques on an advanced level. May be taken multiple times for credit.

**DNCE 410. Accompaniment for Movement. (2)**

Three hours lecture/laboratory. (TH)  
Rhythmic analysis, reading and writing metric patterns, construction and use of percussion instruments and individual and group projects. Spring, alternate years.

**DNCE 470. Methods of Teaching Dance. (3)**

Three hours lecture. (TH)  
*Prerequisite: DNCE 370.*  
Principles and techniques dance with emphasis on students in grades 6-12. Theory and field experience combine to provide pedagogical knowledge and skills. Students devise and implement learning experiences in dance which are appropriate and meaningful for middle and secondary students.

**DNCE 480, 481. History and Philosophy of Dance. (3, 3)**

Three hours lecture. (TH)  
Traces development of dance during various

historical periods. DNCE 480 covers primitive, Oriental, Egyptian, ancient Greek and Roman civilizations and the Christian era through the Middle Ages; DNCE 481 covers the developments in dance from the Renaissance to the present. Fall/Spring, alternate years.

**DNCE 488. Final Honors Project. (2-3)**

Hours and credits to be arranged. (TH)  
*Prerequisite: Enrollment in the Honors Academy, completion of all other Honors Academy requirements, a minimum 3.5 GPA overall and in dance.*

This project and the topic to be explored will be determined by the student, the faculty member with whom the student works and the student's major program area. (Honors Project may be a written or performance-based project.) In order to receive honors credit, a student must earn a grade of "A" or "B" for the final project. Course may not be repeated.

**DNCE 498. Independent Study. (1-4)**

See "Independent Study" on p. 63.

**DESIGN**

**DSN 110. Introduction to Design. (3)**

Three hours lecture.  
An overview of the field of design, encompassing the built environment, fashion, interiors, print, textiles, and everyday objects in the world around us.

**DSN 111. Design Fundamentals. (3)**

Six hours studio.  
An introduction to the elements and principles of design in two- and three-dimensional formats. The design process, including problem solving, creative expression and conceptual thinking, is emphasized.

**DSN 366. Travel Study – Design. (1-12)**

*Prerequisite: Permission of Instructor*  
Academic study involving domestic and/or international travel. May be repeated for credit for a maximum of 12 hours. Grading option can be either A-F or pass/fail.



**DSN 390. Pre-Internship Seminar. (1)**

One hour lecture.

*Prerequisite:* 2.5 GPA in the major, DSNM 263 or DSNI 205 or DSNF 254 (Grade of "C" or better) and permission of instructor.

A self-directed study to prepare the student for a summer internship experience in fashion design, interior design or fashion/interior merchandising.

**DSN 400. Special Topics in Design. (1-6)**

*Prerequisite:* Permission of Instructor.

A study of a current topic that is of interest in the area of design, with emphasis on new developments, technology, or research in the various areas. May be repeated for credit for a maximum of 9 hours, provided a new topic is explored each time. Grading option can be either A-F or pass/fail.

**DSN 488. Final Honors Project. (2-3)**

*Prerequisite:* Enrollment in Honors Academy; completion of all other Honors Academy requirements; senior standing in the Design major.

This project and the topic to be explored will be determined by the student and the faculty member supervising the project. (Honors project may be a written or performance-based project). In order to receive honors credit, a student must earn a grade of "A" or "B" for the final project. Course may not be repeated and students may not receive credit if they have previously taken DSNF 488 or DSNI 488.

**DSN 498. Independent Study. (1-3)**

*Prerequisite:* Permission of Instructor.

Investigation by the student in areas of interest under the direction of an adviser.

**FASHION****DSNF 123. Principles of Fashion Design. (3)**

Two hours lecture; two hours laboratory.

*Prerequisite:* DSN 111 (Grade of "C" or better)

Elements and principles of design applied to the creation, coordination, presentation and evaluation of apparel products.

**DSNF 133. Introduction to the Fashion Industry. (3)**

Three hours lecture.

An introduction to the industry segments involved in the design, production and distribution of women's, men's, children's apparel and accessories. Career opportunities in fashion will be included.

**DSNF 223. Basic Textiles. (3)**

Two hours lecture; two hours laboratory.

*Prerequisite:* DSNF 123 (Grade of "C" or better).

A study of fibers, yarns, fabrics and finishes for use in consumer textile products. Emphasis is placed on investigation of fibers/yarns/fabrics/for apparel products.

**DSNF 233. Meaning of Dress. (3)**

Three hours lecture.

*Prerequisite:* DSNF 133 (Grade of "C" or better), and PSCY 121 or SOCY 110.

A study of the cultural, social, psychological and physical factors which influence market segmentation in the apparel industry. Fall.

**DSNF 253. Basic Garment Assembly. (3)**

One hour lecture, four hours laboratory.

*Prerequisite:* DSNF 123 (Grade of "C" or better).

Introduction to appropriate sewing techniques for various fabrics and construction considerations used in apparel. Identification of garment and commercial pattern specifications will be used for product evaluation.

**DSNF 254. Advanced Garment Assembly. (3)**

One hour lecture; four hours laboratory.

*Prerequisite:* DSNF 253 (Grade of "C" or better)

Advanced construction techniques and use of a variety of fabrics will be explored. Development of skills in application of construction techniques, and use of different equipment, fabrics, and findings.

- DSNF 303. Flat Pattern Design.** (3)  
One hour lecture, four hours laboratory.  
*Prerequisite:* DSNF 254 (Grade of "C" or better).  
Introduction to principles of flat pattern making. Designing and styling of original ideas from the two-dimensional to the three-dimensional form.
- DSNF 304. CAD for Apparel Design.** (3)  
One hour lecture, four hours laboratory.  
*Prerequisite:* DSNF 254 and DSNF 323 (Grade of "C" or better).  
Provides experience with software (computer aided design, product development and management programs) designed for use in the fashion industry.
- DSNF 313. Design by Draping.** (3)  
One hour lecture, four hours laboratory.  
*Prerequisite:* DSNF 254 (Grade of "C" or better).  
Introduction to the principles of designing garments through draping techniques. Development of original designs on a three dimensional form.
- DSNF 323. Fashion Sketching.** (3)  
One hour lecture, four hours laboratory.  
*Prerequisite:* DSNF 123 and 223 (Grade of "C" or better).  
Sketching of men's, women's and children's clothing. Emphasis on garment details, textures and presentation formats.
- DSNF 343. Sewn Product Analysis.** (3)  
Two hours lecture; two hours laboratory.  
*Prerequisite:* DSNF 223 (Grade of "C" or better).  
Investigation of apparel quality through identification of product standards and specification, performance, sizing, appearance, design and production.
- DSNF 353. History of Fashion.** (3)  
Three hours lecture.  
*Prerequisite:* Junior standing.  
A study of the history of fashion as it relates to the development of western dress over a period of time, circa 3000 BC to 1880. Fashion will be studied within the historical, social and cultural environment of the time.
- DSNF 367. History of Modern Fashion.** (3)  
Three hours lecture.  
*Prerequisite:* Junior standing.  
A study of the history of fashion as it relates to the development of western dress from 1880 to the present. Fashion will be viewed within the historical, social and cultural environment of the time. Special attention will be given to notable fashion designers for this time period.
- DSNF 383. Technical Aspects of Apparel Design.** (3)  
One hour lecture; four hours laboratory.  
*Prerequisite:* DSNF 303 (Grade of "C" or better).  
Investigation of techniques used to achieve the desired silhouette, garment set and fit based on industry standards. Concepts include the impact of fabric selection, fitting device selection and pattern grading on garment set, silhouette and aesthetics.
- DSNF 391. Fashion Design Internship.** (2)  
*Prerequisite:* DSN 390 and all 300 level DSNF courses passed with a grade of "C" or better.  
Course includes 200 hours of field experience in a fashion design internship approved by the Departmental Internship Committee; two semester hours required. This course may be repeated for no more than 8 semester hours of credit. A grade of Pass/Fail is awarded by the departmental internship coordinator.
- DSNF 481. Apparel Design Production I.** (3)  
One hour lecture, four hours laboratory.  
*Prerequisite:* DSNF 391.  
Study of design processes and research methods used to develop apparel product design. Problems identification and implementation of research methods will be used to develop creative products.

**DSNF 491. Apparel Design****Production II. (3)**

One hour lecture, four hours laboratory.

*Prerequisite: DSNF 481 (Grade of "C" or better).*

A study of apparel production processes. Students use research methods and design processes to solve design problems and produce garments that meet industry specifications and quality evaluation. The capstone course for Fashion Design.

**INTERIOR DESIGN****DSNI 112. Visual Thinking for Design. (3)**

Six hours studio.

*Prerequisite: DSN 110 and DSN 111 (Grade of "C" or better).*

An application of design fundamentals and problem solving techniques to two- and three-dimensional design problems for the interior spatial environment, with attention to human factors. Emphasis is on the design process, including conceptual thinking and creative expression.

**DSNI 120. Drafting I. (3)**

*Prerequisites: DSN 110 and DSN 111 (Grade of "C" or better).*

Six hours studio.

An introduction to the skills and techniques required in representing designed space and form using conventional architectural drawing and drafting standards.

**DSNI 200. Sophomore Studio I. (3)**

Six hours studio.

*Prerequisite: DSNI 112 and 120 (Grade of "C" or better).*

Fundamentals of space planning and spatial development with emphasis on functionality, human factors and human behavior.

**DSNI 205. Sophomore Studio II. (3)**

Six hours studio.

*Prerequisite: DSNI 200 and 210 (Grade of "C" or better).*

A continuation of Sophomore Studio I. This course is the application of the design process, with emphasis on schematic design, to small-scale interior design problems.

**DSNI 210. Presentation Techniques. (3)**

Six hours studio.

*Prerequisite: DSNI 112 and 120 (Grade of "C" or better).*

An introduction to visualization and presentation techniques for interior design. Graphic skills are developed through the exploration of various media and techniques and creativity of expression and conceptual thinking are emphasized.

**DSNI 220. Drafting II. (3)**

Six hours studio.

*Prerequisite: DSNI 120 and 210 (Grade of "C" or better).*

An advanced exploration of architectural representation, with focus on building structures, systems, and code requirements, and emphasis on creating detailed drawings as required for casework, millwork and other custom interior design components.

**DSNI 230. Materials, Finishes and Textiles I. (3)**

Two hours lecture; two hours laboratory.

*Prerequisite: DSNI 120 (Grade of "C" or better).*

An introduction to the physical properties of and recommended applications for basic materials, finishes and textiles used in interior spaces. The student develops knowledge and skills needed to research and evaluate functional, aesthetic, economic and environmental characteristics of materials, finishes and textiles.

**DSNI 235. Materials, Finishes and Textiles II. (3)**

Two hours lecture, two hours laboratory.

*Prerequisite: DSNI 230 (Grade of "C" or better).*

A continuation of DSNI 230. The student explores increasingly complex materials, with special focus on evaluation and application of textiles within the interior environment.

**DSNI 300. Junior Studio I. (4)**

Eight hours studio.

*Prerequisite: DSNI 205 and 220 (Grade of "C" or better) and pass Portfolio Review.*

A comprehensive study of the design process

as applied to residential spaces. Problem solving skills are emphasized in designing living spaces that accommodate user needs.

**DSNI 305. Junior Studio II. (4)**

Eight hours studio.

*Prerequisite: DSNI 300 and 320 (Grade of "C" or better).*

A comprehensive study of the design process as applied to corporate interior design. Problem solving skills are employed in designing interior workplace environments that accommodate user needs in commercial spaces.

**DSNI 320. Computer Aided Design I. (2)**

Four hours studio.

*Prerequisite: DSNI 220 (Grade of "C" or better), ITEC 100, and pass Portfolio Review.*

An introduction to concepts and techniques of two-dimensional computer-aided design applications for interior spaces.

**DSNI 325. Computer-Aided Design II. (2)**

Four hours studio.

*Prerequisite: DSNI 320 (Grade of "C" or better).*

An introduction to advanced techniques in computer-aided design for interiors. Applications include three-dimensional modeling, rendering and animation.

**DSNI 340. Lighting for Interiors. (3)**

Two hours lecture, two hours laboratory.

*Prerequisite: DSNI 220 (Grade of "C" or better) and pass Portfolio Review.*

A study of the theoretical and technical principles of light and its application within the interior environment.

**DSNI 350. History of Interiors I. (3)**

Three hours lecture.

A broad overview of the design of interior spaces and furnishings from ancient Egypt to the Victorian period.

**DSNI 355. History of Interiors II. (3)**

Three hours lecture.

*Prerequisite: DSNI 350 (Grade of "C" or better).*

A broad overview of the design of interior spaces and furnishings from the Victorian period to the present.

**DSNI 365. Design Theory and Research I. (2)**

Two hours lecture.

*Prerequisite: DSNI 300 (Grade of "C" or better).*

A study of the theories that form the foundation for decision making in interior design, and the research methods that inform and impact the problem solving process. Research related to human factors and cultural differences is presented and information-gathering techniques are examined.

**DSNI 392. Interior Design Internship. (2)**

*Prerequisite: DSN 390 and "C" or better in all 300 level DSNI courses.*

Includes 120 hours of field experience in an interior design center approved by the Departmental Internship Committee; two semester hours are required. This course may be repeated for no more than 8 semester hours of credit. A grade of Pass/Fail is awarded by the departmental internship coordinator.

**DSNI 400. Senior Studio I. (3)**

Six hours studio.

*Prerequisite: DSNI 305 and 325 (Grade of "C" or better) and pass DSNI 392.*

A comprehensive study of the design process as applied to retail and hospitality environments. Problem solving skills are employed in designing commercial spaces to accommodate user needs.

**DSNI 405. Senior Studio II. (3)**

Six hours studio.

*Prerequisite: DSNI 400 (Grade of "C" or better).*

A comprehensive study of the design process as applied to institutional design. Problem solving skills are employed in designing healthcare environments that accommodate user needs.

**DSNI 465. Design Theory and Research II. (2)**

Two hours lecture.

*Prerequisite: DSNI 365 (Grade of "C" or better).*

A continuation of DSNI 365. The student examines current theory and research in interior

design relevant to corporate, retail, hospitality, and institutional environments.

**DSNI 490. Professional Practice and Ethics.** (2)

Two hours lecture.

*Prerequisite: DSNI 400 (Grade of "C" or better).*

Provides a study of business principles and professional ethics for the practice of interior design.

**DSNI 492. Senior Showcase and Portfolio.** (1)

Two hours studio.

*Prerequisite: DSNI 400 (Grade of "C" or better).*

This capstone course is the culminating activity of four years of interior design study. Students confront the challenge of designing and developing their individual portfolios and producing a senior exhibit.

## DESIGN MERCHANDISING

**DSNM 243. Advertising and Promotion for Design.** (3)

Three hours lecture.

*Prerequisite: DSN 110 and 111 (Grade of "C" or better).*

Exploration of advertising and promotional techniques used to create awareness or acceptance of design products or design ideas. Students cannot receive credit if previously taken DSNF 243.

**DSNM 263. Merchandising Mathematics.** (3)

Three hours lecture.

*Prerequisite: DSN 110 and 111 (Grade of "C" or better).*

A study of the retail mathematics practices used in the procurement and sales of apparel and interior products. Student cannot receive credit if they have previously taken DSNF 263.

**DSNM 385. Buying and Procurement for Design.** (3)

Three hours lecture.

*Prerequisite: DSNM 263 (Grade of "C" or better), and junior standing.*

An advanced analysis and manipulation of the professional procedures, formulas, and purchasing negotiations used in product procurement and sales at the trade and retail levels.

**DSNM 393. Merchandising Internship.** (2)

*Prerequisite: DSN 390 and DSNM 385 (Grade of "C" or better).*

Course includes 200 hours of field experience in a merchandising center approved by the Departmental Internship Committee; two semester hours required. This course may be repeated for no more than 8 semester hours of credit. A grade of Pass/Fail is awarded by the departmental internship coordinator.

**DSNM 420. Design Products and Services.** (3)

Three hours lecture.

*Prerequisite: DSNM 393 and senior standing.*

A study of apparel and interior products and services offerings from budget to designer price points. Emphasis is on market segmentation and target market manipulations. Student cannot receive credit if they have previously taken DSNF 420.

**DSNM 433. Visual Merchandising.** (3)

One hour lecture, four hours laboratory.

*Prerequisite: DSNM 393 and senior standing.*

A study of the theory and practice of visual merchandising (3-dimensional) for retail sales and promotions at the consumer and wholesale levels.

**DSNM 443. Economics of Design.** (3)

Three hours lecture.

*Prerequisite: ECON 105 and junior standing.*

Study of the economic, governmental and environmental factors which affect the various segments of the textile, apparel and interiors



complex, individually and as a whole. The factors are reviewed and evaluated from a domestic and international perspective. Students cannot receive credit if they have previously taken DSNF 443.

**DSNM 493. Forecasting for Design. (3)**

Three hours lecture.

*Prerequisite: DSNM 420 (Grade of "C" or better), and senior standing.*

Methods and procedures for forecasting products and market trends in the apparel and interior industry. The capstone course for merchandising students. Students cannot receive credit if they have previously taken DSNF 423.

## ECONOMICS

**ECON 101. Survey of Economics. (3)**

Three hours lecture.

A study of economic theory, institutions and issues. Emphasis on gaining a broad understanding of economic reasoning and its application to major contemporary issues. Students who have completed ECON 105 and 106 may not take ECON 101. General Education credit - Social and Behavioral Sciences.

**ECON 105, 106. Principles of Economics. (3, 3)**

Three hours lecture.

ECON 105 is an introduction into the study of scarcity and choice: supply and demand theory, national income accounting, money and banking, monetary and fiscal policy models and how government deals with the problems of inflation, unemployment and economic growth. ECON 106 concentrates on micro-economics: elasticity of demand and supply, consumer and producer behavior, market structure, labor market analysis and general equilibrium. General Education credit - Social and Behavioral Sciences.

**ECON 203. Public Finance. (3)**

Three hours lecture.

*Prerequisite: ECON 106.*

All three levels of government are discussed with emphasis on financing federal government. Students are introduced to taxation and spending as they relate to techniques in macroeconomic analysis.

**ECON 271. Rural Economics. (3)**

Three hours lecture.

*Prerequisite: ECON 105.*

Investigates resource allocation and problems of the basic industries providing foods and fibers to the U.S. economy. The course analyzes problems arising in the on-going evolution of demands for utilization of non-urban natural and man-made resources in achieving society's economic objectives.

**ECON 272. Natural Resource Economics. (3)**

Three hours lecture.

*Prerequisite: ECON 106.*

Analysis of the development, conservation and preservation of natural systems, mineral and energy resources.

**ECON 295. Topics in Economics. (3)**

Three hours lecture.

*Prerequisite: Completion of one of the following: ECON 101, 105, 106; or permission of the instructor.*

Introduces students to topics of current national and global interest. This course will draw from other social sciences, humanities, and business disciplines while maintaining its emphasis on economics processes and applications. Students may take course up to six credit hours under two different topics. General Education credit - Social and Behavioral Sciences.

**ECON 301. The Economics of Entrepreneurship. (3)**

Three hours lecture.

*Prerequisite: Junior standing.*

Examines the nature and significance of the entrepreneurial drive throughout history, focusing on the role that this drive has played in

the economic growth of countries, how public policy has fostered this drive, and how this drive is unfolding, both locally and globally, in our current era of rapid technological innovation.

**ECON 305. Intermediate Macroeconomic Theory. (3)**

Three hours lecture.

*Prerequisite: ECON 105 and 106 and junior or senior standing.*

Analyzes the intersectoral determination of national income and employment and the general price level.

**ECON 306. Intermediate Microeconomic Theory. (3)**

Three hours lecture.

*Prerequisite: ECON 106 and junior or senior standing.*

A theoretical study of the firm, markets, the price system and the allocation of resources.

**ECON 307. Mathematical Economics. (3)**

Three hours lecture.

*Prerequisite: ECON 106; MATH 126, or 151; and junior or senior standing.*

Development of selected mathematical and quantitative techniques, with emphasis on the application of those techniques to economic theory and problems.

**ECON 309. Comparative Economic Systems. (3)**

Three hours lecture.

*Prerequisite: ECON 105 and junior or senior standing.*

Critical study of capitalism, socialism and corporatism. Analysis of contemporary systems with case studies of Japan, France, China, the former Soviet Union, central and eastern European countries, the Baltic nations, and other selected countries. General Education credit - Social and Behavioral Sciences.

**ECON 311. Economic Development. (3)**  
Three hours lecture.

*Prerequisite: ECON 105 and junior or senior standing.*

Study of issues, theories and policy alternatives in economic growth and development of less developed countries, poverty and income distribution, demographic factors, major theories of growth, resource limitations, development policies and agencies. General Education credit - Social and Behavioral Sciences.

**ECON 313. Public Planning. (3)**

Three hours lecture.

*Prerequisite: ECON 105 and junior or senior standing.*

History of planning in the public sector, cost-benefit analysis, program budgeting, efficiency criteria and discounting analyzed and specific cases reviewed. Class reports on projects undertaken by local planning agencies.

**ECON 330. Money and Banking. (3)**

Three hours lecture.

*Prerequisite: ECON 105 and junior or senior standing.*

A study of the functions of money in economic society and of the impact of monetary policy on national income, prices, employment and interest rates. The role of banking in the money supply process is examined.

**ECON 340. Global Economy and Business. (3)**

Three hours lecture.

*Prerequisite: Junior standing.*

An overview of the global economic environment within which business is practiced and the opportunities and challenges managers face in doing business across national boundaries. A business core requirement. General Education credit - Social and Behavioral Sciences or International and Intercultural Studies.

**ECON 350. Investment Economics. (3)**

Three hours lecture.

*Prerequisites: ECON 105 and junior or senior standing.*

Introduction to investment theory, securities

markets, risk and returns, mechanics of investment and security analysis.

**ECON 375. Environmental Economics. (3)**  
Three hours lecture.

*Prerequisite: ECON 106 and junior or senior standing.*

Examines the nature and significance of threats to the environment, the history of environmental protection in the United States and the forces shaping public policy. Tools of economics analysis used to compare and contrast various legal and market-oriented approaches in dealing with environmental problems and sustainable development.

**ECON 391. Law and Economics. (3)**  
Three hours lecture.

*Prerequisite: ECON 105 and junior or senior standing.*

Analyzes the application of economic theory in the American judicial system. Investigates the choice of legal rules and regulations on the incentives faced by individuals. Considers the influence of economic development on the evolution of law.

**ECON 408. The History of Economic Thought. (3)**

Three hours lecture.

*Prerequisite: ECON 105, and junior or senior standing.*

Economic thought studied in relation to: the environment of the contributor, historical perspective of the contribution and the part the contribution played in shaping contemporary economic thought.

**ECON 421. Econometrics. (3)**  
Three hours lecture.

*Prerequisite: STAT 200; ECON 105, 106; MATH 126 or 151; and junior or senior standing.*

*This course deals with the application of statistical methods to business and economic data. The reading and interpretation of statistics will be stressed in ECON 442.*

**ECON 442. International Trade Theory and Policy. (3)**

Three hours lecture.

*Prerequisite: ECON 105, 106 and junior or senior standing.*

An examination of classical and modern theories of international trade, and the consequences of tariffs, quotas, customs unions and other trade policies for the domestic and international economy.

**ECON 443. International Monetary Theory and Policy. (3)**

Three hours lecture.

*Prerequisite: ECON 105, 106, and junior or senior standing.*

An examination of the determinants of a nation's balance of payments, exchange rate determination, implications of various exchange rate regimes for domestic stabilization policies and the international coordination of monetary and stabilization policy.

**ECON 455. Principles of Managerial Economics. (3)**

Three hours lecture.

*Prerequisites: ECON 106; STAT 200; and junior or senior standing.*

Demonstrates the use of microeconomic theory and quantitative methods in the formulation of business plans and the solution of business problems.

**ECON 461. Industrial Organization. (3)**

Three hours lecture.

*Prerequisite: ECON 106 and junior or senior standing.*

Investigates the relationships among market structures, market conduct and market performance. Examines the rationale for government intervention into or regulation of different industries.

**ECON 480. Labor Problems. (3)**

Three hours lecture.

*Prerequisite: ECON 105 and junior or senior standing.*

Covers history of the labor movement, union-management relations, the non-unionized worker, wage theory and unemployment in

context of the application of economic theory to problems of labor.

**ECON 482. Industrial Relations. (3)**  
Three hours lecture.

*Prerequisite: ECON 106, 480, and junior or senior standing.*

Study of the industrial relations system as a subsystem of the social system and its linkages with the economic and political subsystems. Covers the collective bargaining system, its history and development, structural problems in industrial relations, public policy framework for collective bargaining, contract negotiations and administration, arbitration and related issues.

**ECON 488. Final Honors Project. (3)**

*Prerequisite: Completion of economics requirements, enrollment in the Honors Academy, senior standing, a minimum 3.5 GPA in all courses and in economics.*

To earn a bachelor's degree with honors in economics, a student may conduct research and write a thesis or prepare for and take a comprehensive examination. In order to receive honors credit, a student must earn a grade of "A" or "B" for the final project. Course may not be repeated.

**ECON 490. Economics Internship. (1-3)**

*Prerequisite: Junior or senior economics major and permission of the instructor.*

A one- or two-semester program of work and study in the student's major area and/or career interest. The number of hours of work, credit hours and grade for the work performed determined by the faculty member or members sponsoring the student. Students may take up to a total of six credit hours – no more than three credit hours per internship site.

**ECON 495. Current Topics in Economics. (3)**

Three hours lecture.

*Prerequisite: ECON 105 and junior or senior standing.*

Investigates topics of current and continuing interest not covered in regularly scheduled courses. Students may take course up to six credit hours under two different topics.

**ECON 498. Independent Study. (1-3)**

One to three hours credit per semester.

*Prerequisite: Junior or senior standing.*

See "Independent Study" on p. 63.

For a description of graduate courses, please consult the *Radford University Graduate Catalog*.

## EARLY CHILDHOOD

**EDEC 321. Early Development and Learning: Infants and Toddlers. (4)**

Three hours lecture.

*Pre- or Corequisites: 2.5 GPA; HUMD 300 or PSYC 317 or equivalent, or permission of instructor.*

Designed to provide knowledge of the dynamic interrelated physical, social, emotional, and cognitive development of infants and toddlers and a foundation for understanding learning patterns of young children from birth through three years. Application of appropriate practices, which enhance learning, will be explored. Theories and methods of child study and observation within cultural and family contexts will be addressed. Students will go to field sites regularly to observe and interact with infants and toddlers.

**EDEC 322. Early Development and Learning: Preschool through Primary Grades (Three years through age eight). (4)**

Three hours lecture

*Pre- or Corequisites: 2.5 GPA; EDEC 321; HUMD 300, or PSYC 317 or equivalent, or permission of instructor.*

Designed to provide knowledge of the dynamic interrelated physical, social, emotional, and cognitive development of children three through eight years of age. Theories of development and methods of child study within cultural and family contexts will be addressed. Learning patterns will be identified as will appropriate strategies and practices to enhance and support learning and development. Students will go to field sites regularly to observe and interact with preschoolers/primary ages.

**EDEC 323. Language Arts and Literature for Young Children.**

(3)

Three hours lecture.

*Pre- or Corequisite: EDEC 322; Sophomore or junior standing; 2.5 GPA*

Addresses the concurrent development and integration of listening, speaking, reading, and writing. Students will establish, organize, and manage the learning environment, including materials, resources, literature, and opportunities for developing young children's oral and written communication skills. Students will become familiar with a variety of genre of children's literature. Various literature extension activities and the love of reading will be fostered. The development, evaluation, and use of media and technology will be integrated throughout the course. Students who have received credit for HUMD 323 cannot also receive credit for EDEC 323.

**EDEC 400/500. Foundations, Programs, and Trends in Early Childhood Education.**

(3)

Three hours lecture.

*Prerequisite: Junior or senior standing in IDEC or graduate student; 2.5 GPA.*

The historical, philosophical, and social foundations of early childhood education and how these foundations influence current thought and practice will be examined. Students will explore philosophical schools influencing the development of the profession and perspectives on early childhood. Public policies and current trends in America that impact young children and their families will be addressed. Students will research and critically examine various educational programs and curricula for young children.

**EDEC 425/525. Assessment-Based Instruction and Adaptations for Young Children (PreK-3rd Grade).**

(4)

Four hours lecture/discussion.

*Prerequisite: IDEC major, successful completion of EDEC 322 and 323, EDSP 360; 2.5 GPA.*

*Corequisite: EDEC 430; or permission of instructor.*

Designed to provide pedagogical concepts and skills for preservice teachers working

with preschool through primary grade children in inclusive classrooms. Informal assessment strategies are applied to individualize instruction and adapt curriculum. The central concepts and tools of inquiry in the social studies/sciences are used to develop integrated curriculum and learning experiences that enhance children's development. Applied use of technology and media will be integrated throughout the course.

**EDEC 430. Practicum in Early Childhood Education.**

(6)

2 hours lecture, 4 hours practicum.

*Prerequisites: Successful completion of EDSP 360, EDEC 322, and 323, and 2.5 GPA.*

*Corequisite: EDUC 425; or permission of instructor.*

A clinical practicum providing experience and opportunity for application of skills working with young children in inclusive settings under direct supervision for 19-20 hours a week throughout the semester. Students are expected to abide by their cooperating professional's schedule. Students begin the experience in observation and helping roles, and work toward assuming full teaching responsibilities. Weekly seminars focus on development of children's conflict-resolution skills; facilitate self-reflection and professionalism. This course is graded A-F.

**EDEC 445. Administration of Programs for Young Children.**

(3)

Two hours lecture/discussion, two hours field experience.

*Prerequisite: Senior standing, successful completion of EDEC 321, 322, 323, EDSP 360, 2.5 GPA, IDEC major; or permission of instructor.*

Addresses early childhood program administration – regulations, personnel, budget, schedules; health, safety, nutrition, anti-bias curriculum for young children; working with families based on family systems theories; documentation; and professionalism. This course requires extensive field experience.



**EDEC 485. Practicum in Administration of Programs for Young Children. (3)**

Two hours seminar; eight hours laboratory.

*Pre- or Corequisite: Successful completion of EDEC 445 and 2.5 GPA.*

A clinical practicum 16 to 18 hours a week throughout the semester that provides the opportunity to gain first hand administrative experience in programs that address the needs of preschool children. Students gain direct experience in working with organizational management, budgeting, record-keeping, staffing, program evaluation, food management, legal issues and regulations. Students are expected to abide by their cooperating professional's schedule. On-going seminars facilitate students' applications of skills, reflection, and professional growth. Must be arranged with adviser and practicum coordinator two semesters in advance of enrollment.

**EDEC 488. Final Honors Project. (3)**

*Prerequisite: Senior level standing, enrollment in the Honors Academy, completion of all other Honors Academy requirements, a minimum 3.5 GPA in all courses and in IDEC coursework.*

The project and topic to be explored will be determined by the student in conjunction with the faculty member with whom the student works and the IDEC program coordinator. Topics may include any of the areas addressed in the IDEC program. In order to receive honors credit, a student must earn a grade of "A" or "B" for the final project. Course may not be repeated.

**EDEC 498. Independent Study. (1-4)**

*Prerequisite: Junior or senior level standing, minimum 2.5 GPA.*

Investigation by the student in areas of interest under the direction of an adviser. Prior permissions are required and arrangements must be made before registration. See "Independent Study" section in the *Radford University Undergraduate Catalog* (p. 63).

## **EDUCATIONAL FOUNDATIONS**

**EDEF 320. Introduction to Professional Education. (3)**

Three hours lecture.

*Prerequisite: A minimum GPA of 2.5 on all work at Radford University.*

*Pre- or Corequisite: Course in human growth and development (HUMD 300; or PSYC 218 and PSYC 317)*

Serves as an introduction to teaching as a profession. Topics include teaching as a profession, the organization and culture of schools, legal rights and responsibilities of teachers and students, philosophical and psychological perspectives, historical developments underlying education in the United States, social issues in education, the application of learning theory to instruction and learning environments, basic concepts and principles regarding teaching strategies, assessment and evaluation of student learning, and teaching from a multicultural perspective. A weekly service learning component is also required. Students may not receive credit for both EDEF 320 and EDUC 320.

## **EDUCATIONAL TECHNOLOGY**

**EDET 445. Integration of Technology in Teaching and Training. (3)**

Two hours lecture, two hours laboratory.

*Prerequisites: EDUC 309, admission to the teacher education program. ITEC 100 is recommended but not required.*

*Co-requisites: EDUC 440, EDUC 441 and EDRD 417.*

Designed to facilitate skills needed by educators to integrate technology into their professional practice. The use of electronic media to design, develop, implement, and evaluate effective instructional environments is addressed, as well as the different roles technology can play in managing the learning process and continually improving professional practice. Persons involved in teaching roles in PK-12 education, postsecondary education, administration, training and human resource development will benefit significantly from this course.

## MIDDLE EDUCATION

### **EDME 408. Approaches to Teaching. (3)**

Two hours lecture; two hours laboratory.

*Prerequisites: Admission to Teacher Education Program and a minimum 2.5 GPA.*

In this course the pre-service teacher studies the teaching/learning processes through examining models of teaching. Teacher decision-making in planning is a primary focus as students learn how to plan, how to accommodate diverse learning styles and how to evaluate learning.

### **EDME 409. The Middle School**

#### **Learner. (2)**

Two hours lecture.

*Prerequisites: Admission to Teacher Education Program and a minimum 2.5 GPA.*

The purpose of this course is to help the prospective middle level teacher develop in-depth knowledge and understanding of early adolescents as students. The developmental characteristics and needs of early adolescents provide a framework for examining the diversity of students in regard to their abilities and cultural background. Implications are drawn for developing appropriate learning environments to foster development.

### **EDME 410. Community: A Middle School Perspective. (2)**

Two hours lecture.

*Prerequisites: Admission to Teacher Education Program and a minimum 2.5 GPA.*

To prepare early adolescents for the 21st Century, middle school educators are challenged to “create small communities for learning” which connect and empower teachers and students. Students study and practice community building through interdisciplinary teaming, adviser/adviser programs and parental involvement.

### **EDME 413: Conceptualizing, Planning and Teaching. (2)**

Two hours lecture.

*Prerequisites: Admission to Teacher Education Program and a minimum 2.5 GPA.*

Designed to provide a focus on the teaching/learning processes during the student teaching experience. The goal is to continue to

promote reflective teaching practices as students conceptualize, plan and implement lessons in middle level classrooms. Students plan in disciplinary and interdisciplinary groups and examine alternative teaching materials, strategies and methods of assessment.

### **EDME 432: Middle Level Teacher Assistant Program. (6)**

Fifteen hours laboratory per week.

*Prerequisites: Admission to Teacher Education Program and a minimum 2.5 GPA.*

This experience involves a placement with a middle level interdisciplinary team and the completion of 15 clinical hours weekly. Students also attend a one hour seminar each week to facilitate the integration of field experiences and course work. Students complete a minimum of 225 hours of field experience.

## READING

### **EDRD 314. Reading I. (3)**

*Prerequisite: Admission to Teacher Education Program.*

Designed to teach developmental reading skills to preservice teachers. The focus will be on strategies and activities for teaching emergent literacy, readiness, word attack, and comprehension skills.

### **EDRD 413. Early Literacy and Reading. (4)**

Four semester hours credit.

*Prerequisites: EDEC 321, 322, 323, 400, and admission to the teacher education program.*

Designed to assist students in developing skills in understanding and fostering emergent literacy skills with a focus on reading and writing. The emphasis is upon the concurrent and interrelated development of reading and writing. Students will establish and evaluate environments which foster communicative development, gain skills in observing and understanding how children learn to read and write, study research in emergent literacy, produce materials which foster reading and writing, learn to assess children's reading and writing, integrate the use of media and technology to and explore issues related to early literacy.

**EDRD 414. Reading II.**

Two hours lecture.

*Prerequisites:* EDRD 314, admission to Teacher Education Program, and a minimum 2.5 GPA.

*Corequisite:* EDUC 304.

Focuses on strategies for teaching reading in the content areas, approaches to reading instruction, assessment, and grouping for instruction.

**EDRD 415. Interdisciplinary Connections Through Reading and Writing.**

Two hours lecture; 1 hour laboratory.

*Prerequisites:* Admission to Teacher Education Program and a minimum 2.5 GPA.

The primary focus of this course is the active engagement of students as readers and writers across the content areas. Students evaluate texts and learn ways to make reading and writing more purposeful and meaningful for middle level learners. Fiction and nonfiction books for early adolescents are used as primary tools in the processes.

**EDRD 416. Content Reading & Literacy.**

*Prerequisite:* Admission to teacher education program.

Introduces pre-service content area teachers to the why and how of promoting basic and higher-order literacy. Reading, writing, and thinking are fostered in the context of specific subject areas.

**EDRD 498. Independent Study.**

One to four hours credit.

*Prerequisites:* Admission to Teacher Education Program and a minimum 2.5 GPA.

Prior permission required; arrangements must be made before registration. See "Independent Study," p. 63.

For a description of graduate courses, consult the *Radford University Graduate Catalog*.

**(3) SPECIAL EDUCATION****EDSP/COSD 225. Communication****Processes, Development, and Disorders. (3)**

Three hours lecture.

An overview of normal communication processes and development. Causes, nature, symptoms and treatment of disorders of communication across the life span, with emphasis on multicultural differences. Roles of professionals in the identification, prevention, and management of communicative disorders. Students will be required to have a speech-language and hearing screening.

**EDSP 360. Young Children with Special Needs. (3)**

Three hours lecture.

*Prerequisites:* A minimum 2.5 GPA.

An overview of early intervention and early childhood special education, including legislation, trends and issues; the etiology and characteristics of disabilities and at-risk conditions; factors influencing development and learning; and services for children with special needs from birth to age eight and their families.

**EDSP 361. Current Trends in Education of Exceptional Individuals. (3)**

Three hours lecture.

*Prerequisite:* A minimum of 2.5 GPA.

Study of children and youth with one or more of the following conditions: specific learning disabilities, mental retardation, emotional and behavioral disorders, speech and language impairments, hearing impairment/deafness, visual impairments/blindness, orthopedic impairments, multiple disabilities, developmental delays, autism, or giftedness. Characteristics of exceptional learners, curricular and instructional modifications, and current trends and issues in special education services are emphasized.

**EDSP 400. Educator's Introduction to Autism Spectrum Disorders. (3)**

Three hours lecture.

Addresses characteristics and diagnosis of autism spectrum disorders, with primary emphasis on autism and Asperger syndrome; the

impact of those characteristics on learning; and assessment to develop an individualized educational program. Includes proactive teaching strategies, accommodations, and modifications that support socialization, communication, and academics.

**EDSP 401. Teaching Students with Autism Spectrum Disorders.**

(3)

Three hours lecture.

*Prerequisite: EDSP 400.*

Addresses a wide variety of approaches for teaching and supporting individuals with autism spectrum disorders. Included are relationship-based approaches, approaches based on the theories of applied behavioral analysis, biological or physiological interventions, and other therapeutic interventions (e.g. art, dance, music, auditory integration, discrete trial teaching).

**EDSP 402. Expanding Social Competence for Students with Autism Spectrum Disorders.**

(3)

Three hours lecture.

*Prerequisite: EDSP 400 and EDSP 401.*

Addresses strategies to assist individuals with autism to communicate and socialize. Emphasis is on analysis of environmental demands, assessing social competence, determining individual preferences, and offering instruction to address priority skills that will positively affect socializing in a variety of contexts.

**EDSP 403. Accommodations for Exceptional Learners in the Mainstream.**

(1)

One hour lecture.

*Prerequisites: EDUC 309 and admission to Teacher Education Program and a minimum 2.5 GPA.*

Provides the prospective secondary teacher with an overview of the educational needs of exceptional learners and the adaptations to accommodate these needs within the mainstream classroom.

**EDSP 404/504. Introduction to Special Education for Secondary Educators.**

(3)

Three hours lecture.

*Prerequisite: EDUC 309 and admission to the Teacher Education Program.*

*Corequisite: Must be taken during the fall block semester in secondary education.*

Introduction to special education with emphasis on its history and purposes, the laws governing special education, and the students served. Course will also stress teaching strategies for secondary educators.

**EDSP 426/526. Introduction to Deaf and Hard of Hearing**

(3)

Three hours lecture.

*Prerequisites: EDSP 360 or 361; and a minimum 2.50 GPA*

Introduction to the education of deaf and hard of hearing students (PreK-12) for prospective teachers and other professionals serving deaf/hard of hearing students. Includes legislation, trends, issues, etiology, identification, characteristics, Deaf culture, school-related needs, and communication modes used in educational practices.

**EDSP 427/527. Curriculum and Methods for Deaf and Hard of Hearing Students.**

(3)

Three hours lecture.

*Prerequisites: EDSP 426 and a minimum 2.50 GPA.*

Study of curriculum, methods, techniques and materials used in the education of deaf/hard of hearing students. Includes information on classroom organization and management, instructional planning, curriculum adaptations and modifications, community agencies, assessment and evaluation, and standards for professionalism.

**EDSP 428/528. Development and Remediation of Reading, Writing, and Discourse for the Deaf and Hard of Hearing.**

(3)

Three hours lecture.

*Prerequisites: EDSP 426 and a minimum 2.50 GPA.*

Study of the complex nature of language acquisition, reading and writing in deaf/hard of hearing students, and techniques for enhancing language and teaching reading in this population. Examines current theories and practices in reading and language arts instruction for hearing as well as deaf/hard

of hearing children, making adaptations and modifications in curriculum, integrating technology, and including parents in the instructional process.

**EDSP 429. Practicum I: High Incidence Disabilities. (2)**

*Prerequisite: EDSP 361 and enrollment in the Interdisciplinary Studies High Incidence Disabilities program.*

*Corequisite: Must be taken concurrently with EDSP 466.*

The first in a series of structured, sequenced and supervised clinical experiences provided in conjunction with the specialized study and course work for the pre-professional Interdisciplinary Studies option in High Incidence Disabilities.

**EDSP 430. Practicum II: High Incidence Disabilities. (4)**

*Prerequisite: EDSP 361, 464, 429; minimum 2.5 GPA; Enrollment in the pre-professional option in high incidence disabilities.*

*Corequisite: Must be taken concurrently with EDSP 676.*

The second in a series of structured, sequenced and supervised clinical experiences provided in conjunction with the specialized study and course work for the pre-professional Interdisciplinary Studies option in High Incidence Disabilities.

**EDSP 432. Practicum in Deaf and Hard of Hearing. (4)**

*Prerequisites: EDSP 361 and admission to the Teacher Education program.*

Provides structured, sequenced and supervised clinical experiences throughout the semester in conjunction with the specialized study and course work in the Special Education Professional Core. Faculty-directed seminars are included. Pass/Fail.

**EDSP 436. Teaching Infants, Toddlers, and Preschoolers with Special Needs. (3)**

Three hours lecture.

*Prerequisites: EDSP 360 or EDSP 361; 2.5 GPA.*

Addresses methods for providing developmentally and exceptionality appropriate

instructional programming for young children with special needs in all areas of development. Includes development of individualized education programs and individualized family service plans.

**EDSP 437. Assessment of Young Children with Special Needs. (3)**

Three hours lecture.

*Prerequisites: EDSP 360 and 2.5 GPA.*

Provides participants with knowledge of the selection, administration, and interpretation of formal and informal assessment techniques for young children with disabling and at-risk conditions and their families.

**EDSP 438. Program Management in Early Childhood Special Education. (3)**

Three hours lecture.

*Prerequisites: EDSP 360 and a minimum 2.5 GPA.*

Addresses administrative aspects of service delivery systems for young children with disabilities or at-risk conditions and their families. Examines legal requirements, funding mechanisms, service coordination, resource acquisition, interagency coordination, integration with peers without disabilities, child find, transition facilitation, professional development, and program evaluation. Includes techniques for working with children, families, educators, related service providers and other human services professionals.

**EDSP 439. Medical Aspects of Teaching Young Children. (3)**

Three hours lecture.

*Prerequisites: EDSP 360 or EDSP 361, minimum 2.5 GPA.*

Examines the medical and health care needs of infants, toddlers, and young children with and without disabilities. Includes the role of health care professionals, child abuse and neglect, health and safety, emergency care, management of chronic health impairments, and management of neurodevelopmental and motor disabilities.



**EDSP 440. Practicum in Early Intervention.**

(3)

Three course hours credit.

*Prerequisites: IDEC major, successful completion of EDSP 360, EDSP 436, EDSP 439, and EDEC 321; minimum 2.5 GPA.*

Provides pedagogical experience with infants, toddlers, and preschoolers with disabilities, developmental delays, risk conditions or typical development. Two to three days per week are spent working with very young children in early intervention services, at -risk programs, child care settings, and family homes under the direct supervision of a cooperating professional. EDSP 440 is a structured and supervised field experience in the Interdisciplinary Studies: Early Childhood program. Bi-weekly seminars provide discussion of current educational practices and issues of concern to educators of infants, toddlers, and preschoolers with special needs and their families.

**EDSP 445. Adaptive Strategies in Arithmetic.**

(3)

Three hours lecture.

*Prerequisites: EDSP 360 or EDSP 361, and minimum 2.5 GPA.*

For students working with children and youth in areas of arithmetic and mathematics. Emphasis on techniques and strategies for the teaching and remediation of arithmetic and mathematical skills and competencies.

**EDSP 451. Collaborative Skills for Professionals Serving Diverse Populations.**

(3)

Three hours lecture.

*Prerequisite: EDSP 360 or EDSP 361, 2.5 GPA.*

Provides knowledge of consultation and communication skills necessary to be a contributing member of school and community teams which serve children and families with varying cultural backgrounds, attitudes, feelings, and needs.

**EDSP 455:456. Student Teaching for Deaf and Hard of Hearing** (4-6:4-6)

*Prerequisites: Admission to teacher education licensure program; successful completion of ESSP 427, 428, 430, 469, COSD 223, 321, 422, or demonstrated proficiency in American Sign Language.*

Each of these courses represents a one-half semester, full-time placement in which the student works at one level with deaf and hard of hearing students in a classroom under the direction of a licensed teacher. The student may participate in a clinical-diagnostic setting as part of an interdisciplinary educational team. EDSP 455 addresses the preschool/elementary level and EDSP 456 addresses the secondary level.

**EDSP 460. Current Problems in Special Education (Topic).** (1-4)

*Prerequisite: Senior Standing.*

Examines a major educational problem, its implications and possible solutions.

**EDSP 462. Proactive Classroom Management and Positive Behavior Support.** (3)

Three hours lecture.

*Prerequisites: EDSP 360 or EDSP 361 and a minimum 2.5 GPA.*

For future teachers, administrators, guidance counselors, and support personnel concerned with classroom behavior management and development of social skills in students with learning and behavior problems. Emphasis will be on research-based models and applications of behavior intervention, social skills development, classroom discipline strategies, and legal issues for exceptional learners.

**EDSP 464. Introduction to Mental Retardation and Severe Disabilities.** (3)

Three hours lecture.

*Prerequisites: EDSP 360 or 361 and a minimum 2.5 GPA.*

Considers persons with mental retardation and severe disabilities in terms of incidence, etiology, abilities and needs in academic, social and biophysical realms. Options for educational and vocational programming, as

well as services and supports provided through other human service agencies are examined. Current issues and future trends in the field are considered. Students engage in field experiences in local community services and programs for persons with developmental disabilities.

**EDSP 466. Teaching Students with Individualized Adapted Curriculum. (3)**

Three hours lecture.

