

COURSE LISTINGS

Course Prefixes

AAS	AFRICAN AND AFRICAN AMERICAN STUDIES	HON	HONORS
ANT	ANTHROPOLOGY	HPR	HEALTH AND PHYSICAL RECREATION
AED	ART EDUCATION	HTR	HOSPITALITY AND TOURISM
ATS	ART THERAPY STUDIES	HUM	HUMANITIES
BIO	BIOLOGY	INS	INDIVIDUALIZED STUDIES
BUS	BUSINESS	ITA	ITALIAN
CHE	CHEMISTRY	LAT	LATIN
CHI	CHINESE	LIB	LIBRARY RESEARCH
COM	COMMUNICATION	MAT	MATHEMATICS
CIS	COMPUTER INFORMATION SYSTEMS	MED	MATHEMATICS EDUCATION
CRS	CREATIVE STUDIES	MCL	MODERN AND CLASSICAL LANGUAGES
CRJ	CRIMINAL JUSTICE	MUS	MUSIC
CTE	CAREER AND TECHNICAL EDUCATION	NFS	NUTRITION AND FOOD SCIENCE
DAN	DANCE	PAR	PERFORMING ARTS
DES	DESIGN	PHI	PHILOSOPHY
ECO	ECONOMICS	PHY	PHYSICS
EDF	EDUCATIONAL FOUNDATIONS	PLN	PLANNING
EDU	EDUCATION	PSC	POLITICAL SCIENCE
ENG	ENGLISH	PSY	PSYCHOLOGY
ENS	ENVIRONMENTAL SCIENCE	REL	RELIGIOUS STUDIES
ENT	ENGINEERING TECHNOLOGY	SAF	SAFETY STUDIES
EXE	EXCEPTIONAL EDUCATION	SCI	GENERAL SCIENCE
FAR	FINE ARTS	SED	SCIENCE EDUCATION
FLE	FOREIGN LANGUAGE EDUCATION	SLP	SPEECH-LANGUAGE PATHOLOGY
FRE	FRENCH	SOC	SOCIOLOGY
FTT	FASHION AND TEXTILE TECHNOLOGY	SPA	SPANISH
GEG	GEOGRAPHY	SSE/SST	SOCIAL STUDIES EDUCATION
GER	GERMAN	SWA	SWAHILI
GES	GEOSCIENCES	SWK	SOCIAL WORK
GRK	GREEK	TEC	TECHNOLOGY
HEW	HEALTH AND WELLNESS	TED	TECHNOLOGY EDUCATION
HIS	HISTORY	THA	THEATER ARTS

Course Coding System

At the time of the printing of this catalog, new students at Buffalo State are required to fulfill general education 2000 (GE2K) requirements. Students starting their education before fall 2000 are required to fulfill general education core (GEC) requirements. A five-character code is used to illustrate which general education requirement(s) a course fulfills under either set of requirements. See page 39 of this catalog for more information.

D = diversity (GEC and GE2K)
 G = global (GEC)
 C = course is part of the core (for GEC)

Other letters indicate which general education category the course fulfills:

T = applied science and technology
 A = the arts
 H = humanities
 M = math/sciences
 S = social science
 Z = mathematics
 F = foreign language
 B = basic communication
 V1 = civilizations, American history
 V2 = civilizations, Western civilization
 V3 = civilizations, other world civilizations

Here's a sample course listing:

DAN 302
MODERN DANCE TECHNIQUE II
3, 1/4; CA

Prerequisite: DAN 200 or instructor permission. Fundamental principles of movement in relation to dynamics, rhythm, and space. Introduction to improvisation and modern dance history. Designed to develop and strengthen technical dance skills.

Here's what it means:

DAN 302

This is a dance course, number 302.

MODERN DANCE TECHNIQUE II

Name of course.

3, 1/4

Number of semester credit hours the course earns,
 Number of lecture hours the class meets per week /
 Number of studio or lab hours per week.

CA

This course satisfies the arts general education requirement.

Prerequisites:

Prerequisites or requirements you must fulfill before registering for a course.

The remainder of the course listing describes the subject matter.

AAS

AFRICAN AND AFRICAN AMERICAN STUDIES

Center for Interdisciplinary Studies

AAS 101 BEGINNING SWAHILI I 3, 3/0; F

The fundamentals of Swahili with emphasis on the spoken and written language.

AAS 102 BEGINNING SWAHILI II 3, 3/0; F

Prerequisite: AAS 101 or instructor permission. Continuation of AAS/SWA 101.

AAS 201 INTERMEDIATE SWAHILI I 3, 3/0; F

Prerequisite: AAS 102 or instructor permission. Further development of basic skills with emphasis on reading and writing.

AAS 202 INTERMEDIATE SWAHILI II 3, 3/0; F

Prerequisite: AAS 201 or instructor permission. Continuation of AAS/SWA 201.

AAS 221 THE HISTORY OF BLACK EDUCATION IN AMERICA 3, 3/0

The role of blacks in the American educational system. Changes that have taken place to improve or retard education for blacks. Approaches for providing meaningful education for blacks now and in the future.