*Prerequisites: EDSP 464, 2.5 GPA.*

Study of curriculum, methods, techniques, and materials used in the education of students who have disabilities that require individualized planning to design curriculum goals appropriate to their needs. Most typically, these students have intermittent, limited, or extensive support needs. Educational planning and program content for primary, intermediate and secondary levels are addressed.

**EDSP 469. Evaluative Techniques. (3)**

Three hours lecture.

*Prerequisites: EDSP 361 or PSYC 401 and a minimum 2.5 GPA.*

Familiarizes students with use and interpretation of formal and informal diagnostic tests and procedures calculated to enable teachers to best determine instructional levels and techniques for exceptional students.

**EDSP 471. Teaching the Gifted Child. (3)**

Three hours lecture.

*Prerequisites: EDSP 361 and a minimum 2.5 GPA.*

Introduces students to the gifted child, including identification, characteristics, special problem areas, and appropriate curricular approaches in teaching and guiding the gifted.

**EDSP 472. Introduction to Learning Disabilities and Emotional/Behavioral Disorders. (3)**

*Prerequisites: EDSP 360 or 361 or PSYC 401, 2.5 GPA.*

Provides knowledge of characteristics of school age students with specific learning disabilities (SLD) and students with emotional/behavioral disorders (E/BD), possible causes of SLD and E/BD, and the school related needs of students with these disabilities.

**EDSP 488. Final Honors Project. (2-3)**

Note: Special Education Honors students wishing to take the Final Honors Project should enroll in EDUC 488. See p. 288 for catalog description of EDUC 488.

**EDSP 498. Independent Study. (1-4)**

One to four hours credit.

*Prerequisite: Junior or senior standing.*

Prior permission must be received; arrangements must be made before registration. See "Independent Study," p. 63.

For a description of graduate courses, consult the *Radford University Graduate Catalog*.

## **EDUCATION**

**EDUC 200. Exploring Education. (2)**

Three hours lab/field experience and seminars.

A field experience course (90 hours of lab/field experience) with associated professional development seminars (15 hours). Provides opportunities for students to explore key aspects of the teaching profession and to begin the process of professional development as educators. Students examine the teaching profession and the "fit" between the career and their personal experiences, characteristics, and aspirations. Seminars provide a general overview of key concepts regarding teaching and teacher preparation and licensure in Virginia.

**EDUC 304. Teaching Language Arts and Children's Literature in the Elementary Classroom. (3)**

Three hours lecture.

*Prerequisite: Admission to Teacher Education Program.*

*Corequisite: EDUC 410, EDUC 425, EDUC 430, and EDRD 414.*

Designed to provide preservice teachers with the knowledge, skills and dispositions essential to implementing an integrated approach to language arts programs in the Pre-K-6 classroom. The course focuses on methods for teaching children's literature, language acquisition, writing, literacy assessment, ap-

plications of word study, visual literacy, critical literacy, the social context of literacy, and English Language Learners.

**EDUC 309. The School and the Student. (3)**

Three hours lecture.

*Prerequisite: A minimum 2.5 GPA on all undergraduate work attempted and a minimum 2.5 GPA on work at Radford University.*

A study of the mental, physical, behavioral-emotional and social growth characteristics of children and youth and of the effects of cultural, linguistic and other differences upon these characteristics. Course focuses on the uniqueness of the learner and implications of both individual growth and variations. There is an emphasis upon applications of theory and research to teaching and schooling in preK-12 classrooms.

**EDUC 310. Teaching and Learning Elementary Science. (3)**

Three hours lecture.

*Prerequisite: Admission to Teacher Education Program.*

Teacher candidates learn developmentally appropriate, research based teaching methods for science in the elementary classroom. The pedagogy will build upon the science courses taken by students and will provide concrete experiences for implementation and incorporation of national and state standards in planning and instruction.

**EDUC 400. Trends in Science Education. (3)**

Three hours lecture.

Study of trends in science education.

**EDUC 402/FORL 402. Second Language Teaching Methods. (3)**

Three hours lecture.

*Prerequisite: FORL 400.*

Provides students with concepts necessary to analyze traditional and innovative second language teaching methods. Provides rationale for selection, application, and assessment of methodological choice.

**EDUC 410. Teaching and Learning Elementary Mathematics. (3)**

Three hours lecture.

*Prerequisites: Admission to the Teacher Education Program and to the early field experience program in elementary education and successful completion of MATH 312.*

This pedagogy course builds on the mathematics courses taken by students in their general education block as well as MATH 312 and provides the skills needed to be effective elementary school educators. Students discuss applications of learning theories to mathematics education and are provided with concrete experiences that can be utilized in the elementary classroom. The incorporation of national and state standards in planning and instruction will be modeled.

**EDUC 425. Curriculum, Instruction, and Teaching: Social Studies. (3)**

*Prerequisite: Admission to Teacher Education.*

*Corequisite: Blocking.*

Offers students the opportunity to plan, develop, implement, and evaluate curriculum and learning activities for elementary-aged children. Using social studies as a focus, students will implement appropriate assessment and intervention techniques for individual and classroom instruction and develop integrated learning activities across curricular areas. Within the focus of multi-cultural education, students will learn how to use the tools of inquiry, technology, and central concepts of unit design and implementation.

**EDUC 430. Field Applications of Professional Studies in the Elementary Classroom. (6)**

*Prerequisite: Admission to Teacher Education Program.*

*Corequisite: EDUC 304, EDUC 410, EDUC 425, and EDRD 414.*

Provides extensive clinical experience in an elementary classroom with a qualified clinical faculty member and a cohort leader/field supervisor. Provides opportunities for interns to make applications from previous and concurrent pedagogy courses. Involves learning

classroom management strategies and applications appropriate for diverse school cultures.

**EDUC 440. Teaching Grades 6-12. (3)**  
*Prerequisites: EDUC 309, EDSP 361, and admission into the Teacher Education program.*  
*Corequisite: EDUC 441, EDRD 416, EDET 445.*

Will assist pre-service teachers in developing requisite knowledge and skills for teaching in grades 6-8 in science, mathematics, social sciences and English. This course is taught in conjunction with a field experience in grades 6-12.

**EDUC 441. Field Experience for Grades 6-12. (3-6)**  
*Prerequisites: EDUC 309 and admission in the Teacher Education program.*  
*Corequisite: EDET 445, EDRD 416, EDUC 440 and EDSP 362*

This field experience is taken in conjunction with EDUC 440 Teaching Grades 6-12 (Science, Mathematics, Social Science, and English). It is intended for the pre-service content area teacher to learn the secondary adolescent culture and to develop and practice skills appropriate for these learners. Pass/Fail.

**EDUC 442. Teaching Grades 9-12. (3)**  
*Prerequisites: EDUC 440 and 441, EDRD 416, EDET 445.*  
*Corequisite: EDUC 452.*

Will assist pre-service teachers in integrating their content, professional, and pedagogical knowledge and skills to devise learning experiences which are meaningful to secondary students in grades 9-12. Utilizing investigations, central concepts of their content area, inquiry, and knowledge of the reform movements, this course will allow students to practice skills and to explore the problems in planning learning activities, implementing lessons and teaching secondary science, mathematics, social sciences and English.

**EDUC 450. Student Teaching: Grades K-6. (6-12)**

*Prerequisite: Meet eligibility for student teaching (see p. 109).*

Provides clinical experience on one or more grade levels appropriate to the certification area. Experience begins with observation and limited participation; culminates in assumption of full responsibility in the classroom. Special seminars are regularly scheduled to enhance professional development of student.

**EDUC 451. Student Teaching: Grades 6-8. (6-12)**

*Prerequisite: Meet eligibility for student teaching. (see p. 109).*

Clinical experience on one or more grade levels appropriate to the certification area; begins with observation and limited participation and culminates in assumption of full responsibility in the classroom. Special seminars regularly scheduled to enhance professional development of student. Pass/Fail.

**EDUC 452. Student Teaching: Grades 9-12. (12)**

*Prerequisite: Meet eligibility for student teaching (see p. 109).*

A clinical experience in grade levels 9-12 for persons seeking certification to teach secondary schools. Begins with observation and culminates in assumption of full responsibility in the classroom. Pass/Fail.

**EDUC 453. Student Teaching: Grades K-12. (6-12)**

*Prerequisite: Meet eligibility for student teaching (see p. 109).*

Provides clinical experiences in at least two settings: one in an elementary school and one in a middle school or high school. Begins with observation and limited participation and culminates in assumption of full responsibility in the classroom. Special seminars regularly scheduled to enhance professional development of student. Pass/Fail.

**EDUC 460. Current Problems in Education (Topic). (1-4)**

*Prerequisite: Senior standing.*

Examines a major educational problem or trend, its implications and possible solutions or impact on education.

**EDUC 488. Final Honors Project. (2-3)**

*Prerequisite: Enrollment in the Honors Academy, completion of all other Honors Academy requirements, a minimum 3.5 GPA in all courses and in educational studies.*

The project and the topic to be explored will be determined by the student, the faculty member with whom the student works, and the student's major program area. (Honors project may be a written or performance-based project.) In order to receive honors credit, a student must earn a grade of "A" or "B" for the final project. Course may not be repeated. No student may enroll in the Honors project during the semesters of blocking or student teaching. See "Honors Academy" p. 92.

**EDUC 498. Independent Study. (1-4)**

*Prerequisite: Junior or senior standing. Prior permission required; arrangements must be made before registration.*  
See "Independent Study," p. 63.

For a description of graduate courses, consult the *Radford University Graduate Catalog*.

## **ENGLISH**

**ENGL 101. Introduction to Expository Writing. (3)**

Three hours lecture.

Introduction to basic principles of the composing process, rhetoric and standard usage. Expository writing assignments, with emphasis on writing to specific audiences to accomplish particular rhetorical purposes, such as to inform, to offer an opinion or to present an analysis. Students who score 670 or higher on the verbal section of the SAT will receive credit for this course and will begin their general education coursework in the Communication area with English 102. General Education credit – Communication.

**ENGL 102. Reading, Writing, and Research Skills. (3)**

Three hours lecture.

*Prerequisite: ENGL 101.*

Development of writing skills and processes begun in ENGL 101 and introduction to such research skills as summarizing, paraphrasing, footnoting, note-taking and using library resources. General Education credit – Communication.

**ENGL 201. Readings in World Literature. (3)**

Three hours lecture.

*Prerequisite: ENGL 101, 102.*

Study of selected works in World literature with emphasis on the development of critical reading skills within a historical, cultural, and ideological national context. General Education credit – Humanities.

**ENGL 202. Readings in British Literature. (3)**

Three hours lecture.

*Prerequisite: ENGL 101, 102.*

Study of selected works in British literature with emphasis on the development of critical reading skills within a historical, cultural, and ideological national context. General Education credit – Humanities.

**ENGL 203. Readings in American Literature. (3)**

Three hours lecture.

*Prerequisite: ENGL 101, 102.*

Study of selected works in American literature with emphasis on the development of critical reading skills within a historical, cultural, and ideological national context. General Education credit – Humanities.

**ENGL 300. Introduction to English Studies (WI). (3)**

Three hours lecture.

*Prerequisite: Completion English 101 and 102. May be taken simultaneously with, or prior to, 200-level general education literature course.*

This writing-intensive course introduces students to fundamental skills of literary analysis, the conventions of different literary genres,



the use of various literary critical practices, and research and writing in the discipline. The course also offers an overview of other aspects of the discipline – e.g., language and linguistics – with attention to possible career options.

**ENGL 306. Professional Writing. (3)**

Three hours lecture.

*Prerequisite: Completion of English general education requirements, and junior or senior standing or permission of instructor.*

Introduces students to writing for their careers. Assignments may include instructions, a proposal, a resume, letters, memos, short reports, and computer graphics.

**ENGL 307. Business Writing. (3)**

Three hours lecture.

*Prerequisite: Completion of English general education requirements and junior or senior standing or permission of instructor.*

Prepares students to cope with the strategy and writing of a wide range of informative and persuasive business letters and reports.

**ENGL 309. Fiction Writing. (3)**

Three hours lecture.

*Prerequisite: Completion of English general education requirements.*

For student who plans to teach creative writing at secondary level and needs introduction to fiction writing methods; for student who, regardless of background and vocational plans, is interested in developing fiction writing potential or improving writing skills; or for student of literature interested in writing fiction and sharpening critical appreciation.

**ENGL 310. Poetry Writing. (3)**

Three hours lecture.

*Prerequisite: Completion of English general education requirements.*

For student who plans to teach creative writing at secondary level and needs introduction to poetry writing methods; for student who, regardless of background and vocational plans, is interested in developing poetry writing potential; or for student of literature interested in writing poetry and sharpening critical appreciation.

**ENGL 312. Creative Nonfiction Writing. (3)**

Three hours lecture.

*Prerequisite: Completion of English general education requirements.*

For student who plans to teach writing and needs introduction to creative nonfiction methods; for student who wishes to write for newspapers, magazines, or other publications; for student interested in developing skills in writing essays and literary journalism; or for student interested in developing writing and critiquing skills.

**ENGL 314. Topics in Literature. (3)**

Three hours lecture.

*Prerequisite: Completion of English general education requirements.*

Investigation of a literary topic of current or continuing interest not normally covered in regularly scheduled courses. Topic announced with each offering of course. May be taken twice for credit. Depending upon the topic, this course may be used to meet requirements for the minor in Appalachian Studies or Women's Studies.

**ENGL 321. The Study of Fiction. (3)**

Three hours lecture.

*Prerequisite: Completion of English general education requirements.*

A study of fiction as a literary genre, with its own specific types and critical theories.

**ENGL 322. The Study of Poetry. (3)**

Three hours lecture.

*Prerequisite: Completion of English general education requirements.*

A study of poetry as a literary genre, with its own specific types and critical theories.

**ENGL 323. The Study of Drama. (3)**

Three hours lecture.

*Prerequisite: Completion of English general education requirements.*

A study of drama as a literary genre, with its own specific types and critical theories.

**ENGL 330. British Literary History I.**

(3)

Three hours lecture.

*Prerequisite: Completion of English general education requirements.*

Traces British literary history from its origins until the end of the seventeenth century. Focusing on significant literary works and authors, it examines the literary genres, periods, and traditions that shaped a national literature in early Britain.

**ENGL 331. British Literary History II.**

(3)

Three hours lecture.

*Prerequisite: Completion of English general education requirements.*

Traces British literary history from the end of the seventeenth century to the present. Focusing on significant literary works and authors, it examines the literary genres, periods, and traditions that shaped a national literature in Britain since the seventeenth century.

**ENGL 340. American Literary History.**

(3)

*Prerequisite: Completion of English general education requirements.*

Traces American literary history from the colonial period to the present. Focusing on significant literary works and authors, it examines the literary genres, periods, and traditions that shaped a national literature in America since its beginnings as European colonies.

**ENGL 402. Teaching Writing: Theories and Practices.**

(3)

Three hours lecture.

*Prerequisite: Completion of English general education requirements.*

Teaches students the latest theories and practices governing the teaching of written composition. Students write expository essays, work in writing support groups, develop writing assignments, study the writing process and learn to respond to and evaluate student writing. Course required to satisfy certification requirements for English majors intending to teach at the secondary level.

**ENGL 403. Grammar and Style for Writers.**

(3)

Lecture and discussion.

*Prerequisite: Completion of English general education requirements.*

Analysis and practice of various prose styles to prepare students for professional courses; study of grammatical concepts relevant to effective writing.

**ENGL 406. Advanced Technical Writing.**

(3)

Three hours lecture.

*Prerequisite: Completion of English general education requirements, junior or senior standing and ENGL 306.*

Teaches students to master the advanced technical writing skills required to write professional reports, proposals, manuals and other communications studied in the course. Individual and team-written projects assigned.

**ENGL 407. Technical Editing.**

(3)

Three hours lecture.

*Prerequisite: Completion of English general education requirements, junior or senior standing, ENGL 306 and ENGL 403.*

Prepares students to analyze the readability of technical documents written in the workplace (e.g., instructions, user manuals, abstracts, proposals), and to deal with problems of correctness, consistency, clarity, organization and rhetorical effectiveness of language and layout. Realistic weekly assignments include excerpts from technical manuals, insurance and government documents, instructions and reports.

**ENGL 409. Advanced Fiction Writing.**

(3)

Three hours lecture.

*Prerequisite: ENGL 300 and 309.*

For students wishing to develop potential in fiction writing. May be taken twice for credit.

**ENGL 410. Advanced Poetry Writing.**

(3)

Three hours lecture.

*Prerequisite: ENGL 310.*

For students wishing to develop potential in poetry writing. May be taken twice for credit.

**ENGL 420. Introduction to Literary Criticism. (WI)**

(3)

Three hours lecture.

*Prerequisite:* Completion of English general education requirements; ENGL 300 or permission of department chair.

Survey of major texts of literary criticism from classical period to present; includes analysis of major problems of literary criticism and introduces dominant modes of critical thought today.

**ENGL 424. The Study of Children's Literature.**

(3)

Three hours lecture.

*Prerequisite:* Completion of English general education requirements. Priority given to (1) IDSE majors and (2) IDSM majors.

Course familiarizes students, particularly prospective elementary school teachers, with classic and contemporary children's literature. Students study children's literature by focusing on historical contexts, genres, evaluation criteria, media adaptations, selection aids and procedures, and book-related activities. The intent is to develop knowledgeable, thoughtful students who are skilled in using children's literature in classroom or library settings.

**ENGL 425. The Study of Adolescent Literature.**

(3)

Three hours lecture.

*Prerequisite:* Completion of English general education requirements.

Familiarizes students with classical and contemporary literature whose audience is primarily adolescents. Students are led to understand why teenage readers make the literature choices they do. The course helps students develop a positive attitude toward this kind of literature and understand why this kind of literature should have a place in the reading program of adolescents. Course required to satisfy licensure requirements for English majors intending to teach at the secondary level.

**ENGL 426. Teaching English in the High School.**

(2)

Two hours lecture

*Prerequisite:* Completion of English general

education requirements; admission to the Teacher Education Program.

*Corequisite:* Junior clinical field experience or "blocking."

Provides instruction in the methods of teaching English language arts in the secondary school. Designed to allow students to explore student-centered approaches to teaching literature and language and to practice designing lessons and making long-range plans. Meeting two hours weekly, the course satisfies licensure requirements for English majors intending to teach at the secondary level. It does not satisfy English major requirements, but is a requirement in the professional education core.

**ENGL 428. Planning and Teaching Seminar.**

(1)

One hour lecture.

*Prerequisite:* All General Education requirements; EDUC 309, 320, 440, 441, and ENGL 402, 425, 426 and 463.

*Corequisite:* EDUC 452.

One-week planning seminar followed by weekly hour-long seminar meetings. Taken concurrently with EDUC 452, the student teaching field experience. All seminar meetings will allow students opportunities to collaborate on problems and planning directly related to the student teaching experience. Student may not receive credit if previously taken ENGL 427.

**ENGL 431. Medieval Literature.**

(3)

Three hours lecture.

*Prerequisite:* Completion of English general education requirements; ENGL 300 or permission of department chair.

Study of major literary works composed in England during the Middle Ages (6th through 15th centuries). Special attention to the works and language of Chaucer.

**ENGL 433. Renaissance Literature.**

(3)

Three hours lecture.

*Prerequisite:* Completion of English general education requirements; ENGL 300 or permission of department chair.

Study of selected writers, themes and genres in 16th century England.

**ENGL 434. Seventeenth Century Literature.**

(3)

Three hours lecture.

*Prerequisite: Completion of English general education requirements; ENGL 300 or permission of department chair.*

Introduction to varied prose and poetry of 17th century. Special attention to the works of Milton.

**ENGL 435. Restoration and Eighteenth Century.**

(3)

Three hours lecture.

*Prerequisite: Completion of English general education requirements; ENGL 300 or permission of department chair.*

Survey of several chief works of English literature from Dryden through Samuel Johnson, including the development of the English novel.

**ENGL 437. Romanticism.**

(3)

Three hours lecture.

*Prerequisite: Completion of English general education requirements; ENGL 300 or permission of department chair.*

Study of the British Romantic Movement.

**ENGL 438. Victorian Literature.**

(3)

Three hours lecture.

*Prerequisite: Completion of English general education requirements; ENGL 300 or permission of department chair.*

Study of major British poets and prose writers from 1825-1900.

**ENGL 439. Modern British Literature.**

(3)

Three hours lecture.

*Prerequisite: Completion of English general education requirements; ENGL 300 or permission of department chair.*

Study of works of British writers of first half of 20th century and appraisal of outstanding literary tendencies of the age.

**ENGL 442. Early American Literature.**

(3)

Three hours lecture.

*Prerequisite: Completion of English general education requirements; ENGL 300 or permission of department chair.*

Study of colonial writers of Virginia

and New England and major figures of American literature to 1830.

**ENGL 443. The American Renaissance.**

(3)

Three hours lecture.

*Prerequisite: Completion of English general education requirements; ENGL 300 or permission of department chair.*

Study of several major 19th century American writers and general intellectual climate of the period.

**ENGL 444. American Realism and Naturalism.**

(3)

Three hours lecture.

*Prerequisite: Completion of English general education requirements; ENGL 300 or permission of department chair.*

Study of work of selected American realists and naturalists from late 19th and 20th centuries.

**ENGL 445. Modern American Literature.**

(3)

Three hours lecture.

*Prerequisite: Completion of English general education requirements; ENGL 300 or permission of department chair.*

Study of major poets and novelists between 1900 and World War II with consideration of how their works relate to intellectual currents of the period.

**ENGL 446. Appalachian Folklore.**

(3)

Three hours lecture.

*Prerequisite: Completion of English general education requirements.*

Study of the mountain verbal lore of tales, ballads and sayings; nonverbal or partially verbal lore of customs, games and rituals; material lore of structure, designs and landscapes. Field collections and written analyses required. This course may be used to meet requirements for the minor in Appalachian Studies.

**ENGL 447. Appalachian Literature.**

(3)

Three hours lecture.

*Prerequisite: Completion of English general education requirements; ENGL 300 or permission of department chair.*

Establishment of standards for identifying Appalachian literature; study of selected works representative of the mountain culture. This course may be used to meet requirements for the minor in Appalachian Studies.

**ENGL 449. African American Literature.** (3)

Three hours lecture.

*Prerequisite: Completion of English general education requirements; ENGL 300 or permission of department chair.*

Study of literature written by African Americans. Scope includes all genres and periods. Enables students to understand African American literature both in itself and within the larger context of American literature and culture.

**ENGL 450. Native American Literature.** (3)

Three hours lecture.

*Prerequisite: Completion of English general education requirements; ENGL 300 or permission of department chair.*

Study of various tribal literatures, including traditional oral texts and transitional and contemporary works in English by Native American authors.

**ENGL 451. Contemporary Literature.** (3)

Three hours lecture.

*Prerequisite: Completion of English general education requirements; ENGL 300 or permission of department chair.*

Study of representative works of second half of the 20th century: American, British and world.

**ENGL 453. The Female Literary Tradition.** (3)

Three hours lecture.

*Prerequisite: Completion of English general education requirements; ENGL 300 or permission of department chair.*

Study of the distinctive literary heritage shared by women writers in England and North America from the Renaissance to the present. The theoretical grounding of the course is current French and Anglo-American

feminist criticism, from which perspective the course traces the development of a women's literary tradition in English and considers a number of issues pertinent to the study of women's writing: women's relationship to a dominant literary tradition, representations of female experience in both the dominant and the female tradition, gender and genre, and female creativity. This course may be used to meet requirements for the minor in Women's Studies.

**ENGL 454. Literature and the Environment.** (3)

Three hours lecture.

*Prerequisite: Completion of English general education requirements.*

Examines literature concerning the relationship between humans and the environment. Study of landmark non-fictional works of an emerging ecological ethic as well as fictional works than invite an ecocritical approach. They will examine how changing literary interpretations of the land have influenced attitudes toward non-human nature and how cultural values have shaped our definitions of nature, our perceptions of it, and our interaction with the natural world.

**ENGL 463. Grammar and Language for Teachers.** (3)

Three hours lecture.

*Prerequisite: Completion of English general education requirements.*

Primarily intended for prospective teachers of English language arts, this course offers an intensive study of English grammar illuminated by the history and development of the language, by language acquisition theory (psycholinguistics) and by social dimensions of language (sociolinguistics). Required for English majors preparing to teach in secondary schools; recommended also for all students preparing to teach at the following levels: elementary, middle and special education.

**ENGL 464. The History of the English Language.** (3)

Three hours lecture.

*Prerequisite: Completion of English general education requirements.*



Study of history and development of English language from its origins to present.

**ENGL 465. English Linguistics. (3)**

Three hours lecture.

*Prerequisite: Completion of English general education requirements.*

Study of major theories, methods, and techniques of linguistic analysis. Emphasis placed on application to the English language.

**ENGL 470. The Author in Context (WI). (3)**

Three hours lecture.

*Prerequisite: Completion of general education requirements; ENGL 300 or permission of department chair.*

Study of a single author's work in view of the literary, biographical, historical and cultural contexts that shaped it and the critical contexts within which it is read. The course emphasizes instruction and practice in writing for complex rhetorical situations within the discipline of English Studies. May be taken more than once for credit with focus on a different author. Depending upon the topic, this course may be used to meet requirements for the minor in Women's Studies.

**ENGL 472. Readings in Shakespeare. (3)**

Three hours lecture.

*Prerequisite: Completion of English general education requirements; ENGL 300 or permission of department chair.*

Critical study of representative works of Shakespeare.

**ENGL 488. Final Honors Project. (2-3)**

*Prerequisite: Completion of English general education requirements, senior standing, enrollment in Honors Academy, completion of all other Honors Academy requirements, a minimum 3.5 GPA in all courses and in English.*

To earn a bachelor's degree with honors in English, a student may conduct research and write a thesis or prepare for and take a comprehensive examination. In order to receive honors credit, a student must earn a grade of "A" or "B" for the final project. Course may not be repeated.

**ENGL 490. Summer Workshop. (3)**

*Prerequisite: Completion of English general education requirements.*

Designed to give students concentrated study in a specialized area of English. Grading on Pass/Fail basis. May be taken twice for credit. Depending upon the topic, this course may be used to meet requirements for the minor in Appalachian Studies.

**ENGL 495. English Internship. (1-12)**

*Prerequisite: ENGL 306. ENGL 407 highly recommended.*

Offers opportunity through experiential learning to apply English skills and learn about careers in business and technical writing or other non-teaching fields. Internship consists of placement with a business or governmental agency interested in utilizing the liberal arts background and writing skills obtained through English coursework. Credit hours vary according to the number of hours a week and the number of weeks in the internship. Interns must have junior or senior standing, a 3.0 minimum average in English courses, and approval of department chairperson. Grading on Pass/Fail basis. May be taken twice for credit, but for no more than 12 hours total.

**ENGL 496. Senior Seminar. (WI) (3)**

Three hours seminar.

*Prerequisite: Senior status as an English major.* The objective of this course is twofold: (1) to invite students of language, writing, and literature to participate in the theoretical debates surrounding the study of English; (2) to afford each student the opportunity to pursue a semester-long research project culminating in a senior essay which focuses on an interest the student has developed during prior course work.

**ENGL 498. Independent Study. (1-6)**

See "Independent Study" on page 61.

For a description of graduate courses, please consult the *Radford University Graduate Catalog*.

## **EXERCISE, SPORT AND HEALTH EDUCATION**

### **ESHE 102. Aquatic Fitness. (1)**

Three hours lecture/laboratory.

*Prerequisite: Student should be comfortable in the water.*

Acquaints students with basic fitness principles and offers them a variety of aquatic exercise forms to help maintain or improve their level of fitness.

### **ESHE 103. Conditioning. (1)**

Three hours lecture and laboratory.

Develops basic understanding of the value of fitness. Various methods of training give students an opportunity to improve level of physiological fitness.

### **ESHE 110, 111, 115, 116, 117, 120, 121, 122, 124, 130, 136.**

#### **Sport Activities. (1 hr. each)**

Two contact hours per week.

15-week and 7.5-week courses are offered. 7.5-week courses may be blocked together for 2 credit hours. Practice and study of sport and physical activity skills. Activities include: Badminton, 110; Bowling, 111 (Special fee); Beginning Tennis, 115; Track and Field, 116; Racquetball, 117; Basketball, 120; Beginning Volleyball, 121; Softball, 122; Soccer/Indoor Soccer, 124; Karate, 130; Tae Kwon Do, 136.

### **ESHE 150. Fundamentals of Athletic Training. (1)**

One hour lecture/observation.

Focuses on the history, development and scope of the athletic training profession, as well as current and future trends related to athletic training. Students will also become familiar with the Athletic Training Program at RU. Students will observe athletic trainers in the athletic training room and the clinical athletic training setting.

### **ESHE 201. Introduction to Athletic Injuries. (3)**

Three hours lecture.

*Prerequisite: HLTH 200 and sophomore standing.*

Common sports-related injuries and illnesses

will be discussed with an emphasis on the proper methods for prevention, recognition, and immediate care and rehabilitation of those conditions.

### **ESHE 205. Introduction to Athletic Training Skills. (2)**

Two hours lecture.

*Prerequisite: Cumulative GPA of 2.50.*

*Corequisite: ESHE 201 and ESHE 225.*

Didactic and psychomotor skill instruction with practical examinations covering taking and recording of vital signs, emergency care procedures, taping, wrapping, splinting, and basic modality theory and application.

### **ESHE 210. Introduction to Teaching Physical and Health Education. (2)**

One hour lecture; two hours laboratory.

*Prerequisite: 15 semester hours completed.*

The point-of-entry course in the physical education teaching concentration. Provides an overview of the teacher licensure process for health and physical education in the Commonwealth of Virginia. Students are expected to understand and demonstrate their knowledge of the history, philosophy, sociology, and current models of teaching physical and health education. Also includes a PRAXIS I exam requirement for all students.

### **ESHE 212. Introduction to Sport Management. (3)**

Three hours lecture.

*Prerequisite: Fifteen credit hours.*

Designed to provide students with an overview of the sport management/administration profession and the array of careers currently available in the sport industry. Studies the impact of social, historical, health and economic trends on the growth of sport in the United States and throughout the world. Special emphasis is placed on ethical and diversity issues as they relate to the sport management profession. Information related to the governance of sport organizations is studied.

**ESHE 225. Practicum I (Athletic Training). (1)**

*Prerequisite: Cumulative GPA of 2.50.*

*Corequisite: ESHE 201, ESHE 205.*

Clinical experiences designed to provide students with an appreciation of the various duties of athletic trainer in a traditional setting. This course requires the completion of 100 hours of observation and clinical experience performed under the supervision of an Approved Clinical Instructor.

**ESHE 243. Lifeguard Training. (2)**

One hour lecture; two hours laboratory.

*Prerequisite: Continuously swim 500 yards using crawl, breaststroke, elementary backstroke and sidestroke; tread water, surface dive and swim underwater 15 yards.*

Prepares individuals for the job of life guarding at pools and small lakes. American Red Cross certification is available for those who meet course requirements.

**ESHE 250. Practicum II (Athletic Training). (3)**

*Prerequisite: ESHE 201, ESHE 205, ESHE 225, Entrance into ATEP.*

*Corequisite: ESHE 323.*

Laboratory and clinical experiences designed to provide students with formal instruction and evaluation in the Entry Level Athletic Training Clinical Proficiencies. This course requires the completion of 150 hours of clinical experience performed under the supervision of a program approved Clinical Instructor.

**ESHE 262. Introduction to Asian Martial Arts. (3)**

Two hours lecture; two hours laboratory.

Survey of Asian martial arts concepts and cultural interpretations for self defense, defensive tactics, and personal protection. Introduction of international issues, rituals, values, and performance of major escapes, locks, holds, counters, and defense against weapons. General Education credit – International and Intercultural Studies.

**ESHE 294. Motor Development. (2)**

Two hours lecture/laboratory or all lecture.

*Pre- or Corequisite: ESHE 210.*

A study of motor skill development as a result of human growth and maturation throughout the lifespan. Provides students with a background to explain motor performance via differences in development and motor development. Students are given opportunities to observe performances and apply motor development principles in practice. The course is requisite to the Theory and Practice methods courses within the ESHE teaching concentration.

**ESHE 301. Theory and Practice of Fitness/Wellness. (2)**

One hour lecture; two hours laboratory.

*Prerequisite: HLTH 200 and ESHE 294.*

Provides students with a comprehensive study of principles and methods of teaching basic skills as applied to aerobic conditioning, anaerobic conditioning activities and lifetime wellness activities. Students will become familiar with methods used for the assessment of the components of fitness. Contains both physical activity and simulated/clinical practice-teaching requirements.

**ESHE 302. Theory and Practice of Individual/Dual Activities. (2)**

One hour lecture; two hours laboratory.

*Prerequisite: ESHE 210 and ESHE 294.*

Provides an overview of school-based curricular offerings related to individual and dual activities. Students will become familiar with the skills and instructional methods of several activities. Contains both physical activity and simulated/ clinical teaching requirements.

**ESHE 303. Advanced Conditioning. (1)**

Three hours lecture and laboratory.

Provides students with an opportunity to achieve advanced levels of physical fitness and to study various training techniques.

**ESHE 304. Theory and Practice of Team Sport Activities. (2)**

One hour lecture; two hours laboratory.

*Prerequisite: ESHE 210 and ESHE 294.*

Provides an overview of school-based curricular offerings related to team sport activities.

Students will become familiar with the skills and the content of a wide variety of team sports. Contains both physical activity and simulated/clinical teaching requirements.

**ESHE 305. Principles and Practice of Strength and Conditioning. (3)**

Three hours lecture.

*Prerequisite: HLTH 200.*

Provides students with an overview of concepts and principles essential to designing safe and effective physical conditioning programs. Emphasis given to providing up-to-date scientific and practical information with a variety of instructional/practice opportunities to actively practice, design, teach, evaluate, and adhere to a multitude of exercise techniques and conditioning programs (resistance, cardiovascular, and flexibility). Students are given the opportunity to explore and initiate a variety of external certifications in strength conditioning and fitness.

**ESHE 306. Theory and Practice of Cooperative Games and Activities. (2)**

Two hours lecture and activity.

*Prerequisite: ESHE 210.*

Provides an overview of the curricular offerings centered around cooperative games and movement activities.

**ESHE 310. Multicultural Self Defense Education. (3)**

Three hours lecture/laboratory.

Designed for students who intend to teach, manage, and organize self defense programs in educational systems or fitness facilities. The concepts of the multicultural martial arts matrix will be employed.

**ESHE 315. Physical Activity and Aging. (3)**

Three hours lecture.

*Prerequisite: BIOL 105 and Junior standing.*

Provides the student the opportunity to study the many individual facets of exercise, fitness and the aging process. Given the rapid increase in the number of elderly persons in our society, the student of the 21st century should be able to relate to and understand the many factors that affect the elderly from the health and fitness point of view.

**ESHE 323. Assessment of Athletic Injuries I – The Extremities. (3)**

Two hours lecture; two hours laboratory

*Prerequisite: BIOL 310, ESHE 205 or consent of the instructor.*

*Corequisite: ESHE 250.*

Laboratory and clinical experiences in the recognition and evaluation of athletic injuries occurring to the hand, wrist, forearm, elbow, shoulder, ankle, shin, knee, thigh and hip.

**ESHE 325. Practicum III (Athletic Training). (3)**

*Prerequisite: ESHE 250.*

*Corequisite: ESHE 422.*

Laboratory and clinical experiences designed to provide students with formal instruction and evaluation in the Entry Level Athletic Training Clinical Proficiencies. This course requires the completion of 180 hours of clinical experience performed under the supervision of a program approved Clinical Instructor, and has a corequisite of ESHE 422.

**ESHE 330. Advanced Karate. (1-3)**

Three hours laboratory.

*Prerequisite: Permission of instructor.*

(May be taken for a total of six semester hours of credit.) Provides the standards for Kumite through the level of Black Belt.

**ESHE 333. Athletic Training Skill Assessment. (1)**

One hour lab/assessment evaluation.

*Prerequisite: ESHE 150.*

Students in this course will be evaluated over psychomotor athletic training skills. These skills will be taught in ESHE 205, ESHE 250, ESHE 323, ESHE 325, ESHE 345, ESHE 365, ESHE 420, and ESHE 422.

**ESHE 335. Seminar in Athletic Training. (2)**

Two hours lecture.

*Prerequisite: ESHE 250, ESHE 323.*

Covers modern trends in rehabilitative techniques, orthotic devices, nutritional supplements and allied health professions that may be applicable to athletic training professionals.

**ESHE 340. General Medical Conditions and Concerns of the Athlete (Athletic Training).** (3)

Three hours lecture.

*Prerequisite:* ESHE 250, ESHE 323 or consent of the instructor.

*Corequisite:* ESHE 345.

Introduction to illnesses and disease processes common in athletic populations. Emphasis will be placed on prevention, recognition, immediate care and appropriate referral techniques.

**ESHE 341. Legal and Ethical Issues in Sports.** (3)

Three hours lecture.

*Prerequisite:* ESHE 212 and junior standing.

Designed to introduce students to the legal doctrines, major statutes, standards and case law that establish legal responsibilities, rights, privileges and controls related to the field of exercise and sport sciences.

**ESHE 343. Lifeguard Training Instructor.** (2)

One hour lecture, two hours laboratory.

Prepares aquatic professionals to teach Lifeguard Training. American Red Cross Instructor certification is available to those who meet the course requirements.

**ESHE 345. General Medical Rotation. (Athletic Training).** (1)

*Prerequisite:* ESHE 250, ESHE 323.

*Corequisite:* ESHE 340.

Laboratory and clinical experiences designed to provide students with formal instruction and evaluation in the entry level athletic training clinical proficiencies. This course requires the completion of 50 hours of clinical experience performed under the supervision of an approved medical professional at a program approved site.

**ESHE 350. Sport and Exercise Psychology.** (3)

*Prerequisite:* PSYC 121.

Provides students with an overview of concepts and principles essential to understanding the behavioral aspects of sport and exercise. Emphasis is given to the conceptual

frameworks and the applied aspects of performance enhancement, mental skills, exercise behavior and motivation, social factors, and psychology of injury. Applications are made to the athlete/participant, exercise leader and sport coach.

**ESHE 355. Practicum IV (Athletic Training).** (4)

*Prerequisite:* ESHE 325.

Laboratory and clinical experiences designed to provide students with formal instruction and evaluation in the Entry Level Athletic Training Clinical Proficiencies. This course requires the completion of 240 hours of a program approved Clinical Instructor. A portion of these clinical hours must be done at an off campus rotation with pre-season football at a program approved clinical site.

**ESHE 358. Technology for Exercise, Sport and Health Education.** (3)

Two hours lecture, two hours laboratory.

*Prerequisite:* ITEC 100/110/ITEC 120 or equivalent, ESHE major, and junior standing.

Students shall acquire the knowledge and skills to understand and use "high tech" exercise equipment, personal computer, related software, and main frame systems employed in commercial fitness/wellness centers, hospitals, education centers.

**ESHE 360. Marketing of ESHE.** (3)

Three hours lecture.

Examines the entrepreneur's role with emphasis on marketing and promotion. Studies and applies methods employed to promote, market, select and administer all aspects of exercise, sport and health programs.

**ESHE 361. World Martial Arts.** (3)

Three hours lecture.

Analyzes the physical skills and cultural changes affecting the adaptation and development of classical and contemporary martial arts in the United States.

**ESHE 362. Principles of Self Defense.** (3)

Three hours lecture.

Examines avenues of self defense, personal



survival methods and danger prevention strategies including: defense for assault, rape, home security, environmental awareness, ethics, moral and legal ramifications of self protection.

**ESHE 363. Seminar in Professional Fieldwork. (1)**

One hour lecture.

*Prerequisite: Junior standing.*

Examines issues in Commercial Fitness/Sports Medicine. Provides information for resume, interviewing, job search skills and contracts. This course is required for admittance to ESHE 463. Pass/Fail.

**ESHE 364. Pre-Professional Fieldwork in ESHE. (3)**

*Prerequisite: Junior standing and instructor's permission.*

Provides Junior level ESHE students with the opportunity to integrate previous course work with practical field experience. Offers students 120-150 on-site work hours to apply theory to practice.

**ESHE 365. Therapeutic Exercise. (4)**

Three hours lecture; two hours laboratory

*Prerequisite: ESHE 323 or consent of instructor.*

Effects, advantages, disadvantages, indications, contradictions, precautions, and the application parameters of therapeutic exercises in injury rehabilitation.

**ESHE 370. Socio-Cultural Aspects of Sport. (3)**

Three hours lecture.

*Prerequisite: ESHE 212 and junior standing.*

The purpose of this course is to introduce the student to sport specific socio-cultural perspectives as they apply to the study of sport management. Topics may include race/ethnicity, gender and social class, and globalization as these report to sport. Students will demonstrate the ability to assess the effect of sport in both America and global societies.

**ESHE 382. Methods for Teaching K-12 Physical Education. (4)**

Three hours lecture; two hours field experience.

*Prerequisite: ESHE 210.*

Provides students with an understanding of teaching elementary through secondary school age youngsters in a physical activity setting. Intended as a companion course with HLTH 382: Methods of Teaching K-12 Health Education in the teaching concentration, this course provides the fundamental teaching skills needed for successful teaching in elementary, middle, and high school physical education.

**ESHE 385. Teaching Physical Education for Inclusion. (2)**

Two hours lecture.

*Prerequisite: ESHE 210.*

Provides students with an understanding of teaching K-12 physical education to children with disabilities. Explores the characteristics of children legally classified as having a disability and ways to program for inclusion in school-based physical education. Students develop the ability to plan and assess to facilitate inclusion, in particular utilizing instructional and curricular modifications for safe and effective learning environments of physical activity.

**ESHE 388. Coaching the Athlete. (3)**

Three hours lecture.

*Prerequisite: Junior standing.*

Develops an understanding of the obligations a coach has to the athlete, school and community.

**ESHE 390. Kinesiology. (3)**

Two hours lecture; two hours laboratory.

*Prerequisite: BIOL 322 or BIOL 310 or BIOL 311 (students in the sports medicine concentration must complete BIOL 310 and BIOL 311).*

Explores the study and analysis of human motion.

**ESHE 391. Exercise Science. (4)**

Four hours lecture.

*Prerequisites: BIOL 105 and HLTH 200.*

Provides an understanding of the biomechanical and physiological aspects of physical activity. The course includes study of the immediate and long term effects of physical training and sport performance. Students will be expected to analyze human motion from a mechanical perspective as well as describe the muscular and metabolic functioning of various systems. Students are expected to be able to apply principles of their area of study.

**ESHE 392. Exercise Physiology. (3)**

Two hours lecture; two hours laboratory.

*Prerequisite: BIOL 322 or BIOL 310 and BIOL 311 (students in the Sports Medicine concentration must complete BIOL 310 and BIOL 311).*

Provides understanding of exercise physiology and its ramifications. Includes study of immediate and long-range effects physical exertion and training have on organic functions of the body.

**ESHE 395. Motor Behavior. (3)**

Three hours lecture.

*Prerequisite: PSYC 121.*

Provides essential knowledge about the process of learning and performing motor skills. Studies the process of change in the ability of a person to perform a motor skill as a result of deliberate practice. Students are also expected to understand the psychological factors contributing to performance. Combining motor learning and sport psychology principles, students are expected to design practice and performance conditions that optimize the learning and performance of sport and movement skills in their area of study.

**ESHE 396. Assessment and Prescription in Exercise, Sport and Health Education. (3)**

Two hours lecture; two hours laboratory.

*Prerequisite: HLTH 200 and ESHE 391 or ESHE 392.*

Designed to examine the techniques of assessing physical fitness and provide practice assessing physical fitness components. This

information will be interpreted and developed into an exercise prescription. Advanced techniques of assessment will be used in this class.

**ESHE 397. Health/Fitness Program Development. (3)**

Three hours lecture.

*Prerequisite: ESHE 390 and 392, or ESHE 391.*

Students shall acquire the knowledge and skills to develop fitness and health promotion programs for individuals with a variety of needs. In addition, they will develop an understanding of the procedures necessary to evaluate and contract with vendors who supply health and fitness services.

**ESHE 405. Personal Training Review. (3)**

Three hours lecture.

*Corequisite: ESHE 390 and ESHE 392, or ESHE 391 or permission of instructor.*

Provides a review of kinesiology and exercise physiology as they apply to personal training. In addition, students will have experience in applying the principles of personal training. Students will be eligible to sit for a personal training certification at the end of this course.

**ESHE 415. Issues in Sport Management. (3)**

Three hours lecture.

*Prerequisite: ESHE 212 or permission of instructor.*

Principles of organization and administration in a variety of sport related settings. Issues concerning facilities, equipment, philosophy, budget, scheduling, public relations, staffing, diversity and management style are discussed.

**ESHE 420. Therapeutic Modalities. (4)**

Three hours lecture; two hours laboratory.

*Prerequisite: ESHE 323 or permission of instructor.*

Enables students to study the effects, advantages, disadvantages, indications, contradictions, precautions, and application parameters of therapeutic modalities in injury rehabilitation of the physically active. Emphasis is placed on treatment modalities available to athletic trainers in clinical settings.

**ESHE 422. Athletic Injury Assessment II – Head, Spine, Thorax. (3)**

Two hours lecture; two hours laboratory.

*Prerequisite:* ESHE 323 or permission of instructor.

*Corequisite:* ESHE 325.

Laboratory and clinical experiences in the recognition and evaluation of athletic injuries occurring to the head, spine, thorax, and abdomen.

**ESHE 430. Senior Professional Athletic Training Seminar. (3)**

Two hours lecture; two hours laboratory.

*Prerequisite:* ESHE 355, Senior standing, or permission of instructor.

Resume writing, interviewing, and a comprehensive review of the Athletic Training educational competencies. This course requires the completion of 120 hours of clinical experience performed under the supervision of an Approved Clinical Instructor.

**ESHE 453. Student Teaching in Physical Education: Grades K-12. (12)**

*Prerequisite:* Meet eligibility for student teaching (see p. 109).

Provides clinical experiences in at least two settings: one in an elementary school and one in a middle or high school. Begins with observation and limited participation and culminates in assumption of full responsibility in the classroom. Special seminars are regularly scheduled to enhance professional development of students. Pass/Fail.

**ESHE 460. Exercise Leadership. (3)**

Three hours lecture.

*Prerequisite:* HLTH 200 and ESHE 392.

Develops the knowledge and skills that are essential to lead exercises. A wide variety of health, fitness and wellness activities will be included and range from procedures to be used for one-on-one personal training to large group classes.

**ESHE 461. Organization and Administration of Health/Fitness Programs. (3)**

Three hours lecture.

*Prerequisite:* HLTH 200 and one of the following: ESHE 360 or ESHE 460.

Focuses on the development, organization, implementation and administration of health, fitness, wellness and other health promotion programs. It includes basic information on facility and staffing requirements for such programs.

**ESHE 462. Senior Capstone Experience. (1)**

Two hours lab.

*Prerequisites:* Completion of 86 credit hours and ESHE 395.

This seminar course will provide students with a culminating research, writing, and presentation experience. Students will complete a written synthesis of research on a topic of their interest, and will create and present their synthesis to students and faculty.

**ESHE 463. Fieldwork in ESHE. (3, 6, 9, or 12)**

50 contact hours per credit hour.

*Prerequisite:* Completion of all required ESHE and HLTH courses and a minimum cumulative grade point average of 2.1 and a 2.5 grade point average in the major. Students completing ESHE 364 may not exceed 9 hours in ESHE 463. 12 hour credit for ESHE 463 must obtain permission.

Provides student opportunity to integrate previous course work with practical field experience. Pass/Fail.

**ESHE 475. Applied Physical Education Assessment. (3)**

Three hours lecture.

Will develop the skills needed to design, implement, and assess an outcomes-based curriculum in physical and health education. It focuses on pedagogical assessment, and will include various forms of alternative assessments, such as current technologies, computer-based tools, and student portfolios.

**ESHE 488. Final Honors Project. (2-3)**

*Prerequisites: Enrollment in the Honors Academy, completion of all other Honors Academy requirements, a minimum 3.5 GPA in all courses in the Department of Exercise, Sport, and Health Education.*

Project and the topic to be explored will be determined by the student and the faculty member with whom the student works. Honors project may be written or a written-and-performance-based project. In order to receive honors credit, a student must earn a grade of "A" or "B" for the final project. Course may not be repeated.

**ESHE 496. Topical Seminar in ESHE. (1-3)**

One to three hours lecture or laboratory equivalent.

Exploration of a specific area of current interest in physical education with specific topics to be selected. May be taken for up to six hours of credit.

**ESHE 498. Independent Study. (1-6)**

*Prerequisite: Junior standing 2.5 or higher GPA.*

See "Independent Study" on p. 63.

## **FOODS AND NUTRITION**

**FDSN 100. Introduction to Professions in Foods and Nutrition. (2)**

One hour lecture; two hours field experience.

*Prerequisite: Major in Foods and Nutrition or consent of instructor.*

Students are introduced into professions in nutrition, including educational preparation, areas of specialization and professional issues in the discipline.

**FDSN 204. Basic Food Preparation. (4)**

Two hours lecture; four hours laboratory.

*Prerequisite: Major in Foods and Nutrition or consent of instructor.*

Students learn the concepts related to the selection and preparation of standard food products.

**FDSN 214. Introduction to Nutrition. (3)**

Three hours lecture.

A study of the relationship of nutrition to health at various stages of life and in different lifestyles. General Education credit - Health and Wellness.

**FDSN 218. Food Service Studies I: Introduction to Food Service Systems. (3)**

Three hours lecture.

Topics include history, current trends, menu development, food production and delivery systems, and physical facilities.

**FDSN 314. Community and Cultural Nutrition. (3)**

Three hours lecture.

*Prerequisite: FDSN 214 and 48 credit hours completed.*

Students will study the cultural food patterns and the means of assessing and meeting nutritional needs of a community.

**FDSN 316. Nutrition in the Life Cycle. (3)**

Three hours lecture.

*Prerequisite: FDSN 214, BIOL 322 and 48 credit hours completed.*

Examines the normal nutrition of humans at different times during the life cycle, from fetal to elderly individuals. The physiological, psychological and cultural aspects characteristic of different phases in the life span will be related to nutritional requirements and eating behaviors.

**FDSN 318. Food Service Studies II: Operations Management. (4)**

Three hours lecture; two hours laboratory.

*Prerequisite: FDSN 204 and 218.*

Topics include purchasing, receiving, and inventory management, food production operations management, and facility safety. The food sanitation component uses the National Restaurant Association's Servsafe® Certification program.

**FDSN 403. Nutrition Assessment. (4)**

Four hours lecture.

*Prerequisites: BIOL 322, FDSN 316, CHEM 101, 103 or 120.*

Introduces techniques and interpretation of nutrition assessment parameters (dietary,

physical, biochemical and clinical data) to determine the nutritional status, requirements and practice interventions/applications in health and disease.

**FDSN 404. Laboratory Methods in Foods and Nutrition. (4)**

Two hours lecture; four hours laboratory.

*Prerequisite: BIOL 322, FDSN 316, FDSN 403, CHEM 101, 103 or 120, senior standing.*

Emphasizes the scientific principles in the study of food and nutrition and introduces the student to experimental methods.

**FDSN 414: 415. Advanced Nutrition and Biochemistry I and II. (4:4)**

Four hours lecture.

*Prerequisite: BIOL 322, BIOL 334, FDSN 316, CHEM 101 and 120 or 103, and senior standing.*

Presents a detailed study of the nutrients and their role in human intermediary metabolism and physiology.

**FDSN 420. Professional Culinary Arts. (3)**

Three hours lecture and demonstration.

*Prerequisite: FDSN 204 and 318.*

Students will learn professional culinary techniques. Emphasis will be placed on culinary skills, presentation skills and food science principles.

**FDSN 425. Medical Nutrition Therapy I. (4)**

Four hours lecture.

*Prerequisite: BIOL 322, FDSN 316, CHEM 101, 103 or 120, senior standing.*

The theoretical basis for diet modification in disease is integrated with knowledge of human physiology, immunology, pharmacology, and biochemistry. Students are introduced to the skills required of the professional nutrition care specialist and plan modified diets for select medical conditions.

**FDSN 426. Medical Nutrition Therapy II. (4)**

Four hours lecture.

*Prerequisite: FDSN 425.*

Continuation of FDSN 425.

**FDSN 435. Nutrition Counseling and Education I. (3)**

Three hours lecture.

*Prerequisites: PSYC 121, BIOL 322, FDSN 316, CHEM 101, 103 or 120, senior standing.*

Presents current best practice techniques in nutrition counseling and education, including professional issues for the Registered Dietitian.

**FDSN 436. Nutrition Counseling and Education II. (3)**

Three hours lecture.

*Prerequisite: FDSN 435.*

Continuation of FDSN 435.

**FDSN 488. Final Honors Project. (2-3)**

*Prerequisite: Enrollment in the Honors Academy, completion of all other Honors Academy requirements, a minimum 3.5 cumulative and major GPA.*

Project and the topic to be explored will be determined by student and faculty member with whom student works.

**FDSN 498. Independent Study. (1-3)**

Investigation by the student in areas of interest under the direction of an adviser. See p. 63.

**FINANCE**

**FINC 251. Personal Finance. (3)**

Three hours lecture.

*Prerequisite: Sophomore standing or permission of instructor.*

Deals with personal financial planning including asset accumulation, insurance, savings, credit management, asset conservation and estate planning. This course may not be taken by finance majors for fulfillment of the finance option requirements.

**FINC 331. Introduction to Business Finance. (3)**

Three hours lecture.

*Prerequisite: ACTG 212; STAT 200.*

Introduces financial concepts and techniques



of financial management and emphasizes an understanding of how the principles of finance can be used to enhance the value of the firm. Topics include the mathematics of interest and the time value of money, financial statement analysis and forecasting, valuation techniques, the measurement and relationship between risk and expected return, capital investment decisions, and working capital management.

**FINC 332. Intermediate Business Finance.**

(3)

Three hours lecture.

*Prerequisite: FINC 331.*

Applies the analytical tools acquired in FINC 331 Introduction to Business Finance to further explore the theory and practice of financial decision making to enhance firm value. Topics include advanced capital budgeting techniques, cost of capital, capital structure, dividend policy, mergers and acquisitions, and international finance.

**FINC 335. Financial Markets and Institutions.**

(3)

Three hours lecture.

*Prerequisite: FINC 331; junior or senior standing.*

Examines markets and intermediaries that service the supply and demand for funds in a free enterprise economy.

**FINC 336. Principles of Real Estate.**

(3)

Three hours lecture.

Provides a study of the basic principles and practices of real estate that are involved in the ownership and transfer of real property. Attention given to the economic and social impact of real estate, the real estate market, property rights, property ownership, real estate investment and financing real estate.

**FINC 341. Insurance I.**

(3)

Three hours lecture.

Provides a study of analysis of risks, policy provisions, different types of insurance, organizational structures of insurance companies, social insurance, and regulation of the insurance industry.

**FINC 351. Personal Financial Planning.**

(3)

Three hours lecture.

*Prerequisites: FINC 331 or FINC 251; ACTG 211; ECON 105; ECON 106; STAT 200.*

Covers the general principles of financial planning. Topics include time value of money, financial planning process, client interactions, personal financial statements, personal cash flow management, education funding, retirement planning, special circumstances, buying vs. leasing decisions, and the business of financial planning.

**FINC 381. Investment Analysis.**

(3)

Three hours lecture.

*Prerequisite: FINC 331.*

Provides a survey and an analysis of different types of financial securities and the markets in which they are traded. It focuses on both traditional securities such as stocks and bonds and derivative instruments such as futures, options, and swaps.

**FINC 431. Retirement and Estate Planning.**

(3)

Three hours lecture.

*Prerequisites: Junior or senior standing, FINC 331 and FINC 351.*

Retirement planning provides individuals with knowledge of both public and private retirement plans and systems. Estate planning focuses on the efficient conservation and transfer of wealth, consistent with the client's goals. Issues that an individual faces in planning for retirement or in planning his or her estate are discussed.

**FINC 434. Bank Management.**

(3)

Three hours lecture.

*Prerequisite: FINC 331.*

Intended to provide student with information on both the structure and functions of commercial banks and on established and new practices of bank management with emphasis on reserves, credit, investment and service. Cases used occasionally to simulate and find solutions to real world problems.

**FINC 436. Real Estate Finance. (3)**

Three hours lecture.

*Prerequisite: FINC 331; FINC 336.*

Provides a study of the basic principles involved in financing transactions in real estate. Attention given to sources of funds, methods of financing, real estate investment analysis and tax consequences of real estate transactions.

**FINC 438. Financial Decision Making. (3)**

Three hours lecture.

*Prerequisite: FINC 332.*

The capstone study of the application of financial policy. Emphasis on problem solving through the use of cases. Course integrates all financial areas.

**FINC 439. International Finance. (3)**

Three hours lecture.

*Prerequisite: FINC 331 or permission of instructor.*

Deals with the international dimension of business finance with a focus on the globalization of financial markets.

**FINC 441. Insurance II. (3)**

Three hours lecture.

*Prerequisite: FINC 331.*

Covers the appropriate uses of insurance contracts, such as property, casualty, life, health, disability, and annuity contracts, for individual and business insurance planning. It also covers rate-making, operating and investing practices of insurers.

**FINC 451. Advanced Financial Planning. (3)**

Three hours lecture.

*Prerequisites: FINC 341; FINC 351; FINC 381; FINC 441; ACTG 411.*

The culminating experience in financial planning that will include a review and expansion of the overall financial planning process, with a comprehensive client financial planning case. Trusts, insurance, estate planning and taxation are discussed.

**FINC 471. Special Topics in Finance. (1-4)**

One to four hours lecture.

*Prerequisite: Approval of instructor.*

Examines topics of special interest in finance

not covered in current course offerings. May be taken more than once for a maximum of four hours credit.

**FINC 472. Independent Study. (1-4)**

Gives an individual student the opportunity to examine a topic of personal interest in more depth than is possible in any existing course. See "Independent Study" on p. 63.

**FINC 481. Global Portfolio Wealth Management. (3)**

Three hours lecture.

*Prerequisites: FINC 381 and FINC 439 or FINC 381 and permission of instructor.*

Provides a global view on investment opportunities and fundamental coverage of portfolio management, including stock valuation, derivatives, and wealth management techniques.

**FINC 488. Final Honors Project. (2-3)**

*Prerequisites: Completion of business core, enrollment in the Honors Academy, senior standing, a minimum GPA of 3.5 in all courses and in finance.*

Research project in finance. In order to receive honors credit, a student must earn a grade of "A" or "B" for the final project. Course may not be repeated.

**FINC 490. Finance Internship. (3)**

*Prerequisites: The student must be a junior or senior finance major, a cumulative GPA of 2.5 or higher and permission of the instructor.*

A one-semester program of work and study in the student's major area and/or career interest. Learning objectives, qualifications and hours of work approved by faculty coordinator and sponsoring agency. Final grade determined by supervising faculty. Graded A-F. Course may not be repeated for a better grade.

For a description of graduate courses, please consult the *Radford University Graduate Catalog*.

## FOREIGN LANGUAGE

### **FORL 100. Elementary Conversation in Critical Languages. (4)**

Four hours lecture and activity.

*Prerequisite: Written permission of the Critical Language Program Coordinator.*

Elementary practice in listening comprehension of and in speaking a critical language. Three hours of drill and conversation with tutors plus self-study and practice. General Education Credit – International and Intercultural Studies

### **FORL 109F/109G/109S/. Study Abroad Practicum. (3-8)**

A directed program of travel study designed to augment a student's knowledge of the language and culture of a particular country (generally French, German, or Spanish). Students will receive a minimum of 15 hours per week of formal language instruction in addition to being involved in a total immersion living situation. Permission by the department chair is required prior to enrollment. General Education credit – International and Intercultural Studies.

### **FORL 200. Intermediate Conversation I in Critical Languages. (4)**

*Prerequisite: FORL 100 in the same language or the equivalent and written permission of the Critical Language Program Coordinator.* Intermediate practice in listening comprehension of and in speaking a critical language. Three hours of drill and conversation with tutors plus self-study and practice. General Education credit – International and Intercultural Studies.

### **FORL 204. Masterpieces of German Literature in Translation. (3)**

*Prerequisites: Completion of ENGL 101 and 102 (or the equivalent).*

Study of masterpieces of German literature translated into English. This course has been approved for General Education credit in Area 4 Humanities of the curriculum under Literature Required.

### **FORL 209F/209G/209S. Study Abroad Practicum. (3-8)**

*Prerequisite: 4 hours of language instruction or two years in high school.*

A directed program of travel study designed to augment a student's knowledge of the language and culture of a particular country (generally French, German, or Spanish). Students will receive a minimum of 15 hours per week of formal language instruction in addition to being involved in a total immersion living situation. Permission by the department chair is required prior to enrollment. General Education credit – International and Intercultural Studies.

### **FORL 210. Intermediate Conversation II in Critical Languages. (4)**

*Prerequisite: FORL 200 in the same language or the equivalent and written permission of the Critical Language Program Coordinator.* Intermediate practice in listening comprehension of and in speaking a critical language. Three hours of drill and conversation with tutors plus self-study and practice. General Education credit – International and Intercultural Studies.

### **FORL 309F/309G/309S. Study Abroad Practicum. (3-18)**

*Prerequisite: 12 hours of language instruction or three years in high school.*

A directed program of travel study designed to augment a student's knowledge of the language and culture of a particular country (generally French, German, or Spanish). Students will receive a minimum of 15 hours per week of formal language instruction in addition to being involved in a total immersion living situation. Permission by the department chair is required prior to enrollment. General Education credit – International and Intercultural Studies.

### **FORL 409F/409G/409S. Study Abroad Practicum. (3-18)**

*Prerequisite: 18 hours of language instruction or four years in high school.*

A directed program of travel study designed to augment a student's knowledge of the language and culture of a particular country (generally French, German, or Spanish). Students

will receive a minimum of 15 hours per week of formal language instruction in addition to being involved in a total immersion living situation. Permission by the department chair is required prior to enrollment. General Education credit – International and Intercultural Studies.

**FORL 488. Final Honors Project. (2-3)**

*Prerequisites: Enrollment in the Honors Academy, completion of all other Honors Academy requirements, a 3.5 minimum GPA in all courses and in foreign languages.*

Project and topic to be explored will be determined by the student and the faculty member with whom the student works. (Honors project may be a written or a written and performance-based project.) In order to receive honors credit, a student must earn a grade of “A” or “B” for the final project. Course may not be repeated.

## FRENCH

**FREN 100. Elementary French. (4)**

Four hours lecture and language practice.

An introduction to French; acquisition of a basic active command of French; emphasis on listening comprehension, speaking, reading and writing. General Education credit - International and Intercultural Studies.

**FREN 101. Practical French Conversation. (2)**

Two hours lecture/discussion.

Basic conversational French. Especially useful for the traveler. No credit for the major/minor or BA requirement.

**FREN 200. Intermediate French I. (4)**

Four hours lecture and language practice.

*Prerequisite: FREN 100 or two years of high school French.*

A continuation of the study of the fundamentals of the language and continued development of the language skills. General Education credit - International and Intercultural Studies.

**FREN 210. Intermediate French II. (4)**

Four hours lecture and language practice.

*Prerequisite: FREN 200 or two years of high school French.*

A review of basic French grammar and practice in speaking, listening, reading, and writing. General Education credit - International and Intercultural Studies.

**FREN 300. Readings in French. (4)**

Four hours lecture and language practice.

*Prerequisite: FREN 210 or three years of high school French.*

Devoted to developing reading, writing, oral and aural skills. General Education credit - International and Intercultural Studies.

**FREN 320. Topics in French Cinema. (4)**

Four hours lecture.

*Prerequisite: FREN 210.*

Survey of contemporary French films and the history of French cinema from 1930 to the present, with the integration of French films in their cultural background. Can be taken twice for credit with different topics. General Education credit - International and Intercultural Studies.

**FREN 361. Advanced Grammar and Composition. (4)**

Four hours lecture.

*Prerequisite: FREN 300 or four years of high school French.*

Intensive study of grammar and composition.

**FREN 362. Advanced Readings. (4)**

Four hours lecture.

*Prerequisite: FREN 300 or four years of high school French.*

For students who wish to improve their reading ability in French. An intensive reading course in French.

**FREN 451. Survey of French Literature. (4)**

Four hours lecture.

*Prerequisite: FREN 300 or four years of high school French.*

A comprehensive view of French literature through analysis of selected major French works of French literature of the 19th and 20th centuries. All work conducted in French.

**FREN 460. Special Topics.** (3-4)  
Three or four hours lecture.  
*Prerequisite: FREN 300 and junior standing.*  
Advanced study of topics in language, literature, or culture. All work conducted in French. May be taken twice for credit.

**FREN 470. Masterpieces of French Literature.** (3-4)  
Three or four hours lecture.  
*Prerequisite: FREN 300.*  
A critical study of masterpieces of French literature by genre. May be taken twice for credit. All work conducted in French.

## GEOGRAPHY

Physical science courses, designated (PS), may meet the requirements for the required six to eight additional hours of science credits for the Bachelor of Science degree in some majors other than geography. Social science courses, designated (SS), meet requirements for the Social Science major. Courses in techniques used by geography are designated (T). Courses that qualify as a U.S. geography course for the Social Science major are designated with an asterisk.

**GEOG 101. Europe and the Americas (World Geography).** (SS) (3)  
Three hours lecture.  
Recommended for students preparing to teach. Comprehensive review of physical and cultural features of Europe, the former Soviet Union, the Americas and Australia. General Education credit - Social and Behavioral Sciences or International and Intercultural Studies.

**GEOG 102. Africa and Asia (World Geography).** (SS) (3)  
Three hours lecture.  
Recommended for students preparing to teach. Comprehensive review of physical features and cultural history of Africa, Southwest, Southeast, South and East Asia. General Education credit - Social and Behavioral Sciences or International and Intercultural Studies.

**GEOG 103. Introduction to Human Geography.** (SS) (3)  
Three hours lecture.

Introduction to concepts and methods of examining human modification of earth's surface; emphasis on processes fostering differences, similarities and change in cultural patterns through space and time in a comparative framework. General Education credit - Social and Behavioral Sciences

**GEOG 125. Introduction to Geospatial Data.** (T) (3)  
Three hours lecture/laboratory.

*Prerequisites: Three hours of GEOG or permission of instructor.*

Study of how physical and cultural information is presented on maps. Construction of maps, charts and graphs depicting geographic phenomena.

**GEOG 130. Physical Geography.** (PS) (3)  
Three hours lecture.

Introduction to the physical geography of the Earth (atmospheric systems, biosphere, and landforms) and the interrelationships among various environmental elements. Students cannot receive credit for both GEOG 100 and GEOG 130.

**GEOG 140. Introduction to Environmental Studies.** (SS) (3)  
Three hours lecture.

Review of contemporary local, national and international environmental problems and of the various analytic and policy approaches for resolving such problems. General Education credit - Social and Behavioral Sciences

**GEOG 201. North America.\*** (SS) (3)  
Three hours lecture.

Presentation of integrated spatial construction of the continent. Study of physical and human elements in the creation of the present diversity of life. General Education credit - Social and Behavioral Sciences



**GEOG 202. The Commonwealth of Virginia\* (SS) (3)**

Three hours lecture.

Examination of physical and human features of the state; emphasis on past and present human interpretations of the potentials of the land. General Education credit - Social and Behavioral Sciences.

**GEOG 203. Appalachian Geography.\* (SS). (3)**

Three hours lecture.

A regional geography of Appalachia, this course examines the spatial interactions of people and the environment within Appalachia in historical and current contexts. General Education credit - Social and Behavioral Sciences. Depending upon the topic, this course may be used to meet requirements for the minor in Appalachian Studies.

**GEOG 211. Perspectives in Geography. (3)**

Three hours lecture.

*Prerequisites: Declared major in Geography.*

Seminar which examines the points of view of the discipline of geography and introduces the methods used by professional geographers in the collection, analysis, and presentation of spatial data. Assists students in designing courses of study that support their interests and career goals. Required of all incoming majors.

**GEOG 241. Environmental Regulation. (3)**

Three hours lecture.

*Prerequisites: GEOG 140 or permission of instructor.*

Review of pertinent U.S. and international environmental laws and regulations and of principal analytic tools that inform the creation and enforcement of such laws and regulations.

**GEOG 250/ITEC 250. Introduction to GIS. (T) (3)**

Three hours lecture.

*Prerequisites: Basic knowledge of Internet usage.*

Designed to introduce students in geography as well as students from other disciplines to the general concepts of Geospatial Information Systems (GIS). Course will involve the

use of Internet-available technologies to practice and work with GIS technologies.

**GEOG 270. Fundamentals of Cartography. (T) (4)**

Four hours lecture and laboratory.

*Prerequisites: GEOG 125 and GEOG 250.*

Cartographic theory with a focus on map design will be discussed in lecture and in practice with a lab. Topics will include but not be limited to studying map layout, balance, typography, color use, use of map projections for presenting spatial information, use of map symbols, as well as learning to design different categories of maps including dot maps, proportional symbols, and choropleth maps. Students who have received credit for GEOG 214 may not also receive credit for GEOG 270.

**GEOG 280. Regional Geography. (SS) (3)**

In-depth examination of a selected non-U.S. world region. Includes physical, socioeconomic, historical and contemporary spatial patterns. Region covered will vary from semester to semester. May be taken for credit more than once when regions differ. General Education credit – Social and Behavioral Sciences and International and Intercultural Studies.

**GEOG 302. Economic Geography. (SS) (3)**

Three hours lecture.

Introduction to principles governing distribution of economic activity. Emphasis on development of theoretical models and their real world application. Includes transportation and land use models, principles of industrial location, methods of measuring location and dispersion of economic activity and urban location.

**GEOG 305. Population Geography. (SS) (3)**

Three hours lecture.

*Prerequisite: GEOG 101 or GEOG 102 or permission of instructor.*

Study of basic demographic processes and exploration of their spatial/geographic dimensions.

**GEOG 315. Intermediate GIS Concepts. (T)**

(3)

Three hours lecture.

*Prerequisite: GEOG 250*

Intermediate GIS concepts will be studied, including in-depth discussions of theoretical foundations, use of various extensions to basic GIS routines, data structures in GIS, use and customization of commercial data packages, data sources for GIS, and data and software compatibility issues in GIS.

**GEOG 322. Cultural Geography. (SS) (3)**

Three hours lecture.

Study of evolution of various cultures. Compares differences and similarities of contemporary cultures and human landscapes.

**GEOG 334. Climatology. (PS) (3)**

Three hours lecture.

*Prerequisite: GEOG 130 or any physical science course or permission of the instructor.*

Deals with meteorological phenomena and their role in the formation of weather. The effects of weather on the environment are studied in the larger context of climate.

**GEOG 335. Biogeography. (PS) (3)**

Three hours lecture.

*Prerequisite: GEOG 130, or BIOL 105, 215, or 216, or permission of the instructor.*

Study of the processes influencing the distribution patterns of terrestrial organisms. Introduction to applied biogeography.

**GEOG 336. Human Ecology. (PS) (3)**

Three hours lecture.

*Prerequisite: BIOL 105 or 121; or GEOG 335 or permission of instructor.*

Investigation of ways in which humans interact with Earth's other species. Focus is on the modification of natural ecosystems and organisms from prehistory to the 21st century, including the domestication of plants and animals, dispersal of wild and domestic species, and the development of human-dominated agricultural and urban ecosystems. Some field work is expected.

**GEOG 340. International Environmental Problems. (SS) (3)**

(3)

Three hours lecture.

*Prerequisite: GEOG 140.*

Overview of international environmental problems, climate change, energy use, deforestation, loss of biodiversity, poverty and trade, population growth, industrial policy. Discussion of appropriate U.S. and international policy response.

**GEOG 350/GEOL 360.**

**Geomorphology. (PS) (4)**

(4)

Three hours lecture, three hours laboratory.

*Prerequisite: GEOL 105.*

Introduction to surficial processes and landforms. Fluvial, eolian, glacial, karst and coastal zone processes analyzed. Map and air photo interpretation included.

**GEOG 361. Public Lands. (3)**

(3)

Three hours lecture.

*Prerequisite: Junior or Senior standing or permission of instructor.*

Presents an overview of the nations' major public lands systems. It covers history of the federal lands, legal and institutional framework, and planning and management concepts and processes such as environmental impact analysis. Current policy issues will be examined from several perspectives.

**GEOG 362. Geography of Rivers. (3)**

(3)

Three hours lecture.

*Prerequisite: GEOG 130 or permission of instructor; junior or senior standing.*

An overview of the physical, ecological, social, and regulatory aspects of river systems. This is an issues-oriented course but with a foundation of basic understanding of rivers as physical and ecological systems.

**GEOG 410. Advanced GIS. (T) (3)**

(3)

Three hours lecture and laboratory.

*Prerequisite: GEOG 125 and 250.*

Theory and practice of a Geospatial Information System. Spatial data capture, manipulation of data sets, overlaying of spatial data and hard copy map generation with a full feature Geographic Information System.

**GEOG 412. Advanced Geoprocessing. (T)**

(3)

Three hours lecture and laboratory.

*Prerequisite: GEOG 410.*

Theory and practice of advanced cartographic techniques. Research and cartographic design of complex cartographic projects and graphic design of cartograms will be practiced.

**GEOG 425. Digital Image Processing. (T) (4)**

Three hours lecture; three hours laboratory.

*Prerequisite: MATH 137, GEOG 130 (or GEOL 105), and GEOG 125.*

Provides students the opportunity to (1) learn theory and practice of contemporary remote sensing products (digital aerial photographs, digital orthophotos, airborne and satellite sensor platforms and their images), (2) learn and experiment with the technologies utilized in the analysis, image processing, and interpretation of these products, and (3) learn the use of the products in analog and digital format for other geographic technologies.

**GEOG 480. Seminar.**

(1-4)

Three hours seminar.

*Prerequisite: Junior or senior standing.*

Intensive study of a special field of geography. Topics determined by instructors' and students' interests. May be taken maximum of three times for no more than nine semester hours of credit. Depending upon the topic, this course may be used to meet requirements for the minor in Appalachian Studies.

**GEOG 488. Final Honors Project. (2-3)**

*Prerequisite: Enrollment in the Honors Academy, completion of all other Honors Academy requirements, a minimum 3.5 GPA in all courses and in geography.*

Project and topic to be determined by the student, the faculty member with whom the student works, and the department. In order to receive honors credit, a student must earn a grade of "A" or "B" for the final project. Course may not be repeated.

**GEOG 490. Field Research Methods. (T) (3)**

Three hours lecture and field work.

*Prerequisite: Junior or Senior standing.*

Basic elements of geographic field research

performed in Radford area. Course focuses on tools of field analysis. Students prepare single or group projects as indication of acquisition of logic of spatial analysis. This course may be used to meet requirements for the minor in Appalachian Studies.

**GEOG 492. Land Use.**

(3)

Three hours lecture.

*Prerequisite: Junior or Senior standing.*

Study of concepts and perception of land use. Course stresses compatibility of geologic systems and land use.

**GEOG 493. Planning Techniques.**

(3)

Three hours lecture.

*Prerequisite: Junior or Senior standing.*

Study of issues involved in comprehensive planning of communities and lands beyond urban realms. Emphasis on discussion of major planning concerns; particular attention paid to nature of rural problems and directions in future.

**GEOG 495. Directed Field**

**Research. (T)**

(1-6)

Field course, variable number of weeks.

Field course to regions in the United States and elsewhere in the world. (May be taken twice for credit but only six units may be used to meet requirements for the major.)

**GEOG 496. Senior Capstone Project. (3)**

Three hours research.

*Prerequisites: Last semester senior standing; major in geography.*

An individual or group project that applies the knowledge and skills obtained in any of the concentrations in the geography major. Required of all GEOG majors.

**GEOG 498. Independent Study.**

(1-6)

See "Independent Study" on p. 63.

**GEOG 499. Internship.**

(2-9)

Application of skills and concepts learned in classroom to a real life problem. As a junior or senior, participating student drafts and submits a work proposal to sponsoring agency and supervising instructor. Agency may pay student for work. Grade of "P" or "F" given upon successful completion of project.

## **GEOLOGY**

### **GEOL 100. Earth Resources and Natural Hazards.**

(4)

Three hours lecture; two hours laboratory. Examines the effect of geologic processes and hazards on human activities, the appraisal of human impact on the natural physical environment, and the geologic occurrence, availability and use of mineral and energy resources. GEOL 100 will satisfy half the general education laboratory science requirement. Students who have earned credit for GEOL 103 may not also earn credit for GEOL 100. General Education credit - Physical and Natural Sciences.

### **GEOL 105. Exploring Earth.**

(4)

Three hours lecture; two hours laboratory. Develops understanding of physical aspects of the science of geology, including study of the earth's materials, processes and structure. GEOL 105 will satisfy half the general education laboratory science requirement. Students who have earned credit for GEOL 101 may not also earn credit for GEOL 105. General Education credit -Physical and Natural Sciences.

### **GEOL 106. The Earth Through Time.**

(4)

Three hours lecture; two hours laboratory. *Prerequisite: GEOL 105.* Examines the historical aspects of geology, including the history of the physical events and life during the planet's evolution. GEOL 106 will satisfy half the general education laboratory science requirement. Students who have earned credit for GEOL 102 may not also earn credit for GEOL 106. General Education credit - Physical and Natural Sciences.

### **GEOL 261. Geology of Virginia.**

(4)

Three hours lecture; three hours laboratory. *Prerequisite: GEOL 105; and either GEOL 100 or GEOL 106.* Survey of geologic features of Virginia, emphasizing minerals, rocks, fossils and physiographic/geologic provinces; development of Virginia through geologic time; mineral wealth and environmental issues in Virginia.

### **GEOL 305. Professional Skills in the Geosciences.**

(4)

Two hours lecture; four hours laboratory. *Prerequisite: Eight hours of geology and ITEC 100.*

Introduces students to the concept of professionalism in the geosciences and develops communication, leadership, organizational and other practical skills essential to the successful professional geoscientist. One or more field trips may be required. Students who have received credit for GEOL 205 cannot also receive credit for GEOL 305.

### **GEOL 310. Mineralogy.**

(5)

Three hours lecture; six hours laboratory. *Prerequisite: CHEM 101 and GEOL 105 .* Introduces students to concepts and techniques involved in the study of minerals, both on a macroscopic and microscopic scale. Study of mineral formation, major mineral groups, their crystallography, compositions, structures, classifications, identification and environmental aspects. Introduction to principles involved in the investigation of optical properties of minerals in thin section under petrographic microscope. Techniques include microphotography and automated, digital image analysis of minerals. Introduction and demonstration of the X-Ray Diffractometer, Scanning Electron Microscope and Electron Microprobe as instruments for mineralogical analysis. Students who have received credit for GEOL 212 cannot also receive credit for GEOL 310.

### **GEOL 312. Petrology.**

(5)

Three hours lecture; six hours laboratory. *Prerequisite: GEOL 310.* Introduction to composition, texture, classification, origin, evolution and distribution of the major rock groups based on established field relationships and experimental determinations. Laboratory emphasis on hand samples and thin sections.

**GEOL 320. Sedimentation and Stratigraphy.**

(4)

Three hours lecture; two hours laboratory.

*Prerequisite: GEOL 105; and either GEOL 100 or GEOL 106.*

Introduction to origin, transportation and deposition of sediments and interpretation of sedimentary deposits. Study of principles involved in describing, classifying and interpreting stratified sedimentary rocks.

**GEOL 330. The Age of Reptiles.**

(3)

Three hours lecture.

*Prerequisites: GEOL 105; and either GEOL 100 or GEOL 106 or BIOL 112 or BIOL 215 and BIOL 216; or permission of the instructor.*

Investigates the geology, paleoecology, and flora and fauna of the Mesozoic Era, the Age of Reptiles. Topics to be studied are the rise, evolution, and extinction of the dinosaurs and other large reptiles such as the pleisiosaurs, ichthyosaurs, mosasaurs, and pterosaurs; the origins of mammals and birds; as well as the climate, paleogeography, plate tectonics, and flora extant during this span of geologic time.

**GEOL 335. General Paleontology.**

(4)

Three hours lecture; two hours laboratory.

*Prerequisite: GEOL 106.*

Study of fossil plant and animal phyla; emphasis on principles of paleontology as well as the taxonomic classification, principal morphologic characters and general evolutionary development of important fossil groups.

**GEOL 360 (GEOG 350)**

**Geomorphology.**

(4)

Three hours lecture; two hours laboratory.

*Prerequisite: GEOL 105.*

Introduction to surficial processes and landforms. Fluvial, eolian, glacial, karst and coastal zone processes analyzed. Map and air photo interpretation included.

**GEOL 365. Oceanography.**

(4)

Three hours lecture; two hours laboratory

*Prerequisite: Eight hours from any of the following natural sciences: Astronomy, Biology, Chemistry, Geology, Meteorology, Physical Science Processes, or Physics.*

Introduction to the physical, chemical, geological, and biological processes in the marine environment and their interaction. Includes analysis of topical issues such as global climate and sea level changes, mineral and energy resources from the sea, marine pollution, and law of the sea. Student may not receive credit if previously taken GEOL 361 and GEOL 362.

**GEOL 406/PHYS 406. Geophysics.**

(4)

Three hours lecture; two hours laboratory.

*Prerequisites: GEOL 105 or ASTR 111; and PHYS 221:222 or PHYS 111:112; and MATH 152; or permission of instructor.*

Examination of the basic principles and techniques of modern geophysical methods, and the applications of these methods to site investigations for environmental and engineering geologic projects. Some Saturday labs may be required.

**GEOL 408. Spatial Data Applications in Geology.**

(4)

Three hours lecture; two hours laboratory.

*Prerequisites: 12 hours of geology and permission of the instructor.*

Introduction to the study of the theoretical and practical analysis of spatial data in geology. Included will be map reading, photo interpretation and the use of remote sensing, image processing, and geographic information systems to interpret geologic spatial information for resource exploration and environmental management.

**GEOL 415. X-Ray Diffraction in**

**Geology.**

(4)

Two hours lecture; four hours laboratory.

*Prerequisite: GEOL 310.*

Includes a presentation of the basic theory of X-Ray diffraction, the use of X-Ray diffraction equipment to identify minerals, determine lattice types, parameters and the indexing of diffraction lines. The application of the techniques and equipment to various geologic problems will be investigated. Laboratory hours will be scheduled on an individual basis with the instructor.



**GEOL 440. Structural Geology. (4)**

Three hours lecture; three hours laboratory.

*Prerequisite: GEOL 310.*

Description and field recognition of geological structures of the earth's crust; includes fundamentals of rock mechanics and applications of stress and strain theory to the origin of structures, tectonics of mountain-building, and global plate tectonics.

**GEOL 441. Geologic Field Methods. (3)**

One hour lecture; four hours laboratory.

*Prerequisite: GEOL 440.*

Introduction to techniques and basic concepts of geologic field methods.

**GEOL 445. Applied Geology Summer Field School. (6)**

Approximately two months correspondence and 40 hours of field work and classroom instruction per week.

*Prerequisite: GEOL 105; and either GEOL 100 or GEOL 106.*

Intensive training in geologic field methods with emphasis on mapping, data collection and the geology of Virginia with applications to environmental and engineering concerns and to land use planning. The university campus serves as the base from which field studies are conducted. The course requires overnight excursions permitting the examination of a wide variety of geologic field conditions including field trip stops in all the geologic provinces of Virginia. Course may require transportation, food and camping fees. Course will not substitute for GEOL 441, Geologic Field Methods, for students majoring in geology.

**GEOL 451. Regulatory Issues in Environmental Geology. (3)**

Three hours lecture.

*Prerequisites: GEOL 474 (Hydrogeology); and either senior standing or permission of the instructor.*

Investigates the societal and regulatory framework within which much of the professional practice of environmental geology occurs. The relevant current and developing legislation will be addressed, along with the roles of federal, state, and municipal authorities in promulgation of the law. Class discussions and assignments

will emphasize the functions of the practicing professional geologist in the various research, regulatory, and consulting roles related to environmental regulation.

**GEOL 455. Principles of Engineering Geology. (4)**

Three hours lecture; three hours laboratory.

*Prerequisites: GEOL 105; and either GEOL 100 or GEOL 106; and mathematics through trigonometry. Minimum of one semester of physics is strongly recommended.*

A study of the application of geologic principles and data collection techniques to the evaluation of design and construction problems relating to engineering projects including dams, highways, landfills, tunnels and reservoirs, including an overview of availability and suitability of soil and rock as construction materials.

**GEOL 457. Erosion and Sediment Control/Stormwater Management. (3)**

Three hours lecture.

*Prerequisite: Enrollment as a major in any natural science or geography; or at least eight hours of geology courses.*

A study of the principles of erosion and sediment control and stormwater management as these apply to construction sites. Topics emphasized include regulatory and legal aspects, techniques of estimating rainfall runoff, use of soil loss estimators, examination of structural and nonstructural methods of erosion and sediment control, and preparation of erosion and sediment control plans.

**GEOL 461. Regional Geology of the United States. (4)**

Three hours lecture; three hours laboratory.

*Prerequisite: GEOL 320.*

Regional survey of structural and stratigraphic framework of geologic provinces of United States; emphasis on geologic features and evolution of Appalachian and Western Interior regions.

**GEOL 472. Environmental Aqueous Geochemistry. (3)**

Three hours lecture.

*Prerequisite: CHEM 101 and CHEM 102;*

*GEOL 310; mathematics through trigonometry; or permission of instructor. General computer literacy will be expected and required for success in the course.*

Investigates the principles which determine the chemical quality of surface and subsurface waters in the environment and application of these principles to solving of environmental and engineering problems. Emphasis is on the interactions between waters (both pristine and polluted) and their geologic setting. Use of quantitative solution methods including computer modeling is generously incorporated.

**GEOL 474. Hydrogeology. (4)**

Three hours lecture; two hours laboratory.

*Prerequisite: GEOL 105; and either GEOL 100 or GEOL 106; MATH 151; or permission of the instructor. Minimum of one semester of physics is strongly recommended.*

A qualitative and quantitative study of groundwater availability and movement, and the development of groundwater as a resource. Included will be pertinent geologic and engineering aspects of groundwater flow and the effect of man on the groundwater regime. Laboratory includes a field investigation.

**GEOL 476. Watershed Management. (3)**

Three hours lecture.

*Prerequisite: Eight hours of geology; math through precalculus; and senior standing or permission of instructor.*

Investigates the physical watershed system and the effects of land use on the quantity and quality of water resources. Students will be exposed to a variety of "tools" available to manage the watershed and water as a product of the watershed. Included will be an introduction to the roles of the various governmental agencies and private organizations in the practice of watershed management.

**GEOL 481. Seminar in Modern Topics in Geology. (3)**

Three hours lecture.

*Prerequisite: GEOL 105; and either GEOL 100 or GEOL 106; and permission of instructor.*

Emphasis on geologic literature, classroom

presentation and group discussion of current geologic topics. May be taken maximum of three times for no more than nine semester hours of credit. Topic may not be repeated by a student.

**GEOL 488. Final Honors Project. (2-3)**

*Prerequisites: Enrollment in Honors Academy and completion of all other Honors Academy requirements; a minimum 3.5 GPA in all courses and in geology.*

To earn a bachelor's degree with honors in geology, a student must conduct research and write a thesis based on the research. In order to receive honors credit, a student must earn a grade of "A" or "B" for the final project. Course may not be repeated.

**GEOL 495. Internship in Geology. (1-6)**

*Prerequisites: 8 credit hours in Geology or other laboratory science, 2.5 GPA in Geology courses, and permission of the department chair.*

Involves the application of skills and concepts learned in the classroom and laboratory in a real world situation through full- or part-time placement in a professional setting with a company or organization doing work in some area of geology. Students will be supervised by both the internship site personnel and by a geology faculty member. This course is offered for pass/fail grade only.

**GEOL 498. Independent Study. (1-6)**

*Prerequisite: Any one of the following: GEOL 105; and either GEOL 100 or GEOL 106 or BIOL 102.*

See "Independent Study" on p. ••.

## **GERMAN**

**GRMN 100. Elementary German. (4)**

Four hours lecture and language practice.

Balanced emphasis on listening, speaking, reading and writing. General Education credit - International and Intercultural Studies.

**GRMN 200. Intermediate German I. (4)**  
Four hours lecture and language practice.

*Prerequisite: GRMN 100 or two years of high school German.*

Balanced emphasis on listening, speaking, reading and writing. General Education credit - International and Intercultural Studies.

**GRMN 210. Intermediate German II. (4)**

Four hours lecture and language practice.

*Prerequisite: GRMN 200 or two years of high school German.*

Review of fundamentals using grammatical, literary and cultural materials. General Education credit - International and Intercultural Studies.

**GRMN 300. Readings in German. (4)**

Four hours lecture and language practice.

*Prerequisite: GRMN 210 or two years of high school German.*

Review of fundamentals using grammatical, literary and cultural materials. This course has been approved for General Education credit in Area 5 International and Intercultural Studies. May be taken twice for credit with different texts and films/videos.

**GRMN 301, 302. German Grammar and Composition. (4,4)**

Four hours lecture.

*Prerequisite: GRMN 210.*

Intensive oral and written practice of the complete grammar as used by native speakers.

**GRMN 303. German Conversation. (4)**

Four hours lecture.

*Prerequisite: GRMN 210 or three years of high school German.*

Intensive situational practice of conversational skills. May be taken twice for credit with different topics.

**GRMN 304. German Culture. (4)**

Four hours lecture.

*Prerequisite: GRMN 210.*

Contrastive presentation of modern German culture and its historical background. General Education credit - International and Intercultural Studies.

**GRMN 450. Survey of German Literature. (4)**

Four hours lecture.

*Prerequisite: GRMN 300 or four years of high school German.*

A survey of literature in the German language through analysis of selected representative works in their historical, cultural and literary background.

**GRMN 460. Special Topics. (3-4)**

Three or four hours lecture.

*Prerequisite: GRMN 300.*

Advanced study of topics in language, literature or culture. All work conducted in German. May be taken twice for credit.

## HISTORY

Courses marked (A) are designated for credit in Group A (United States), those with (B) for credit in Group B (Europe), and those with (C) for credit in Group C (Africa, Asia, Latin America, Middle East). Courses marked with an (\*) may be taken for either Group A, B, or C based on content as determined by the student's adviser. Courses marked with more than one designator may be counted in either group as marked. Students may not count any one course for more than one group.

**HIST 101. World History to 1650. (3)**

Three hours lecture.

A general survey of world history; study of the world's major cultural areas, their unique achievements and their interaction with and relation to other societies. Covers the period up to the mid-17th century. General Education credit - Social and Behavioral Sciences or International and Intercultural Studies. This course may be used to meet requirements for the minor in International Studies.

**HIST 102. World History After 1650. (3)**

Three hours lecture.

A general survey of world history; a study of the world's major cultural areas, their unique achievements and their interaction with and relation to other societies. Covers the period

after mid-17th century. General Education credit - Social and Behavioral Sciences or International and Intercultural Studies. This course may be used to meet requirements for the minor in International Studies.

**HIST 111. U.S. History to 1877. (3)**  
Three hours lecture.

Survey of national history from the colonial period through the American Revolution and early national period through the Civil War and Reconstruction. Emphasis on economic, political and social developments and the growth of the representative and democratic process. General Education credit - Social and Behavioral Sciences.

**HIST 112. U.S. History Since 1877. (3)**  
Three hours lecture.

General survey of national history since the beginnings of industrialization in the 1870s. Explores economic, political and social developments in the United States and growing American involvement in world affairs. General Education credit - Social and Behavioral Sciences.

**HIST 295. The Historians Craft. (3)**  
Three hours lecture.

*Prerequisite: Six hours of HIST at the 100 level.*

This seminar will introduce students to the numerous facets of historical inquiry. Basic components of the course center on the nature and philosophy of history; historical interpretation; research, analysis, and writing; and the practical application of history. Its focus is on preparing students for upper-division courses in history while integrating work in their major into their overall university experience. Students who have earned credit for HIST 305 may not also earn credit for HIST 295.

**HIST 300. The 20th Century World (A, B, C). (3)**

Three hours lecture/discussion.

*Prerequisite: Three hours of HIST at 100 level.*

An overview of the world in the 20th century with emphasis on the overriding themes from the historian's perspective: nationalism,

globalization, economic development, environmentalism. Course establishes a basis for the understanding of current events in historical perspective. (Students cannot receive credit for HIST 300 and HIST 401.)

**HIST 302. War in the Modern Age (A, B). (3)**

Three hours lecture.

*Prerequisite: Three hours of HIST at 100 level.*

General history of Western warfare, surveying the evolution of war, technology, and societies from the Middle Ages in Europe to the conflicts of the present-day.

**HIST 303. Studies in Military History (\*). (3)**

Three hours lecture.

*Prerequisite: Three hours of HIST at 100 level.*

In-depth study of a particular aspect of military history. Study may include such topics as leadership, World War II and causes of war. (Students cannot receive credit for HIST 303 and HIST 486.)

**HIST 306. History of Women (\*). (3)**

Three hours lecture.

*Prerequisite: Three hours of HIST at 100 level.*

Study of the roles and changing status of men and women. (Students cannot receive credit for HIST 306 and HIST 335.) This course may be used to meet requirements for the minor in Women's Studies.

**HIST 308. Ancient Greece and Rome (B). (3)**

Three hours lecture.

*Prerequisite: Three hours of HIST at 100 level.*

A study of the cultural, intellectual and political development of the Hellenic and Hellenistic traditions and Republican and Imperial Rome. (Students cannot receive credit for HIST 308 and 408.)

**HIST 309. Medieval Civilization (B).** (3)  
Three hours lecture.

*Prerequisite: Three hours of HIST at 100 level.*

A study of the cultural, social, and intellectual development of Europe from 300 to 1500 with emphasis on the dynamic character of Medieval Europe. (Students cannot receive credit for HIST 309 and HIST 409.)

**HIST 311. Ancient Near East (B, C).** (3)  
Three hours lecture.

*Prerequisite: Three hours of HIST at 100 level.*

A study of the cultural, intellectual and political development of the ancient civilizations of Egypt, Mesopotamia, Syria, Palestine, Asia Minor, Iran, the Indus Valley and the Aegean world. (Students cannot receive credit for HIST 311 and HIST 407.)

**HIST 313. History of East Asia (C).** (3)  
Three hours lecture.

*Prerequisite: Three hours of HIST at 100 level.*

Survey of East Asian cultures and civilizations with emphasis on China and Japan. Studies diplomatic, economic, intellectual, political and social aspects of the societies. (Students cannot receive credit for HIST 313 and 362.)

**HIST 314. Imperial India: India from Mughal Times to the Present (C).** (3)  
Three hours lecture.

*Prerequisite: Three hours of HIST at 100 level.*

A general survey of South Asian history from the building of the Mughal empire to the present. Topics include the nature of Mughal and British rule in India, the many peoples who have coexisted in India, and the blending of Muslim, Hindu, and British traditions. Also emphasizes developments in South Asia since the end of British rule in 1947.