AAS 222 THE DEVELOPMENT OF MODERN EDUCATION IN AFRICA 3, 3/0

Educational changes in Africa from the colonial era to the present and their effects on social and political issues in Africa and abroad.

AAS 386 BLACK THEATER WORKSHOP I 3, 3/0

The performance of black rituals, scenes, and one-act and full-length plays by giants in black theater like Ed Bullins, Imamu Amiri Baraka, Alice Childress, Lorraine Hansberry, Lofton Mitchell Douglas, Turner Ward, and more. Designed for students interested in writing, directing, and/or performing in black-experience plays.

ANT

ANTHROPOLOGY

Anthropology Department

ANT 100 HUMAN ORIGINS 3, 3/0; CS

Introduction to the fossil and archeological records of humanity. The emergence and development of the human species.

Exploration of the physical changes that have occurred in the human lineage and changes in our cultural behavior from hunting to farming and urban life. Recommended as a first or second course in anthropology.

ANT 101 UNDERSTANDING CULTURE 3, 3/0; G CS

Human behavior and culture; formation of personality; nature of social structure, interaction, and the satisfaction of human needs. Cross-cultural comparisons. Recommended as a first or second course in anthropology.

ANT 144 INTRODUCTION TO FOLKLORE AND FOLKLIFE 3, 3/0; D CS

Introduction to the major genres of folklore and folklife and their function in contemporary society. Includes ethnic and occupational folklore; rites of passage and calendar customs; roots music; and the relationship of folklore, popular culture, and the Internet.

ANT 203 HUMAN VARIATION 3, 3/0

Examination of and relationship between physical variations in human populations. Relationship between attributes and cultural patterns. Genetic basis of human evolution and variation. Ecological distribution of human physical varieties with special emphasis on modern human populations.

ANT 300 INDIGENOUS PEOPLES OF WESTERN NORTH AMERICA 3, 3/0

Origins of Native Americans. Routes of migration of Western Indians and affiliations with Asiatic peoples. Language families. Cultures of Indians of the Northwest coast, Mackenzie-Yukon area, plateau, Great Basin, plains, California, and Southwest.

ANT 301 INDIGENOUS PEOPLES OF EASTERN NORTH AMERICA 3, 3/0; G CS V2

Lifeways of Native Americans of eastern North America; influences from middle and South America; sub-Arctic and Arctic. Emphasis on cultures of Iroquois and Algonquian-speaking peoples.

ANT 303 THE ANTHROPOLOGY OF EUROPE 3, 3/0; G CS V2

Introduction to the anthropology of Europe and European cultures; the diverse peoples and cultures of Western and Eastern Europe,

folklife, peasantry, folkarts, and European and Euro-American worldviews. European colonialism and European attitudes about and practices toward other cultural groups.

ANT 305 PEOPLES OF AFRICA 3, 3/0; G CS

Cross-cultural comparisons of selected societies of Africa, emphasizing economic conditions, migrations, indigenous states, linguistics, social structure, aesthetics, religion, prehistory, and physical types.

ANT 307 URBAN ANTHROPOLOGY 3, 3/0

The city as a total social system with special attention to cultural diversity in terms of both backgrounds of foreign countries and regions within the native country. Students may be requested to carry out organized field research within the city. Recommended for urban studies minors.

ANT 308 ARCHEOLOGICAL METHOD 4, 0/0

Prerequisite: ANT 100 or equivalent. Laboratory and field methods in archaeology. Opportunity for practical experience with various archaeological techniques.

ANT 312 ARCHEOLOGY OF NORTH AMERICA 3, 3/0

Prehistory of North America beginning with earliest human presence in North America, including the Paleo-Indian period; Archaic, Woodland, and Mississippian in the East; and periods comparable in time in the West.

ANT 315 RESEARCH METHODS IN CULTURAL ANTHROPOLOGY 3, 3/0; SP 03, 04

Prerequisite: Any anthropology course. Research methods in cultural anthropology covering field work, participant observation, sampling, measurements, documentation, statistical and cross-cultural methods.

ANT 320 HUMAN GROWTH IN ANTHROPOLOGICAL PERSPECTIVE 3, 3/0

Prerequisite: One course in the natural or social sciences, upper-division status, or instructor permission. The human growth pattern from both a biological and cultural perspective. A global approach will be used. Topics include growth studies, nutritional studies, anthropometric techniques, social and environmental factors that influence growth, the short and long term impact of the "cycle of poverty," and variation in growth among different populations.

ANT 321 PRIMATE BEHAVIOR 3, 3/0

Prerequisite: One course in the natural or social sciences, upper-division status, or instructor permission. Social behavior among nonhuman primates, with particular attention to monkeys and apes.

ANT 324 THE HUMAN SKELETON 3, 3/0

Prerequisite: One course in the natural or social sciences, upper-division status, or instructor permission. Skeletal remains of past human societies. Structure and function of the skeleton; age, sex, illness, and injury to the individual; reconstructing the population, demography, health status, growth patterns, and genetic affinities.

ANT 325/CRJ 325 FORENSIC ANTHROPOLOGY 3, 3/0

Prerequisite: ANT 324. Forensic applications of the recovery and identification of human skeletal remains. Determination of age, sex, and ancestry. Also taphonomy, differentiating human from animal remains, analysis and significance of traumas, and search and recovery techniques.