**HIST 316. Colonial Latin America (C).** (3)  
Three hours lecture.

*Prerequisite: Three hours of HIST at 100 level.*

A topical survey beginning with the conquests of Mexico and Peru by Spain and (to

a lesser extent) Brazil by Portugal. Focus is on the impact on native Americans of Spanish colonialism and on the evolution of Hispanic-American institutions, family and kinship patterns and economic behavior. (Students cannot receive credit for HIST 316 and HIST 431.)

**HIST 317. National Latin America (C).** (3)  
Three hours lecture.

*Prerequisite: Three hours of HIST at 100 level.*

A general survey of Latin American history from the creation of independent nations until the present. Emphasis on the economic modernization process and its consequences. (Students cannot receive credit for HIST 317 and HIST 332.)

**HIST 319. The Middle East (C).** (3)  
Three hours lecture.

*Prerequisite: Three hours of HIST at 100 level.*

A survey of the Middle East from the birth of Islam to the present time, focusing on the 19th and 20th centuries. Emphasizes the great diversity in peoples, cultures and historical development despite the overriding influence of Islam. Issues include nationalism and colonialism, the emergence of Israel, modernization and development, oil diplomacy and intraregional rivalries.

**HIST 320. The Vietnam War (A, C).** (3)  
Three hours lecture.

*Prerequisite: Three hours of HIST at 100-level.*

History of the war covering the general background, French and American involvement and the present situation in southeast Asia. Focuses on military, diplomatic and domestic aspects of American involvement.

**HIST 325. African Civilizations (C).** (3)  
Three hours lecture/discussion.

*Prerequisite: Three hours of HIST at 100 level.*

Examines Africa's social, cultural and economic institutions as they have evolved and changed through the ages. Topics include human evolution in Africa, state formation, the



slave trade, early European contacts and colonialism. (Students cannot receive credit for HIST 325 and HIST 377.)

**HIST 326. 20th Century Africa (C). (3)**

Three hours lecture/discussion.

*Prerequisite: Three hours of HIST at 100 level.*

Analysis of the events and trends that have shaped Africa and its peoples in the 20th century. Topics include the rise of nationalism, the impact of the two World Wars, struggles for independence, the impact of the Cold War, efforts at economic, social and political development in the post-Independence era, Africa in the Age of Globalization. (Students cannot receive credit for HIST 326 and HIST 378.)

**HIST 330. African American History to 1865 (A). (3)**

Three hours lecture/discussion.

*Prerequisite: Three hours of HIST at 100-level.*

Examines the experiences of African Americans from the colonial era to the Civil War and Emancipation. Topics include the Atlantic Slave Trade, Colonial Slavery and the Revolutionary Era, Antebellum Slavery, the Antebellum Free African American Population, the Civil War and Emancipation.

**HIST 331. African American History from 1865 (A). (3)**

Three hours lecture/discussion.

*Prerequisite: Three hours of HIST at 100-level.*

Examines the experiences of African Americans from Emancipation to the present. Topics include Reconstruction, Segregation, both World Wars, the Great Depression, the Civil Rights Movement and Status Today.

**HIST 337, 338. English History (B). (3,3)**

Three hours lecture.

*Prerequisite: Three hours of HIST at 100 level.*

Familiarizes students with development of social, religious and political influences that have made the modern British Commonwealth. HIST 337 extends to 1687, HIST 338 after 1687.

**HIST 339. Scotland and Ireland in the Modern Age (B). (3)**

Three hours lecture.

*Prerequisite: Three hours of HIST at 100 level.*

A general survey of Scottish and Irish history in modern times. Topics will range from William Wallace through the Reformation to Bonnie Prince Charlie and from Drougheda through the Great Famine to the Troubles in Northern Ireland. Themes will include state building, identity formation, and relations between Highlanders and Lowlanders, Celts and Saxons, and Protestants and Catholics.

**HIST 341. Renaissance, Reformation and Revolution (B). (3)**

Three hours lecture.

*Prerequisite: Three hours of HIST at 100 level.*

A study of European history from 1300-1815 with emphasis on the Renaissance, the Protestant Reformation, royal absolutism, the Enlightenment, the French Revolution and Napoleon. (Students cannot receive credit for HIST 341 and HIST 410.)

**HIST 342. Revolutionary Europe, 1789 to 1870 (B). (3)**

Three hours lecture and/or discussion.

*Prerequisite: Three hours of HIST at 100 level.*

Study of modern European history from 1789 through 1870. Topics include the French Revolution, Napoleon, Revolutions of 1830 and 1848, Industrial Revolution, Urbanization, Liberalism, Socialism and Nationalism. (Students cannot receive credit for HIST 342 and HIST 426.)

**HIST 343. Europe Since 1870 (B). (3)**

Three hours lecture.

*Prerequisite: Three hours of HIST at 100 level.*

Study of political events which brought on two World Wars, their economic and social impact on Europe; shift of world power away from Europe; adjustments made in consolidation of European community since 1870. (Students cannot receive credit for HIST 343 and HIST 427.)

- HIST 345. Czarist Russia (B, C). (3)**  
 Three hours lecture.  
*Prerequisite: Three hours of HIST at 100 level.*  
 Russian history from formation of the Kiev State through World War I and fall of the Romanovs.
- HIST 346. Soviet Russia (B, C). (3)**  
 Three hours lecture.  
*Prerequisite: Three hours of HIST at 100 level.*  
 Russian history under Soviets. Domestic and diplomatic policies examined as well as Russian social conditions in 20th century.
- HIST 349. Germany: From Bismarck through Hitler (B). (3)**  
 Three hours lecture.  
*Prerequisite: Three hours of HIST at 100 level.*  
 Study of German history from 1870 to 1945. Topics include Bismarck and national unification, World Wars I and II, Hitler and National Socialism. (Students cannot receive credit for HIST 349 and HIST 380.)
- HIST 350. Modern European Intellectual History (B). (3)**  
 Three hours lecture.  
*Prerequisite: Three hours of HIST at 100-level.*  
 Explores the relationship between thought and its social context in Europe since 1750. The course draws on philosophical, scientific, and cultural texts, and focuses on the political implications of philosophical reflections, scientific investigation, and cultural criticism. (Students cannot receive credit for HIST 350 and HIST 429.)
- HIST 352. Virginia History (A). (3)**  
 Three hours lecture.  
*Prerequisite: Three hours of HIST at 100 level.*  
 Comprehensive survey of history in Virginia. (Students cannot receive credit for HIST 352 and HIST 322.)
- HIST 354, 355. American Social History (A). (3,3)**  
 Three hours lecture.  
*Prerequisite: Three hours of HIST at 100 level.*  
 An intensive study of American life, customs, character and social problems. HIST 354 covers the colonial era through the mid-19th century and HIST 355 from mid-19th century to the present.
- HIST 356. History of American Religious Thought (A). (3)**  
 Three hours lecture.  
*Prerequisite: Three hours of HIST at 100 level.*  
 Offers a survey of important developments in American religious thought including Puritanism, Transcendentalism, the Social Gospel, Fundamentalism and NeoOrthodoxy.
- HIST 360. Colonial America (A). (3)**  
 Three hours lecture.  
*Prerequisite: Three hours of HIST at 100 level.*  
 Study of transatlantic expansion of Europe, establishment of English colonies in the New World and their growth and development to 1750. (Students cannot receive credit for HIST 360 and HIST 461.)
- HIST 361. Revolutionary America (A). (3)**  
 Three hours lecture.  
*Prerequisite: Three hours of HIST at 100 level.*  
 Study and analysis of the causes of the Revolution, the War for Independence, the Confederation period and the formation and ratification of the Constitution. (Students cannot receive credit for HIST 361 and HIST 462.)
- HIST 364. American Slavery (A). (3)**  
 Three hours lecture/discussion.  
*Prerequisite: Three hours of HIST at 100-level.*  
 Provides an in-depth study and analysis of the institution of slavery as it developed in the United States. Particular focus will be placed on the institution from the perspective of the slaves themselves. Topics include the

Atlantic Slave Trade, Origins of Slavery, Colonial Slave Systems, Slave Culture and Resistance. (Students cannot receive credit for HIST 364 and HIST 470.)

**HIST 365. Civil War and Reconstruction (A). (3)**

Three hours lecture/discussion.

*Prerequisite: Three hours of HIST at 100 level.*

Study of the period 1850-1877. Social, political, economic, diplomatic and military developments illustrated.

**HIST 368. The Populist and Progressive Era (A). (3)**

Three hours lecture.

*Prerequisite: Three hours of HIST at 100 level.*

Political, economic and social history from 1880 to 1917. Special emphasis on the Gilded Age thesis, the role of Populists in American history and contemporary treatment of the origins and aims of the Progressive movements. (Students cannot receive credit for HIST 368 and HIST 420.)

**HIST 370. The Old South (A). (3)**

Three hours lecture.

*Prerequisite: Three hours of HIST at 100 level.*

Analysis of pre-Civil War development of Southern culture and civilization; attention to political, economic, social and intellectual actors. (Students cannot receive credit for HIST 370 and HIST 481.)

**HIST 371. The New South (A). (3)**

Three hours lecture.

*Prerequisite: Three hours of HIST at 100 level.*

Analysis of internal Southern development since 1865; special attention to political and racial factors. (Students cannot receive credit for HIST 371 and HIST 482.)

**HIST 373. Appalachian History (A). (3)**

Three hours lecture.

*Prerequisite: Three hours of HIST at 100 level.*

Inquiry into uniqueness of the Appalachian

region including the people and their history, livelihood, religion, speech, music, social mores, folklore and politics. Emphasis on 20th century. (Students cannot receive credit for HIST 373 and HIST 310.)

**HIST 381. Recent America (A). (3)**

Three hours lecture.

*Prerequisite: Three hours of HIST at 100 level.*

An in-depth study of major political, diplomatic, economic, social, and cultural developments in U.S. history during recent decades. (Students cannot receive credit for HIST 381 and HIST 457.)

**HIST 385. Public History (\*). (3)**

Three hours lecture.

*Prerequisite: Three hours of HIST at 100 level.*

Introduces students to the field of applied or public history and to the role that historians play in such diverse activities as historic preservation, historic site interpretation and management, historical societies, governmental historical organizations, and museums.

**HIST 392. Special Topics in History (\*). (3)**

One to three hours lecture and/or discussion.

*Prerequisites: At least three hours of history at the 100 level and advance permission of the instructor.*

Detailed study of topics or period of history of current interest for advanced students.

**HIST 466. History Travel Study (\*). (3-6)**

*Prerequisite: Three hours of HIST at 100 level.*

Involves domestic and/or international travel. Student will participate in the investigation of historical topics in relevant locations. One of the goals of the course is to allow students to better understand and relate to historical issues specific to countries and regions by exploring them "on location". This course may be taken multiple times for credit with different topics or areas of study. Designation of the course as counting for area "A", "B", or "C" of the History major will depend

on the course content, and should be established before the student enrolls. This course can count for a maximum of 3 credit hours in any one of those areas of the History major. A maximum of 6 credit hours of travel study may be applied towards the History major. A maximum of 3 credit hours of travel study may be applied towards the History minor or the Social Science major.

**HIST 488. Honors Thesis. (3)**

*Prerequisites: Enrollment in the Honors Academy, completion of all other Honors Academy requirements, a minimum 3.5 GPA in all courses and in history, senior standing.* Conducting research and writing a thesis for a bachelor's degree with honors in history. In order to receive honors credit, the student must receive a grade of "A" or "B" for the thesis. Course may not be repeated.

**HIST 490. Internship. (3-15)**

*Prerequisites: 12 hours history; junior standing, minimum 2.5 GPA, departmental approval.*

A one semester internship with historical agency, society, museum or other relevant institution. Student receives both academic and agency supervision. Course does not count toward fulfillment of the requirements for the history major and may be taken only once. Pass/Fail grading.

**HIST 495. Senior Seminar. (3)**

Three hours seminar.

*Prerequisite: HIST 295 (completed with a "C" or better); History major; senior standing; or permission of instructor.*

A seminar focusing on a topic, or related group of topics in European, United States and/or non-Western history. This seminar will serve as a senior capstone experience for History majors bringing together critical thinking, research, and communication skills. This course will concentrate attention upon a particular period or theme of history. Specific topics of seminars change each semester in accordance with interests of instructors and needs of the department. This course will encourage engagement in primary and secondary sources, historical analysis and argument,

and an understanding of historical interpretation. Completion of a senior writing project is required. HIST 495 is required for all History majors. It may not be used to fulfill coursework in the three fields of required history courses.

**HIST 498. Independent Study (\*). (1-6)**

*Prerequisite: At least three hours of history at the 100 level and advance permission of instructor.*

Student works closely with one member of the department who defines the requirements for the course which vary among instructors. A topic of study is defined and the student works, largely independently, through the semester, to research and report on the topic. Each instructor will define by nature of the content of the study whether it meets History major requirements in Group A, B, or C. See "Independent Study" on page 63.

## HEALTH EDUCATION

**HLTH 111. Personal Health. (3)**

Three hours lecture.

Assists students with life adjustment problems, supplies scientific information stimulates effective behavior and encourages better living. (Students who have earned credit for NURS 111 may not earn credit for HLTH 111). General Education Credit – Health and Wellness.

**HLTH 200. Wellness Lifestyle. (3)**

Two hours lecture, two hours physical activity per week with laboratory assessment.

Provides students with the knowledge and skills to keep themselves healthy and fit for life. The lecture provides information on health knowledge. The activity classes introduce a variety of fitness skills and techniques in order to help the individual pursue lifetime fitness. The laboratory assessments provide personal health/wellness data. All three components are integrated to promote a commitment to a wellness lifestyle. General Education Credit – Health and Wellness.

**HLTH 245. Foundations of Health Education and Health Promotion. (3)**

Three hours lecture.

Serves as an introduction to the profession of health education and health promotion. It will examine underlying factors related to health and introduces the student to the process of managing current health problems in the United States. This course does not meet general education requirements.

**HLTH 250. Consumer Health. (3)**

Three hours lecture.

*Prerequisite: HLTH200.*

Will provide students with the knowledge and skills necessary to distinguish legitimate health information and misinformation. In addition, students will learn to make informed decisions pertaining to fitness and nutrition, major health problems, and other health-related diseases and conditions.

**HLTH 300. Community Health and Epidemiology. (3)**

Three hours lecture.

*Prerequisite: HLTH 245 and STAT 200, or permission of instructor.*

Introduction to community and public health issues. Basic principles of epidemiology will be introduced, and students will use these principles to understand how morbidity and mortality statistics are calculated and interpreted.

**HLTH 320. Health and Safety Foundations. (3)**

Three hours lecture; two hours laboratory.

*Prerequisite: HLTH 200.*

Provides a study of essential factors relating to safe and unsafe behaviors. Psychological and philosophical factors are explored relative to how they can be modified to prevent accidents. The course imparts essential knowledge and develops appropriate attitudes, habits and skills relative to personal safety, first aid and accident prevention. Students may obtain ARC certification and first aid upon successful completion of the course.

**HLTH 321. First Aid and Safety. (3)**

Three hours lecture.

Studies of attitudes, habits and skills relative to safety, first aid and accident prevention. Students may obtain ARC certification in CPR and first aid upon successful completion of the course.

**HLTH 325. Diversity of Health in the United States. (3)**

Three hours lecture.

*Prerequisite: HLTH 300.*

Designed to inform students of diversity issues, health-related disparities, and controversies related to the health of racial, ethnic, and other groups of the population in the United States.

**HLTH 362. Community Health, Diseases, and Disorders. (3)**

Three hours lecture.

*Prerequisite: HLTH 200.*

Provides critical health information future teachers can be expected to share with K-12 school children.

**HLTH 382. Methods of Teaching K-12 Health Education. (4)**

Three hours lecture; two hours field experience.

*Prerequisite: ESHE 210.*

Intended as a companion course with ESHE 382: Methods of Teaching K-12 Physical Education in the teaching concentration, this course provides the fundamental teaching skills needed for successful teaching in elementary, middle, and high school health education.

**HLTH 410. Drivers Education Theory. (3)**

Three hours lecture.

*Prerequisite: Junior status.*

Imparts knowledge, attitudes, skills and methodology needed to teach drivers education. This is the first of two courses required for drivers' education certification.

**HLTH 412. Driver Education-Driver Task Analysis. (3)**

One hour lecture; four hours laboratory.

*Pre- or Corequisite: HLTH 410 and current Virginia driver's license.*



Critical analysis of highway transportation system, the driving task, traffic problems, factors contributing to performance of highway user and knowledge, attitudes and skills necessary for competence of traffic citizens. Develops traffic citizen competencies and introduces methods and materials to develop those competencies in others.

**HLTH 450. Current Health Problems – Topical. (1-3)**

One to three hours.

Students will study the implications of selected current health problems as applied to health education/health promotion. Topics may include but are not limited to Health Counseling, Consumer Health, Worksite Health, Addiction and Public Health. Depending upon the topic, this course may be used to meet requirements for the minor in Women's Studies.

**HLTH 451. Drug Use and Drug Abuse Education. (3)**

Three hours lecture.

A study of the effects of drug use and abuse upon society and the public schools.

**HLTH 453. Human Sexuality. (3)**

Three hours lecture.

*Prerequisite: Junior Standing*

A study of information, education and communication about human sexuality as it relates to people in our society.

**HLTH 460. International Health. (3)**

Three hours lecture.

Analysis of public and international health issues as they relate to the individual, community and society.

**HLTH 465. Exercise, Performance and Nutrition. (3)**

Three hours lecture.

*Prerequisites: HLTH 200 and BIOL 322 or BIOL 310 and BIOL 311.*

Designed to examine the relationships of exercise, physical activity and performance as they relate to nutrition. It includes basic information on human energy systems, weight control, sports nutrition and proper diet.

**HLTH 475. Health Behavior Change. (3)**

Three hours lecture.

*Prerequisite: HLTH 300*

Provides an in-depth study of a variety of health behavior change theories that are used in health interventions. Students shall use the constructs of selected theories to design lesson plans for a behavioral intervention.

**HLTH 480. Interviewing and Helping Skills for Health Educators. (3)**

Three hours lecture.

*Prerequisites: HLTH 475 or permission of instructor.*

Will provide students with the knowledge and skills necessary to promote healthy lifestyle choices with prospective clients in a one-on-one or group setting.

**HLTH 485. Health Program Planning and Evaluation. (3)**

Three hours lecture.

*Prerequisites: ESHE 360, HLTH 475, and senior standing.*

The capstone course for the Health Education and Health Promotion Curriculum. This course requires students to design and evaluate a health promotion program.

**HLTH 488. Final Honors Project. (2-3)**

*Prerequisites: Enrollment in the Honors Academy, completion of all other Honors Academy requirements, a minimum 3.5 GPA in all courses in the Department of Exercise, Sport, and Health Education.*

Project and the topic to be explored will be determined by the student and the faculty member with whom the student works. Honors project may be written or a written-and-performance-based project. In order to receive honors credit, a student must earn a grade of "A" or "B" for the final project. Course may not be repeated.

## HUMAN DEVELOPMENT

### **HUMD 201. Marriage and Alternative Lifestyles.**

(3)

Three hours lecture.

Examines traditional and modern marriage, alternatives to marriage, the choice-making process and factors influencing choices.

### **HUMD 300. Human Growth and Development Birth through Adolescence.**

(3)

Three hours lecture.

Covers critical components of human development from the prenatal stage through adolescence, including theories, ethics, research and applications. Personal, social, professional, and cultural perspectives related to working with children and adolescents are explored. This course does not meet requirements for psychology majors.

### **HUMD 301. Human Sexual Development.**

(3)

Three hours lecture.

Studies various aspects of human sexuality from a development perspective.

### **HUMD 401. The Family.**

(3)

Three hours lecture.

Examines diversity, change and issues within the family unit.

## INTERNATIONAL STUDIES

Courses offered through the Summer Study Abroad Program are described beginning on page 51.

### **INST 101. Introduction to International Studies.**

(3)

Three hours lecture.

An introductory survey of international issues, emphasizing the cross-disciplinary nature of International Studies. General Education credit – International and Intercultural Studies.

### **INST 488. International Studies: Senior Project.**

(3)

Three hours research.

*Prerequisite: Senior standing and approval of the project by the Committee on International Studies.*

Students research and present a senior project appropriate to their particular area of concentration, supervised by a faculty adviser. Students must earn a grade of A or B to graduate with the minor.

### **INST 489. Seminar in International Studies.**

(3)

Three hours seminar.

*Prerequisite: Junior or senior standing and, for non-minors, approval by the course coordinator. Students concentrate on an area of international studies, which varies each semester depending upon the individual instructors.*

Course is cross-disciplinary and team-taught.

### **INST 489A. Study Abroad**

#### **Practicum with AustraLearn.**

(12-18)

*Prerequisites: Consult Director of International Education.*

Open to all majors. This is an affiliate program that allows a student to study a variety of subjects with over a dozen universities in Australia and New Zealand. Affiliate programs allow students to maintain RU student status while abroad thus allowing them continued access to financial aid and future registration at RU. Students must complete an RU Study Abroad Registration and course Approval Form outlining courses to be taken and approved before leaving to study abroad. Grade values are pass/fail and the awarding of specific course credit is determined at the conclusion of the experience and when official transcripts are received by the Registrar's Office. Scholarships are possible.

**INST 489C. Study Abroad Practicum  
with Middlesex University in  
London, England. (12-18)**

*Prerequisites: Consult Program Coordinator.  
Available Fall and Spring. Open to all majors.*

This is an exchange program where participants can study a variety of subjects in England, including Art, Business, Cultural Studies, Education, Health Science, Humanities and Sociology. Exchange programs allow RU students to study abroad while paying RU tuition. Hours earned are treated as if completed at RU for both program completion purposes and financial aid. Students must complete an RU Study Abroad Registration and Course Approval form outlining courses to be taken and approved before leaving to study abroad. Grade values are assigned as pass/fail and the awarding of specific course credit is determined at the conclusion of the experience and when official transcripts are received by the Registrar's Office.

**Faculty Coordinator: See International Education Director**

**INST 489D. Study Abroad Practicum in  
Kansai Gaidai, Japan. (12-18)**

*Prerequisites: Consult Director of International Education. Available Fall, Spring, and academic year. Open to all majors. Limited scholarships may be available.*

As an exchange student in Japan, participants can study almost any subject, including Japanese Business Overseas, Media in Japan, Anthropological Perspectives on Japan, Religion in Japan, and Japanese Art. Instruction is in English for most classes, and Japanese is taught at all levels. Exchange programs allow RU students to study abroad while paying RU tuition. Hours earned are treated as if completed at RU for both program completion purposes and financial aid. Students must complete an RU Study Abroad Registration and Course Approval form outlining courses to be taken and approved before leaving to study abroad. Grade values are assigned as pass/fail and the awarding of specific course credit is determined at the conclusion of the experience and when official transcripts are received by the Registrar's Office.

**Faculty Coordinator: See International Education Director**

**INST 489E. Study Abroad Practicum  
with Kassel Universitat in  
Germany. (12-18)**

*Prerequisite: German is required. Students should be enrolled in, or have completed, German coursework at the 300-level. Open to all majors. Semester or year.*

This is an exchange program that involves a directed program of travel study designed to augment a student's knowledge of the German language and culture. Students will receive a minimum of 15 hours per week of formal language instruction in addition to being involved in a total immersion living situation. Permission by the department chair is required prior to enrollment. Exchange programs allow RU students to study abroad while paying RU tuition. Hours earned are treated as if completed at RU for both program completion purposes and financial aid. Students must complete an RU Study Abroad Registration and Course Approval form outlining courses to be taken and approved before leaving to study abroad. Grade values are assigned as pass/fail and the awarding of specific course credit is determined at the conclusion of the experience and when official transcripts are received by the Registrar's Office.

General Education credit – International and Intercultural Studies.

**Faculty Coordinator: Dr. Philip Sweet**

**INST 489G. Study Abroad Practicum in  
Spain. (12-18)**

Language instruction.

*Prerequisites: Permission of the Spanish program director and the department chair is required. Available Fall or Spring Open to all majors.*

This is an affiliate program whereby students participate in a directed program of travel study designed to augment a student's knowledge of the language, culture, and literature of Spain. Students will receive a minimum of 15 credit hours per week of formal language instruction in addition to being involved in a total immersion living situation. Permission by the department chair required prior to enrollment. Affiliate programs allow students to maintain RU student status while abroad thus allowing them continued access to financial

aid and future registration at RU. Students must complete an RU Study Abroad Registration and course Approval Form outlining courses to be taken and approved before leaving to study abroad. Grade values are pass/fail and the awarding of specific course credit is determined at the conclusion of the experience and when official transcripts are received by the Registrar's Office. General Education credit. International and Intercultural Studies.

**Faculty Coordinator: Dr. Leonor Ulloa or Dr. Lance Gutierrez**

**INST 489I. Study Abroad Practicum with the Université Catholique de l'Ouest in Angers, France. (Semester Exchange Program) (15)**

*Prerequisite: Two years of undergraduate study.*

Available Spring semester, students receive 15 credit hours and pay in-state tuition to Radford University.

A directed program of travel study designed to augment a student's knowledge of the French language and culture. Students will receive a minimum of 15 hours per week of formal language instruction in addition to being involved in a total immersion living situation. Permission by the department chair is required prior to enrollment. Upon successful completion, students will receive a total of 15 credit hours. Grade values are assigned as pass/fail and the awarding of specific course credit is determined at the conclusion of the experience and when official transcripts are received by the Registrar's Office. General Education credit – International and Intercultural Studies.

**Faculty Coordinator: Dr. Eric du Plessis**

**INST 489J. Study Abroad Practicum in Glasgow, Scotland. (12-18)**

*Prerequisites: Music majors only. Students are expected to have an average 3.0 GPA or better to be accepted. Available Spring semester and academic year.*

This is an exchange program whereby music majors with a minimum 3.0 cumulative GPA are invited to apply to study at one of the oldest and most prestigious institutions in the

United Kingdom. Exchange programs allow RU students to study abroad while paying RU tuition. Hours earned are treated as if completed at RU for both program completion purposes and financial aid. Students must complete an RU Study Abroad Registration and Course Approval form outlining courses to be taken and approved before leaving to study abroad. Grade values are assigned as pass/fail and the awarding of specific course credit is determined at the conclusion of the experience and when official transcripts are received by the Registrar's Office.

**Faculty Coordinator: Dr. Bruce Mahin**

**INST 489K. Study Abroad Practicum in Mexico. (6-18)**

Open to all majors. Offered Spring or Fall. A program is also offered in the Summer with slightly different criteria - see the RU Summer Program for additional information. A directed program of travel study designed to augment a student's knowledge of the language and culture of Mexico and Latin America. Grade values are assigned as pass/fail and the awarding of specific course credit is determined at the conclusion of the experience and when official transcripts are received by the Registrar's Office. Maximum of 18 credit hours.

**Faculty Coordinator: Dr. Leonor Ulloa or Dr. Lance Gutierrez**

**INST 489L. Study Abroad Practicum with National Taiwan Normal University, China. (12-18)**

*Prerequisites: Consult Director of International Education.*

Open to all majors. This is an exchange program that allows RU students to study at the National Taiwan Normal University in China while paying RU tuition. Hours earned are treated as if completed at RU for both program completion purposes and financial aid. Students must complete an RU Study Abroad Registration and Course Approval form outlining courses to be taken and approved before leaving to study abroad. Grade values are assigned as pass/fail and the awarding of specific course credit is determined at the conclusion of the experience and when

official transcripts are received by the Registrar's Office.

**INST 489M. Study Abroad Practicum with AIFS. (12-18)**

*Prerequisites: Consult Director of International Education.*

This is an affiliate program that affords students the opportunity to study a variety of subjects through selected universities. Affiliate programs allow students to maintain RU student status while abroad thus allowing them continued access to financial aid and future registration at RU. Students must complete an RU Study Abroad Registration and course Approval Form outlining courses to be taken and approved before leaving to study abroad. Grade values are pass/fail and the awarding of specific course credit is determined at the conclusion of the experience and when official transcripts are received by the Registrar's Office.

**INST 489N. Study Abroad Practicum with AIU-London. (12-18)**

*Prerequisites: Consult Director of International Education.*

This is an affiliate program for study abroad in London. Affiliate programs allow students to maintain RU student status while abroad thus allowing them continued access to financial aid and future registration at RU. Students must complete an RU Study Abroad Registration and course Approval Form outlining courses to be taken and approved before leaving to study abroad. Grade values are pass/fail and the awarding of specific course credit is determined at the conclusion of the experience and when official transcripts are received by the Registrar's Office.

**INST 489O. Study Abroad Practicum with Salzburg College, Austria. (12-18)**

*Prerequisites: Consult Director of International Education.*

Open to all majors. This is an affiliate program with Salzburg College in Austria that provides students with the opportunity to study courses in the liberal arts, business and education. Instruction is in English. Affiliate programs allow students to maintain RU

student status while abroad thus allowing them continued access to financial aid and future registration at RU. Students must complete an RU Study Abroad Registration and course Approval Form outlining courses to be taken and approved before leaving to study abroad. Grade values are pass/fail and the awarding of specific course credit is determined at the conclusion of the experience and when official transcripts are received by the Registrar's Office.

**INST 489Z. Non-RU Study Abroad Practicum. (6-18)**

*Prerequisite: Pre-approval by Director of International Education.*

Utilized as a means to acknowledge registration in a non-RU affiliated Study Abroad program that has been approved on an individual basis by the Director of International Education and for which a formal articulation agreement has been generated between the financial aid office of the participating university and RU. Special rules apply, so interested parties are strongly encouraged to consult with the University Registrar or the Director of Financial Aid for additional information. Grade values are assigned as pass/fail and the awarding of specific course credit is determined at the conclusion of the experience and when official transcripts are received by the Registrar's Office. If pre-approval has not been attained prior to the student's participation abroad, the student will not be considered enrolled at Radford University and credit will only be considered under the traditional transfer credit evaluation process.

## **INFORMATION TECHNOLOGY**

**ITEC 100. Introduction to Information Technology. (3)**

Three hours lecture, or two hours lecture and two hours lab.

Introduces students to the fundamental concepts in information technology and mathematical reasoning that provide the technical underpinning for state-of-the-art applications. Widely used computer applications, including word processing, spreadsheets, databases,



presentation software, computer communications and networking are studied. Material is presented through lecture, demonstration, and class discussion with supporting experiences to reinforce and practice the presented material. Students have a choice of two delivery modes. Please refer to Part C of the course syllabus for details about the delivery modes. Students who have received credit from INSY 181, CPSC 106, or CPSC 106P may not receive credit for ITEC 100. General Education – Mathematical Sciences.

**ITEC 109. Problem Solving and Programming. (3)**

Two hours lecture; two hours lab.

An introduction to problem solving using programming. Topics include a survey of techniques used in problem solving, methods for representing the solution of a problem as an algorithm and the implementation of an algorithm as a computer program. Students who have received credit for CPSC 109, CPSC 120, or ITEC 120 cannot subsequently receive credit for ITEC 109. ITEC 109 does not meet requirements for the ITEC major. This course has been approved for General Education—Mathematical Sciences.

**ITEC 110. Principles of Information Technology. (3)**

Three hours lecture.

Provides an introduction to information technology, to the principles that underlie information technology, problem solving, and to the fields that make up information technology. Students who have received credit for INSY 281 or CPSC 109 may not receive credit for ITEC 110.

**ITEC 120. Principles of Computer Science I. (4)**

Three hours lecture; two hours laboratory.

A rigorous, systematic approach to object oriented problem solving and programming. Students who have received credit for CPSC 120 may not receive credit for ITEC 120. General Education credit – Mathematical Sciences.

**ITEC 122. Discrete Mathematics. (3)**

Three hours lecture.

*Prerequisite: ITEC 120 (Grade of “C” or better) and MATH 125 or 126 or 138 or 140 or 151 or 155.*

An introduction to discrete mathematical concepts including set theory, finite state machines, and induction. Students who have received credit for CPSC 122 may not receive credit for ITEC 122.

**ITEC 198. Programming Language. (1)**

One hour lecture.

*Prerequisite: Refer to the course description on file in the Department office.*

A self-paced course in which students that have had an introduction to programming can learn and apply another language. Languages that have been offered in the past include: FORTRAN, COBOL, LISP, C, Prolog, Shell, C++, Ada, and Visual Basic. Course may be taken up to four times with a different language each time.

**ITEC 202. Web Technology for End Users. (3)**

Three hours lecture.

*Prerequisite: ITEC 100.*

A study of the technologies used on the World Wide Web to produce static and dynamic web pages. The course is targeted at non-IT professionals who nonetheless may have significant roles in the design, development, content, or implementation of web sites.

**ITEC 210. Design and Development of Visual Systems. (3)**

Three hours lecture.

*Prerequisite: ITEC 120 (Grade of “C” or better).*

Introduction to the principles of visual programming including general software engineering principles, user interface design principles, and application of visual programming language. Students who have received credit for CPSC 210 cannot receive credit for ITEC 210.

**ITEC 220. Principles of Computer Science II.**

(4)

Three hours lecture; two hours lab.

*Prerequisite: ITEC 120 (Grade of "C" or better).*

Continuation, from ITEC 120, of the development of a disciplined approach to programming, with emphasis on data abstraction. Students who have received credit for CPSC 124 cannot receive credit for ITEC 220.

**ITEC 225. Web Programming I.**

(3)

Three hours lecture.

*Prerequisite: ITEC 120 (Grade of "C" or better).*

An introduction to web programming for those students that already understand programming fundamentals. Includes an introduction to a variety of web based programming languages as well as an introduction to operating system environments that support web applications. Students who have received credit for CPSC 103 or CPSC 107 cannot receive credit for ITEC 225.

**ITEC/GEOG 250. Advanced GIS (T).**

(3)

Three hours lecture.

*Prerequisite: Basic knowledge of Internet usage.*

Course is designed to introduce non-technical students in geography as well as students from other disciplines to the general concepts of Geographic Information Systems (GIS). Course will involve the use of Internet-available technologies to practice and work with GIS technologies.

**ITEC 301. Information Technology Management.**

(3)

Three hours lecture.

*Prerequisite: ITEC 100.*

A study of principles, techniques, and tools for the management of information including database management systems, decision support systems, and data warehouses.

**ITEC 310. Programming in C and Unix.**

(3)

Three hours lecture.

*Prerequisites: ITEC 110 and ITEC 220 (Both courses require grade of "C" or better).*

Introduces the C programming language including C library routines and the system call interface to the Unix operating system. File and terminal I/O, process control, and inter-process communication are also covered.

**ITEC 315. Graphical User Interface Design and Implementation.**

(3)

Three hours lecture.

*Prerequisite: ITEC 225.*

A study of graphical user interface (GUI) design and implementation. Covers platform independent design concepts, frameworks and environments for GUI development, and problems and solutions associated with GUIs in a web environment. One or more integrated development environments (IDE) will be studied in depth. Students implement GUIs in a series of software development tasks.

**ITEC 320. Procedural Analysis and Design.**

(3)

Three hours lecture.

*Prerequisites: ITEC 220 and ITEC 110 (Both courses require grade of "C" or better).*

An introduction to procedural analysis, design and programming for students who have prior exposure to object technology. Includes an introduction to a procedural language and procedural methods.

**ITEC 324. Principles of Computer Science III.**

(3)

Three hours lecture.

*Prerequisites: ITEC 110 and ITEC 220 (Both courses require grade of "C" or better).*

Continuation, from ITEC 220, of the development of a disciplined approach to programming with emphasis on data abstraction.

**ITEC 325. Web Programming II.**

(3)

Three hours lecture.

*Prerequisite: ITEC 225 (Grade of "C" or better) and ITEC 340.*

Covers the continuation of Web Programming I for tools, methods, and technologies for designing and producing multimedia pieces. More basic technologies and tools and methods for designing and managing world wide web programming and development are discussed. Emphasis is on the role of today's

e-business and world wide web in collaborative work. Practical experience in designing, implementing and maintaining hypermedia world wide web systems is planned.

**ITEC 330. Numerical Analysis. (3)**

Three hours lecture.

*Prerequisite: MATH 251 and ITEC 120.*

A study of algorithms useful in obtaining numerical solutions of problems on a digital computer. Students who have received credit for CPSC 330 cannot receive credit for ITEC 330.

**ITEC 340. Database I. (3)**

Three hours lecture.

*Prerequisite: ITEC 220 and ITEC 110 (Both courses require grade of "C" or better).*

A first introduction to database systems including the relational model, SQL, security, database design, and stored procedures. Students may not receive credit if they have previously taken INSY 383, 483 or CPSC 440.

**ITEC 350. Introduction to Computer Networking. (3)**

Three hours lecture.

*Prerequisite: ITEC 110 and ITEC 220 (Both courses require grade of "C" or better).*

Introduction to physical and logical networking concepts including the ISO reference model, topologies, protocols, local and long-haul networks. Students who have received credit for CPSC 450 or INSY 371 may not receive credit for ITEC 350.

**ITEC 352. Computer Organization. (3)**

Three hours lecture.

*Prerequisite: ITEC 122 and ITEC 220 (Grade of "C" or better).*

Covers relationships among computer components, structures and systems, hardware features, costs, capabilities. Students who have received credit for CPSC 351 or 352 may not receive credit for ITEC 352.

**ITEC 360. Data Structures and Analysis of Algorithms. (3)**

Three hours lecture.

*Prerequisites: ITEC 122, ITEC 320, ITEC 324 and either MATH 251 or 255.*

Includes data structures, concepts and algorithms used in the solution of nonnumeric problems; applications to data management systems, file organization, information retrieval, list processing and programming languages. Students who have received credit for CPSC 360 may not receive credit for ITEC 360.

**ITEC 363. Integration of Software. (3)**

Three hours lecture.

*Prerequisite: ITEC 100.*

Designed to provide students with advanced microcomputer applications skills in word processing, spreadsheets, databases, and multi-media presentations. Major emphasis is placed on the integration of software packages to complete business applications. Students who have received credit for INSY 383 may not receive credit for ITEC 363.

**ITEC 370. Software Engineering I. (3)**

Three hours lecture.

*Prerequisite: ITEC 110 and ITEC 220 (Both courses require grade of "C" or better).*

An introduction to requirements analysis, specification, and design strategies for both procedural and object oriented approaches to development. Students who have received credit for CPSC 271 or INSY 481 may not receive credit for ITEC 370.

**ITEC 371. Operating Systems. (3)**

Three hours lecture.

*Prerequisite: ITEC 352.*

Principles of operating systems including interaction between operating systems and architecture of computer systems with emphasis on resource management. Students who have received credit for CPSC 371 may not receive credit for ITEC 371.

**ITEC 380. Organization of Programming Languages. (3)**

Three hours lecture.

*Prerequisites: ITEC 320 and ITEC 324.*

Programming language constructs, run-time behavior of programs, desirable features of languages, design and implementation considerations to obtain those features. Students who have received credit for CPSC 380 may not receive credit for ITEC 380.

**ITEC 400. Foundations of Computer Science. (3)**

Three hours lecture.

*Prerequisite: Senior standing.*

A rigorous, systematic approach to object oriented problem solving and programming. This is a leveling course for students who do not have either the educational or experience background to start the Information Technology (IT) courses for the IT concentration for a Masters in Education (MSED) program. ITEC 400 will not count as graduate credit towards the ITEC Concentration for the MSED. Undergraduate students in the College of Information Science and Technology may not take this course for credit towards their degree.

**ITEC 410. Modeling and Simulation. (3)**

Three hours lecture.

*Prerequisites: ITEC 320 and STAT 301.*

An introduction to mathematical modeling and the simulation of models using a high-level programming language. Students who have received credit for CPSC 410 may not receive credit for ITEC 410.

**ITEC 420. Computability Theory and Formal Languages. (3)**

Three hours lecture.

*Prerequisite: ITEC 122.*

A survey of attempts to model computation and formal language concepts. Students who have received credit for CPSC 420 may not receive credit for ITEC 420.

**ITEC 425. Advanced Web Development. (3)**

Three hours lecture.

*Prerequisite: ITEC 325.*

An advanced development class in Web programming for those students that have completed the Web Programming I and II sequence. Includes the applied study of Web services, Web security, and other current topics in Web development.

**ITEC 430. Computer Graphics. (3)**

Three hours lecture.

*Prerequisite or corequisite: ITEC 360.*

A survey of the data structures and algorithms used in computer graphics. Students who have received credit for CPSC 430 may not receive credit for ITEC 430.

**ITEC 441. Database II. (3)**

Three hours lecture.

*Prerequisite: ITEC 340.*

A continuation of the introduction to the techniques used in the modeling and manipulation of large sets of data. An in-depth coverage of triggers, assertions, PS/SQL, advanced modeling concepts, normalization, etc.

**ITEC 442. Data Warehousing, Mining, and Reporting. (3)**

Three hours lecture.

*Prerequisites: ITEC 340.*

A continuation of principles of database systems and the introduction to techniques for the modeling and manipulation of large data sets. This course provides in-depth coverage of data warehousing, data mining, and reporting.

**ITEC 451. Network Design and Analysis. (3)**

Three hours lecture.

*Prerequisites: ITEC 122, ITEC 350, and STAT 301.*

Advanced concepts in networking including network performance, design, administration, security, and tuning. Students who have received credit for CPSC 450 may not receive credit for ITEC 451.

**ITEC 452. Distributed Computing. (3)**

Three hours lecture.

*Prerequisites: ITEC 310, ITEC 350, and ITEC 371.*

Introduction to analysis and design of distributed systems.

**ITEC 460. Translator Design and Construction. (3)**

Three hours lecture.

*Prerequisites: ITEC 352 and ITEC 380.*

Logical design of and construction techniques for compilers and interpreters. Students will complete a major project implementing a compiler or an interpreter. Students who have received credit for CPSC 460 may not receive credit for ITEC 460.

**ITEC 471. Software Engineering II. (3)**

Three hours lecture.

*Prerequisites: ITEC 320, ITEC 324, and ITEC 370.*

A continuation of principles of software engineering and the design and implementation strategies appropriate for large software projects. Includes the use of CASE tools, extreme programming methods, software metrics, verification, validation, quality assurance, and a further exploration of the principles of human-computer interaction.

**ITEC 472. Software Engineering III. (3)**

Three hours lecture.

*Prerequisite: ITEC 471.*

A continuation of principles of software engineering and the design and implementation strategies appropriate for large software projects. This course is intended to provide a large-system capstone experience.

**ITEC 480. Artificial Intelligence. (3)**

Three hours lecture.

*Prerequisite: ITEC 122 and ITEC 324.*

An introduction to the study of intelligence as computation. Students who received credit for CPSC 480 may not receive credit for ITEC 480.

**ITEC 485. Decision Support Systems. (3)**

Three hours lecture.

*Prerequisites: ITEC 100 and ITEC 340.*

Data and Modeling solutions to semi-structured business problems including expert systems, executive information systems, on-line analytical processing, natural language interfaces, and ad-hoc query and reporting tools. Students who received credit for INSY 482 may not receive credit for ITEC 485.

**ITEC 488. Honors Capstone Project. (3)**

Three hours lecture.

*Prerequisites: Completion of all the required information technology courses up to the 300-level courses; enrollment in the Honors Program; senior standing.*

To earn a bachelor's degree with honors in Computer Science and Technology or Information Sciences and Systems, a student must complete a research project, write a report

and make an oral presentation of the work done. In order to be eligible for a degree with honors, a student must earn a grade of "A" or "B" for the final project. Course may not be repeated.

**ITEC 490. Senior Seminar. (1)**

One hour lecture.

*Prerequisite: Senior standing in computer science and technology or information science and systems.*

A seminar series designed to aid in the transition from the university to work. Includes topics in resume preparation, research, and ethics.

**ITEC 493. Selected Topics in Information Technology. (1-3)**

One to three hours lecture.

*Prerequisite: Permission of instructor.*

Selected topics in Information Technology, as student and faculty interest demands. A new course description is available each time the course is offered. Interested students should contact the course instructor before registering. This course may be taken more than once for credit with a different topic. This course may not be used to satisfy a General Education requirement or a requirement for the major or minor, which includes technical electives. This course may be used for a general elective or a B.S. elective.

**ITEC 495. Information Systems Capstone. (3)**

Three hours lecture.

*Prerequisites: Senior standing, Information Science and Systems major, ITEC 225, ITEC 340, ITEC 370, FINC 331, and MGNT 357.*

Advanced topics in information systems that build on previous courses in software engineering, web programming, database and business. This course is intended to provide a large information system capstone experience.

**ITEC 498. Independent Study. (1-6)**

*Prerequisite: Permission of instructor.*

Independent Study courses are designed to permit students to investigate independently specific problems or areas of interest under the direction of a faculty adviser. This course



may not be used to satisfy a General Education requirement, a B.S. requirement, or a requirement for the major or minor, which includes technical electives. This course may be used only for a general elective. See “Independent Study” on page 63.

For a complete listing of graduate courses, consult the *Radford University Graduate Catalog*.

## LATIN

### **LATN 101. Elementary Latin I. (4)**

Four hours lecture and language practice. Study of basic language structures and forms, pronunciation of classical Latin, English derivatives, and various aspects of Roman civilization. General Education credit - International and Intercultural Studies.

### **LATN 102. Elementary Latin II. (4)**

Four hours lecture and language practice. *Prerequisite: LATN 101 or permission of the instructor.*

Continued study of basic language structures and forms, pronunciation of classical Latin, English derivatives and Roman civilization. General Education credit - International and Intercultural Studies.

### **LATN 201. Intermediate Latin. (4)**

Four hours lecture and language practice. *Prerequisite: LATN 102 or two years of Latin in high school.*

Review of basic Latin grammar and syntax along with prose readings adapted to the level; study of relevant aspects of Roman civilization. General Education credit - International and Intercultural Studies.

### **LATN 315. Advanced Grammar. (3)**

Three hours lecture. *Prerequisite: LATN 350 or concurrent enrollment of LATN 350.*

Intensive study of Latin grammar and syntax. Recommended for students planning to teach Latin.

### **LATN 350. Latin Literature. (3)**

Three hours lecture.

*Prerequisite: LATN 201 or permission of the instructor.*

Study of a major Latin author or genre. Topic will vary. Credit may be received each time topic is different. General Education credit – International and Intercultural Studies.

### **LATN 460. Special Topics. (3-4)**

Three or four hours lecture.

*Prerequisites: LATN 350 and junior standing.* Advanced study of topics in language, literature or culture. Readings in Latin. May be taken twice for credit.

## LEADERSHIP

### **LEAD 110. Emerging Leadership. (3)**

*Prerequisite: Minimum of 2.0 GPA*

The course is designed to expose students to new perspectives on leadership and to encourage students to recognize their own potential as leaders. Through class discussions, readings, speakers and interactions, both on campus and in the community, students will be introduced to leadership theories, traits, and skills. This course will encourage students to be creative leaders, to accept and celebrate diversity, to recognize the importance of risk and change, and to see the potential in every person to be a leader.

## MATHEMATICS

### **MATH 111. Math and Human Development. (3)**

Three hours lecture.

Covers a variety of topics in number systems, operations, data analysis, and probability. The content of this course adheres to the NCTM Standards and the Virginia Standards of Learning where they can appropriately be applied. Will not satisfy requirements for a major in mathematics. Students who have received credit for MATH 103 may not also receive credit for MATH 111. General Education Credit—Mathematical Sciences.

**MATH 112. Math and Human Development II.**

(3)

Three hours lecture.

Covers a variety of topics in geometry and basic algebra. The content of this course adheres to the NCTM Standards and the Virginia Standards of Learning where they can appropriately be applied. Will not satisfy requirements for a major in mathematics. Students may not take MATH 112 for credit unless they have previously passed MATH 111 or MATH 103. Students who have received credit for MATH 109 may not also receive credit for MATH 112. General Education Credit—Mathematical Sciences.

**MATH 114. Math and Human Society.**

(3)

Three hours lecture.

Core Math for the Social Sciences. Topics covered include logic, argument, fallacy; scale and magnitude; spherical geometry; statistical reasoning; mathematical modeling for exponential growth and decay, finance, and forecasting; game theory and voting systems; principles of computation. Will not satisfy requirements for a major in mathematics. General Education Credit—Mathematical Sciences.

**MATH 116. Math and Humanity.**

(3)

Three hours lecture.

Core Math for the Humanities. Mathematics is studied in its historical and cultural context, as a creative human endeavor. Topics covered include the numerical and geometrical genesis of mathematics, formal and rhetorical logic, the developments leading to modern algebra and analysis, the development of modern logic, sets and infinity, and the mathematics of computation. Will not satisfy requirements for a major in mathematics. General Education Credit—Mathematical Sciences.

**MATH 125. Finite Mathematics for Business and Economics.**

(3)

Three hours lecture.

*Prerequisite: Two years of high school algebra (or equivalent).*

Contains an introduction to the concepts of functions and graphing, with focus on linear, quadratic, exponential and logarithmic

functions. Applications contain simple linear models, linear systems, optimization with quadratic functions and problem solving in finance such as compound interest and annuities. Calculators and/or EXCEL will be used in problem solving. Will not satisfy requirements for a major in mathematics. General Education Credit—Mathematical Sciences.

**MATH 126. Business Calculus.**

(3)

Three hours lecture.

*Prerequisite: Four years of high school mathematics.*

An introduction to calculus with particular emphasis on applications in business and economics. Topics include functions, limits and continuity, differentiation, exponential functions and logarithms, anti-derivatives and the integral. Students who wish to strengthen their mathematics skill before taking MATH 126 are advised to enroll in MATH 125. Will not satisfy requirements for a major in mathematics. Students who have received credit for MATH 121 or for MATH 151 may not also receive credit for MATH 126. General Education Credit—Mathematical Sciences.

**MATH 132. Honors Applications of Mathematics.**

(3)

Three hours lecture.

*Prerequisite: Honors Academy membership.*

An introduction to the application of mathematical ideas for Honors students. Topics vary. This course can be taken more than once with different topics. General Education Credit—Mathematical Sciences.

**MATH 135. Fundamentals of Geometry.**

(3)

Three hours lecture.

*Prerequisite: MATH major or permission of instructor.*

Introduces core concepts and principles of Euclidean geometry, with some attention also given to non-Euclidean geometry. Emphases are placed on the use of spatial visualization and geometric modeling to explore and analyze geometric shapes, structures, and their properties from both formal and informal perspectives. Course content adheres to the National Council of Teachers

of Mathematics and Standards and the Virginia Standards of Learning where they can appropriately be applied. Students who have earned credit for MATH 109 may not subsequently earn credit for MATH 135.

**MATH 137. College Algebra. (3)**

Three hours lecture.

A systematic approach to the concepts of algebra. Topics Include basic properties of numbers systems, equations and inequalities, systems of equations, functions and graphs, polynomials and rational functions, exponentials and logarithms. Will not satisfy requirements for a major or a minor in mathematics. Credit for MATH 137 will not be granted after a student has received credit for any of the following: MATH 126, 138, 151, 152, 251, 252 or the equivalent transfer course. Students who have earned credit for MATH 104 may not subsequently earn credit for MATH 137. General Education Credit - Mathematical Sciences.

**MATH 138. Precalculus Function**

**Analysis. (3)**

Three hours lecture.

*Prerequisite: A minimum of two years high school algebra (or equivalent).*

Basic concepts of functions and related real number algebra and graphing, especially polynomial, exponential and logarithmic functions. Will not satisfy requirements for a major in mathematics. General Education Credit - Mathematical Sciences.

**MATH 140. Trigonometry and Analytic Geometry. (3)**

Three hours lecture.

*Prerequisite: Adequate algebra skills necessary.*

Fundamental concepts of plane trigonometry and of plane analytic geometry. Trig functions, trig identities, solving triangles, analytic geometric proofs, conics, parametric equations. Will not satisfy requirements for a major in mathematics. General Education Credit - Mathematical Sciences.

**MATH 142. Discrete Mathematics. (3)**

Three hours lecture.

*Prerequisite: MATH major or permission of instructor.*

Introduces the student to discrete structures and mathematical tools which are used to represent, analyze, and manipulate discrete objects. These include sets, functions, relations, graphs, combinatorics, discrete probability, recurrence relations, mathematical induction, symbolic logic, and graphs and trees.

**MATH 151:152. Calculus and Analytic Geometry I and II. (3:3)**

Three hours lecture. Three hours credit for each course.

*Prerequisite: MATH 140 or four years of high school mathematics, including some trigonometry.*

The first part of this course covers the concepts of functions, limits and continuity of functions the derivative, and rules and applications of differentiation. The second part deals with the Riemann integral, the fundamental theorem of calculus, methods of integration, and applications. Mathematical software packages and graphing calculators will be used as illustrative and problem-solving devices. General Education Credit - Mathematical Sciences.

**MATH 251:252. Calculus and Analytic Geometry III and IV. (3:3)**

Three hours lecture, three hours credit for each course.

*Prerequisite: MATH 152.*

The first part of this course covers sequences and series, Taylor and power series, parametric curves, geometry higher dimensional spaces, and vector-valued functions. The second part deals with functions of several variables, discussion of limits, continuity, and differentiability, multivariable optimization, iterated integrals and applications to volumes, line integrals and Green's Theorem. Mathematical software packages and graphing calculators will be used as illustrative and problem solving devices.

**MATH 260. Applied Linear Algebra and Matrices. (3)**

Three hours lecture.

*Prerequisite: Any of MATH, 125, 126, 137, 138, 140, 151.*

Computational and theoretical aspects of systems of linear equations, matrices, determinants, and eigenvalues, and their applications to problem solving. Further topics include finite dimensional real vector spaces, bases and orthogonality, and applications, such as linear programming, quadratic forms and least squares problems. Computer software such as MATLAB will be used in this course. General Education Credit - Mathematical Sciences.

**MATH 300. Mathematical Foundations. (3)**

Three hours lecture.

*Prerequisites: MATH 142 or ITEC 122, and MATH 152 and any MATH course numbered 200 or above.*

A first course in the foundations of modern mathematics. The topics covered include propositional and predicate logic, set theory, the number system, induction and recursion, functions and relations, and computation. The methods of proof and problem solving needed for upper-division coursework and the axiomatic basis of modern mathematics are emphasized throughout the course. The level of the course is challenging but appropriate for students with a minimum of three semesters of college mathematics. Students who have earned credit for MATH 200 may not subsequently earn credit for MATH 300.

**MATH 312. Elementary and Middle Grades Mathematics for Social Analysis. (3)**

Three hours lecture.

*Prerequisites: MATH 111 and MATH 112, or permission of instructor.*

The primary purpose of this course is to prepare future and current elementary and middle school teachers to critically analyze and explore the world using mathematics. Students will conduct meaningful and carefully reasoned real-world investigations and critiques using elementary and middle school mathematics and also communicate the results

of these problem-posing and problem-solving investigations both orally and in writing. This course examines the interplay among mathematical topics and integrates mathematics across the curriculum. Students are introduced to the National Council of Teachers of Mathematics (NCTM) Standards and to the Virginia Standards of Learning. Mathematical content emphases are also based on the NCTM Standards and include topics in number operations, algebraic thinking, geometry, measurement, and data analysis and probability. Students who have earned credit for MATH 315 may not subsequently earn credit for MATH 312.

**MATH 321. History of Mathematics. (3)**

Three hours lecture.

*Prerequisites: MATH 135, MATH 142 or ITEC 122, and MATH 251.*

The pursuit of mathematics as a human endeavor, illustrating how mathematics has developed over the past 5,000 years including the contributions of diverse cultures. This course will cover not only the evolution and historical perspective of the development of mathematics, but will include a study of the mathematics itself.

**MATH 325. Special Methods-Secundary Mathematics Education. (3)**

Three hours lecture.

*Prerequisite: STAT 301 and MATH 251.*

A special methods course in the teaching of mathematics at the secondary level. Will not satisfy requirements for a major in mathematics except for those in the Bachelor of Science degree program pursuing certification to teach. Special emphasis will be placed on the role of technology in teaching, problem solving, and representation of mathematics concepts.

**MATH 403. Foundations of Geometry. (3)**

Three hours lecture.

*Prerequisite: MATH 300.*

Studies systems of postulates in a comparison of Euclidean and non-Euclidean geometries; geometric structures such as incidence geometry and transformational geometries. The content of this course adheres to the

NCTM Standards and the Virginia Standards of Learning where they can appropriately be applied.

**MATH 412. Theory of Numbers. (3)**

Three hours lecture.

*Prerequisite: MATH 300.*

Study of divisibility, primes, congruences, diophantine equations and quadratic residues.

**MATH 423:424. Abstract Algebra I, II. (3:3)**

Three hours lecture.

*Prerequisite: MATH 300.*

A study of the structure of algebraic systems with emphasis on groups, rings, integral domains, and fields.

**MATH 428. Complex Variables. (3)**

Three hours lecture.

*Prerequisite: MATH 252.*

A study of elementary functions with a complex domain and techniques of differentiation and integration of complex functions.

**MATH 430:431. Advanced Calculus. (3:3)**

Three hours lecture.

*Prerequisite: MATH 252.*

A systematic modern approach to the differential and integral calculus of functions of one and several variables, including standard theorems and analytical techniques of mathematical analysis.

**MATH 436. Numerical Analysis. (3)**

*Prerequisite: MATH 252.*

A study of algorithms for approximate solutions of scientific computing problems.

**MATH 437. Differential Equations. (3)**

*Prerequisite: MATH 252.*

A study of analytic techniques, numerical methods, and computer software for differential equations.

**MATH 441. Topology. (3)**

Three hours lecture.

*Prerequisite: MATH 252.*

An introduction to point-set topology, with emphasis on the study of functions and the real line.

**MATH 445:446. Operations Research. (3:3)**

Three hours lecture.

*Prerequisites: MATH 445: MATH 152; MATH 446: STAT 301 and MATH 445.*

Study of mathematical models used in business organizations or any system of operations. Topics include linear programming, game theory and inventory theory.

**MATH 451. Mathematical Logic. (3)**

Three hours lecture.

*Prerequisite: MATH 403 or MATH 423 or MATH 430.*

An introduction to mathematical logic, including the completeness theorem for the predicate calculus.

**MATH 460. Linear Algebra. (3)**

Three hours lecture.

*Prerequisite: MATH 252.*

A study of vector spaces, linear transformations, matrix representations, determinants and characteristic roots.

**MATH 471. Combinatorics and Graph Theory. (3)**

Three hours lecture.

*Prerequisite: ITEC 122 and MATH 460.*

Fundamental ideas of combinatorics and graph theory, permutations and combinations, inclusion and exclusion, ordinary generating functions, recurrence relations, graphs and digraphs, trees and networks.

**MATH 480. Topics in Mathematics. (3)**

Three hours lecture.

*Prerequisite: Permission of instructor.*

Special topics in mathematics, as student and faculty interest demands; syllabus is available each time the course is offered. Interested students should contact the department chairperson and the course instructor before registering. May be taken again for credit with a different topic.

**MATH 488. Final Honors Project. (2-3)**

*Prerequisite: Major in mathematics and/or statistics, enrollment in the Honors Academy, completion of all other Honors Academy requirements, a minimum 3.5 GPA in all*



*courses and in mathematics and statistics, senior standing.*

Topic to be explored determined by the student, the faculty member with whom the student works and the department. Topics may be chosen from the areas of analysis, algebra, topology or applied mathematics. In order to receive honors credit, a student must earn a grade of "A" or "B" for the final project. Course may not be repeated. See Honors Academy on p. 92.

**MATH 495. Techniques of Analysis. (3)**

*Prerequisite: Graduate standing in computational sciences.*

Basic techniques from analysis and linear algebra necessary for graduate work in computational sciences. This course gives students with some technical background the analytical tools necessary for graduate work in the computational sciences. Students may not earn credit for both MATH 431 and MATH 495.

**MATH 498. Independent Study. (1-6)**

See Independent Study on p. 63.

**MATH 499. Internship in Mathematics. (1-6)**

*Prerequisite: Junior or senior standing; at least a 2.5 GPA overall, at least a 2.5 GPA in mathematics and permission of instructor.*

Applications of theory learned in the classroom to real-world mathematical problems in a professional setting. Provides a platform for building teamwork skills and solving interdisciplinary problems.

## MANAGEMENT

**MGNT 101. Introduction to Business and Entrepreneurship. (3)**

Three hours lecture.

Provides a basic background for the study of businesses and entrepreneurship, and promotes an understanding of the fundamental business practices. Note: Not open to juniors and seniors except by permission of instructor.

**MGNT 221. Fundamentals of Management. (3)**

Three hours lecture.

Designed to provide non-business majors with basic management skills which can be used to increase their effectiveness as managers in a wide variety of professions. Note: Not open to junior or senior level business majors. Business majors must have completed the Pre-business program (p. 155) and have been admitted to a business major, in addition to having completed any specific prerequisite or co-requisite courses, to be eligible to take 300- or 400-level management courses. Students in other majors may take 300- or 400-level management courses if they have reached junior or senior standing and have completed any specific prerequisite or co-requisite courses.

**MGNT 250. Entrepreneurship and Innovation. (3)**

Three hours lecture.

Provides an overview of the principles, theories, and practice of entrepreneurship and innovation. Emphases will be placed on the student understanding how past entrepreneurs have used innovation methods to launch entrepreneurial ventures; and how the student can use their own creativity to launch entrepreneurial ventures.

**MGNT 322. Organizational Behavior. (3)**

Three hours lecture.

*Prerequisite: Junior standing.*

A study of behavior of individuals and groups within organizations and of the organization itself. Intended to develop in managers a greater awareness of the problems and opportunities in managing human resources in organizations. A business core requirement.

**MGNT 323. Human Resource Management. (3)**

Three hours lecture.

*Prerequisite: Junior standing.*

Introduction to the most important functions of human resource management, including personnel planning, EEO laws, recruitment, job analysis, selection, performance appraisal, compensation, and training.

**MGNT 326. Cultural Diversity and International Management.**

(3)

Three hours lecture.

*Prerequisite: Junior standing.*

Explores intercultural issues related to work organization and management. The course will attempt to build intercultural understanding, sensitivity, and skills. The emphasis is on intercultural awareness, effective work performance, and a global perspective of business and careers, especially as pertaining to international human resource management. The course also explores the international strategic planning process, including environmental scanning, internal resource analysis, and goal formulation.

**MGNT 330. Managing Technology and Information Resources.**

(3)

Three hours lecture.

*Prerequisite: Junior standing.*

Topics covered include information technologies, information development, and the impact of information technology on organizations at a variety of levels, from personal information systems to enterprise information architectures. Attention is given to the use of information systems for achieving a competitive advantage.

**MGNT 333. Statistical Decision Support.**

(3)

Three hours lecture.

*Prerequisite: Junior standing and ENGL 102, ITEC 100, STAT 200, and MATH 126 or MATH 151.*

Application of descriptive statistics, mathematical modeling, microcomputer technology, and problem solving processes to the solution of business problems. A business core requirement.

**MGNT 350. Owning and Managing a Business.**

(3)

Three hours lecture.

*Prerequisite: Junior standing.*

Designed for students who want to learn more about privately held businesses. Major topics include: identifying business opportunities and threats, evaluating firm performance, developing and managing growth strategies,

professional management in the entrepreneurial firm, managing assets, managing human resources, managing risk, preparing a succession plan, and evaluating exit strategies. Students are advised to take one or more of the following courses: ACTG 212; FINC 331; or MKTG 340 before enrolling in this class.

**MGNT 357. Operations Management.**

(3)

Three hours lecture.

*Prerequisite: MGNT 333.*

Study of modern theory and practice for planning and controlling the operations function, both in manufacturing and service organizations. Quantitative tools of analysis used to support decision making in the various activities of operations management are reviewed. A business core requirement.

**MGNT 361. Organizational Communications.**

(3)

Three hours lecture.

*Prerequisite: Junior standing.*

Instruction in all types of communication required to function effectively in an office. Communications fundamentals, business English, correspondence, written reports, oral communication, employment communications and other special communication applications emphasized.

**MGNT 421. Leadership and Motivation.**

(3)

Three hours lecture.

*Prerequisite: Junior standing and MGNT 322.*

Leadership situations, styles, skills; motivation of self and co-workers. Emphasis on in-depth application of concepts to managerial practice.

**MGNT 425. Management of Change.**

(3)

Three hours lecture.

*Prerequisite: Junior standing and MGNT 322.*

Introduces organizational development as well as the occurrence of structural and cultural change in organizations. Individual change systems theory is also discussed.

**MGNT 428. Business Policy and Strategy.**

(3)

Three hours lecture.

*Prerequisite: FINC 331, MGNT 357, MKTG 340 and senior standing.*

A capstone course focusing on how organizations achieve sustained success in a competitive global economy. Functional skills acquired in other business classes are integrated in making ethical strategic decisions and applying them to competitive positioning. A business core requirement.

**MGNT 450. Managing New Venture Creation.**

(3)

Three hours lecture.

*Prerequisite: MGNT 350.*

Instructs students on the initiation of business ventures. Topics to be covered in the course include the creation, identification, and analysis of business models; the process of launching new ventures, as either a privately-owned entrepreneurial or corporate-owned intrapreneurial venture; the identification, acquisition, and deployment of the resources necessary to implement business visions; and the implication of growth on firm dynamics.

**MGNT 452. Business Consulting.**

(3)

Three hours lecture/field work.

*Prerequisite: MGNT 351, or MKTG 340 and FINC 331, or permission of instructor.*

Introduces the student to comprehensive organizational analysis, alternative development and implementation planning in a business firm. Students will work in teams with the management of firms in the surrounding area. Extensive field work is required. Students meet regularly with the managers of firms assigned to their team, conduct analysis of the firm's problems and develop a plan of action for solving the problems identified. Professional presentations are an integral part of this course.

**MGNT 457. Integrated Management Systems.**

(3)

Three hours lecture.

*Prerequisite: Junior standing.*

Global business managers are increasingly under pressure to improve the financial performance and the profitability of their

companies. The intense global competition has forced organizations to focus on the integration of business activities and the creation of an integrated system in order to streamline business processes and to achieve both effectiveness and efficiency in their operations. The main objective of this course is to introduce the student to the benefits of integrated management systems in modern organizations.

**MGNT 460. Contemporary Issues in Management.**

(3)

Three hour seminar.

*Prerequisite: Senior standing and MGNT 322, or permission of instructor.*

Contemporary issues organizations face with emphasis on the professional conduct of business in a dynamic environment. Special topics may include business ethics, social responsibility, public affairs, competitiveness, community relations, labor relations, issues management or environmental management.

**MGNT 471. Special Topics in Management.**

(1-6)

Hours and credits to be arranged.

*Prerequisite: Junior standing and approval of instructor.*

Examines topics of special interest in management area not covered in current course offerings. Can be taken more than once for a maximum of six hours credit. Depending upon the topic, this course may be used to meet requirements for the minor in Women's Studies.

**MGNT 472. Independent Study.**

(1-4)

*Prerequisite: Approval of Department Chair.*

Gives an individual student the opportunity to examine a topic of personal interest in more depth than is possible in any existing course. See "Independent Study" on p. 63.

**MGNT 481. Management Study Abroad.**

(3-6)

*Prerequisites: Junior standing and permission of instructor.*

A travel/study course taught in conjunction with the summer study abroad program to a chosen destination. The focus is on international business, trade, and monetary practices

outside of the United States with hands-on experience in adapting decision making processes and strategies to accommodate different cultures. Major emphasis is placed on understanding the economic environment, gaining cultural insights, learning local business customs, and formulating effective management strategies. The class also provides opportunities to enhance oral, written, and research skills. May not be repeated.

**MGNT 488. Final Honors Project. (2-3)**

*Prerequisites: Completion of business core, enrollment in the Honors Academy, senior standing, a minimum 3.5 GPA in all courses and in management.*

Research project in management. In order to receive honors credit, a student must earn a grade of "A" or "B" for the final project. Course may not be repeated.

**MGNT 490. Management Internship. (1-3)**

*Prerequisites: Junior or senior management major; a cumulative GPA of 2.5 or higher and permission of the instructor.*

A one- or two-semester program of work and study in the student's major area and/or career interest. Learning objectives, qualification and hours of work approved by faculty coordinator and sponsoring agency. Final grade determined by supervising faculty. Graded A-F. Course may not be repeated for a better grade.

For a description of graduate courses, please consult the *Radford University Graduate Catalog*.

## MARKETING

**MKTG 340. Principles of Marketing. (3)**

Three hours lecture.

*Prerequisite: Junior standing*

An overview of the discipline of marketing, the evolution of the marketing concept and the interface of marketing with other major organizational functions. The functions and institutions of marketing are related to the controllable variables of product, price,

distribution and promotion. Emphasis is on adapting to uncontrollable domestic and international environments by adjusting the controllable marketing variables. A business core requirement.

**MKTG 341. Advertising Strategy. (3)**

Three hours lecture.

*Prerequisite: Junior standing and MKTG 340.*

An in-depth study of the administration of the complete advertising program. Integration and coordination of promotion with other variables of the marketing mix as they relate to consumer and industrial markets.

**MKTG 342. Internet Marketing. (3)**

Three hours lecture.

*Prerequisite: Junior standing and MKTG 340.*

Introduction to the rapidly evolving world of Internet marketing. The opportunities, problems, tactics and strategies associated with incorporating electronic methods into the marketing function are examined. Emphasis is placed on experiential learning and the latest technological aspects of marketing in the online environment.



*Marketing professor James Lollar was awarded the 2008 Distinguished Service Award at spring commencement ceremonies.*

- MKTG 343. Retailing.** (3)  
Three Hours Lecture.  
*Prerequisites: Junior standing and MKTG 340.*  
Designed to provide a comprehensive understanding of the key perspectives that shape the retail marketplace including environmental influences, retail relationships, retail analysis and decision-making strategies.
- MKTG 344. Sales Management.** (3)  
Three hours lecture.  
*Prerequisite: Junior standing and MKTG 340.*  
Planning, organizing, leading, acquiring and controlling are applied to the management of the sales force and the coordination of the sales force with the total marketing effort.
- MKTG 345. Integrated Marketing Communication (IMC).** (3)  
Three hours lecture.  
*Prerequisites: Junior standing and MKTG 340.*  
Examines how various marketing functions can work together cohesively to achieve effective marketing communication. Students learn how marketing actions need to fit together harmoniously to produce “one voice” in a brand or firm’s communication with its audience.
- MKTG 350. Consumer Behavior.** (3)  
Three hours lecture.  
*Prerequisite: Junior standing and MKTG 340.*  
A study of consumer purchase decision process, the variables that affect consumer behavior, and the utilization of the knowledge of consumer behavior in the development of effective marketing strategies. This course draws heavily on such social science disciplines as psychology, sociology, cultural anthropology and economics.
- MKTG 360. Professional Selling.** (3)  
Three hours lecture.  
*Prerequisite: Junior standing and MKTG 340.*  
Contains a study of the theory and practice of professional selling and provides an opportunity for skill development relative to sales careers. After studying practical buyer-seller relationships, the students examine the roles of planning, interpersonal communication and resource management in selling effectiveness.
- MKTG 440. Logistics.** (3)  
Three hours lecture.  
*Prerequisite: Junior standing and MKTG 340.*  
The study of inventory, transportation and traffic management, storage and other logistics functions as an integrated system within the firm and throughout the firm’s supplier and customer channels. Uses problem-solving case studies with computer assisted decision making.
- MKTG 442. International Business.** (3)  
Three hours lecture.  
*Prerequisites: Junior standing, MKTG 340 and FINC 331.*  
A study of the theories, institutions and trends in international trade and investment. Emphasis placed on the environment within which international business is practiced and the opportunities and challenges managers face in doing business across national boundaries.
- MKTG 444. Supply Management.** (3)  
Three hours lecture.  
*Prerequisite: Junior standing and MKTG 340.*  
The study of organizational acquisition of equipment, materials, services and supplies. Students learn current purchasing and logistics supply chain operations and relations in organizational markets including industrial, business-to-business, institutional and governmental. Case studies and/or computer simulations used.
- MKTG 445. Marketing Strategy.** (3)  
Three hours lecture.  
*Prerequisites: Junior standing, MKTG 340, and 6 additional hours of MKTG.*  
An analysis of marketing environments and the development of marketing objectives, programs and strategies. Marketing strategies developed are integrated with other functional areas within the organization. Case studies and computer simulations may be used.
- MKTG 446. Marketing Research.** (3)  
Three hours lecture.  
*Prerequisites: Junior standing, STAT 200, and MKTG 340.*  
The uses and applications of marketing research in the marketing management decision



process employing a project-oriented approach to engage students in all aspects of the marketing research process, from problem definition through management recommendations.

**MKTG 452. International Marketing. (3)**  
Three hours lecture.

*Prerequisites: Junior standing and MKTG 340 or permission of instructor.*

The study of global marketing strategies with emphasis on adjusting plans and techniques to accommodate marketing in different cultures. Case studies and computer applications may be used.

**MKTG 471. Special Topics in Marketing. (1-6)**

*Prerequisite: Junior standing and MKTG 340.*  
Examines topics of special interest in marketing area not covered in current course offerings. May be taken more than once for a maximum of six hours credit. Hours and credit to be arranged. Depending upon the topic, this course may be used to meet requirements for the minor in Women's Studies.

**MKTG 472. Independent Study. (1-4)**

*Prerequisite: Approval of Department Chair.*  
Gives an individual student the opportunity to examine a topic of personal interest in more depth than is possible in any existing course. See "Independent Study" on p. 63.

**MKTG 481. Marketing Study Abroad. (3-6)**

*Prerequisites: Junior or senior standing and MKTG 340 or permission of instructor.*

The study of international marketing with an emphasis on adapting decision-making processes and strategies to accommodate different cultures. Marketing decision processes and methods are examined within the context of an international environment. The class provides opportunities to enhance communication and technology skills, and may include pre-trip meetings and assignments, an in-country experience, and post-trip reflective assignments. May not be repeated.

**MKTG 488. Final Honors Project. (2-3)**

*Prerequisites: Completion of business core, enrollment in the Honors Academy, senior*

*standing, a minimum 3.5 GPA in all courses and in marketing.*

Research project in marketing. In order to receive honors credit, a student must earn a grade of "A" or "B" for the final project. Course may not be repeated.

**MKTG 490. Marketing Internship. (3)**

*Prerequisites: Junior or senior standing; minimum GPA of 2.5 (cumulative) 3.0 (major); and permission of instructor.*

A one- or two-semester program of work and study in the student's major area and/or career interest. Learning objectives, qualifications and hours of work approved by faculty coordinator and sponsoring agency. Final grade determined by supervising faculty. Graded A-F. Course may not be repeated for better grade.

For a description of graduate courses, please consult the *Radford University Graduate Catalog*.

## MILITARY SCIENCE

**MSCI 111. Introduction to Leadership and the Army. (2)**

One hour lecture; two hours laboratory.  
Enrollment in course incurs no military obligation.

This course of instruction is an introductory study of various leadership styles and their effects on military organizations and the organization of the U.S. Army, its roles, missions, customs and traditions. Students also receive instruction on the use of the lensatic compass, map reading, first aid, CPR, and physical conditioning. As part of the course, students participate as a member of a team observing and evaluating leader behavior in a variety of situations, both in and out of the classroom. Adventure training is available on an elective basis and can include rappelling, field activities and weapons firing. Students may apply for three-year ROTC scholarships.

**MSCI 112. Developing Leadership I. (2)**

One hour lecture; two hours laboratory.  
Enrollment in course incurs no military obligation.

This course of instruction includes an

introduction to the principles of leadership, methods to determine and develop the student's individual leadership style, evaluating and improving writing and speaking skills, and an introduction to leadership in small tactical units. The course also includes instruction in developing skills involved with individual physical conditioning, land navigation, first aid, and map reading. Students also participate as a member of a team that observes and evaluates leadership styles in a variety of situations. An evaluation of each student's physical fitness level is conducted to determine eligibility for Airborne, Air Assault or Mountain Warfare training. Students may apply for three-year ROTC scholarships.

**MSCI 211. Leadership Styles/Theory and Application. (3)**

Two hour lecture; two hours laboratory.

*Prerequisites: MSCI 111 and 112 or department chairperson's permission.*

Early in course incurs no military obligation. This course involves the study of individual leadership styles and techniques using historical case studies. Students are also introduced to the branches (specialties) of the Army. The concepts and applications of communication and goal-setting in small organizations are analyzed. Students are provided an opportunity to develop and improve their writing and public speaking skills through a required written exercise and an oral presentation. They are also evaluated as a team leader required to accomplish specific collective tasks in a practical setting. The course includes physical fitness training and evaluation. Adventure training is available on an elective basis. Students may apply for two-year scholarships.

**MSCI 212. Developing Leadership Skills II. (3)**

Two hour lectures; two hours laboratory.

Enrollment in course incurs no military obligation.

Course includes analyzing group missions to determine specified and implied tasks, organizing and conducting an oral presentation, and preparing a concise, written directive (operations order) detailing how a team will accomplish a task. Students also serve as a team leader during a 48-hour off-

campus practical exercise incorporating individual skills of land navigation and physical conditioning. Adventure training is available on an elective basis. An assessment of physical fitness levels is conducted to determine eligibility for summer Airborne, Air Assault or Mountain Warfare training. Students may apply for two-year scholarships.

**Summer Leadership Introduction  
Camp Challenge (Ft. Knox, KY) N/C**

This is a five-week leadership skills course that allows students between their sophomore and junior year the opportunity to gain constructive credit for the ROTC Basic Course. During this program students learn basic military tasks including Rifle Marksmanship, Land Navigation, Map Reading, Leadership Principles, Rappelling, Water Survival and Basic Tactical Training and participate in daily Physical Fitness. Upon completion of this program each student who desires to continue with the ROTC program will be enrolled in the Advanced Course. This is an excellent opportunity to determine if the Army ROTC program is right for the applicants, without any obligation for further service. Student's may compete for two-year scholarships.

**MSCI 311. Leading Small Organizations. (4)**

Three hours lecture; two hours laboratory.

*Prerequisites: MSCI 111, 112, 211, 212 and 200- level courses or placement credit as determined by the Professor of Military Science for qualified veterans of military service.*

Involves analyzing ethical dilemmas in leadership when organizational goals conflict with member welfare, examining the role of policy and standard operating procedures in organizations, and developing effective writing and oral presentation skills. Students are also required to organize a team and successfully lead it to a predetermined location (land navigation in the Jefferson National Forest). Instruction includes students serving as an apprentice instructor conducting a physical training session for 30 participants. Students are also evaluated as leaders of a 10-person team and alternately as a leader of a five person team, assigned various tasks to complete during a 48-hour off-campus exercise.

**MSCI 312. Developing Leadership III. (4)**  
Three hours lecture, two hours laboratory.

*Prerequisites: MSCI 111, 112, 211, 212 or placement credit as determined by the Professor of Military Science.*

Involves planning for the unexpected in organizations under stress; developing alternate courses of action which can succeed; how to delegate tasks and supervise subordinate leaders; and when and how to provide guidance and direction. Students also analyze a military operation and, as a leader of a 35-member platoon, prepare a written directive (operations order) necessary to successfully complete the mission. The operations order is presented orally to the student's platoon, and the student is evaluated on his ability to lead the unit to the successful accomplishment of the mission through properly utilizing three subordinate squad leaders and six team leaders in a 48-hour off-campus exercise. Course emphasis is on unit leader responsibilities, map interpretation, tactical communications, doctrine, systems and techniques, first aid, water survival, rappelling, squad and platoon offensive and defensive tactics, land navigation and other basic military skills. Evaluation of physical fitness level is conducted to determine eligibility for Airborne, Air Assault or Mountain Warfare training, participation in the Advanced Leadership Camp (Ft. Lewis, WA) and for assignment as a leader in an active Army unit during the summer.

**Summer Leadership Practicum and Evaluation (Ft. Lewis, WA)**

N/C

This is an ROTC advanced level requirement. Students spend five weeks at an advanced leadership camp conducted during the summer for all cadets who have successfully completed the first three years of military science. Leadership potential is evaluated through approximately six to eight leader opportunities where students are placed in positions leading five, 10 and 35-member teams and organizations. Cadets are evaluated in 12 leadership dimensions including Values, Attributes, Skills, Making Decisions, Communication (both oral and written), Motivating People, Planning and Organizing activities, Executing Actions, Assessing Progress and

Results, Developing People, Building Teamwork and Learning from Experiencing. This intensive leadership practicum results in an evaluation which qualifies each student's leadership potential in terms of a written assessment and numerical grade. An order of merit list is compiled which rank orders all students attending camp.

**MSCI 411. Leadership Challenges and Organizational Goalsetting. (4)**

Three hours lecture, two hours laboratory.

*Prerequisites: MSCI 311, 312.*

Includes studies in advanced leadership and management: how to assess organizational cohesion and what to do if it is lacking. Students conduct an afteraction review and write an afteraction report based upon lessons learned from the past summer's Advanced Leadership Practicum at Ft. Lewis. They also examine the components of the Army's training cycle. Students study methods of instruction and conduct classes for underclassmen. They also learn how to counsel subordinates to improve individual and group performance. Students continue to improve oral and written communication skills through the presentation of a briefing and submission of a written assessment of leadership failures or successes based upon a "first battle" chosen from any American military conflict.

**MSCI 412. Transition to Officership. (4)**

Three hours lecture; two hours laboratory.

*Prerequisites: MSCI 311, 312 and 411.*

Prepares students for service as commissioned officers on Active Duty in the U.S. Army Reserves or Army National Guard. Students are introduced to Army management systems: personnel and logistics, the military's legal system and its application at company level, and the officer/noncommissioned officer relationship. They are also taught how to prepare subordinate evaluation forms and how to establish professional goals and objectives through preparation of the Officer Evaluation Report support form. The future officers learn leading "from the front" through providing instruction (both on and off campus) to underclassmen. They are also required to complete a staff action which involves

selecting a project, establishing milestones, estimating resources (sources and costs), presenting an “In Progress Review” briefing, and submitting a written final report summarizing the end results of the completed work at term end. Students plan, prepare and conduct field training exercises for the training of underclassmen. They also prepare and conduct selected leadership laboratory instruction for MSCI 100- 200- and 300- level students.

**MSCI 498. Independent Study. (1)**

*Prerequisites: MSCI 311, 312, 411 and 412.*

Requires one or more in-depth individual research assignments culminating with a presentation of findings at the end of the semester to the senior Military Science instructor (RU Army ROTC OIC). All course material will be researched and presented in accordance with Department of Defense (DoD) and Department of the Army (DA) regulatory guidance. The grade option for this course will be in accordance with the standard RU A-F grading scale.

## **MEDIA STUDIES**

**MSTD 104. Basic News Writing. (3)**

Four hours lecture and laboratory.

Instruction and practice in basic writing for print and electronic media. Includes introduction to writing fundamentals, writing for news media, and use of expository, narrative, descriptive and persuasive approaches. This is a core course required of all Media Studies majors in the journalism concentration. Students cannot receive credit for both MSTD 104 and MSTD 105.

**MSTD 130. Introduction to Communication (3)**

Three hours lecture.

An introduction to the field of communication including a survey of communication history, systems, technology, and roles in society. Provides students with a foundation in the history and practices of a wide range of communication areas. This is a core course required of all students majoring in the School of Communication. Students who have

previously received credit for MSTD 101 may not receive credit for this course.

**MSTD 146. Media Performance. (3)**

Three hours lecture/performance.

Performance demonstrated and practiced through a variety of media in studio and field settings. Personal coaching provided on the basis of audio and video recordings, analysis and feedback.

**MSTD 173. Introduction to Advertising. (3)**

Three hours lecture.

Provides a foundation for advertising, its history, development, problems and challenges. Includes an overview of advertising, its creativity, composition, decision making, media planning, and management.

**MSTD 204. News Reporting. (3)**

Four hours lecture and laboratory.

*Prerequisite: MSTD 104.*

Practice in advanced level reporting and feature writing. The course requires submission of all stories for possible media distribution (e.g., The Tartan and “NRV News”). Advanced discussion of ethics, morality, law and responsibility, as well as examination of national and international media issues. Students cannot receive credit for both MSTD 204 and MSTD 305.

**MSTD 223. Advertising Copywriting. (3)**

Three hours lecture and laboratory.

*Prerequisite: MSTD 173.*

Introductory course that exposes advertising students to various copywriting styles using a combination of lecture and laboratory exercises.

**MSTD 226. Digital Imaging. (3)**

Four hours lecture and laboratory.

Instruction in the technology of digital imaging and photo journalism. Practice in the creation, editing and processing of digital images for use in various media with some emphasis on the World Wide Web. Visual communication theories and history of photography are also covered. Students cannot receive credit for both MSTD 226 and MSTD 325 or MSTD 426.



- MSTD 236. Print Production. (3)**  
Four hours lecture and laboratory.  
*Prerequisite: MSTD 104.*  
Principles and practices in the production of print and digital media with emphasis on computer graphics and desktop publishing. Course also covers theories of typography and visual communication. Students cannot receive credit for both MSTD 236 and MSTD 328.
- MSTD 246. Basic Audio Production. (3)**  
Three hours lecture.  
*Prerequisites: MSTD 146.*  
*Corequisite: MSTD 247.*  
Instruction in the basic theories of audio production, including studio and remote recording. Training in use of production equipment for radio, television and film. Formerly MSTD 345: Students cannot receive credit for both MSTD 246 and MSTD 345.
- MSTD 247. Script Writing. (3)**  
Three hours lecture.  
*Prerequisites: MSTD 146.*  
*Corequisite: MSTD 246.*  
An introductory media writing course that exposes production students to various forms of script writing for television, radio, film, and corporate video. Students cannot receive credit for MSTD 247, MSTD 106 and MSTD 331.
- MSTD 273. Advertising Analysis. (3)**  
Three hours lecture.  
*Prerequisite: MSTD 173.*  
Analysis of advertising strategies in national and international mass media. Course examines particular advertisements, case studies and campaigns in advertising with particular attention given to aesthetics and ethics.
- MSTD 300. Media History. (3)**  
Three hours lecture/discussion.  
*Prerequisite: MSTD 130, COMM 230.*  
Tracing the tributaries of concepts and practices of American journalism, including events, personalities, and institutions that influenced media from the colonial period to the present.
- MSTD 304. Electronic News Gathering. (3)**  
Four hours lecture and laboratory.  
*Prerequisites: MSTD104, MSTD 130, and COMM 230.*  
Instruction and practice in news reporting for electronic media (for example, television, radio, cable, web). Introduction to various formats and professional standards. Includes news gathering from participants, experts, libraries and on-line sources. Emphasis placed on campus news and beat coverage. Discussion of national and international issues when reporting in the different media. Students cannot receive credit for both MSTD 304 and MSTD 205.
- MSTD 326. Web Production. (3)**  
Four hours lecture and laboratory  
*Prerequisite: MSTD 130, COMM 230, and MSTD 226 or ITEC 225.*  
Instruction and practice in designing interactive World Wide Web sites for the mass media. Course also introduces web aesthetics, digital imaging and other applications for the web.
- MSTD 327/POSC 327/COMM 327. Politics and the Media. (3)**  
Three hours lecture.  
*Prerequisite: POSC 120 and MSTD 130 and COMM 230, or permission of instructor.*  
The role of modern mass media in the political arena, with an emphasis on elections and policy-making.
- MSTD 335. Media and Society. (3)**  
Three hours lecture/discussion.  
*Prerequisite: MSTD 130, COMM 230.*  
Investigation of the impact of mass media on society; discussion of theoretical concepts, political and social issues related to promotion, distribution, programming and advertising.
- MSTD 346. Electronic Field Production.(3)**  
Two hours lecture and two hours laboratory.  
*Prerequisite: MSTD 130, COMM 230, and MSTD 246.*  
*Corequisite: MSTD 347*  
Fundamental course in techniques of electronic video field production. Includes script writing, lighting, and shooting a variety of video projects. Development of client relationships. Students must enroll in MSTD 346 and MSTD 347 concurrently.



**MSTD 347. Video Editing and Effects. (3)**

Three hours of lecture and laboratory.

*Prerequisite:* MSTD 130, COMM 230, and MSTD 246.

*Corequisite:* MSTD 346.

Introduction to analog and digital editing and video effects theories and techniques. Training in the use of analog and computerized video editing systems and digital video effects programs. Exploration of hardware and software issues relating to 3-dimensional graphics manipulation, video compression and recording. Students must enroll in MSTD 346 and MSTD 347 concurrently. Formerly MSTD 447: Students cannot receive credit for both MSTD 347 and MSTD 447.

**MSTD 373. Advertising Media Planning. (3)**

Three hours lecture.

*Prerequisite:* MSTD 130, COMM 230, and MSTD 226.

Examines variety of local and national sales methods, market research, demography, sales planning, organization and management. Includes writing for sales campaigns, preparation of presentations, production and placement of advertisements, development of client relations and follow-up service.

**MSTD 400. Media Law and Ethics. (3)**

Three hours lecture.

*Prerequisite:* MSTD 130 and COMM 230, or permission of instructor.

Examination of basic legal concepts and legal problems affecting mass media and media professionals. Includes case studies from the areas of constitutional law, statutory law and regulatory agency decisions. Principles and case studies in mass media ethics explored.

**MSTD 404. Specialized Journalism. (3)**

Four hours lecture and laboratory.

*Prerequisites:* MSTD 104, MSTD 204, MSTD 130, COMM 230.

Strategies for computer assisted reporting, practice in gathering information from first-person participants and expert sources, and experience in writing investigative and exploratory articles and/or documentary scripts. The course concentrates on several themes evident in journalism today, including diversity reporting, community journalism, financial

reporting, reporting for the web, international issues and others. Students cannot receive credit for both MSTD 404 and MSTD 406.

**MSTD 407. Science and Environmental Writing. (3)**

Four hours lecture and laboratory

*Prerequisites:* MSTD 130, COMM 230, MSTD 304.

Principles and practice of writing for scientific, educational and environmental publications; advanced reporting in public affairs and investigative journalism. Application of theories and models to advanced writing.

**MSTD 427. Advanced Web and Multimedia Production. (3)**

One hour lecture, four hours laboratory.

*Prerequisites:* MSTD 130 and COMM 230 and MSTD 236 and MSTD 326, or permission of instructor.

Theories of Interactivity, information presentation and virtual reality; practice in the creation of advanced interactive publications, including audio, video and hypermedia applications for web and other digital media.

**MSTD 434. Media Literacy. (3)**

Three hours lecture/discussion.

*Prerequisite:* MSTD 130, COMM 230.

Examination of various approaches to media criticism, including the development of critical and evaluative thinking and writing related to all forms of mass media.

**MSTD 444. Media Management. (3)**

Three hours lecture.

*Prerequisite:* MSTD 130, COMM 230.

Examination of duties, responsibilities and skills necessary for efficient management of media. Emphasis placed on economic contingencies, media law, advertising, ratings, physical systems procurement and personnel decision-making.

**MSTD 445. Advanced Audio Production. (3)**

Three hours of lecture and laboratory.

*Prerequisite:* MSTD 130, COMM 230, and MSTD 246.

Instruction in advanced audio production theories and techniques. Training in the use of digital cart machines and computer-assisted editing

systems; development of multi-rack mixing skills; coordination and integration of studio and computer systems; exploration of hardware and software issues relating to synchronization, sound compression and Internet publishing.

**MSTD 446. TV Studio Production. (3)**

Three hours lecture and laboratory.

*Prerequisite: MSTD 130, COMM 230, MSTD 346 and MSTD 347.*

Development of advanced skills in video production, including the operation, coordination and integration of studio equipment through computer systems. Involves theory and practice of production; direction of student video production in the studio.

**MSTD 451. Intercultural and International Communication. (3)**

*Prerequisite: MSTD 130, COMM 230.*

Advanced study of the issues, problems, theories and policies of intercultural and international communication in the interpersonal, group, organizational and mediated contexts.

**MSTD 452. International Film and Electronic Media. (3)**

*Prerequisite: MSTD 130, COMM 230.*

Study of electronic media and film produced outside of the United States, including developing nations. Emphasis on aesthetic, social, cultural, economic, political and religious forces which shape media.

**MSTD 460. Topics in Media Studies. (3)**

Three hours lecture and discussion.

*Prerequisite: MSTD 130, COMM 230, and 60 hours completed. May be taken a maximum of two times for credit.*

Examination of selected issues and problems in mass media. Study of theories and models of communication, advanced writing in specific fields of media studies.

**MSTD 473. Advertising Production. (3)**

Four hours lecture and laboratory.

*Prerequisites: MSTD 130, COMM 230, MSTD 226 and MSTD 273.*

Advertising design and production for print, broadcast and digital media.

**MSTD 481. Journalism Portfolio. (3)**

Four hours lecture and lab. May be repeated, but no more than 9 hours of MSTD 481 and/or MSTD 450 may be taken for credit.

*Prerequisite: MSTD 104, 130, 204, 146 or 236, 304, 404 and COMM 230.*

Provides specific, directed activity for completion and evaluation of portfolio and resume material for advanced students in journalism.

**MSTD 482. Production Technology Portfolio. (3)**

Four hours of lecture and laboratory. May be repeated, but no more than 9 hours of MSTD 450 and/or MSTD 482 may be taken for credit.

*Prerequisite: MSTD 106, 130, 146, 246, 346, 347, 446, and COMM 230.*

Provides specific, directed activity for completion and evaluation of portfolio and resume material for advanced students in Production Technology.

**MSTD 483. Advertising Campaigns. (3)**

Four hours of lecture and laboratory. May be repeated, but no more than 9 hours of MSTD 450 and/or MSTD 483 may be taken for credit.

*Prerequisite: MSTD 130, 173, 236, 273, 373, 473, and COMM 230.*

Provides specific, directed activity for advanced students in advertising production, planning, and other experiential learning.

**MSTD 484. Web Design Portfolio. (3)**

Four hours of lecture and laboratory. May be repeated, but no more than 9 hours of MSTD 484 and/or MSTD 450 may be taken for credit.

*Prerequisite: MSTD 130, 226, 326, 427, and ITEC 110 and 120 and COMM 230.*

Provides specific, directed activity for advanced students in Web production, editing, and other experiential learning.

**MSTD 488. Final Honors Project. (2-3)**

*Prerequisites: MSTD 130, COMM 230, Enrollment in the Honors Program, completion of all other Honors Program requirements, a minimum GPA of 3.5 in all courses and in the School of Communication.*

Projects and topics to be determined by students, faculty members with whom students work, and

the School. In order to receive honors credit, students must earn a grade of "A" or "B" for final projects. Course may not be repeated.

**MSTD 493. Corporate and Industrial Video Production. (3)**  
*Prerequisite: MSTD 130, COMM 230, MSTD 346.*

Preparation, planning, writing and production of video programs within corporate and industrial environments. Definition of external and internal program needs, development of training objectives, research proposals; directing of video projects, management of postproduction packaging and distribution; legal contracts and responsibilities.

**MSTD 498. Independent Study. (1-6)**  
One to six hours.  
*Prerequisites: MSTD 130, COMM 230, and permission of instructor.*

No more than six hours of Independent Study may be taken toward graduation. May be taken for honors credit with permission of the Honors Program. May be taken for letter grade or pass/fail. Independent study course proposals must be approved by the School of Communication curriculum committee prior to the deadline for adding courses in the term in which the study is to be undertaken.

**MSTD 499. Media Studies Internship. (1-6)**  
One to six hours.  
*Prerequisites: Permission of instructor. Students must majors in the School of Communication, complete the application process and obtain approval from the School of Communication before enrolling.*

Significant professional experience on site with approved media organizations. Students must consult with academic advisers before applying for internships, obtain School approval and meet application deadlines. Application forms and policy statements are available in a packet obtained from the University Bookstore.

## MUSIC

**MUSC 100. Introduction to Music Literature. (3)**

Three hours lecture.

Examination of music literature of all periods; emphasis on standard concert repertory. Development of essential listening skills and understanding of music of other cultures. Required of all music majors and open to students in other curricula. General Education credit - Fine Arts.

**MUSC 102. Fundamentals of Music Therapy. (2)**

Two hours lecture.

*Prerequisites: Music major (MUS or PMUS) or permission of instructor.*

Principles and practice in the field of music therapy. Required of all music therapy majors and open to students in other curricula with permission of instructor.

**MUSC 104. The Arts, Entertainment, and the Marketplace. (3)**

Three hours lecture.

An overview of the many diverse fields and career opportunities within the Arts and Entertainment industries is covered with an emphasis on music business related fields. A survey of career options and a study of relevant publications and industry resources related to arts and entertainment media, retail, management, marketing, and promotion is included.

**MUSC 107. Applied Music. (1-2)**

One-half or one-hour private lesson.

Hours earned may not be counted toward either the Bachelor of Arts, Bachelor of Music, Bachelor of Music Therapy or Bachelor of Science major. May not be taken by music majors in applied music instrument. May be taken again for credit.

**MUSC 110. Introduction to Music Theory. (4)**

Three hours lecture; two hours laboratory.

Introduction to the discipline of music theory, including study of terminology, historical perspective, basic knowledge and concepts, and related reading and aural skills.

**MUSC 111:112. First Year Theory. (3:3)**

Three hours lecture.

*Prerequisite (MUSC 111): A satisfactory score on the Music Fundamentals Test or completion of MUSC 110 with a grade of "C" or better. Prerequisite (MUSC 112): Completion of MUSC 111 with a grade of "C" or better.*

Fundamentals of music and the principles of vertical and linear organization through analysis and exercises in part-writing.

**MUSC 114:115. First Year Ear Training and Sight Singing. (1:1)**

Two hours laboratory.

*Prerequisite (MUSC 114): A satisfactory score on the Music Fundamentals Test or completion of MUSC 110 with a grade of "C" or better. Prerequisite (MUSC 115): Completion of MUSC 114 with a grade of "C" or better.*

Development of aural skills through exercises in sight singing, rhythmic reading and music dictation.

**MUSC 119. Jazz Improvisation I. (1)**

Two hours laboratory.

*Prerequisites: Completion of MUSC 111 with a grade of "C" or better.*

Introduction to Jazz improvisation and performance practices for instrumentalists and vocalists through direct listening, theoretical analysis, transcription, and performance.

**MUSC 120. Introduction to Music Education. (1)**

Two hours lecture/laboratory.

Introduces the profession of music education to prospective school music teachers, including historical, philosophical and sociological foundations and legal issues affecting students and teachers. Students engage in critical thinking about the music teaching profession and examine themselves as potential music teachers.

**MUSC 121. The Art of Music. (3)**

Three hours lecture.

Introduction to elements of music. Study of important forms, styles and media of Medieval, Renaissance, Baroque, Classical, Romantic and 20th-century music. For non-music majors. General Education credit - Fine Arts.

**MUSC 123. The Art of Jazz. (3)**

Three hours lecture.

Study of the basic elements and history of jazz music through lectures and listening. General Education credit - Fine Arts.

**MUSC 127. Introduction to Computer Music. (3)**

Three hours lecture.

*Prerequisite: Music major.*

Introduction to current digital technologies used in the creation, manipulation, and distribution of sound and music using MIDI hardware and software applications. Develops skills that are essential for the production and distribution of music using digital technologies through project-based assignments and examinations.

**MUSC 128. Computer Music Techniques. (3)**

Two hours lecture; two hours laboratory.

*Prerequisite: MUSC 127.*

Exploration of sound synthesis, digital sampling and computer-based sound editing techniques. Access to resources in the Center for Music Technology. Recital of student works given at the end of the semester. Spring.

**MUSC 131. Symphonic Band. (1)**

Three hours rehearsal.

Emphasis on study and performance of a wide variety of band literature. Concerts presented each year on campus and on tour. Open to qualified students. May be taken again for credit.

**MUSC 134. Jazz Combo. (1)**

Three hours rehearsal.

*Prerequisite: Audition.*

Performance of standard jazz literature in a small group setting. Emphasis on improvisation, development and building of a repertory of jazz tunes for performance. Presents programs throughout the year on and off campus. Open to all students by audition each semester. May be taken again for credit.

- MUSC 143:144. Diction for Singers.** (1:1)  
Two hours laboratory.  
*Corequisite: Applied Voice.*  
English, Italian, French, German and Latin diction for singers, including an overview of basic grammar and vocabulary.
- MUSC 145. Chorus.** (1)  
Three hours rehearsal.  
*Prerequisite: Audition.*  
Performance of challenging choral literature of all styles and periods for tenor and bass voices. Participation in various activities and concerts on and off campus. Joins with other university choral ensembles to form the RU Choral Union for the performance of extended masterworks. Open to qualified students of any major. Qualified members of this choir may perform contemporary a cappella music. A maximum of four credits may be used to meet the ensemble requirement for music majors. May be taken again for credit.
- MUSC 147. Chorale.** (1)  
Three hours rehearsal.  
*Prerequisite: Audition.*  
Performance of challenging choral literature of all styles and periods for soprano and bass voices. Participation in various activities and concerts on and off campus. Joins with other university choral ensembles to form the RU Choral Union for the performance of extended masterworks. Open to qualified students of any major. Qualified members of this choir may perform contemporary a cappella music. A maximum of four credits may be used to meet the ensemble requirement for music majors. May be taken again for credit.
- MUSC 151. Chamber Orchestra.** (1)  
Three hours rehearsal.  
Emphasis on major works of chamber orchestra literature. Open to qualified students. May be taken again for credit.
- MUSC 160. Beginning Class Piano.** (1)  
Three hours laboratory.  
*Prerequisite: Audition/Interview.*  
Keyboard skills at an introductory level are offered for non-keyboard music majors, minors, and non-music majors who have had limited experience. The course includes sight reading, analysis, memorization and performance of music; harmonization and transportation of melodic lines; playing “by ear” and other creative activities including improvisation.
- MUSC 161:162. First Year Class Piano.** (1)  
Three hours laboratory.  
*Prerequisite: (MUSC 161) Audition and music reading ability.*  
*Prerequisite: (MUSC 162) Completion of MUSC 161 with grade of “C” or better.*  
Keyboard skills at the first and second basic levels is offered for non-keyboard music majors and minors. This course includes sight reading, analysis, memorization and performance of music; technical skills to develop a “feel” for the topography of the keyboard: harmonization and transposition of melodic lines; playing by “ear” and other creative activities including composition and improvisation.
- MUSC 169:170. Applied Music.** (1-2)  
One-half or one-hour private lesson.  
Hours earned may not be counted toward either the Bachelor of Arts, Bachelor of Music, or Bachelor of Science major. May be taken again for credit.
- MUSC 171:172. First Year Applied Music.** (1-3)  
One-half hour (one credit) or one-hour private lesson (two or three credits). Three credits available to performance majors only.  
*Prerequisite (MUSC 171): Satisfactory entrance audition.*  
*Prerequisite (MUSC 172): Completion of MUSC 171 with a grade of “C” or better.*



**MUSC 191:291:391:491. Topics in the Arts and Entertainment Business.**

**(1-3)**

One to three hours lecture, two to six hours field study.

*Prerequisite: MUSC 104 and permission of instructor.*

Variable topic course. This sequence of courses will study major topics and issues in the arts and entertainment fields. The class content will draw from important and relevant industry issues, current events, and individual student interests and projects. May be taken again for credit. Depending upon the topic, this course may be used to meet requirements for the minor in Women's Studies.

**MUSC 202:302:402. Clinical Orientation in Music Therapy.**

**(1:1:1)**

One hour lecture, one hour laboratory and one-two hours observation/ participation per week.

*Prerequisite (MUSC 202:302): MUSC 102.*

*Prerequisite (MUSC 402): Upper level standing as a Music Therapy Major.*

This organized and structured experience in a clinical setting involves observation and participation in a clinical setting under the supervision of a board certified music therapist, and may be taken again for credit.

**MUSC 204:304:404. Music Business Field Experience.**

**(1-3)**

One to three hours lecture.

*Prerequisite: MUSC 104 and permission of instructor.*

This organized and structured experience in a music business setting involves 30 to 60 hours of observation and participation under the supervision of a business manager or owner. May be taken again for credit.

**MUSC 205. Music with the Disabled.**

**(2)**

Two hours lecture.

Application of music as therapy with the major disability categories: serves as a preparation for music therapy clinical practicum requirements.

**MUSC 208. Marketing the Arts.**

**(3)**

Three hours lecture.

*Prerequisite: MUSC 104 or permission of instructor.*

An intensive study of marketing and promotion as applied to the various arts disciplines. Areas addressed include market research, segmentation of populations, target audiences, development of promotional materials, and planning and implementation of marketing plans.

**MUSC 211:212. Second Year Theory.**

**(3:3)**

Three hours lecture.

*Prerequisite (MUSC 211): Completion of MUSC 112 with a grade of "C" or better.*

*Prerequisite (MUSC 212): Completion of MUSC 211 with a grade of "C" or better.*

Shaping features of texture, timbre, rhythm and tonal motion at various levels. Dissolution of tonality from late chromatic harmony through the emergence of 20th century techniques, including Impressionism, set theory, 12-tone technique, experimentation and neo-Impressionism.

**MUSC 214:215. Second Year Ear Training and Sight Singing.**

**(1:1)**

Two laboratory hours.

*Prerequisite (MUSC 214): Completion of MUSC 115 with a grade of "C" or better.*

*Prerequisite (MUSC 215): Completion of MUSC 214 with a grade of "C" or better.*

Continuation of First Year Ear Training and Sight Singing.

**MUSC 216:217. Keyboard Harmony.**

**(1:1)**

Two hours laboratory.

*Prerequisite: Level 1 proficiency in keyboard.*

Practical application of harmonization, improvisation, score reading and figured bass realization.

- MUSC 218. Jazz Piano.** (1)  
Two hours laboratory.  
*Prerequisite:* Level 1 proficiency in keyboard.  
Development of piano skills necessary to perform jazz as a solo musician or within an ensemble setting. Emphasis on comping (jazz style accompanying) and solo improvisation with practical applications toward performance.
- MUSC 219. Jazz Improvisation II.** (1)  
Two hours laboratory.  
*Prerequisites:* Completion of MUSC 162 and MUSC 119 with grades of "C" or higher.  
Advanced study of Jazz improvisation and performance practices for instrumentalists through direct listening, theoretical analysis, transcription, and performance.
- MUSC 220. Growth and Development of the Music Learner.** (2)  
Two hours lecture; one hour laboratory.  
*Prerequisite:* Completion of MUSC 120 with a grade of "C" or better.  
A study of the musical, mental, physical, behavioral-emotional, and social growth characteristics of students and of individual differences among students. Course focuses on the relationship between human development and the music curriculum. Special attention is given the National Standards for music. Laboratory includes at least nine hours observation in schools, exercises in peer teaching, and uses of technology in music education.
- MUSC 221. Classroom Instruments.** (1)  
Three hours laboratory.  
*Prerequisite:* Completion of MUSC 120 with a grade of "C" or better.  
Study of instruments commonly used in general music classes in schools, including pitched and unpitched percussion, recorder, guitar, baritone ukelele, and autoharp. The course includes playing techniques for classroom ensembles, including western and non-western instruments, improvisation in general music, instrument construction, repertoire, and basic arranging for classroom instruments. Information on using the voice effectively in the classroom is also included.
- MUSC 227. Computer Music Applications.** (3)  
Three hours lecture.  
*Prerequisite:* ITEC 110.  
Practical approaches to problems and solutions related to the use of computers in music education, composition, performance, commercial recording and activities where the digital representation of sound is important. Focus on application development.
- MUSC 228. Music in Podcasting.** (3)  
Three hours lecture.  
Survey and critical evaluation of music in podcasting as an art form including the design, and production of original material appropriate for internet distribution. Considers use of music and text to express ideas and concepts which have relevance to personal, cultural, and social contexts. Analysis of formal structures appropriate to the medium.
- MUSC 229. Percussion Class.** (1)  
Three hours laboratory.  
Introduction to basic percussion instrument performance techniques.
- MUSC 237. String Class.** (1)  
Three hours laboratory.  
Fundamentals of playing violin, viola, cello and bass; teaching skills; maintenance techniques.
- MUSC 257:258. Voice Class.** (1:1)  
Three hours.  
Fundamentals of singing technique, diction and performance practices through demonstration and practical application. MUSC 257: fall; 258: spring.
- MUSC 261:262. Second Year Class Piano.** (1:1)  
Three hours laboratory.  
*Prerequisites (MUSC 161):* Completion of MUSC 162 with a grade of "C" or better or audition.  
*Prerequisites (MUSC 262):* Completion of MUSC 261 with a grade of "C" or better or audition.  
Keyboard skills at the third and fourth basic level are offered for non-keyboard music

majors and minors. The course includes sight reading, analysis, memorization, and performance of music; technical skills to develop a “feel” for the topography of the keyboard; harmonization and transposition of melodic lines; playing by “ear” and other creative activities including improvisation.

**MUSC 267:268. Guitar Class. (1:1)**

Three hours.

Beginning through intermediate guitar techniques intended primarily for students requiring functional skills. Open to all students with consent of instructor. MUSC 267:fall; 268:spring.

**MUSC 269:270. Fretboard Skills. (1:1)**

Two hours laboratory.

*Prerequisites: MUSC 268 and permission of instructor for non-guitar performance majors.*

Basic skills in harmonization, transposition, position studies and improvisation will be studied as they specifically apply to the fingerboard.

**MUSC 271:272. Second Year Applied Music. (1-3)**

One-half hour (one credit) or one-hour private lesson (two or three credits). Three credits available to performance majors only.

*Prerequisite: (MUSC 271): Completion of MUSC 172 with a grade of “C” or better.*

*Prerequisite (MUSC 272): Completion of MUSC 271 with a grade of “C” or better.*

**MUSC 277. Woodwind Class. (1)**

Three hours laboratory.

Development of skills and knowledge in the fundamentals of playing, teaching and maintaining woodwind instruments: clarinet, saxophone, flute, oboe, and bassoon.

**MUSC 287. Brass Class. (1)**

Three hours laboratory.

Development of skills and knowledge in the fundamentals of playing, teaching, and maintaining brass instruments: trumpet, horn, trombone, Euphonium, and tuba.

**MUSC 291. Topics in the Arts and Entertainment Business. (1-3)**

See MUSC 191:291:391:491

**MUSC 297. K-12 Vocal Pedagogy. (1)**

Three hours lecture/laboratory.

Study of vocal development from pre-school through high school. The course incorporates both theoretical perspectives and practical experience with respect to guiding and working with the developing voice. At least four hours of observation/participation in public school music classes.

**MUSC 302. Clinical Orientation in Music Therapy. (1)**

See MUSC 202:302:402

**MUSC 304. Music Business Field Experience. (1-3)**

See MUSC 204:304:404

**MUSC 315. Arts and Entertainment Industry Management. (3)**

Three hours lecture.

*Prerequisite: MUSC 104 or permission of instructor.*

Provides an intensive study of legal and business issues in the arts and entertainment industries and the role of the manager in these affairs. Topics covered include product and retail management; merchandising; sales and distribution; artistic management; and arts administration.

**MUSC 321, 322. History of Music. (3 ,3)**

Three hours lecture.

*Prerequisite: MUSC 100.*

General survey of history and literature of music. Required of all music majors and open to students in other curricula. 321: Fall; 322: Spring. General Education credit – Fine Arts.

**MUSC 336. Influence of Music on Behavior. (3)**

Three hours lecture.

*Prerequisite: Upper level standing as a Music Therapy Major.*

*Pre- or Corequisite: MUSC 102.*

Study of uses of music, past and present, and its effects on man’s behavior.

**MUSC 344. Methods and Literature for School Choirs. (3)**

Three hours lecture.

*Prerequisite: Completion of MUSC 220 and MUSC 354 with minimum grades of "C".*

A study of instructional methods and materials for teaching choral music in PreK-12 School settings. Includes a survey of exemplary choral literature with treble, cambiata, and mixed choirs and the investigation of performance practices for various style periods and multicultural/world music. At least six hours of observation/participation in public school music classes.

**MUSC 346. Methods and Literature for School Bands. (3)**

Three hours lecture.

*Prerequisite: Completion of MUSC 220 and MUSC 354 with minimum grades of "C".*

A survey of instructional methods and literature for beginning, intermediate and advanced school bands. Includes curriculum planning, rehearsal techniques, performance practices for various style periods and cultures. At least six hours of observation/participation in public school music classes and participation in Lab Band as conductor-teacher and performer is required.

**MUSC 354. Introduction to Conducting. (2)**

Three hours.

*Prerequisite: MUSC 100 .*

*Pre- or Corequisites: MUSC 212 and 215.*

Introduces basic techniques including application of aural and rhythmic skills. Fall.

**MUSC 355. Choral Conducting. (2)**

Three hours.

*Prerequisite: MUSC 354.*

Continuation of MUSC 354 with emphasis on conducting techniques, score interpretation and rehearsal methods inherent to conducting vocal music. Instruction covers vocal techniques and diction.

**MUSC 356. Instrumental Conducting. (2)**

Three hours lecture/lab.

*Prerequisites: MUSC 354 and one semester each of Woodwind Class, Brass Class, Percussion Class and String Class.*

Continuation of MUSC 354 with emphasis on band and orchestral conducting. Score reading, instrumental score interpretation, instrumental rehearsal techniques, instrumentation and transposition stressed. Each student prepares score for rehearsal by large instrumental ensemble. Participation in Lab Band as conductor-teacher and performer is required.

**MUSC 360. Marching Band Techniques. (1)**

Two hour lecture, laboratory.

*Prerequisite: MUSC 220 with a grade of "C" or better.*

A survey of the methods and materials necessary for the organization, administration, and instruction of school marching bands. At least four hours of observation/participation in public school music classes is required.

**MUSC 364. Jazz Ensemble Methods. (1)**

Two hours lecture/laboratory.

Provides an overview of the methods and materials necessary for the development of high school/middle school jazz ensemble programs. At least four hours of observation/participation in public school music classes is required.

**MUSC 366. Travel Study. (1-12)**

Academic study involving domestic and/or international travel. May be taken again for credit with different topics or areas of study. General Education credit - Fine Arts.

**MUSC 371:372. Third Year Applied Music. (1-3)**

One-half hour (one credit) or one-hour private lesson (two or three credits). Three credits available to performance majors only.

*Prerequisite (MUSC 371): Completion of MUSC 272 with a grade of "C" or better.*

*Prerequisite (MUSC 372): Completion of MUSC 371 with a grade of "C" or better.*

*Pre- or Corequisite (MUSC 372): One of the following courses: MUSC 151, 433, 435, 436, 437, 453, 455 or 457.*

- MUSC 373. Computer Music Composition.** (1-2)  
Two hours (1) or four hours laboratory (2).  
*Prerequisites: MUSC 127 and MUSC 212.*  
Original compositions using electronic sound sources are prepared for performance in a concert setting or as a vital component in an audio-visual presentation. Existing works composed for electronic sound sources are surveyed. May be taken again for credit.
- MUSC 391. Topics in the Arts and Entertainment Business.** (1-3)  
See MUSC 191:291:391:491.
- MUSC 402. Clinical Orientation in Music Therapy.** (1)  
See MUSC 202:302:402.
- MUSC 404. Music Business Field Experience.** (1-3)  
See MUSC 204:304:404.
- MUSC 416. Financial Management for the Arts.** (3)  
Three hours lecture.  
*Prerequisites: MUSC 104 and permission of instructor.*  
An intensive study of financial and funding issues in the arts and entertainment industries and the role of the financial manager and development director in these affairs. Topics covered include financial planning and reporting, budgeting, and grant writing and research.
- MUSC 417. Form and Analysis.** (3)  
Three hours lecture.  
*Prerequisite: MUSC 212.*  
Standard forms from small units through concerto and fugal techniques. Synthesis of larger, more general concepts. Comparative study of various periods and cultures.
- MUSC 418. Arranging and Orchestration.** (3)  
Three hours lecture.  
*Prerequisite: MUSC 212.*  
Scoring for various band and orchestral ensembles; vocal and instrumental arranging. Includes the study, preparation and performance of scores.
- MUSC 419. Counterpoint.** (3)  
Three hours lecture.  
*Prerequisite: MUSC 212.*  
The detailed study and composition of the various contrapuntal devices and forms found in the history of western music.
- MUSC 420. Methods and Materials in Music Therapy.** (3)  
Three hours lecture.  
*Prerequisites: MUSC 112 and Upper level standing as a Music Therapy Major.*  
*Pre- or Corequisites: MUSC 205 and 336.*  
Investigates existing methods and resource materials in music therapy. Development of new method and resource materials. Covers practices and techniques of recreational music and their application to all disability areas.
- MUSC 421:422. Guitar History and Literature.** (2:2)  
Two hours lecture.  
*Prerequisites: MUSC 321 and 322.*  
A study of guitar history and literature from the Renaissance to the present will include such topics as notation, performance practices, instrumental development and social contexts.
- MUSC 428. Computer Music Forum.** (1-2)  
Two hours (1) or Four hours (2) presentations and discussion.  
*Prerequisite: MUSC 128.*  
Intensive work on individual projects in computer music and related research, with class discussion of these and of current developments in the field. Graduate credit requires work at advanced levels. May be taken again for credit.
- MUSC 431. Wind Ensemble.** (1)  
Three hours rehearsal.  
*Prerequisite: Audition.*  
Emphasis on study and performance of serious wind ensemble literature. Concerts presented each year on campus and on tour. May be taken again for credit.



- MUSC 433. Advanced Jazz Combo. (1)**  
Two Hours Rehearsal.  
*Prerequisite: Audition.*  
Performance of advanced jazz literature for a jazz combo. Emphasis on composition/arranging, improvisation, development of repertory of jazz tunes for performance. Present concerts and programs throughout the year on and off campus.
- MUSC 434. Jazz Ensemble. (1)**  
Three hours rehearsal.  
*Prerequisite: Audition.*  
Exposure, learning and performance of traditional and contemporary styles of music for the jazz ensemble. Presents formal and/or informal programs throughout the year on and off campus. Open to all students for audition. A maximum of one credit may be used to meet the large ensemble requirement for music majors. May be taken again for credit.
- MUSC 435. Percussion Ensemble. (1)**  
Three hours rehearsal.  
*Prerequisite: Audition.*  
Performance of contemporary percussion/marimba ensemble literature. Presents programs throughout the year on and off campus. Open to all students by audition each semester. A maximum of one credit may be used to meet the large ensemble requirement for music majors. May be taken again for credit.
- MUSC 436. Guitar Ensemble. (1)**  
Three hours rehearsal.  
*Prerequisite: Audition.*  
The Guitar Ensemble offers training in sight-reading and chamber music performance skills for guitarists. Performs both on and off-campus, and is open to all students by audition, each semester. A maximum of four credits may be used to meet the large ensemble requirement for majors. May be taken again for credit.
- MUSC 437. Digital Ensemble. (1)**  
Two hours rehearsal.  
*Prerequisite: MUSC 128 or equivalent.*  
Existing and original music is prepared for public performance using electronic sound sources in a chamber ensemble setting. May be taken again for credit.
- MUSC 445. Guitar Pedagogy. (3)**  
Three hours lecture.  
Guitar instructional principles, procedures, materials and their applications will be studied. This course will investigate both historical and current theories and practice.
- MUSC 446. Methods and Practicum for General Music. (3)**  
Three hours lecture.  
Admission to the Music Teacher Education Program.  
Study of methods and materials for the teaching of Pre K-12 general music. At least 15 hours of observation/participation in public school general music classes are required.
- MUSC 449. Piano Pedagogy. (3)**  
Three hours lecture, demonstration, laboratory.  
*Prerequisite: Level 4 proficiency in piano.*  
Survey of piano teaching materials, methods and approaches, with emphasis on elementary through intermediate level students; practical demonstration and application of material; observation of teaching; supervised student teaching.
- MUSC 453. Chamber Music Ensemble. (1)**  
Two hours rehearsal.  
*Prerequisite: Permission of instructor.*  
Rehearsal and performance of chamber music literature from duo sonatas to chamber works for strings, winds, mixed strings and winds with or without piano. May be taken again for credit.
- MUSC 455. Madrigal Singers. (1)**  
Three hours rehearsal.  
*Prerequisite: Audition.*  
Performs primarily a capella literature from the Renaissance through the 20th century. A high degree of personal musicianship, discipline and vocal ability is required. A maximum of four credits may be used to meet the large ensemble requirements for music majors. May be taken again for credit.

- MUSC 456. Radford Singers.** (1)  
Four hours rehearsal.  
*Prerequisite: Audition.*  
Performs a wide variety of choral music from all historical periods. A high degree of personal musicianship, discipline and vocal ability is required. Participates in concerts, tours and other activities both on and off campus. May be taken again for credit.
- MUSC 457. Opera Workshop.** (1)  
Three hours rehearsal.  
*Prerequisite: Audition.*  
Study and preparation of vocal roles and ensembles to produce an opera and/or opera excerpts. Presents programs on and off campus throughout the year with two evenings of a fully staged performance in the spring. A maximum of two credits may be used to meet the large ensemble requirement for music majors. May be taken again for credit.
- MUSC 458. Accompanying.** (1)  
Two hours lab/coaching.  
*Prerequisite: Permission of instructor.*  
Accompanying of instrumentalists and vocalists in rehearsals and public performances. May be taken again for credit. Music Education students spend at least four hours as an accompanist for a school choral ensemble during final required semester.
- MUSC 459. Methods and Practicum for Performing Ensembles.** (3)  
Three hours lecture.  
*Prerequisite: Admission to the Music Teacher Education program.*  
A study of techniques for planning, teaching, and managing successful school performing ensembles. At least fifteen hours observation/participation in schools are required.
- MUSC 470. Fourth Year Applied Music.** (1-3)  
One-half hour (one credit) or one-hour private lesson (two or three credits). Three credits available to performance majors only.  
*Prerequisite: Completion of MUSC 372 with a grade of "C" or better.*  
Upper level applied music instruction for students who have met their major requirements in applied music. May be taken again for credit.
- MUSC 471:472. Fourth Year Applied Music.** (1-3)  
One-half (one credit) or one-hour private lesson (two or three credits). Three credits available to performance majors only.  
*Prerequisite (MUSC 471): Completion of MUSC 372 with a grade of "C" or better.*  
*Prerequisite (MUSC 472): Completion of MUSC 471 with a grade of "C" or better.*
- MUSC 477. Music in Therapy.** (3)  
Three hours lecture.  
*Prerequisites: Senior standing, all music therapy core courses and upper level standing as a Music Therapy major.*  
An intensive study of music as therapy including assessment, implementation and evaluation procedures within all major treatment models.
- MUSC 485:486. Psychology of Music.** (3:3)  
Three hours lecture.  
*Prerequisites: Senior standing, BIOL 322, and upper level standing as a Music Therapy Major.*  
Science of sound and music including acoustics, the hearing anatomy, aesthetics, perception, evaluation and measurement of musical ability and achievement, research and statistical method in music. Required of all Music Therapy Majors and open to students in other curricula.
- MUSC 488. Final Honors Project.** (2-3)  
*Prerequisite: Enrollment in the Honors Academy, completion of all other Honors Academy requirements, a minimum 3.5 GPA in all courses and in music.*  
To earn a bachelor's degree with honors in music, a student must conduct research and write a thesis based on the research. In order to receive honors credit, a student must earn a grade of "A" or "B" for the final project. Course may not be repeated.
- MUSC 491. Topics in the Arts and Entertainment Business.** (1-3)  
See MUSC 191:291:391:491.

**MUSC 492. Computer Music Project. (2)**  
Four hours laboratory.

*Prerequisites:* MUSC 128; MUSC 212; MUSC 227.

After substantial inquiry into a major topic area of computer music, such as multi-media performance, sound synthesis, psycho-acoustics or existing electronic music repertoire, a written document or public performance is prepared.

**MUSC 493. Internship in Music Therapy. (1-12)**

*Prerequisite:* Completion of all undergraduate course requirements in music therapy, upper level standing as a Music Therapy Major and permission of instructor.

Six-month internship in an approved facility under a board-certified therapist.

**MUSC 494. Internship in Music Business. (3)**

*Prerequisite:* Completion of all undergraduate music business courses with a grade of "C" or better and permission of instructor.

Eight weeks full-time work in the management aspects of a business related to music chosen by the student and approved by the adviser and department chairperson.

**MUSC 495. Seminar in Music History and Literature. (2-3)**

Two-three hours lecture.

*Prerequisites:* MUSC 321 and 322.

Specialized topic course. Study of advanced music history or literature. May be taken again for credit with different topics.

**MUSC 497. Undergraduate Recital. (1-3)**  
(Half recital – one credit. Full recital – two or three credits.)

*Prerequisite:* Level six proficiency in Applied Music or Composition and permission of instructor for a full recital. Level four proficiency in Applied Music or Composition and permission of instructor for a half recital.

*Corequisites:* MUSC 371, 372, 470, 471, or 472.

Formal public performance. Three credits available to performance level students only. This course may serve as the final honors

project in music. A minimum grade of "B" must be earned in order to receive credit toward completion of the Honors Academy requirements.

**MUSC 498. Independent Study. (1-3)**

*Prerequisites:* MUSC 321 and 322.

See "Independent Study" on p. 63.

**MUSC 499. Undergraduate Thesis. (2)**

*Prerequisites:* MUSC 322 and 498.

Formulation and writing of an extended paper on an appropriate topic relating to music history and literature. This course may serve as the final honors project in music. A minimum grade of "B" must be earned in order to receive credit toward completion of the Honors Academy requirements.

For a description of graduate courses, please consult the *Radford University Graduate Catalog*.

## NURSING

**NURS 111. Personal Health. (3)**

Three hours lecture.

Emphasizes current health issues most applicable to college-age population. Students exposed to information and strategies used to deal effectively with life adjustment problems and to promote healthful living habits. Open to all students. (Students who have earned credit for HLTH 111 may not earn credit for NURS 111.) General Education credit - Health and Wellness.

**NURS 321. Pathophysiology. (3)**

Three hours lecture.

*Prerequisite:* BIOL 322.

Major pathophysiologic concepts are explored. Theories relating etiology, pathogenesis, and clinical manifestations are used to study common disease processes. Concepts from anatomy and physiology provide the foundation for exploring human dysfunction. Concepts learned in this course are basic to the health professions. This course is open to all students.

**NURS 330. Foundations for Professional Practice**

(3)

Three hours lecture

*Prerequisite: Upper division standing; Registered Nurse students.*

The objectives and content of this course are derived from the School of Nursing's philosophy and conceptual framework and facilitate achievement of the School's program objectives. Additionally, the major topics and skills covered in this course are common to most foundational and professional issues texts. Current research and advancement in nursing theory and clinical practice determine course content.

\* Signifies RN to BSN course.

**NURS 335. RN Transition I. \***

(3)

Three hours lecture; two hours laboratory

*Prerequisite: Upper division standing; Registered Nurse students.*

Integrates pathophysiology, pharmacology and health assessment for the experienced registered nurse as follows: (1) focuses on pathophysiology throughout the lifespan providing the student with a scientific knowledge base applicable to clinical practice, (2) emphasizes the relationship of drugs and their effects on humans, and (3) focuses on the use of health assessment skills with clients throughout the lifespan providing the student with the opportunity to gain the knowledge and skills required to perform a systematic health assessment.

\* Signifies RN to BSN course.

**NURS 340. Health Assessment Throughout the Lifespan.**

(3)

Two hours lecture; two hours laboratory.

*Prerequisite: Upper division standing.*

Focuses on the use of health assessment skills required to perform a systematic health assessment.

Three hours lecture.

*Prerequisite: Upper division standing.*

Focuses on the foundational skills necessary for successful community based nursing practice.

**NURS 342. Foundations of Community Based Nursing.**

(3)

Three hours lecture.

*Prerequisite: Upper division standing.*

Focuses on the foundational skills necessary for successful community based nursing practice.

**NURS 343. Nursing Therapeutics.**

(4)

Two hours lecture; five hours laboratory/practicum.

*Prerequisite: Upper division standing.*

Provides theoretical basis for and clinical experience in applying nursing practice techniques designed to promote balance in the client's interaction with the environment.

**NURS 352. Mental Health Nursing.**

(5)

Three hours lecture; six hours practicum.

*Prerequisite: Upper division standing.*

Development of nursing knowledge and skill for mental health promotion, protection, and restoration.

**NURS 360. Pharmacology.**

(3)

Three hours lecture.

*Prerequisite: NURS 340, 342, 343 and 352.*

Emphasis on relationship of drugs and their effects on humans.

**NURS 362. Nursing Research.**

(2)

Two hours lecture.

*Prerequisite: NURS 340, 342, 343, 352 or permission of instructor.*

Provides a comprehensive overview of the research process including problem statements, review of literature, methodology, design, sampling, data collection, and interpretation of findings. The course emphasizes knowledge and skills that are essential for critical evaluation of data-based publications and presentations.

**NURS 364. Nursing of the Adult I.**

(6)

Four hours lecture, six hours practicum.

*Prerequisites: NURS 340, 342, 343 and 352.*

Develops the student's theoretical knowledge of holistic nursing care of the adult. Practicum provides opportunity to promote, protect, and restore health of acutely and chronically ill adults through application of theoretical knowledge in a variety of settings.

**NURS 366. Nursing of Childbearing Family. (5)**

Three hours lecture; six hours practicum.

*Prerequisites:* NURS 340, 341, 342 and 352.

In-depth consideration of the childbearing phase of the lifecycle with application of theory through nursing care of clients and their families related to childbearing in a variety of health care venues or in the community.

**NURS 420. Epidemiology. (3)**

*Prerequisite:* Junior or senior standing.

Provides students an opportunity to examine the field of epidemiology and the applications of this content to their professional disciplines.

**NURS 435. RN Transition Course II. \* (3)**

Three hours lecture.

*Prerequisites:* Upper division standing, NURS 330, NURS 335; Registered Nurse students.

Focuses on application of the nursing process to provide in-depth nursing care for clients and their families. This course promotes the development of the student's ability to apply theoretical knowledge to promote, protect, and restore health across the lifespan.

\* Signifies RN to BSN course.

**NURS 443. Nursing of Children. (5)**

Three hours lecture; six hours practicum.

*Prerequisites:* NURS 360, 362, 364, 366.

Focuses on normal growth and development, health promotion, protection and restoration, and the application of the nursing process with simple to complex health concerns with application of the theory in a variety of clinical settings, such as home, schools, day care, community clinics and hospitals.

**NURS 444. Gerontological Nursing. (5)**

Three hours lecture; six hours practicum.

*Prerequisites:* NURS 360, 362, 364 and 366.

Focuses on gaining knowledge about healthy aging and includes biological, sociological, psychological and spiritual aspects of aging. Clinical application of knowledge takes place in a variety of settings, such as the community, assisted living facilities, acute care facilities, rehabilitation centers, and long-term care facilities.

**NURS 448. Nursing of the Adult II. (5)**

Three hours lecture; six hours practicum.

*Prerequisites:* NURS 360, 362, 364 and 366.

Focuses on nursing care for adult clients with complex health problems incorporating clinical experiences in a variety of community settings. Previously gained knowledge as well as new knowledge is emphasized to promote the acutely ill client's holistic health. Theoretical knowledge and clinical application facilitate transition from student to professional nurse.

**NURS 449. Leadership in Professional Practice. \* (5)**

Three hours lecture. Six hours practicum.

*Prerequisites:* NURS 330, 335, and 444; Registered Nurse students.

*Pre or Corequisite:* NURS 362, 435.

Focuses on leadership style, management and leadership theories, change, quality management, fiscal and economic issues, personnel management, legal and ethical issues, health care organizations and policy, professionalism, political action, and career development.

\* Signifies RN to BSN course.

**NURS 450. Current Problems in Nursing. (1-3)**

*Prerequisite:* Upper division standing or permission of instructor.

Explores current problems in nursing, health care and health care delivery. Depending upon the topic, this course may be used to meet requirements for the minor in Women's Studies.

**NURS 451. Community Health Nursing. (5)**

Three hours lecture; six hours practicum.

*Prerequisites:* NURS 443, 444 and 448.

Focuses on client/environment interactions incorporating clinical experiences with diverse populations in a variety of community settings and with individuals, families, aggregates, and communities. (When NURS 451 is offered in the summer, it is open to Registered Nurse students only.)



**NURS 453. Leadership in Nursing. (4)**  
**Four hours lecture.**

*Prerequisites:* NURS 443, 444, 448.

*Corequisite:* NURS 454.

Focuses on the major leadership and professional development skills necessary for professional practice, including leadership style, management and leadership theories, change, quality management, fiscal and economic issues, personnel management, legal and ethical issues, healthcare organizations and policy, professionalism, personal nursing philosophy, political action, career development, and historical influences on nursing today.

**NURS 454. Clinical Nursing Practicum. (4)**

Five credit hours: 15 hours practicum per week.

*Prerequisites:* NURS 443, 444, 448.

*Corequisite:* NURS 451 and 453.

Provides students with the opportunity to synthesize theoretical concepts, current research, and nursing practice skills in a selected clinical setting. Professional roles are applied through structured clinical learning experiences and learning is facilitated through a selected clinical role model serving as preceptor to the student.

**NURS 455. Introduction to Flight Nursing. (2)**

Two hours lecture.

*Prerequisite:* Permission of the instructor.

Focuses on the theoretical knowledge of nursing care of adults and children with complex illnesses involved in air transport including immediate stabilization and transport of the emergent patient utilizing a team approach.

**NURS 473. Emerging Therapies for Health. (3)**

Three hours lecture.

*Prerequisite:* Upper division standing or permission of instructor

Examines therapies becoming accepted by Americans as complements or alternatives to traditional Western medical practices. Focuses on non-toxic and non-invasive approaches to achieving and maintaining wellness and healing for the body, mind and spirit.

**NURS 488. Final Honors Project. (2-3)**

*Prerequisites:* Enrollment in the Honors Academy, completion of all other Honors Academy requirements, a minimum 3.5 GPA in all courses and in the School of Nursing.

Project and the topic to be explored will be determined by the student and the faculty member with whom the student works. (Honors project may be a written or a written and performance-based project.) In order to receive honors credit, a student must earn a grade of "A" or "B" for the final project. Course may not be repeated.

**NURS 498. Independent Study. (1-3)**

Available to nursing students in upper division. Provides opportunity to pursue an in-depth topic relevant to nursing. See "Independent Study" p. 63 for approval procedure.

\*Denotes RN to BSN course. Upon successful completion of the RN-BSN track, RN students who have completed NURS 330, 335, 435 and 449 at RU may also receive an additional 37 credits of advanced placement resulting in a total of 51 credit hours. See p. 243 for qualifying criteria and additional information.

## **PEACE STUDIES**

**PEAC 200. Introduction to Peace Studies. (3)**

Three hours lecture.

Overview of the main issues and various disciplinary approaches to the study of conflict, conflict management, and world security; introduction to alternative paradigms for conflict management and resolution; introduction to a variety of world order systems. General Education Credit – International and Intercultural Studies.

**PEAC 487. Peace Studies Seminar. (3)**

Three hours seminar.

*Prerequisites:* Junior or senior standing, and for non-minors, permission of instructor.

Concentrates on a theme or themes specific to Peace Studies depending on the

instructor(s). Course is cross-disciplinary and team taught. A major research paper relating to the topical interests of each student is required.

**PEAC 489. Peace Studies. (3)**

Three hours research.

*Prerequisites: Senior standing and approval of thesis proposal by PEAC Committee.*

Students research and write a senior thesis appropriate to the topical focus of their program of study, supervised by an interdisciplinary committee which may be chaired in the students' major departments.

**PEAC 498. Independent Study. (1-6)**

One to six hours of independent study.

*Prerequisites: PEAC 200 and permission of the PEAC Committee.*

## **PHILOSOPHY**

**PHIL 111. Introduction: Knowledge, Reality, and the Human Condition. (3)**

Three hours lecture.

Introduces students to philosophy through an examination of fundamental questions about the nature of reality, the possibility of knowledge, and the human search for meaning. By reading and discussing the work of several major philosophers, students learn to engage in careful and critical reflection on their own lives and on what it means to be a human being. General Education credit - Humanities.

**PHIL 112. Introduction: Ethics and Society. (3)**

Three hours lecture.

Introduces students to philosophy through the study of ethics. Readings from major philosophers focus questions about value in human life and actions. Topics covered may include the nature of ethical reasoning and moral obligation, the value of morality to the individual and society, how ethics helps us understand our place in the universe, and how ethical ideas clarify moral problems facing society. General Education credit - Humanities.

**PHIL 113. Introduction: Reasoning and Argument. (3)**

Three hours lecture.

Introduces students to basic principles of reasoning and argumentation. Students learn to distinguish between valid and invalid reasoning, to recognize patterns of deductive and inductive arguments, to understand the way evidence is used in reasoning, to construct deductive proofs, and to evaluate the soundness of arguments both in everyday contexts and in writings of some major philosophers. General Education credit - Humanities.

**PHIL 114. Introduction: The Origins of Western Philosophy. (3)**

Three hours lecture.

Introduces students to philosophy by tracing the development of the discipline from its origins in ancient Greece to the decline of the ancient world in the 4th and 5th centuries CE. Through an examination of the work of such thinkers as Socrates, Plato and Aristotle, students learn to engage in careful and critical reflection on both the human and the natural world and to experience the sense of wonder that animates the discipline of philosophy. General Education credit - Humanities.

**PHIL 201. Medieval and Renaissance Philosophy. (3)**

Three hours lecture.

*Prerequisite: PHIL 114.*

Traces the development of Western philosophy from the end of the Roman Empire through the Middle Ages to the Renaissance and the beginnings of the modern world. Emphasis is placed on the philosophical systems of major figures such as St. Augustine and St. Thomas Aquinas.

**PHIL 202. Early Modern Philosophy. (3)**  
**Three hours lecture.**

*Prerequisite: PHIL 114.*

Traces the development of Western philosophy from Descartes in the late-16th century through Hume in the mid-18th century. Emphasis is placed on the metaphysical and epistemological systems of such major philosophers as Descartes, Leibniz, Locke, and Hume.

**PHIL 203. History of Late Modern Philosophy.**

(3)

Three hours lecture.

*Prerequisite: PHIL 114.*

Traces the development of European philosophy from Kant to Nietzsche. Philosophical movements including German Idealism, Positivism and 19th Century Materialism, and Existentialism will be examined.

**PHIL 310. Professional Ethics.**

(3)

Three hours lecture.

*Prerequisite: Three hours of philosophy.*

Examines contemporary ethical issues presented by various disciplines and professions in light of ethical theories. This course will focus on ethical questions and problems that arise in a variety of professions including medicine, law, nursing, education, social work, and journalism.

**PHIL 320. Metaphysics.**

(3)

Three hours lecture.

*Prerequisite: Three hours of philosophy.*

Examines basic theories of reality such as materialism, idealism, and dualism. Among the philosophical issues addressed are the following: the nature of mind, the mind-body problem, free will and determinism, the nature of space and time, and proofs concerning the existence of God.

**PHIL 330. Epistemology.**

(3)

Three hours lecture.

*Prerequisite: Three hours of philosophy.*

Investigates the nature, extent, and sources of human knowledge and the relation between the concepts of knowledge, belief, and truth. Major theories which are examined include empiricism and rationalism.

**PHIL 340. Symbolic Logic.**

(3)

Three hours lecture.

*Prerequisite: Three hours of philosophy or mathematics.*

This course in formal logic presents various methods and principles of symbolic logic for use in appraising arguments for validity and invalidity. Topics covered include truth tables, rules of inference, proof procedures, quantification theory, and the logic of relations.

**PHIL 350. Philosophy of Religion.**

(3)

Three hours lecture.

*Prerequisite: Three hours of philosophy or religious studies.*

Examines major approaches to the philosophical understanding of religion. It investigates a number of specific issues within contemporary philosophy of religion such as those of religious "truth," "faith," and "experience."

**PHIL 360. Existential Philosophy.**

(3)

Three hours lecture.

*Prerequisite: Three hours of philosophy.*

Detailed study of the origins and historical development of the 20th century movement in philosophy called existentialism. Through a careful reading of both literary and philosophical texts, students explore such fundamental existential themes and issues as freedom, responsibility, anguish, alienation, authenticity, and death. Special emphasis is given to major thinkers such as Kierkegaard, Nietzsche, and Sartre.

**PHIL 370. Philosophy of Language.**

(3)

Three hours lecture.

*Prerequisite: Three hours of philosophy.*

Examines the contemporary philosophical focus on language. Course topics include the nature and functions of language and theories of meaning. The course will consider both the historical roots and recent developments in the area.

**PHIL 380. Aesthetics.**

(3)

Three hours lecture.

*Prerequisite: Three hours of philosophy.*

Explores various theories and philosophical issues concerning the nature of creativity and the nature and significance of art in all of its forms. Students engage in a critical examination of such questions as these: what exactly do we mean by a "work of art?" What is beauty? What is an aesthetic experience? How are aesthetic values related to other sorts of values? What sort of truth can be found in art?

**PHIL 390. Ethical Theory.**

(3)

Three hours lecture.

*Prerequisite: Three hours of philosophy.*

An in-depth examination of perennial problems and issues in ethical theory. Texts of

major philosophers such as Plato, Aristotle, Aquinas, Hume and Kant are used to focus discussion of topics such as the nature of justice, happiness and the good life, duty and moral obligation, and moral virtue.

**PHIL 421. Topics in Philosophy. (3)**

Three hours lecture.

*Prerequisite: Six hours of philosophy and junior or senior standing.*

An in-depth examination of the work of one major philosopher; a single school or movement in the history of philosophy; or a particular philosophical problem, theme, or issue of contemporary interest. Emphasis is placed on the careful reading and critical discussion of primary philosophical texts. This course may be taken twice with a different topic each time.

**PHIL 488. Final Honors Project. (2-3)**

*Prerequisites: Enrollment in the Honors Academy, completion of all other Honors Academy requirements, and minimum of 3.5 GPA in all courses and in philosophy.*

Project and topic to be determined by the student, the faculty member with whom the student works, and the department. In order to receive honors credit, the student must earn a grade of "A" or "B" for the final project. Course may not be repeated.

**PHIL 490. Philosophy Internship. (3-12)**

*Prerequisites: 18 hours of Philosophy; junior or senior standing; minimum 3.0 GPA in major; approval of the department chairperson.*

Offers an opportunity through experiential learning to apply Philosophy skills in a career-oriented atmosphere. The internship consists of a one or two semester placement with a business, governmental agency, or service organization interested in utilizing a philosophy background and critical and analytic thinking skills, research and writing skills, and knowledge of issues addressed in the study of philosophy. Grading will be on A-F basis. No more than 3 credit hours may be applied toward the requirements for the major.

**PHIL 498. Independent Study. (1-6)**

See "Independent Study" on p. 63.

## PHYSICAL SCIENCE

**PHSC 121:122. Physical Science Processes. (4:4)**

Five hours class time per week.

Class used as laboratory, lecture, recitation, individual study. Opportunities to develop concepts and competencies in physical science. General Education credit - Physical and Natural Sciences.

**PHSC/PHYS 301. Meteorology. (4)**

Three hours lecture; two hours laboratory.

*Prerequisite: PHYS 111 or PHYS 221.*

Basic principles of meteorology, including earth's atmosphere, insulation, humidity, adiabatic processes, large-scale circulation of the atmosphere, mid-altitude weather, violent weather phenomena, and climatology.

**PHSC 350. Physical Science. (4)**

Three hours lecture; two hours laboratory.

*Prerequisite: General education science sequence.*

An analysis and synthesis of physical systems.

**PHSC 402. Methods of Science Teaching. (3)**

Three hours lecture.

*Prerequisites: Admission to the Teacher Education Program and a major in one or more of the sciences.*

Designed to facilitate the preparation of secondary science teachers. Students will examine and utilize various instructional strategies for teaching science in grades 9-12.

**PHSC 431. Energy and the Environment. (3)**

Three hours lecture.

*Prerequisites: PHYS 112 or PHYS 222 or PHSC 122 or CHEM 102.*

A study of energy, its many forms and uses, how it is converted from one form to another, and the environmental consequences of those conversions.

**PHSC/PHYS. 488. Final Honors****Thesis. (2-3)**

*Prerequisites: Completion of physical science general education requirements, enrollment in the Honors Academy, completion of all other Honors Academy requirements, a minimum 3.5 GPA in all courses and in physical science, senior standing.*

To earn a bachelor's degree with honors in physical science a student must conduct research and write a thesis. In order to receive honors credit, a student must earn a grade of "A" or "B" for the final thesis. Course may not be repeated.

**PHSC 490. Internship. (1)**

*Prerequisites: PHYS 111:112 or PHYS 221:222 or ASTR 111:112 or CHEM 101:102, six hours of required courses in the Physical Science major at the 300 level or above, and departmental approval.*

Application of skills and techniques learned in the classroom to real life situations. Participating students submit a program proposal to the sponsoring agency and supervising instructor. Agency may pay student for work performed. This course will be graded P/F. Students may repeat this course for a maximum of 3 credits.

**PHSC 498. Independent Study. (1-6)**

Hours and credit to be arranged in consultation with faculty member with whom the student will work on the Independent Study. For important additional information, see "Independent Study" on p. 63.

**PHYSICS****PHYS 111:112. General Physics.\* (4:4)**

Three hours lecture; two hours laboratory.

*Prerequisite: MATH 137 or equivalent.*

Vectors, mechanics, heat, electricity, magnetism, sound, light and selected topics in modern physics. General Education credit - Physical and Natural Sciences.

**PHYS 221:222. Physics.\* (4:4)**

Three hours lecture; two hours laboratory.

*Prerequisite: MATH 151.*

Topics of PHYS 111:112 are studied utilizing calculus. General Education credit - Physical and Natural Sciences.

\*Students may not receive credit for both PHYS 111:112 and PHYS 221:222.

**PHYS 231. Topics in Applied Physics. (1-3)**

One to three hours lecture or laboratory equivalent.

*Prerequisite: High school algebra and trigonometry.*

Application of the principles of physics to a specific field external to the core sciences, or treatment of a physics-based technology important in the modern world. Will not satisfy the requirements for the physics option of the physical science major or minor.

**PHSC/PHYS 301. Meteorology. (4)**

Three hours lecture; two hours laboratory.

*Prerequisite: PHYS 111 or PHYS 221.*

Basic principles of meteorology, including earth's atmosphere, insulation, humidity, adiabatic processes, large-scale circulation of the atmosphere, mid-altitude weather, violent weather phenomena, and climatology.

**PHYS 305. Modern Physics. (4)**

Three hours lecture; two hours laboratory.

*Prerequisite: PHYS 112 or 222.*

Introduction to modern physics, including special relativity, quantum theory, atomic and nuclear physics, elementary particles. Students cannot earn credit for both PHYS 305 and PHYS 410.

**PHYS 306. Intermediate Mechanics. (3)**

Three hours lecture.

*Prerequisite: PHYS 222 and MATH 152.*

Study of theoretical and applied Newtonian mechanics including position and velocity dependent forces, oscillations, stability, non-inertial frames, and gravitation from extended bodies.



**PHYS 307. Electricity and Magnetism.**

(4)

Three hours lecture; two hours laboratory.

*Prerequisites: PHYS 222 and MATH 152.*

Study of electric and magnetic fields in free space and in materials, interactions of fields and charges, electromagnetic forces, Gauss' and Faraday's Law and the Maxwell Equations. The laboratory will explore basic electronics including ac and dc circuits, signal filters, op amps and circuit troubleshooting.

**PHYS 310. Optics.**

(4)

Three hours lecture; two hours laboratory.

*Prerequisite: PHYS 112 or 222.*

An intermediate course in geometrical and physical optics. Topics included are mirrors, lenses, interference, diffraction, scattering, polarization and introductory quantum optics.

**PHYS 320. Mechanics.**

(3)

Three hours lecture.

*Prerequisite: PHYS 222 and MATH 152.*

An intermediate treatment of the classical mechanics of particles, systems of particles, and rigid bodies.

**PHYS 330. Thermodynamics and Statistical Mechanics.**

(3)

Three hours lecture.

*Prerequisites: PHYS 112 or 222 and MATH 152.*

Topics in thermal physics are treated using both classical thermodynamics and statistical methods. Topics include temperature, heat, work, entropy, ideal gases, phase transitions, kinetic theory.

**PHYS/GEOL 406. Geophysics.**

(4)

Three hours lecture; two hours laboratory.

*Prerequisites: Either GEOL 105 or ASTR 111 and either PHYS 112 or 222 and MATH 152, or permission of instructor.*

Examination of the basic principles and techniques of modern geophysical methods, and the applications of these methods to site investigations for environmental and engineering geologic projects. Some Saturday laboratories may be required.

**PHYS 421:422. Electromagnetic Theory I and II.**

(3:3)

Three hours lecture.

*Prerequisites: MATH 152 and PHYS 112 or 222.*

The fundamentals of electromagnetic theory are presented at an intermediate level. Topics covered are electrostatics, electric current, magnetic fields, the Maxwell equations, and electromagnetic radiation. The laboratory component of the course includes electrical measurements, electric currents, and basic electronics.

**PHYS 430. Quantum Mechanics.**

(3)

Three hours lecture.

*Prerequisites: MATH 252, PHYS 112 or 222, and PHYS 305.*

An introduction to nonrelativistic quantum mechanics. Topics included are the Schrodinger equation, bound states, angular momentum, spin, scattering theory, and the matrix formulation.

**PHYS 441/CHEM 441. Electronics for Scientists.**

(3)

Two hours lecture; four hours laboratory.

*Prerequisite: CHEM 102, PHYS 112 or 222, MATH 152.*

Introduction to analog and digital circuit design appropriate for many scientific disciplines including chemistry, computer science, physics, biology, and geology. Focus will be on analog electronics including basic electronic circuit design, use of transducers, operational amplifiers, and wave forming circuits.

**PHYS 450. Selected Topics in Physics.**

(3-4)

Three hours lecture or three hours lecture and two hours laboratory.

*Prerequisites: PHYS 112 or 222 and MATH 252.*

Selected topics in advanced undergraduate physics. A specific course syllabus will be available when the course is offered. A student may take this course for credit more than once provided the topic is different each time.

**PHYS 470. Physics Reading and Research.**

(1)

One hour lecture.

*Prerequisites: Three hours of PHYS or ASTR at the 300 level or above.*

Presentation and discussion of developments in physics and closely-related areas in current literature.

**PHYS 481. Undergraduate Research.**

(1-3)

*Prerequisites: PHYS 112 or 222 and 6 hours of PHYS courses at the 300 level or above.*

A laboratory course designed for students wishing to pursue an independent research project. May be repeated up to a total of six semester hours.

**PHYS/PHSC 488. Final Honors Thesis.**

(2-3)

*Prerequisites: Completion of physical science general education requirements, enrollment in the Honors Academy, completion of all other Honors Academy requirements, a minimum 3.5 GPA in all courses and in physical science, senior standing.*

To earn a bachelor's degree with honors in physical science a student must conduct research and write a thesis. In order to receive honors credit, a student must earn a grade of "A" or "B" for the final thesis. Course may not be repeated.

**PHYS 490. Internship**

(1)

*Prerequisites: PHYS 111:112 or PHYS 221:222 and six hours of PHYS courses at the 300 level or above, and departmental approval.*

Application of skills and techniques learned in the classroom to real life situations. Participating students submit a program proposal to the sponsoring agency and supervising instructor. Agency may pay student for work performed. This course will be graded P/F. Student may repeat this course for a maximum of three credits.

**PHYS/CHEM 498. Independent Study.**

(1-6)

PHYS 112 or 222 and MATH 152.

See "Independent Study" on p. 63.

**POLITICAL SCIENCE**

Upper-level courses are designated (AG) American Government; (CG) Comparative Government; (IR) International Relations; (PT) Political Theory; and/or (PA) Public Administration.

**POSC 110. Introduction to Politics.**

(3)

Three hours lecture.

Introduces students to the concepts and methods of political science by examining enduring questions and concerns of political life using political philosophy and literature. General Education Credit – Social and Behavioral Sciences.

**POSC 120. Introduction to American Government.**

(3)

Three hours lecture.

Introduces students to the study of American government. Philosophical foundations, constitutional development, institutions, and contemporary issues will be examined. There will be an emphasis on the continuing influence of founding principles. General Education Credit – Social and Behavioral Sciences.

**POSC 130. Introduction to Comparative Government.**

(3)

Three hours lecture.

Serves to introduce students to the comparative study of political regimes. The course will consider both the methodological issues and the principal topics involved in comparative political analysis. It is aimed at preparing students for upper-division courses in comparative politics and, more broadly, at integrating the study of comparative politics into the larger context of liberal education. General Education Credit – Social and Behavioral Sciences.

**POSC 140. Introduction to International Relations. (3)**

Three hours lecture.

An examination of major areas of interest in the study of international relations. These include the study of the relation of power to justice, the effects of war on the regime and the soul, and the relation of diplomatic-strategic conduct to the cosmic order. General Education Credit – Social and Behavioral Sciences.

**POSC 290. Seminar in Political Science. (3)**

Three hours seminar.

*Prerequisites: POSC 110 or 120 or 130 or 140; limited to political science majors and minors.*

Analyzes a contemporary political issue as it relates to the major subfields of political science and investigates what it means to study politics within the framework of a liberal arts education. Its focus is on preparing students for upper-division courses in political science while integrating work in their major into their overall university experience.

**POSC 300. Public Administration (AG, PA). (3)**

Three hours lecture.

*Prerequisite: POSC 120 for non-POSC majors/minors or POSC 120 and POSC 290 for POSC majors/minors.*

Background of administration as a profession, principles that are helpful to the administrator, and effect of political influence.

**POSC 320. Congress (AG). (3)**

Three hours lecture.

*Prerequisite: POSC 120 for non-POSC majors/minors or POSC 120 and POSC 290 for POSC majors/minors.*

Constitutional basis for development, organization, and role of Congress in the American political system. Analysis of Congress and formulation of public policy.

**POSC 321. The American Presidency (AG). (3)**

Three hours lecture.

*Prerequisite: POSC 120 for non-POSC majors/minors or POSC 120 and POSC 290 for POSC majors/minors.*

Development of the presidency since the founding of America. Institutional and political problems associated with the modern chief executive.

**POSC 326. American Political Parties and Elections (AG). (3)**

Three hours lecture.

*Prerequisite: POSC 120 for non-POSC majors/minors or POSC 120 and POSC 290 for POSC majors/minors.*

Analysis of origins, development, and current state of American political parties. Emphasis on the role of parties in the electoral process; voting behavior and public opinion; presidential and congressional elections. (Students who have received credit for either POSC 325 or 426 cannot also receive credit for POSC 326).

**POSC/MSTD/COMM 327. Politics and the Media (AG). (3)**

Three hours lecture.

*Prerequisite: POSC 120 for non-POSC majors/minors or POSC 120 and POSC 290 for POSC majors/minors.*

Modern mass media as actors in the political arena, with an emphasis on how elections and policy-making are affected by the mass media.

**POSC 330. State and Local Government (AG). (3)**

Three hours lecture.

*Prerequisite: POSC 120 for non-POSC majors/minors or POSC 120 and POSC 290 for POSC majors/minors.*

Governmental institutions and processes, political parties, voting at state and county levels.

**POSC 331. Urban and Metropolitan Politics (AG). (3)**

Three hours lecture.

*Prerequisite: POSC 120 for non-POSC majors/minors or POSC 120 and POSC 290 for POSC majors/minors.*

Development of urban government and impact of its politics; attention to roles of formal and informal actors on urban and metropolitan scene.

**POSC 333. Judicial Process (AG). (3)**

Three hours lecture.

*Prerequisite: POSC 120 for non-POSC majors/minors or POSC 120 and POSC 290 for POSC majors/minors.*

Composition, roles, and powers of courts in American government. Emphasis on political nature of judicial decisions.

**POSC 335. American Public Policy. (AG, PA). (3)**

Three hours lecture.

*Prerequisite: POSC 120 for non-POSC majors/minors or POSC 120 and POSC 290 for POSC majors/minors.*

Examination of policy-making process and approaches to issues in American government; emphasis on role of informal influences as opposed to function of elected and appointed officials.

**POSC 336. Global Citizenship (IR, CG). (3)**

Three hours lecture.

*Prerequisites: POSC 130 or POSC 140 for non-majors.*

In-depth overview of specific topics in the areas of political theory, political economy, U.S. foreign policy, comparative government, and selected global issue areas designed (in conjunction with POSC 337) to meet NCSS and Virginia SOL guidelines for program accreditation and teacher preparation for secondary school social science teacher candidates. It is especially appropriate for those seeking certification in Social Studies and Government and includes assessment opportunities suitable for inclusion in their professional portfolios.

**POSC 337. United States and Virginia Government (AG). (3)**

Three hours lecture.

*Prerequisites: POSC 120 and junior or senior standing.*

In-depth overview of national and local political Institutions and fundamental principles

of American government. The political science department sees this class and POSC 336 as essential to any social science major interested in preparing to teach at the secondary level. It is especially appropriate for those seeking certification in Social Studies and Government and includes assessment opportunities suitable for inclusion in their professional portfolios.

**POSC 340. Government and Politics in Asia (CG). (3)**

Three hours lecture.

*Prerequisite: POSC 130 for non-POSC majors/minors or POSC 130 and POSC 290 for POSC majors/minors.*

Comparative study of such major Asian powers as China, Japan, and India as well as selected regional powers.

**POSC 341. Western European Government and Politics. (CG). (3)**

Three hours lecture.

*Prerequisite: POSC 130 for non-POSC majors/minors or POSC 130 and POSC 290 for POSC majors/minors.*

Political structures and functioning of selected Western European political systems. Emphasis on such major powers as the United Kingdom, France, and Germany and on the European Union and the prospects for continuing political integration.

**POSC 342. Government and Politics of Russia and the Independent States (CG). (3)**

Three hours lecture.

*Prerequisite: POSC 130 for non-POSC majors/minors or POSC 130 and POSC 290 for POSC majors/minors.*

Examines the government and politics in the independent states that were formerly part of the Soviet Union.

**POSC 345. Canada: Search for a Nation (CG). (3)**

Three hours lecture.

*Prerequisite: POSC 130 for non-POSC majors/minors or POSC 130 and POSC 290 for POSC majors/minors.*

Political and historical realities of Canada

as seen through the evolution of the French Canadian novel; attention to development of nationalism in Canada and its relevance to the overall American experience. Approach is interdisciplinary.

**POSC 350. U. S. Foreign and Defense Policy (IR). (3)**

Three hours lecture.

*Prerequisite: POSC 140 for non-POSC majors/minors or POSC 140 and POSC 290 for POSC majors/minors.*

Surveys the development of the relationship of American foreign policy and its corollary, American strategy, from the perspective of political philosophy. Assuming that strategy is the continuation of politics by other means, POSC 350 raises questions about the relation of American regime principles to the diplomacy and strategy that implement these principles in the international milieu.

**POSC 360. International Law and Organization (IR). (3)**

Three hours lecture.

*Prerequisite: POSC 140 for non-POSC majors/minor or POSC 140 and POSC 290 for POSC majors/minors.*

Law and organization in an anarchic milieu of sovereign states. Emphasis on theoretical foundations and historical evolution.

**POSC 370:371:372. History of Political Philosophy (PT). (3:3:3)**

Three hours lecture.

*Prerequisite: POSC 110 for non POSC majors/minors or POSC 110 and POSC 290 for POSC majors/minors.*

First Semester: Development of Western political philosophy from ancient Greece through medieval period. Second Semester: Machiavelli through early modern period. Third Semester: Hegel to the present. Emphasis on reading primary sources. Discussion of major schools of thought and interpretation of politics.

**POSC 430. Organizational Theory in the Public Sector (AG, PA). (3)**

Three hours lecture.

*Prerequisite: POSC 300 for non-POSC majors/minors or POSC 300 and POSC 290 for POSC majors/minors.*

Concerned with understanding, explaining, and predicting the best manner to structure/design public organizations to (1) enhance their operating efficiency and (2) fulfill their legislative, judicial, and/or political mandate. Specifically, the course is behaviorally oriented and seeks to explore how individuals and groups behave in varying organizational structures and environments. The unique dynamics of managing public organizations, as opposed to private enterprises, are also a major theme of the course.

**POSC 431. Leadership in Public Administration (AG, PA). (3)**

Three hours lecture.

*Prerequisite: POSC 300 for non-POSC majors/minors or POSC 300 and POSC 290 for POSC majors/minors.*

The issue of leadership as a determinant of organizational effectiveness is an important one for public organizations. This course will review a number of leadership theories and the potential impact of leadership on organizational behavior, culture, and revitalization in the public sector. A dominant theme of this course will be to clarify the distinction between leaders and managers in organizational life.

**POSC 435. Contemporary Problems in Public Administration. (AG, PA). (3)**

Three hours lecture.

*Prerequisite: POSC 300 for non-POSC majors/minors or POSC 300 and POSC 290 for POSC majors/minors.*

Developments in public finance, budgeting and personnel; trends in representative bureaucracy, regulation, regional administration.

**POSC 438. Constitutional Law: Governmental Powers (AG). (3)**

Three hours lecture.

*Prerequisite: POSC 120 for non-POSC majors/minors or POSC 120 and POSC 290 for POSC majors/minors.*

Constitutional powers exercised by federal government; emphasis on intergovernmental relations, separation of powers, role of the Supreme Court in constitutional process and general theories of constitutional government.



**POSC 439. Constitutional Law: Civil Liberties (AG). (3)**

Three hours lecture.

*Prerequisite: POSC 120 for non-POSC majors/minors or POSC 120 and POSC 290 for POSC majors/minors.*

Theoretical bases, popular support, judicial interpretation, and role of civil liberties in the United States.

**POSC 445. Government and Politics in the Developing World (CG). (3)**

Three hours lecture and discussion.

*Prerequisite: POSC 130 for non-POSC majors/minors or POSC 130 and POSC 290 for POSC majors/minors.*

Analysis of processes, problems, and prospects of modernization in underdeveloped areas of the world. Asian, African, and Latin American countries used as examples.

**POSC 458. Force in International Relations (IR). (3)**

Three hours lecture.

*Prerequisite: POSC 140 for non-POSC majors/minors or POSC 140 and POSC 290 for POSC majors/minors.*

An intensive study of the use of force in international relations and its effect on regimes and the soul. Themes include the classical perspective on force, just war theory, pacifism, empire maintenance and decay, and force and world order.

**POSC 460. Theories of International Relations (IR). (3)**

Three hours lecture.

*Prerequisite: POSC 140 for non-POSC majors/minors or POSC 140 and POSC 290 for POSC majors/minors.*

Theoretical inquiry into the characteristic aspects of diplomatic strategic behavior among political units, from city-states to empires. Emphasis on the relation of morality and power.

**POSC 461. Government and Politics of Latin America (CG). (3)**

Three hours lecture.

*Prerequisite: POSC 130 for non-POSC majors/minors or POSC 130 and POSC 290 for POSC majors/minors.*

An introduction to Latin American politics that focuses on enduring themes and contemporary politics in selected countries.

**POSC 463. International Political Economy (IR). (3)**

Three hours lecture.

*Prerequisite: POSC 140 for non-POSC majors/minors or POSC 140 and POSC 290 for POSC majors/minors.*

Analysis of the political impact of economic relationships among nation-states and between nation-states, subnational organizations, and supranational organizations. Topics covered include international trade, international monetary relations, imperialism, dependency, multinational corporations and the politics of natural resources.

**POSC 474. American Political Thought (AG, PT). (3)**

Three hour lecture.

*Prerequisites: POSC 110 and 120.*

Examines the thought of the American founders, the principles of the constitutional order, and the evolution of American political thought over more than two centuries. Emphasis on original sources in the thought of American statesmen, political activists and dissenters, and intellectuals. (Students who have received credit for either POSC 472 and 473 cannot also receive credit for POSC 474).

**POSC 485. Internships in Political Science and Public Administration. (3-15)**

*Prerequisites: POSC 290; Junior or Senior standing; 2.5 in political science; 2.0 cumulative university GPA; departmental approval. Must be POSC major or minor.*

Only three hours may be applied toward requirements for the major or minor. This course will allow students to integrate concepts developed in classroom experiences and relevant readings in the theory of political science and public administration with the practice of these concepts in public and private agencies, organizations, and institutions.

**POSC 488. Final Honors Project**  
(AG; CG; IR; PA; PT: as  
designated). (2-3)

*Prerequisites: POSC 290; enrollment in the Honors Academy, completion of all other Honors Academy requirements, a minimum 3.5 GPA in all courses and in political science.*

Project and the topic to be explored will be determined by the student, the faculty member with whom the student works, and the department. (Honors project may be a written or a written and performance-based project.) In order to receive honors credit, a student must earn a grade of "A" or "B" for the final project. Course may not be repeated.

**POSC 490. Seminar (AG; CG; IR; PA; PT; as designated).** (3)

Three hours lecture and discussion.

*Prerequisites: Successful completion of appropriate 100-level course and POSC 290, or permission of the instructor.*

Analysis of a particular problem or issue in political science or contemporary politics. May be repeated as topics change. Depending upon the topic, this course may be used to meet requirements for the minor in Appalachian Studies.

**POSC 491. Scope and Methods in Political Science. (PT).** (3)

Three hours lecture.

*Prerequisites: POSC 110, 290 and junior or senior standing*

Introduction to professional study; focus on conceptual approaches to study of political science, various contemporary schools of thought and methodology. Primary work in research methods as appropriate to the various subfields of the discipline.

**POSC 498. Independent Study.**  
(AG; CG; IR; PA; PT: as  
designated) (1-3)

*Prerequisites: 18 hours of political science, including POSC 290, and permission of instructor.*

Students must obtain approval from department on proposed program in semester preceding that in which independent study is

anticipated. Course may carry one to three hours credit a semester and may be repeated up to six semester hours, but a maximum of three hours may be counted toward completion of any concentration requirements. Offered as required. See "Independent Study" on p. 63.

## PSYCHOLOGY

**PSYC 121. Introductory Psychology.** (3)

Three hours lecture.

An introduction to the study of behavior. Topics include essential concepts in brain function, motivation, learning, personality, social and abnormal psychology, along with the methods used to study them, and their applications. General Education credit - Social and Behavioral Sciences.

**PSYC 201. Psychological Research I.** (3)  
**Two hours lecture; two hours laboratory.**

*Prerequisite: PSYC 121.*

*Pre-or corequisite: STAT 200 or permission of the instructor. (STAT 205, 208, or 211 are also acceptable.)*

A survey of the principal topics and methods used to perform scientific research in various fields of Psychology. Topics include naturalistic observation of behavior in children and adults, measurement and scaling of attitudes and perceptual phenomena, qualitative and quantitative description and analysis of behavior, correlational research in personality and social psychology, and sampling as applied to the study of intelligence and other normative psychological scales.

**PSYC 202. Psychological Research II.** (3)

Two hours lecture; two hours laboratory.

*Prerequisite: PSYC 201.*

Survey of the principal topics and methods used to perform scientific research in various fields of psychology. Topics include naturalistic observation of behavior in children and adults measurement and scaling of attitudes and perceptual phenomena, qualitative and quantitative description and analysis of behavior, correlational research in personality

and social psychology, and sampling as applied to the study of intelligence and other normative psychological scales.

**PSYC 218. Adolescent Psychology. (3)**

Three hours lecture.

*Prerequisite: PSYC 121.*

Emotional, social, physical, personality and cognitive aspects of human development in adolescence. General Education credit - Social and Behavioral Sciences. Students may not receive credit if previously taken PSYC 318.

**PSYC 222. Orientation to the Psychology Major. (1)**

One hour lecture.

*Prerequisites: Psychology major; PSYC 201 as prerequisite or corequisite; recommended for majors with less than 18 hours of PSYC courses.*

Introduces the student to the academic and professional field of psychology in order to assist students in understanding the possibilities of psychology as a career field, and also to assist students to better understand the requirements of the major at RU.

**PSYC 230. Lifespan Developmental Psychology. (3)**

Three hours lecture.

*Prerequisite: PSYC 121.*

Will contribute to an understanding of the physical, social, emotional, and intellectual development of people throughout the lifespan. Areas of development that will be covered include motoric and perceptual skill development, social/emotional and personality development, linguistic and intellectual development from conception through old age. This course will not substitute for PSYC 317 as a Psychology social science core class. General Education credit – Social and Behavioral Sciences.

**PSYC 250. Psychology of Diversity. (3)**

Three hours lecture.

*Prerequisites: PSYC 121.*

Provides an overview of the psychology of race/ethnicity, sex/gender, and minority groups in a multicultural context. This course will cover issues of psychological

development, mental health, sex/gender, and power inequity within minority groups residing in North America, including but not limited to: African-Americans, Hispanic/Latino Americans, American Indians, and Asian Pacific Islanders. It provides a means of critical analysis and integration of diverse perspectives that exist within contemporary psychology. Major emphasis will be on developing an understanding of the variation within and between racial/ethnic groups; psychological issues relevant to women and their minority or out-group status; psychological issues or regarding gender within minority groups; and the psychological processes that underlie the perpetuation of group conflict and inequity and the multicultural approach to confronting these issues. Students may not receive credit if previously taken PSYC 350. This course may be used to meet requirements for the minor in Women's Studies.

**PSYC 282. Consumer Psychology. (3)**

Three hours lecture.

*Prerequisite: PSYC 121.*

Study of relationship between organizations that provide goods and services and individuals who receive them; emphasis on research findings which help consumers derive greater satisfaction and pleasure from the products they consume. General Education credit - Social and Behavioral Sciences. Student may not receive credit if previously taken PSYC 382.

**PSYC 317. Child Psychology. (SS Core) (3)**

Three hours lecture.

*Prerequisite: PSYC 121.*

Motor, perceptual, linguistic, social and intellectual aspects of human development from conception through middle childhood. Fulfills one of the Social Sciences core requirement for the psychology major and minor. General Education credit - Social and Behavioral Sciences.

**PSYC 320. Introduction to Cognitive Psychology (NS Core). (3)**

Three hours lecture.

*Prerequisites: PSYC 121.*

A survey of human cognitive psychology. Topics include attention, perception, memory, mental imagery, language and reading,

problem solving, and decision making. This course satisfies one of the Natural Science core requirements for the psychology major and minor.

**PSYC 333. Principles of Learning (NS Core).**

Three hours lecture.

*Prerequisite: PSYC 121.*

An introduction to the basic principles of experimental and applied learning. Data from animal and human experiments will be considered. Selected areas of application to human social problems included. The laboratory will consist of a set of graduated exercises which the student will be required to complete, including training a rat in a set of standard exercises. Fulfills one of the Natural Sciences core requirements for the psychology major and minor.

**PSYC 343. Social Psychology (SS Core). (3)**

Three hours lecture.

*Prerequisite: PSYC 121.*

Study of the effects of others on the behavior of individuals, including social perception, attitude change, attraction and conformity, as well as the structure and behavior of groups including leadership, competition and decision making. Fulfills one of the Social Sciences core requirements for the psychology major and minor.

General Education credit - Social and Behavioral Sciences.

**PSYC 347. Environmental Psychology. (3) Three hours lecture.**

*Prerequisite: PSYC 121.*

Covers topics related to the interrelationship between human behavior and experience and the built and natural environment.

**PSYC 353/BIOL 353. Comparative Behavior. (3)**

Two hours lecture; two hours laboratory.

*Prerequisites: PSYC 121 and eight credits of Biology.*

Study of animal behavior from viewpoints of zoology, ethology and comparative psychology. Emphasis on review of

animal phyla for sensory capacities, motor capabilities and coordinating mechanisms; classification of behavioral traits; analysis of instinctive behavior, learned behavior, social behavior, animal communications and evolutionary significance of social organization.

Note: Does not fulfill the lab course requirement.

**PSYC 361. Psychology of Personality (SS Core). (3)**

Three hours lecture.

*Prerequisite: PSYC 121.*

Introduction to descriptions, dynamics and determinants of personality. The major theories of personality are discussed and compared. Fulfills one of the Social Science core requirements for the psychology major and minor. General Education credit - Social and Behavioral Sciences.

**PSYC 377. Introduction to Sensation and Perception (NS Core). (3)**

Three hours lecture.

*Prerequisite: PSYC 121.*

An introduction to the basic concepts and theories of sensory and perceptual psychology. Selected areas of application to everyday life will also be included. Fulfills one of the Natural Sciences core requirements for the psychology major and minor.

**PSYC 378. Brain and Behavior (NS Core). (3)**

Three hours lecture.

*Prerequisites: PSYC 121.*

Examines the brain and its role in mediating behavior and psychological processes in humans and other animals. Topics to be covered include neuronal functioning and communication, structure of the nervous system, common neurological disorders, neural bases of perception and action, learning, memory and cognition, motivation, and biological foundations of psychological disorders. Fulfills one of the Natural Sciences core requirements for the psychology major and minor.

**PSYC 381. Psychology of Work Behavior.**

(3)

Three hours lecture.

*Prerequisite: PSYC 121.*

Study of human behavior in relation to personnel, worker motivation, satisfaction, efficiency, work training, leadership and organizational communications. General Education credit - Social and Behavioral Sciences.

**PSYC 391. Psychology of Women.**

(3)

Three hours lecture.

*Prerequisite: PSYC 121.*

Investigates changing roles of women, and the factors of education, intelligence, personality, physical characteristics and socialization that contribute to these roles. General Education credit - Social and Behavioral Sciences. This course may be used to meet requirements for the minor in Women's Studies.

**PSYC 401. Psychology of the Exceptional Child.**

(3)

Three hours lecture.

*Prerequisite: PSYC 317.*

Gives students an understanding of children who are different intellectually, behaviorally, socially and physically from the average child, as well as an understanding of the ecology of an exceptional child; provides student with some knowledge of special needs and techniques used in the assessment of and education of such individuals as well as information about capacities and abilities.

**PSYC 405. Forensic Psychology.**

(3)

Three hours lecture and discussion.

*Prerequisite: PSYC 121.*

Course provides a survey of the forensic psychology areas. Topics will include aggression, serial killers, jury psychology, eyewitness testimony, detecting deception, insanity plea, hostage negotiation, and critical incident counseling.

**PSYC 415. Evolutionary Psychology.**

(3)

Three hours lecture.

*Prerequisites: PSYC 121*

Application of evolution theory to understanding human behavior, including the topics of learning, intelligence, mating strategies

and gender differences, kinship and social interaction, motivation, emotion, health, and psychopathology.

**PSYC 420. Research in Cognitive Psychology.**

(3)

Two hours lecture; two hours laboratory.

*Prerequisites: PSYC 202, 320.*

An examination of scientific versus pseudo-scientific approaches to knowing, and an emphasis on real-world memory, decision-making, and general cognitive processes.

**PSYC 429. Maturity and Aging.**

(3)

Three hours lecture.

*Prerequisite: PSYC 121.*

Examines aging process and resultant changes in psychomotor skills, learning, thinking and intelligence, employment and productivity, personality, maladjustment and life review.

**PSYC 434. Research in Learning.**

(3)

Two hours lecture; two hours laboratory.

*Prerequisites: PSYC 202, 333.*

An empirical and theoretical survey of the major areas in the psychology of learning. Data from both animal and human experiments discussed from varying points of view. Requires student to design an experimental project, construct apparatus as needed, collect data, analyze data and submit a report in the American Psychological Association (APA) format. Fulfills lab course requirement.

**PSYC 439. Abnormal Psychology (SS Core).**

(3)

Three hours lecture.

*Prerequisite: PSYC 121.*

Study of abnormal psychology that emphasizes the history, major perspectives and Diagnostic and Statistical Manual III-R categories. Fulfills one of the Social Sciences core requirements for the psychology major and minor.

**PSYC 440. Abnormal Child Psychology.**

(3)

Three hours lecture.

*Prerequisite: PSYC 121.*

Provides a survey of the most common childhood and adolescent psychological disorders.



Topics will include theories of abnormal psychological development, current classification (DSM) and assessment techniques, and treatments.

**PSYC 443. Research in Social Psychology. (3)**

Two hours lecture; two hours laboratory.

*Prerequisites:* PSYC 343, PSYC 201, and PSYC 202.

Students will directly study the effects of others on the thoughts, feelings, and behavior of individuals. Students will become familiar with empirical investigations of specific topics in social psychological research, and will be required to conduct research and submit a research report in American Psychological Association (APA) format.

**PSYC 445. Psychological Tests and Measurements. (3)**

Three hours lecture.

*Prerequisites:* PSYC 201 and junior, senior or graduate standing.

Foundations and methodologies of psychological testing, including achievement, ability, interest and personality assessment; problems, issues, developments and future prospects in psychological assessment. Students research, administer, score, interpret and report results of selected psychological tests.

**PSYC 461. Research in Personality. (3)**

Two hours lecture, two hours laboratory.

*Prerequisites:* PSYC 202, 361.

Examines scientific investigations of various aspects of human personality including development, change, and characteristics. Students will become familiar with empirical investigations of specific topics in personality research, and will be required to conduct their own research project and to submit a research report in American Psychological Association (APA) format. Fulfills lab course requirement.

**PSYC 470. History and Systems of Psychology. (3)**

Three hours lecture.

*Prerequisites:* PSYC 121 and junior or senior status as a psychology major or minor.

Develops understanding of history of thought

as it relates to the field of psychology. Centers on significant issues which have persisted through history and the methods used by great men and women in their efforts to grapple with these issues. Deals with the systems of psychology and contemporary theories.

**PSYC 477. Research in Sensation and Perception. (3)**

Two hours lecture; two hours laboratory.

*Prerequisites:* PSYC 202, 377.

An introduction to research methods and experimental investigations in sensory and perceptual psychology. Meets the lab course requirement for psychology majors.

**PSYC 478. Research in Physiological Psychology. (3)**

Two hours lecture; two hours laboratory.

*Prerequisites:* PSYC 202, 378.

Survey of the structure and functions of the nervous and endocrine systems in controlling and organizing various psychological events and processes. These include perception and movement, emotion, motivation, memory, language and consciousness and clinical uses of physiological psychology. The laboratory is designed to introduce the student to various scientific ways of studying the relationships between physiology and behavior. Fulfills lab course requirement.

**PSYC 480. Human Neuropsychology. (3)**

Three hours lecture.

*Prerequisites:* PSYC 121 and senior standing or permission of instructor.

Disorders and diseases of the human brain will be examined to familiarize students with the causes, consequences, and treatment of brain disorders, and to illuminate the role of the brain in normal psychological functioning. Students will learn about the structure and function of the nervous system, causes of brain damage, common neuropsychological disorders and syndromes, disorders of brain function in children and adults, and assessment and rehabilitation of brain function.

**PSYC 488. Final Honors Project. (2-3)**

*Prerequisites:* Enrollment in the Honors Academy, completion of all other Honors Academy

*requirements, a minimum of 3.5 GPA in all courses and in psychology.*

Project and topic to be determined by the student, the faculty member with whom the student works, and the department. In order to receive honors credit, a student must earn a grade of "A" or "B" for the final project. Course may not be repeated.

**PSYC 490. Seminar in Psychology. (1-3)**

Three hours lecture.

*Prerequisite: PSYC 121.*

Presentation and discussion of current issues in psychology.

**PSYC 491. Research Lab: Special Topics. (3)**

Two hours lecture; two hours laboratory.

*Prerequisites: PSYC 202 and permission of instructor.*

Will expose the psychology student to research in a particular area of interest which may not be addressed in any of the other research lab courses offered by the psychology department faculty. It will allow students to have an in-depth exposure to a specific research topic, through lecture, discussion, and empirical investigation. Students will be required to conduct a research project and to submit a research report in APA format. This course will count as meeting the lab requirement for the major.

**PSYC 498. Independent Study. (1-6)**

See Independent Study on p. 63.

**PSYC 499. Internship. (3-12)**

*Prerequisites: Must have a psychology major, a minimum of 75 semester hours credit with at least 18 hours of psychology credits and a GPA of 3.0 overall and 3.2 in the major. Students also must have completed the series of "Success Seminars" conducted by the Center for Experiential Learning.*

Full- or part-time placement in a professional setting to provide students with appointed experience relative to their interests and goals. Supervision will be provided by both internship site personnel and university faculty, and will include weekly on-site and scheduled campus-based seminars. Permission by the internship committee required for enrollment. Graded pass-fail.

## **RECREATION, PARKS AND TOURISM**

**RCPT 112. Activity Leadership and Analysis. (3)**

Three hours lecture.

*Prerequisite: Major in RCPT, freshman or sophomore standing only or permission of chairperson.*

Survey of recreation activities through the fun of participation and practice of acceptable leadership techniques in play situations. Effects of outside dynamic forces on various recreation activities.

**RCPT 200. Leisure in Contemporary Society. (3)**

Three hours lecture.

*Prerequisite: Freshman or sophomore standing; or permission of chairperson.*

Examines the growth and development of leisure as an industry and the importance of leisure experiences in the lives of individuals. Emphasis is on understanding the physical, psychosocial, economic, political, and experiential aspects of leisure. General Education credit - Health and Wellness.

**RCPT 210. Introduction to Recreation, Parks and Tourism. (3)**

Three hours lecture.

*Prerequisite: Freshman or sophomore standing; or permission of chairperson.*

Studies significance and impact of recreation, parks and tourism on American lifestyles. Examines the history, philosophy and scope of the field of recreation, parks and tourism including the roles of professionals. Students are required to do service learning in a recreation setting.

**RCPT 230. Introduction to Outdoor Recreation. (3)**

Three hours lecture.

*Prerequisites: Major in RCPT or permission of chairperson.*

Broad overview of the field of outdoor recreation. Emphasis is placed on land management agencies and strategies used by resource managers. Social and environmental issues that impact on land management policy are discussed.

**RCPT 235. Camp Counseling. (3)**

Three hours lecture.

Introduction to the role of counselors in relation to the objectives, organization, guidance, leadership skills and programming in organized camps.

**RCPT 313. Program Planning in Recreation, Parks and Tourism. (3)**

Three hours lecture.

Focuses on essential elements and basic principles in the development, implementation and evaluation of recreation programs. Em-

phasis on planning, conducting, and evaluating programs in recreation, parks and tourism. May not receive credit if previously have taken RCPT 215.

**RCPT 314. Recreation Workshop. (3)**

Two hours lecture; four hours laboratory.

*Prerequisites: RCPT 112, 210 and 313.*

Students will simulate a park and recreation department. Programs will be planned, financed, coordinated, conducted, and evaluated for different groups throughout the community. Students are evaluated on their ability to deliver program services to different constituent groups, and well as their own ability to develop collaborative relationships.

**RCPT 317. Adventure Programming. (1-3)**

Two hours lecture; two hours laboratory.

*Pre- or corequisite: RCPT 112 or permission of chairperson.*

Focuses on the design, implementation and leadership of adventure activities and programs. The course involves weekly labs and some weekend field experiences in selected adventure activities. Field trips required.

**RCPT 319. Inclusive Services. (3)**

Three hours lecture.

*Prerequisites: RCPT 112, 210.*

Broadens the understanding of recreation, parks and tourism service delivery to individuals and groups that have been historically excluded from full participation. Provides basic understanding and application of techniques for inclusion rather than exclusion of exceptional individuals who may require some specialized setting and/or recreation programs and accommodations in order to be active participants. May not receive credit if previously taken RCPT 219.

**RCPT 326. Leisure and the Aging Process. (3)**

Three hours lecture.

Considers a broad range of topics associated with the role of recreation and the aging process, including the use of activities as a therapeutic intervention in furthering the quality of life experiences as one grows older. Consideration is also given to community and institutionally oriented

program planning and evaluation throughout the leisure service delivery process.

**RCPT 328. Design and Maintenance of Recreation, Parks and Tourism**

**Resources.**

(3)

Three hours lecture.

*Prerequisite: Junior standing, RCPT 313 or permission of chairperson.*

Emphasizes planning principles and procedures in acquiring, developing, maintaining and providing for maximum return of use from parks and related recreation facilities. It focuses on technical design aspects of recreation facilities and maintenance principles needed for upgrading new and/or existing facilities.

**RCPT 331. Outdoor Living Skills.**

(3)

Three hours lecture/ laboratory.

*Prerequisite: Major in RCPT or permission of chairperson.*

Lab and field experiences in camping, backpacking, and orienteering. An emphasis is placed on environmental ethics, education, and philosophy. Field trips required.

**RCPT 340. Introduction to Recreation Therapy.**

(3)

Three hours lecture.

*Prerequisites: RCPT 112, 210, or permission of the chairperson.*

Introduction to recreation therapy as a professional field of service including history, philosophy and concepts, people served, terminology, settings, scope of service and role of practitioners.

**RCPT 342. Application of Activities for Recreation Therapy.**

(3)

Two hours lecture; two hours laboratory.

*Prerequisites: RCPT 313, 319, 340; BIOL 310, 311 or 322; or permission of the chairperson.*

*Corequisite: RCPT 340*

Prepares students for the utilization of activities for rehabilitative purposes. The recreation therapist's role and activity skills utilized in clinical and non-clinical settings are taught. The therapeutic recreation process, theories, scope of practice and components of professionalism are initially applied to the practice setting and may include observational field trips.

**RCPT 344. Program Application in Recreation Therapy.**

(3)

Two hours lecture; two hours laboratory.

*Prerequisite: RCPT 342.*

Provides laboratory experience in recreation therapy. Emphasizes program design and evaluation, activity analysis and facilitation techniques. Students conduct programs for individuals with disabling conditions in the community.

**RCPT 350. Commercial Recreation and Tourism.**

(3)

Three hours lecture.

*Prerequisites: RCPT 112, 210 and 313 or permission of chairperson.*

Introduction to the fundamentals and principles of commercial recreation as a field of service including delivery of goods, services, amenities, facilities, entrepreneurship and trends in commercial recreation, parks and tourism.

**RCPT 365. Legal Liability and Risk Management.**

(3)

Three hours lecture.

*Prerequisites: RCPT 210 and RCPT 313, or permission of chairperson.*

Legal issues relating to park and recreation administration and programming, risk management planning and implementation in park and recreation settings.

**RCPT 411. History and Philosophy of Recreation, Parks and Tourism.**

(3)

Three hours lecture.

*Prerequisite: RCPT 112, 210, 313 and 319.*

Discussion of selected philosophies, theories, issues, problems, trends and principles as foundations for the development of a philosophy of recreation; evolutionary and cross-cultural survey of the history and development of the profession.

**RCPT 413. Professional Issues in Recreation, Parks and Tourism.**

(3)

Three hours lecture.

*Prerequisites: Must have completed 86 semester hours, have a minimum 2.1 cumulative G.P.A. and a minimum 2.5 major G.P.A.*

Focuses on various professional concerns relative to recreation delivery. Emphasis given to internship/employment preparation, concept of a profession and professional organization, ethical principles and professionalism, and trends and issues in recreation, parks and tourism.

**RCPT 417. Seminar in Recreation, Parks and Tourism; Topical. (1-4)**

*Prerequisite: Junior standing.*

Hours and credit to be arranged.

Intensive inquiry into a specific topic (i.e., urban or rural recreation, rock climbing, outdoor leadership, project adventure). Students may repeat course for maximum of six hours credit.

**RCPT 421. Ropes Course Programming. (3)**

Three hours lecture/laboratory.

*Pre- or corequisite: RCPT 112, 210 and 313, and permission of the instructor.*

Students learn and apply the technical, safety, leadership and facilitation skills essential to safe and effective ropes course programming. Emphasis is given to understanding the theoretical underpinnings of ropes course philosophy. A five-day training workshop is a required component of this course.

**RCPT 423. Recreation Administration. (3)**

Three hours lecture.

*Prerequisite: RCPT 112, 210 and 313 or permission of chairperson.*

Introduction to the administration of recreation, parks and tourism. Emphasis on fiscal management, personnel management, organizational structure, marketing techniques and legal foundations in recreation, parks and tourism departments.

**RCPT 424. Advanced Recreation Administration. (3)**

Three hours lecture.

*Prerequisite: RCPT 423.*

Theory and practice of successful administrative techniques in the profession including human relations, communications, personnel management, legal aspects, effective time management, and the supervisor as a teacher. (Student cannot receive credit for RCPT 424 and RCPT 422.)

**RCPT 425. Ethical Issues in Recreation, Parks and Tourism Management. (3)**

Three hours lecture.

*Prerequisites: RCPT 314, senior standing, or permission of chairperson.*

Covers issues that influence recreation, parks and tourism management such as current trends, ethical principles, professionalism, conflict management, and the politics of organizations. Case studies and role playing activities are incorporated in the course.

**RCPT 431. Managing Travel Resources. (3)**

Three hours lecture.

*Prerequisite: Junior or senior standing.*

Emphasizes recreational aspects of tourism development, with focus on the national and international scene; includes case studies, conflicts and political and economic consequences of developing the national heritage as a tourism resource.

**RCPT 435. Tourism and Recreation Marketing. (3)**

Three hours lecture.

*Prerequisites: RCPT 210 and RCPT 313, or permission of chairperson.*

An overview of service marketing as applied to the tourism industry, including but not limited to: unique attributes of service marketing; consumer orientation; understanding consumers and consumer behavior; market segmentation principles; target marketing; product planning; promotion planning; market research; and competitor analysis.

**RCPT 436. Research and Technology Applications in Recreation, Parks and Tourism. (3)**

Two hours lecture; two hours laboratory.

*Prerequisites: ITEC 100 or 106 (or equivalent), RCPT 210, 313 and STAT 200.*

Prepares students for research and evaluation in recreation, parks and tourism. Computer skills and/or applicable technology will be used to conduct a research project during the semester. Instruction is related to applied research projects and how computer examination applications can be used to enhance assessment, management, evaluation and program delivery.



**RCPT 441. Advanced Ropes Course Programming. (3)**

Three hours lecture/laboratory.

*Prerequisite: RCPT 421 or permission of instructor.*

Students will practice advanced facilitation, leadership, technical and safety skills essential to ropes course programming. A five-day training workshop and fifteen (15) hours of service learning are required components of the course.

**RCPT 445. Programming and Evaluation in Recreation Therapy. (3)**

Three hours lecture.

*Prerequisite: RCPT 344.*

Program design, planning and evaluation of recreation therapy services within various care, treatment and rehabilitation agencies as well as public park and recreation settings.

**RCPT 470. Internship. (12)**

40 hours per week for 12 weeks, 480 hours total.

*Prerequisites: A minimum 2.1 grade point average in overall work and a 2.5 in the major; RCPT 112, 210, 313, 314, 413 and 423. In addition, student must be in the process or have completed the courses within his/her concentration, and must have permission of the chairperson.*

Provides maximum opportunity to participate in professional laboratory experiences as a recreation professional.

**RCPT 476. Wilderness Institute. (9)**

Lectures, labs and field trips integrated into an intensive, heavily experiential primarily off-campus course.

*Prerequisite: Permission of instructor.*

Incorporates a broad overview of the field of outdoor recreation. Emphasis is placed on land management agencies and the social and environmental issues that impact on management policy. This course involves skill acquisition and practical field experiences in hiking, orienteering, camping, backpacking, rock climbing, caving, ropes coursing and/or paddling.

**RCPT 488. Final Honors Project. (2-3)**

*Prerequisites: Enrollment in the Honors Academy, completion of all other Honors Academy requirements, a minimum 3.5 GPA in all courses and in the Department of Recreation, Parks and Tourism.*

Project and the topic to be explored will be determined by the student and the faculty member with whom student works. Honors project may be a written or a written- and performance-based project. In order to receive honors credit, a student must earn a grade of "A" or "B" for the final project. Course may not be repeated.

**RCPT 498. Independent Study. (1-4)**

Hours and credit to be arranged.

*Prerequisites: Senior standing; permission from a departmental faculty member, who will supervise the project, must be obtained one semester prior to semester in which student enrolls in course.*

Offers opportunity to pursue in-depth a topic relevant to the recreation, park, and tourism field.

## **RELIGIOUS STUDIES**

**RELN 111. Introduction to Religion. (3)**

Three hours lecture.

Presents recurrent forms and issues in religious life, e.g. myths, rituals, the nature of the divine, good and evil, and introduces students to the academic study of religion. Traditions are covered thematically, with emphasis upon crosscultural features of religion and pertinent theories. General Education credit - Humanities.

**RELN 112. Survey of World Religions. (3)**

Three hours lecture.

This introductory course presents the classical expressions of the world's most widespread and historically significant religions. Students will learn about the origins, foundational figures, scriptures, beliefs, and practices of Hinduism, Buddhism, Daoism, Confucianism, Judaism, Christianity, and Islam. General

Education credit - Humanities or International and Intercultural Studies.

**RELN 200. Survey of the New Testament.** (3)

Three hours lecture.

Examines the New Testament using the tools of contemporary scholarship. Through a study of the history of the early Church and the varied stories presented by the different authors of the New Testament, students will learn to see the formative Christian tradition in all of its variety. General Education credit - Humanities.

**RELN 202. Survey of the Old Testament.** (3)

Three hours lecture.

Provides an introduction to the methods which inform the study of the Old Testament and examines the three segments of the Old Testament, i.e. The Law, the Prophets, and the Writings. Students view the major events which shaped the history of ancient Israel and encounter the themes which formed the ideology of Israelite religion. General Education credit - Humanities.

**RELN 205. Religion and Culture.** (3)

Three hours lecture.

This introduction to the social/scientific study of religion examines religion in its cultural context. Topics such as church and state, religion and race, secularization, and religion and economics are covered through historical cases from around the world. Major sociological theories of religion are considered. General Education credit - Humanities.

**RELN 206. Survey of Religious Experiences.** (3)

Three hours lecture.

Cross-cultural and interdisciplinary examination of religious experiences, defined as "reported direct encounters with the supernatural." Students will read accounts from around the world of religious visions and calls, possession, mystical union, and journeys to the afterlife, along with the biographies of shamans, mediums, and mystics. Theories from a variety of academic disciplines will illuminate

the human causes and consequences of these extraordinary phenomena. General Education credit - Humanities.

**RELN 305. Religion and Women.** (3)

Three hours lecture.

*Prerequisite: Three hours of philosophy or religious studies.*

Examines the presentation of women in religious texts and history, feminist criticism of religious traditions, and the roles of women (past and present) in selected Western, Eastern, tribal, and neopagan religions. This course may be used to meet requirements for the minor in Women's Studies.

**RELN 320. Jesus and the Gospels.** (3)

Three hours lecture.

*Prerequisite: RELN 200 or 202.*

This course first examines the three Synoptic Gospels as coherent and independent narratives. It then moves from story to history by using the tools modern scholars have developed to understand Jesus as a historical figure.

**RELN 330. History of Christianity.** (3)

Three hours lecture.

*Prerequisite: RELN 200 or RELN 202.*

Examines the history of Christianity, understood both as institution(s) and as intellectual tradition. From its origins until today, Christianity has presented itself in various, usually competing, forms. We will strive to understand the intellectual issues at stake in various ages, what it was like to be an average Christian rather than a theologian, and how outsiders (such as Romans or Jews) viewed the Church.

**RELN 350. Religion in India.** (3)

Three hours lecture.

*Prerequisite: RELN 112.*

Provides students with an opportunity for advanced study in the historical development of religious thought and practice in India. It includes the study of Hinduism, Buddhism, Jainism, Islam, and Sikhism as well as minority religions such as Judaism, Christianity, and the faith of the Parsis.

**RELN 360. Religion in China and Japan. (3)**

Three hours lecture.

*Prerequisite: RELN 112.*

Provides students with an opportunity for advanced study in the historical development of religious thought and practice in China and Japan. It includes the study of ancestor worship, folk religion, Confucianism, Daoism, Buddhism, Shinto, "New Religious Movements" and communism.

**RELN 370. American Sects and Cults. (3)**

Three hours lecture.

*Prerequisite: Three hours of religious studies.*

Investigates nonconventional religious groups in the United States, from colonial Quakers and Puritans to contemporary Scientology and the Church of Satan. Lectures will survey mainline religious and cultural trends salient to the appearance of sects and cults. Students will evaluate social/scientific theories on topics such as the mental health of leaders and followers, cult-related violence, conversion and defection, the law and deviant religions.

**RELN 380. Old Testament Topics. (3)**

Three hours lecture.

*Prerequisite: RELN 200 or 202.*

Concentrates on one segment, a particular genre, or a specific issue, to advance the student's knowledge and understanding of the Old Testament. Representative topics include law and covenant, narrative analysis of the Old Testament, wisdom literature, and the prophets. This course may be taken up to three times with a different topic each time.

**RELN 381. Religion and Death. (3)**

Three hours lecture.

*Prerequisite: 3 hours in Religious Studies.*

Religion and Death critically examines a significant dimension of religious life. Death, the great unknown, awaits us all. One of the chief functions of religions is to ease the anxiety and pain of being mortal. How and how well is this accomplished? To answer, students will explore supernaturalist treatments of death across cultures and time, e.g., funeral rites, descriptions of hell, ghost beliefs, and Near-Death Experiences.

**RELN 420. Topics in Religious Studies. (3)**

Three hours lecture.

*Prerequisite: Three hours of religious studies.*

Provides an opportunity for advanced study of a selected topic in religious studies. Examples of topics to be studied may include Zen Buddhism, goddesses, and the letters of Paul. The course may be taken up to three times with a different topic each time.

**RELN 488. Final Honors Project. (2-3)**

*Prerequisites: Enrollment in the Honors Academy, completion of all other Honors Academy requirements, a minimum of 3.5 GPA in all courses and in religious studies.*

Project and topic to be determined by the student, the faculty member with whom the student works and the department. In order to receive honors credit, a student must earn a grade of "A" or "B" for the final project. Course may not be repeated.

**RELN 490. Religious Studies Internship. (3-12)**

*Prerequisites: 18 hours of Religious Studies; junior or senior standing; minimum 3.0 GPA in major; approval of the department chairperson.*

Offers an opportunity through experiential learning to apply skills gained through the Religious Studies curriculum in a career-oriented atmosphere. The internship consists of a one or two semester placement with a business, governmental agency, or religious or service organization interested in working with students who have critical thinking skills, research and writing skills, and knowledge of issues addressed in the study of religion. Grading will be on A-F basis. No more than 3 credit hours may be applied toward the requirements for the major.

**RELN 498. Independent Study. (1-6)**

See "Independent Study" on p. 63.

## **SOCIOLOGY**

### **SOCY 110. Introduction to Sociology. (3)** Three hours lecture.

Introduces basic concepts and methods of sociology. It presents significant research and theory in areas such as culture, social structure, socialization, deviance, social stratification and social institutions. General Education credit - Social and Behavioral Sciences.

### **SOCY 120. Sociological Analysis. (3)** Three hours lecture.

*Prerequisite: SOCY 110*

Intended as a prerequisite for the theory and methods course for the sociology major. Emphasis is placed on developing students' ability to understand and research social phenomena using the three primary theoretical paradigms in sociology, with the goal of developing and enhancing students' analytical and critical thinking skills.

### **SOCY 210. Social Problems. (3)** Three hours lecture.

*Prerequisite: SOCY 110.*

An analysis of problems such as crime and delinquency, overpopulation, social inequality and poverty and minority oppression is the focus of this course. General Education credit - Social and Behavioral Sciences.

### **SOCY 250. Social Inequality. (3)** Three hours lecture.

*Prerequisite: SOCY 110.*

Examines the dimensions, theories and distribution of inequality in the United States and worldwide. Particular attention is paid to the effects of economic inequality on the life chances of rich and poor, men and women, and dominant and subordinate groups alike. General Education credit - Social and Behavioral Sciences.

### **SOCY 265. Society and the Individual. (3)** Three hours lecture.

*Prerequisite: SOCY 110.*

Designed to introduce students to sociological social psychology using a symbolic interactionist viewpoint. Approached this way, students will explore the symbolic nature of

communication, the emergence of the self and our role in the creation and maintenance of our social skills.

### **SOCY 289. Sociology of the Family. (3)** Three hours lecture.

*Prerequisite: SOCY 110.*

Examines family as a social institution. Includes sociological overview of modern family in its diverse forms and its relationship to economy, government, and stratification systems of gender, race, and class.

### **SOCY 320. Sociology of Aging. (3)** Three hours lecture.

*Prerequisites: SOCY 110.*

Provides an introduction to the sociological study of aging with emphasis on the normal aspects of aging, theories of aging and historical and demographic trends in aging. The focus is aging within the American social structure.

### **SOCY 326. Men and Women in Society. (3)** Three hours lecture.

*Prerequisite: SOCY 110.*

Examines differential access to positions of public power and authority for women and men, structural determinants of major social institutions in shaping gender roles and effects of gender roles on institutions. A student may not receive credit for SOCY 226 and SOCY 326. This course may be used to meet requirements for the minor in Women's Studies.

### **SOCY 331. Race and Ethnic Relations. (3)** Three hours lecture.

*Prerequisite: SOCY 110.*

The effects of discrimination on groups such as African Americans, Hispanics, Native Americans, and gays and lesbians are examined as well as the social policy questions relevant to dominant group and minority relations. General Education credit - Social and Behavioral Sciences.

### **SOCY 334. Population Trends and Analysis. (3)** Three hours lecture.

*Prerequisite: SOCY 110.*

The central emphasis of this course is the

causes and consequences of population trends in the United States and the world. The use of demographic data and analysis for decision-making in business and government will also be examined. General Education credit - Social and Behavioral Sciences.

**SOCY 337. Political Sociology. (3)**

Three hours lecture.

*Prerequisite: SOCY 110.*

Provides an overview of American political processes: individual political participation, political movements, influence groups, community power studies, and theories of political power at the national level.

**SOCY 339. Urban Sociology. (3)**

Three hours lecture.

*Prerequisite: SOCY 110.*

The first third of this course examines the development and social organization of contemporary urban areas, including both central cities and suburbs. The remainder of the semester will be devoted to the problems and policy choices facing American urban areas in regard to housing, public services, education, transportation, finances, and government organization.

**SOCY 340. Classical Sociological Theory. (3)**

Three hours lecture.

*Prerequisite: SOCY 120 and SOCY 250; minimum sophomore standing.*

Surveys the classical theories which form the basis of sociology. It also provides an overview of the development of sociology as a science.

**SOCY 341. Sociology of Health and Medicine. (3)**

Three hours lecture.

*Prerequisite: SOCY 110.*

Covers the health professional-patient relationship, relationships between health professionals, the nature of care in different health facilities, social and environmental causes of illness, death and dying, and the general quality of health care and delivery in American society.

**SOCY 350. Criminology. (3)**

Three hours lecture.

*Prerequisite: SOCY 110.*

An introduction to the study of crime and society's attempts to control criminal conduct. It analyzes the major types of criminal conduct, explanations of criminal behavior and the role of the police, courts, and correctional agencies in controlling crime.

**SOCY 361. Work, Organizations, and Society. (3)**

Three hours lecture.

*Prerequisites: SOCY 110 and junior or senior standing, or 6 hours of sociology.*

Examines a wide variety of white- and blue-collar occupations and the impact of organizational structure on work and workers.

**SOCY 370. Environmental Sociology. (3)**

Three hours lecture.

*Prerequisites: SOCY 110 and junior or senior standing.*

Examines sociological issues relating to individuals, society and the natural environment. It focuses on a range of environmental problems utilizing an historical and comparative approach in assessing societal changes and their impact on nature as well as attitudinal differences toward the environment from multicultural perspectives.

**SOCY 380. Introduction to Social Research Methods. (3)**

Three hours lecture.

*Prerequisites: SOCY 120; STAT 200 or equivalent.*

Provides an introduction to basic procedures and techniques used in social research. Emphasis is placed on measuring instruments, as well as major methods and designs employed in social research.

**SOCY 390. Sociology of Sport. (3)**

Three hours lecture.

*Prerequisite: SOCY 110.*

Sociological theories are utilized to understand the significance of sport as a social institution. Issues such as sport and socialization, the social organization of sport, sport



and social stratification, and the relationship of sport to other institutions are discussed.

**SOCY 422. Sociology of Death and Dying. (3)**

Three hours lecture.

*Prerequisite: SOCY 110.*

A study of the social construction of the meaning of death and of the dying process. Includes a review of the demographics and social institutions involved and a critical examination of current social issues of death and dying.

**SOCY 430. Social Movements. (3)**

Three hours lecture.

*Prerequisites: SOCY 110 and junior or senior standing, or 6 hours of sociology.*

Social movements are examined from a sociological perspective, with an emphasis on the social structural origins of collective events, their emergence, decline and effects on social policy.

**SOCY 433. Rural Sociology. (3)**

Three hours lecture.

*Prerequisite: SOCY 110.*

The study of rural society including its organization, rural people and their activities. The focus is on historical background, recent developments and significant current and future trends.

**SOCY 441. Global Inequalities. (3)**

Three hours lecture.

*Prerequisites: SOCY 110, SOCY 250 or junior/senior standing with permission of instructor.*

Focuses on the social, economic, and political factors that shape unequal life chances between and within nations. Theories of development, the role of developed nations, evidence of various types of inequalities, and possible ways to address the global inequalities – including specific projects that have been successful – will be examined. The role of international treaties, of various international and multinational commissions, and of non-governmental agencies will be given particular attention. This course may be used to meet requirements for the minor in Women's Studies.

**SOCY 443. Deviance. (3)**

Three hours lecture.

*Prerequisite: SOCY 110.*

Explores major sociological theories of deviance and examines the socio-political dynamics surrounding definitions of "morality," "normalcy" and goodness in societies. Particular attention is given to sociological approaches to "mental illness," drug/alcohol use and sexuality.

**SOCY 444. Juvenile Delinquency. (3)**

Three hours lecture.

*Prerequisite: Six hours of sociology.*

Examines felony and status offenses among juveniles and focuses on theories dealing with the impact of school, family and various subcultures on socializing youth. The differential handling of youthful offenders is also covered. Credit for SOCY 444 will not be granted after a student has received credit for CRJU 410, Juvenile Justice, or the equivalent course.

**SOCY 446. Social Change. (3)**

Three hours lecture.

*Prerequisites: SOCY 110 and junior or senior standing, or 6 hours of sociology.*

Large-scale historical social change of societies is examined in regard to: the problem of definition and measurement of social change, major theoretical approaches to change and selected factors which cause change. Particular emphasis is placed on contemporary trends in industrial societies and the social problems associated with third world modernization. General Education credit - Social and Behavioral Sciences.

**SOCY 450. Contemporary Sociological Theory. (3)**

Three hours lecture.

*Prerequisites: SOCY 340 and junior or senior standing.*

Surveys a variety of contemporary sociological theories and provides an overview of the critical differences in their assumptions and foci.

**SOCY 457. Law and Social Injustice. (3)**

Three hours lecture.

*Prerequisites: SOCY 110 and junior or senior standing, or 6 hours of sociology.*

Familiarizes students with the current

theories relating to the creation and enforcement of laws. It analyzes the political, economic and social forces that influence the creation and administration of laws.

**SOCY 471. Society and Film. (3)**

Three hours lecture.

*Prerequisites: SOCY 110 and permission of instructor.*

Examination of the social and cultural importance of film. The central focus will be on analyzing cinematic treatment of such things as gender, race, class, marriage and the family, and the impact of social change.

**SOCY 480. Survey Research Methods. (3)**

Three hours lecture.

*Prerequisites: SOCY 380; Junior or senior standing.*

Covers the construction of an instrument, sampling design and methods of analysis and interpretation of data. It acquaints students with the use of computers for social science research. Students gain a hands-on experience with design and completion of survey research that is valuable for any student entering a career requiring familiarity with the basis of social survey research.

**SOCY 484. Sociology of Education. (3)**

Three hours lecture.

*Prerequisites: Junior or senior standing; 6 hours of sociology, or SOCY 110 and EDUC 309.*

Examines the social forces related to schooling and learning. Emphasis is placed on socialization and cultural transmission, teacher and student roles, informal networks in the school system and schools as bureaucratic institutions. The course also examines the application of sociological principles to the study of schooling and the examination of alternative educational movements.

**SOCY 485. Organizational Research. (3)**

Three hours lecture.

*Prerequisites: SOCY 380 or equivalent, junior or senior standing.*

Covers how social organizations collect, analyze, and disseminate data to support planning, evaluation, and management. Students

gain hands-on experience with the use of computers for social science research, analysis of data from at least two types of organizational databases, and the creation and presentation of reports for at least two target audiences.

**SOCY 488. Honors Thesis. (3)**

*Prerequisites: Enrollment in the Honors Academy, completion of all other Honors Academy requirements, a minimum 3.5 GPA in all courses and in sociology and anthropology.*

The student conducts research and writes a thesis for a bachelor's degree with honors in sociology. In order to receive honors credit, the student must receive an grade of "A" or "B" for the thesis. This course may not be repeated.

**SOCY 495. Topical Seminar in Sociology. (3)**

Three hours seminar.

*Prerequisites: 20 hours in sociology and a minimum 2.5 GPA for all sociology courses, or permission of instructor.*

Offers reading and/or research orientation in a specialized area selected by departmental staff. It may be taken for a total of six hours credit when topics differ.

**SOCY 497. Senior Seminar in Sociology. (3)**

*Prerequisite: Senior standing.*

Serves as the capstone experience for sociology majors. Students will learn to market their skills, explore opportunities, and prepare for entry into the workplace.

**SOCY 498. Independent Study. (1-6)**

See "Independent Study" on p. 63.

**SOCY 499. Internship. (3-12)**

*Prerequisites: Students must complete 12 hours of sociology and have permission of the department chair.*

Students must get approval of the department on the proposed program and agency in the semester preceding that in which the internship is anticipated. The course may carry three to twelve hours credit a semester and may be repeated to a maximum of 12 hours credit. Only three credit hours may be counted toward the sociology major. Offered as required.

## SOCIAL WORK

### **SOWK 200. Introduction to Professional Practice.** (3)

Three hours lecture.

Introduces the various fields and issues related to the helping professions with an emphasis on social work. Focuses on the academic, legal and professional requirements, culture, knowledge base, ethical issues and history of the helping professions.

### **SOWK 210. Interventive Methods I.** (3)

Two hours lecture; two hours laboratory.

*Pre- or Corequisite: SOWK 200.*

Introduces the theories, concepts and basic skills involved in helping persons in the delivery of human services. Emphasizes interviewing and problem-solving skills.

### **SOWK 289. Preprofessional Field Instruction (P/F).** (4)

Three hours laboratory.

*Prerequisites: SOWK 210; Undergraduate Studies Committee approval.*

Students are placed in a human service agency for 10 hours per week, or 150 hours total. They intern in an observational and assisting manner with practicing human service professionals. Students attend four required two-hour integrating seminars.

### **SOWK 300. Human Behavior and the Social Environment I.** (3)

Three hours lecture.

*Prerequisite: Admission to SOWK major.*

Provides an overview of social and behavior science concepts influencing understanding of human behavior and the social environment. Special emphasis on understanding individuals.

### **SOWK 301. Human Behavior and the Social Environment II.** (3)

Three hour lecture.

*Co-/Prerequisite: SOWK 300.*

Builds upon concepts drawn from the social and behavioral sciences to further our understanding of the human condition. Special emphasis on collectivities (families, groups, communities and organizations).

### **SOWK 309. Introduction to Social Work Perspectives.** (3)

Three hours lecture.

*Prerequisite: VWCC Social Work major or permission of instructor.*

Designed to prepare students for successful progression, participation and graduation from the undergraduate social work major. The course content includes knowledge of generalist practice, characteristics of a social work professional, expectations of students in the social work program, and the professional standards for conveying that knowledge through scholarly writing.

### **SOWK 317. Generalist Issues and Practice.** (3)

Three hours lecture.

*Prerequisite: VWCC Social Work Major, SOWK: 200, 210 and 289 or permission of instructor.*

Introduces undergraduate students to the distinctive attributes of professional social work. It affords students a comprehensive “working” definition of social work. Course content provides an overview of social work knowledge, values, and skills and their application to human issues and concerns.

### **SOWK 320. History of Social Welfare.** (3)

Three hours lecture.

*Prerequisite: Admission to SOWK Major.*

Reviews the historical development of social work as a profession and social welfare as an institution in western civilization with a focus on post-13th century developments. Emphasis is placed on a developmental lifespan approach.

### **SOWK 321. The Foundations of Social Policy.** (3)

Three hours lecture.

*Prerequisites: SOWK 320.*

Provides students with a conceptual framework for analyzing social policy and its impact on the development of human service programs.

**SOWK 350. Introduction to Social Work Research. (3)**

Three hours lecture.

*Prerequisites: Admission to SOWK major; STAT 200 (co-/prerequisite).*

Introduction to basic methods and techniques used in social work research. Emphasis is placed on common procedures utilized in social work research, particularly as they apply to social work policy and practice.

**SOWK 410. International Perspectives on Social Welfare. (3)**

Three hours lecture.

Provides students with an international perspective for examining the underlying concepts, values, and practices of social work. Examines the universal problems faced by human beings everywhere and programs that have been developed to address those problems.

**SOWK 419. Service Learning. (3)**

Three credits, volunteer experience and monthly seminar.

*Prerequisite: Admission to Social Work major or permission of instructor.*

Course provides opportunity for educationally focused community volunteer service experience where students can apply classroom learning, develop leadership skills, explore career options, and advocate for issues that impact the quality of life.

**SOWK 421. Child Welfare. (3)**

Three hours lecture. Analyzes changing philosophy toward children in American society and the services designed to meet recognized needs.

**SOWK 422. Interventive Methods II: Working With Individuals and Families. (3)**

Two hours lecture; two hours laboratory.

*Prerequisites: Admission to SOWK Major; Pre-corequisite: SOWK 300.*

Integrates the student's knowledge base in human behavior in the social environment with specific skills needed to work with individuals, couples and families. Students gain both theoretical and experiential knowledge.

**SOWK 423. Interventive Methods III: Working With Groups. (3)**

Two hours lecture; two hours laboratory.

*Prerequisites: Admission to SOWK Major; Pre-corequisite: SOWK 301.*

Integrates the student's knowledge base in human behavior in the social environment with specific skills needed in working with groups. Both theoretical material and a "hands on" experience in working with groups are included in this course.

**SOWK 424. Interventive Methods IV: Organizing Skills. (3)**

Two hours lecture; two hours laboratory.

*Prerequisite: Admission to SOWK Major; pre/corequisite: SOWK 301.*

Integrates the student's knowledge base in human behavior in the social environment with specific skills needed in working with neighborhoods, communities, agencies and institutions. Both conceptual frameworks and experience in working with large groups are included.

**SOWK 425. Gerontology: Social Welfare Aspects. (3)**

Three hours lecture.

Surveys the problems of the aged with particular emphasis on the network of social services available to serve the elderly in contemporary society.

**SOWK 480. Special Topics Seminar. (1-3)**

Three hours lecture.

Intensive study of a specialized area of social and human services. Topics are determined by instructors based on student interest. (May be taken a maximum of three times for no more than 9 semester hours credit.)

**SOWK 488. Final Honors Project. (3)**

*Prerequisites: Enrollment in the Honors Academy, completion of all other Honors Academy requirements, a minimum 3.5 GPA in all courses and in Social Work.*

Provides Social Work honors students an opportunity to prepare an honors project. In order to receive honors credit, student must earn a grade of "A" or "B" for the final project. Course may not be repeated. See Honors Academy on p. 92.

**SOWK 489. Field Instruction Placement.** (12)

One semester: 38 hours per week.

*Prerequisites: All required social work courses, all other required courses, and approval of Undergraduate Studies Committee. Student must provide transportation to and from field sites.*

Provides block field placement involving one semester of practice social work in human service agency or institution with trained supervision. Grade of "P" or "F" is given; "P" is interpreted as "C" or better.

**SOWK 490. Integrative Seminar.** (3)

Three hours seminar.

*Pre-or corequisite: Concurrent enrollment in SOWK 489.*

Focuses upon the major elements of social work practice: assessment, intervention, policy implications, ethical imperatives and evaluation. Taken concurrently with the internship and through a series of assignments, the student tests the content of social work practice with experiences in field agencies. Additional resources and fees are required.

**SOWK 498. Independent Study.** (1-6)

See "Independent Study" on p. 63.

## SPANISH

**SPAN 101. Spanish I Beginning Spanish.** (3)

Three hours lecture and language practice.

An introduction to written and oral communication in Spanish with emphasis upon the present tense. Independent laboratory practice required. General Education credit – International and Intercultural Studies.

**SPAN 102. Spanish II Beginning Spanish.** (3)

Three hours lecture and language practice.

*Prerequisite: Spanish 101 or placement by examination.*

A continuation of Spanish I with emphasis upon communication in both the present and past tense. Independent laboratory practice required. General Education credit - International and Intercultural Studies.

**SPAN 201. Spanish III Intermediate Spanish.** (3)

Three hours lecture and language practice.

*Prerequisite: Spanish 102 or placement by examination.*

A continuation of Spanish I and II with emphasis upon communication in any tense. Independent laboratory practice required. General Education credit - International and Intercultural Studies.

**SPAN 202. Spanish IV Intermediate Spanish Practice.** (3)

Three hours lecture and language practice.

*Prerequisite: Spanish 201 or placement by examination.*

A continuation of Spanish I, II, and III with emphasis upon communication. Intensive reading of simple prose. Laboratory practice required. General Education credit - International and Intercultural Studies.

**SPAN 300. Readings in Spanish.** (3)

Three hours lecture.

*Prerequisite: Spanish 202 or placement by examination.*

Practice in the reading of Spanish texts with special attention to the methods of literary analysis.

**SPAN 303. Spanish Conversation.** (3)

Three hours lecture.

*Prerequisite: SPAN 202 or four years of high school Spanish.*

Offers intensive situational practice of conversational skills. This class reviews grammar and vocabulary while focusing on developing the student's ability to converse on a broad range of topics. It requires active participation from the students and is taught entirely in Spanish.

**SPAN 311. Spanish for Health Care.** (3)

Three hours lecture.

*Prerequisite: SPAN 202 or four years of high school Spanish.*

Designed as an introduction to technical vocabulary used by health care professionals when working in this field and to the health practices and systems in the Spanish speaking world. Students are exposed to idiomatic



expressions used when meeting a patient, dealing with privacy issues, etc. This class is not intended for native speakers.

**SPAN 312. Spanish for Law Enforcement. (3)**

Three hours lecture.

*Prerequisite: SPAN 202 or four years of high school Spanish.*

An introduction to the technical vocabulary used by law enforcement professionals when working in this field and to law practices and systems in the Spanish speaking world. Students are exposed to idiomatic expressions used to enhance communication related to this topic. It requires active participation from the students and is taught entirely in Spanish.

**SPAN 320. Advanced Grammar. (3)**

Three hours lecture.

*Prerequisite: SPAN 202.*

Develops students' understanding of the most difficult grammatical concepts of the Spanish language. Required of all Spanish majors.

**SPAN 323. Composition and Translation. (3)**

Three hours lecture.

*Prerequisite: SPAN 320.*

Development of students' abilities in composition in the Spanish language.

**SPAN 325. Spanish Culture. (3)**

Three hours lecture.

*Prerequisite: SPAN 202 or four years of high school Spanish.*

Presents a contrastive study of the cultures of Spain, with emphasis on the dominant Hispanic culture. Historical, political, and artistic events will be given special attention in a chronological survey of the culture of Spain. Taught in Spanish. General Education credit - International and Intercultural Studies.

**SPAN 326. Contemporary Spanish Culture. (3)**

Three hours lecture.

*Prerequisite: Spanish 202 or four years of high school Spanish.*

A topical examination of Spain in the late 20th century, including recent history, political, economic and social problems, and the arts.

Taught in Spanish. General Education credit - International and Intercultural Studies.

**SPAN 335. Spanish American Culture. (3)**

Three hours lecture.

*Prerequisite: Spanish 202 or four years of high school Spanish.*

Traces the development of Spanish American civilization and culture from pre-Colombian period to the Mexican Revolution of 1910. Taught in Spanish. General Education credit—International and Intercultural Studies.

**SPAN 336. Contemporary Spanish American Culture. (3)**

Three hours lecture.

*Prerequisite: Spanish 202 or four years of high school Spanish.*

Traces the development of Spanish American civilization and culture from the Mexican Revolution of 1910 to the present. Taught in Spanish. General Education credit - International and Intercultural Studies.

**SPAN 410. Survey of Spanish Literature I. (3)**

Three hours lecture.

*Prerequisites: SPAN 300 and 320 or equivalent.*

Introduction to most important writers and literary movements of Spain from the Middle Ages through the Golden Age. Taught in Spanish.

**SPAN 411. Survey of Spanish Literature II. (3)**

Three hours lecture.

*Prerequisites: SPAN 300 and 320 or equivalent.*

Introduction to the most important writers and literary movements of Spain from Neoclassicism to the 20th century. Taught in Spanish.

**SPAN 420. Survey of Spanish American Literature I: Colonial Period to Vanguardismo. (3)**

Three hours lecture.

*Prerequisites: SPAN 300 and 320 or equivalent.*

A study of the literature of the countries of Spanish America from the Colonial Period to Vanguardismo. Historical and cultural

background emphasized; most important works are read and discussed in class. Taught in Spanish.

**SPAN 421. Survey of Spanish American Literature II: Postmodernism to Contemporary Period. (3)**

Three hours lecture.

*Prerequisites: SPAN 300 and 320 or equivalent.*

A study of the literature of the countries of Spanish America from Vanguardismo to Contemporary Period. Historical and cultural background emphasized; most important works are read and discussed in class. Taught in Spanish.

**SPAN 460. Special Topics. (3-4)**

Three or four hours lecture.

*Prerequisites: Spanish 300 and Spanish 320 or equivalent.*

Advanced topics in culture, literature or language. All work conducted in Spanish. May be taken twice for credit.

## STATISTICS

**STAT 200. Introduction to Statistics. (3)**

Three hours lecture.

Introduction to statistical methods; descriptive statistics, normal distribution, estimation, hypothesis testing, correlation and regression. Will not satisfy requirements for major in mathematics. Students who have received credit for any of STAT 205, 208, or 211 may not receive credit for STAT 200. General Education Credit – Mathematical Science.

**STAT 301:302. Probability and Statistics I and II. (3)**

Three hours lecture.

*Prerequisites: MATH 152.*

Introduction to the basic concepts of probability. A survey of the most common probability distributions. Introduction to the use of statistical techniques with particular application to physical and biological sciences. Students who have received credit for STAT 410:411 cannot also receive credit for STAT 301:302.

**STAT 320. Methods of Non-Parametric Statistics. (3)**

Three hours lecture.

*Prerequisite: STAT 200 or 301.*

Examines distribution-free analogs of many classical statistical tests. Topics include tests based on binomial distribution, tests based on Fisher's method of randomization, goodness of fit tests, two sample tests, and correlation procedures. Modern computer software will be used to analyze real world data.

**STAT 420. Modern Regression Analysis. (3)**

Three hours lecture.

*Prerequisite: STAT 302.*

Fundamental concepts in modern regression diagnostics. Choice of best subset model using cross validation methods. Study of collinearity and methods for combating collinearity. Use of residuals in regression diagnostics. Detection of high influence data points. Use of modern computer software.

**STAT 421. Design of Experiments. (3)**

Three hours lecture.

*Prerequisite: STAT 302.*

Theory of analysis of variance and covariance; fixed and random effects models; completely randomized design; randomized block design, Latin square design, factorials; split-plot design and response surface design.

**STAT 430. Statistical Packages. (3)**

Two hours lecture; two hours laboratory.

*Prerequisite: STAT 200 or 301.*

Consideration of statistical packages available at Radford University. Topics include accessing the system, editing, describing data sets via summary statistics and graphical displays, testing hypotheses in the normal theory one and two sample cases, simple linear regression and correlation. Both SAS and SPSS are studied.

**STAT 431. Statistical Consulting. (3)**

Three hours lecture.

*Prerequisites: STAT 302.*

Lectures will provide information on communication skills and the process of conducting a statistical consultation. Practical experience in applied statistics and statistical computing

will be obtained by active participation in consultations and by working under faculty supervision with clients from the university community.

**STAT 480. Topics in Statistics. (3)**

Three hours lecture.

*Prerequisite: Permission of instructor.*

Special topics in statistics, as student and faculty interest demands; syllabus is available each time the course is offered. Interested students should contact the department chairperson and the course instructor before registering. May be repeated for credit with a different topic.

**STAT 488. Final Honors Project. (2-3)**

*Prerequisites: Major in mathematics, enrollment in the Honors Academy, completion of all other Honors Academy requirements, a minimum 3.5 GPA in all courses and in mathematics and statistics, senior standing.*

Topics in statistics determined by the student, the faculty member with whom the student works and the department. In order to receive honors credit, a student must earn a grade of A or B for the final project. Course may not be repeated. See Honors Academy on p. 88.

**STAT 498. Independent Study. (1-6)**

See Independent Study on p. 63.

**STAT 499. Internship in Statistics. (1-6)**

*Prerequisite: Junior or senior standing, at least a 2.5 GPA overall, at least a 2.5 GPA in mathematics and statistics and permission of instructor.*

Applications of theory learned in the classroom to real-world statistical problems in a professional setting. Provides a platform for building teamwork skills and solving interdisciplinary problems.

## **THEATRE AND CINEMA**

**THEA 100. Theatre Appreciation. (3)**

Three hours lecture.

An introduction to the art of theatre and dramatic literature through lectures and

discussion of basic artistic components involved in the theatrical process. Attendance at theatrical productions is a major component to the course. General Education credit - Fine Arts.

**THEA 101. Stagecraft. (3)**

Three hours lecture, demonstration and critique. The study of scenic and costume construction methods including equipment and drafting techniques commonly used for theatrical scenery and costumes including the practical application of these techniques through backstage participation in departmental productions.

**THEA 102. Fundamentals of Stage Lighting and Sound. (3)**

Three hours lecture, demonstration and critique. An introduction to the basic equipment and processes of theatrical lighting and sound, how it then interconnects, and its operation.

**THEA 110. Theatre Aesthetics. (3)**

Three hours lecture.

Introductory course in the practice of the art of theatre and is designed for theatre majors. The course will cover how to read and analyze a play, how various theatre artists begin to interpret dramatic literature for production, a basic vocabulary for analysis and production, an orientation to the department and a working knowledge of communicating as part of a production team.

**THEA 125. Acting I: Fundamentals. (3)**

Two hours lecture; two hours laboratory.

An introduction to the study of acting through the exploration of the tools of the actor: body, voice, script analysis, the creative impulse, and how these elements can be shaped in relation to the intent of the playwright and the director. This course is designed primarily for freshman theatre majors.

**THEA 176. Theatre Participation. (1)**

One hour lab.

Provides students with an experiential application of the principles of theatrical production and its related fields. Typical experiences will include, but not be limited to: acting,

box office, costume production, dramaturgy, lighting implementation, makeup creation, publicity, scenic production, stage managing, sound production. This course is intended for students who wish to combine their classroom learning with practical experience through participation in a closely supervised project. May be repeated for up to ten (10) semester hours for credit. Credit previously earned for THEA 104, 105, 106 must be included in the total 10 semester hours allowed for THEA 176.

**THEA 180. Introduction to World Cinema.** (3)

Three hours lecture.

A study of the cinematic arts from its inception to current times. The focus will be on the aesthetic, technological, economic and geopolitical historical progression of the cinematic arts. General Education credit - Fine Arts or International and Intercultural Studies.

**THEA 200. Theatrical Design.** (3)

Three hours lecture.

*Prerequisites: THEA 101, 102, and 110.*

A study in the fundamentals of design for theatrical venues including the conceptualization process. Students will be introduced to each design area including scenery, costume, lighting and sound.

**THEA 203. Production Management.** (3)

Three hours lecture.

Fundamentals of organization and management in theatre operation and their practical application within a production.

**THEA 210. Period Styles and Movement.** (3)

Three hours lecture.

*Prerequisite: THEA 110.*

Introduces the student to the styles, modes, manners and apparel of different periods beginning with the Greeks and progressing to the present day.

**THEA 225. Acting II: Scene Study.** (3)

Two hours lecture; two hours laboratory.

*Prerequisite: THEA 125.*

Study of acting through the analysis and performance of a variety of scenes. Concentration on modern and contemporary realistic plays.

**THEA 226. Voice and Speech for the Performer.** (3)

Three hours lecture.

*Prerequisites: THEA 225 or permission of instructor.*

Raises the student performer's awareness of the intricacies of vocal production and elements of speech in preparation for speaking text.

**THEA 234. Period Costume Construction.** (3)

Three hours lecture.

*Prerequisite: THEA 101.*

A study and practical applications of sewing techniques for theatrical application to include standard construction methods, patterning, draping and fitting for period costumes.

**THEA 236. Theatrical Makeup I: Fundamentals.** (3)

Three hours lecture, demonstration and critique.

A study and practical application of basic stage makeup techniques used in theatrical venues including old age, character, period and fantasy styles.

**THEA 280. Cinematic Aesthetics.** (3)

Three hours lecture.

An exploration of the aesthetic process of cinema through the examination of films recognized by film scholars to be seminal in shaping the way that we make and view cinematic art.

**THEA 300. Sound Design for the Arts.** (3)

Three hours lecture, demonstration, laboratory and critique.

*Prerequisite: THEA 101, THEA 102, THEA 200, or permission of instructor.*

Instruction in the art of sound recording, editing, storage and processing. Study of sound design for the arts with special emphasis on dance, film radio, television, music and theatre.

**THEA 324. Acting III: Improvisation Techniques.** (3)

Three hours lecture.

*Prerequisite: THEA 125.*

The workshop style class seeks to improve

the actors' access to their individual creativity and imagination through exercises designed to sharpen their improvisational skills.

**THEA 326. Advanced Voice and Speech for the Performer. (3)**

Three hours lecture.

*Prerequisite: THEA 226.*

The work begun in THEA 226: Voice and Speech for the Performer is extended through continuing physical awareness with an emphasis on vocal range along with parallel work on articulation and other speech elements.

**THEA 331. Stagecraft II. (3)**

Three hours lecture, demonstration and critique.

*Prerequisite: THEA 101, THEA 200 or permission of instructor.*

The study and practical application of technical production techniques including drafting, projections, elevations, floor plans, sections and Computer-Aided Design (CAD).

**THEA 332. Theatrical Lighting Design: Advanced. (3)**

Three hours lecture, demonstration and critique.

*Prerequisite: THEA 102 or consent of instructor*

This course is the study and practical application of color theory, drafting, computer-aided design and the conceptual process in theatrical lighting design for the stage and cinematic arts.

**THEA 335. Theatrical Costume Design. (3)**

Three hours lecture, demonstration and critique.

The study and practical application of the principles of costume design for theatrical venues including the conceptualization process, drawing and rendering techniques, characterization, computer-aided design and portfolio development.

**THEA 336. Theatrical Makeup II: Advanced. (3)**

Three hours lecture, demonstration and critique.

The advanced study and practical application in makeup techniques including prosthetics, life masks, wig making, computer-aided design and other techniques.

**THEA 350. Directing I: Fundamentals. (3)**

Three hours lecture, demonstration and critique.

*Prerequisites: THEA 101, 102, 110, and 125 or permission of instructor.*

A study in the fundamentals of the directing process through scene work, lectures and discussion. Study of theoretical, critical and historical writings is a major component.

**THEA 366. Travel Study. (1-12)**

Academic study involving domestic and/or international travel. May be taken again for credit with different topics or areas of study. General Education credit - Fine Arts.

**THEA 370. Playwriting. (3)**

Three hours lecture and discussion.

*Prerequisites: THEA 101, 102, 125 or consent of the instructor.*

The basic principles of playwriting are explored in a forum involving the reading and discussion of student plays. Students complete a one-act play or one act of a longer work. Completed scripts are sought for production in The Studio Theatre.

**THEA 375. Theatre History I. (3)**

Three hours lecture.

The study of theatre from its ritualistic beginnings to the Renaissance Period, with specific attention to theatre architecture and literature. Elements of audience, actor, stage scenery, and their relation to each other and to the social and intellectual environment of these periods are also studied. General Education credit - Fine Arts.

**THEA 376. Theatre History II. (3)**

Three hours lecture.

The study of theatre from the Renaissance Period to Contemporary Theatre, with specific attention to theatre architecture and literature. Elements of audience, actor, stage scenery, and their relation to each other and to the social and intellectual environment of these periods are also studied. General Education credit - Fine Arts.



**THEA 380. Documentary/Nonfiction Film.**

(3)

Three hours lecture.

An overview of documentary/nonfiction film from its primitive beginnings in the shorts of the Lumiere Brothers to an examination of contemporary artists, directions and visions.

**THEA 411. Theatrical Scene Design.**

(3)

Three hours lecture, demonstration and critique.

*Prerequisites: THEA 101 and 102 or permission of the instructor.*

A study in the fundamentals of scene design for theatrical venues, incorporating computer-aided design, including conceptualization of stage floor plans and perspectives resulting in realized color renderings or model design.

**THEA 426. Acting IV: Scene Study.**

(3)

Three hours lecture.

*Prerequisite: THEA 225, 324 or permission of instructor.*

An advanced acting course designed for theatre majors who have taken THEA 225. Through the application of scene work students will continue to develop their individual acting process and craft. Focus will be on modern/contemporary realistic texts, reinforcing rehearsal and performance vocabulary and techniques and deepening ensemble skills.

**THEA 427. Acting V: Junior/Senior Acting Studio.**

(3)

*Prerequisites: THEA 125, 225, 226, 324 and junior standing or permission of instructor.*

Provides upper level acting students with the opportunity and format to hone their performance and audition skills in preparation for employment and further study the world of theatre. May be repeated once for credit.

**THEA 450. Directing II: Advanced.**

(3)

Three hours lecture, demonstration and critique.

*Prerequisites: THEA 125, 225 and 350 or permission of the instructor.*

The study of various significant figures and theories of stage, video and film production.

Students are required to complete a final advanced project for public presentation in one of the mediums listed above. A final portfolio is also required.

**THEA 475. Theatrical Problems.**

(3)

Three hours lecture.

Contains a concentrated study of particularly significant people, events, movements or aspects of theatrical venues not covered in depth in other course offerings. May be repeated (on different topics) for maximum of 12 semester hours credit.

**THEA 476. Production Practicum.**

(1-3)

*Prerequisite: Permission of instructor.*

Provides the student with an experiential application of the principles of theatrical production and its various aspects. Typical experiences will include, but not be limited to: acting, box office, costume design and production, directing, dramaturgy, lighting design, makeup design and creation, publicity, scenic design and production, stage managing, sound design and production. This course is intended for students who wish to extend their classroom experience by applying it practically to a realized project. May be repeated for up to twelve (12) semester hours for credit.

**THEA 477. Contemporary Theatre.**

(3)

*Prerequisites: THEA 375 and 376; or junior standing with permission of instructor.*

A study of contemporary theatre in the United States and abroad.

**THEA 478. Internship in Theatrical Production.**

(1-12)

*Prerequisite: Sophomore standing, acceptance of Internship application by the faculty and the theatre designated for internship residency.*

Short or long term professional theatre/film residency in one of the following areas: box office/house management, development, directing/acting, drama enrichment/education, literary, marketing, stage management and technique production and design: scenic costume, lighting and sound. May be taken again for maximum of 12 semester hours credit.

**THEA 480. Film Theory and Criticism. (3)**

Three hours lecture.

The study of critical thought in cinematic arts from its inception to current times.

**THEA 481. Screenwriting. (3)**

Three hours lecture.

*Prerequisites: THEA 280 and 370; or MDST 331 with permission of instructor.*

Focuses on the principals and practices of writing the script for a full-length feature film. Extensive writing is required. Approved as an elective for the Cinematic Arts Interdisciplinary minor.

**THEA 488. Final Honors Project. (2-3)**

*Prerequisites: Enrollment in the Honors Academy, completion of all other Honors Academy requirements, senior standing, a minimum 3.5 GPA in all courses and in theatre.*

The project and the topic to be explored will be determined by the student, the faculty member with whom the student works and the student's major program area. (Honors project may be a written or performance-based project.) In order to receive honors credit, a student must earn a grade of "A" or "B" for the final project. Course may not be repeated.

**THEA 498. Independent Study. (1-6)**

See "Independent Study" on p. 63.

**UNIVERSITY 100****UNIV 100. Introduction to Higher Education. (1)**

*Prerequisites: First year students and/or first semester transfer students by permission.*

Explores the meaning and value of a comprehensive liberal arts education, teach problem solving and decision-making processes, and promote academic success through selected readings, presentations, discussions, and experiential learning opportunities. Students will learn and practice a variety of specific techniques for learning and self-management.

**WOMEN'S STUDIES****WMST 101. Women in the World: Introduction to Women's Studies. (3)**

Three hours lecture/discussion.

An introduction to the interdisciplinary field of Women's Studies through global and multicultural perspectives. It provides an overview of women through time, with attention to differences of gender, race, class, and ethnicity. This course establishes a foundation for further coursework in the Women's Studies minor and other established courses. General Education credit - International and Intercultural Studies.

**WMST 290. Special Topics in Women's Studies. (3)**

Three hours lecture.

*Prerequisites: WMST 101 or permission of instructor.*

Concentrated study on specific areas in Women's Studies. May be taken for credit as often as course content varies. Content will be approved by the Women's Studies Advisory Committee.

**WMST 490. Special Topics Seminar in Women's Studies. (3)**

Three hours lecture.

*Prerequisites: WMST 101 and Sophomore status.*

Concentrated study on specific areas in Women's Studies. May be taken for credit as often as course content varies. Content will be approved by the Women's Studies Advisory Committee.

**WMST 499. Internship in Women's Studies. (3-6)**

Three to six hours experiential, and advisement.

*Prerequisites: Approval by the Women's Studies committee; junior status or higher; WMST 101 and one other accepted course in the minor.* An elective in the Women's Studies minor.

The student will be placed in an agency, department, or program with a focus on women's lives. In this environment, the student will participate in ongoing functions, including training. The student will also meet regularly with a faculty member to process the internship experience and to relate it to readings in Women's Studies.