ANT 326 THE HUMAN FOSSIL RECORD 3, 3/0

Prerequisite: One course in the natural or social sciences or upper-division status. Human evolution as derived from the fossil record. Major fossil hominid discoveries, their interpretation, and their place in the development of the human species.

ANT 327/HEW 327 INTRODUCTION TO MEDICAL ANTHROPOLOGY 3, 3/0; G

Prerequisite: Introductory anthropology, one social science course, or upper-division status. An overview of the history and development of concepts and practices of medicine worldwide. Theories and procedures in illness, sickness, health and well-being in and from a variety of cultural perspectives, historical and contemporary, East and West. Stone Age, folk, shaman, traditional Western and herbal medicine, including healing and religion, homeopathy, and anthropological study of health care institutions.

ANT 329 WORLD PREHISTORY 3, 3/0

Prerequisite: ANT 100 or upper-division status. The aims and methods of prehistoric research and the interpretation of archaeological materials. Major stages in the development of culture illustrated in Old and New World contexts.

ANT 330 PACIFIC ISLANDERS 3, 3/0; G CS V3

General introduction to the prehistory, physical anthropology, ethnography, and ethnology of Polynesia, Micronesia, Melanesia, and Australia, focusing on special problems of current interest.

ANT 340 WOMEN IN ANTHROPOLOGICAL PERSPECTIVE 3, 3/0; G CS

Prerequisite: One course in the natural or social sciences, upper-division status, or instructor permission. Women's position in human society, with attention to biological,

social, and cultural influences on female status in cross-cultural and evolutionary perspective.

**ANT 341
ART AND CULTURE IN
ANTHROPOLOGICAL
PERSPECTIVE**
3, 3/0

Prerequisite: One course in art, one course in the natural and social sciences, or instructor permission. Selected examples of prehistoric art and of the art of Native Americans, Oceania, and Africa. Includes the present renaissance in art among these peoples and in these areas.

**ANT 360
FOLKLORE OF WOMEN**
3, 3/0

Prerequisite: ANT 101, ANT 144, one women's studies or social science course, or upper-division status. Survey of women's folklore and contemporary culture. Includes the role of folklore in the formation of gender roles, women's folklore as feminism, and women as traditional creative artists and performers.

**ANT 362
URBAN FOLKLORE**
3, 3/0

Prerequisite: ANT 101, ANT 144, one social science course, or upper-division status. Folklore and folklife in the urban environment. The survival and reshaping of rural and Old World tradition. The function of folklore in the preservation of ethnic identity. Craft, industrial, and labor traditions. Festivals and celebrations folklore in the media and popular culture. Folklore and technology.

**ANT 365
PRACTICING ANTHROPOLOGY**
3, 3/0

The application of anthropology and anthropological perspectives to contemporary community and world issues and problems. Focus on the practice of anthropology as a career outside academia, in social services, international relations, government positions, community organizing, etc. The relevance of anthropological principles in day-to-day life.

**ANT 367
CULTURE AND ECOLOGY**
3, 3/0; G

Prerequisite: Upper-division status. Overview of the anthropological study of culture and ecology—environmental anthropology—the evolutionary and comparative study of various cultures' relations, both biological and cultural, to their environments. Industrial and non-industrial adaptations to and understandings of the environment. Human-to-nature relations, the study of place, and environmentalism.

**ANT 370
THE ANTHROPOLOGY OF
CONTEMPORARY ISSUES**
3, 3/0; G

Prerequisite: ANT 101 or instructor permission. An anthropological perspective of some of the principal dilemmas of the contemporary world, including technological, demographic, ideological, and cultural problems, which provide much of the content of our daily news and have implications for the survival of our species.

**ANT 375
HUMANISTIC ANTHROPOLOGY**
3, 3/0

Prerequisite: Upper-division status or instructor permission. Expanded forms of anthropological representation (fiction, poetry, and film) and their relationship to traditional anthropological narrative forms. Comparison of humanistic and traditional ethnographic accounts of the same cultures. Literature-based representations of anthropological material.

**ANT 377
ANCIENT CIVILIZATION**
3, 3/0

Prerequisite: ANT 100, ANT 101, upper-division status, or instructor permission. The nature of early civilizations, as well as possible factors involved in their rise and fall. Old World civilizations of Mesopotamia, Egypt, the Indus Valley, and China, and New World civilizations of Mesoamerica and Peru. Similarities and differences between the civilizations.

**ANT 380
LANGUAGE AND CULTURE**
3, 3/0; G

Concepts of language and culture as symbolic systems. Introduction to phonetics, phonemics, morphemics, syntax, and semantics from a cross-cultural and cross-lingual perspective. Exploration of the relationship between grammatical structure and modes of perception and cognition as related to world views and systems of values, with special emphasis on the Sapir-Whorf hypothesis and the work of Chomsky.

**ANT 381
RELIGION, MAGIC, AND
CULTURE**
3, 3/0; CS V3

Prerequisite: One anthropology course. World religious beliefs and practices, and universal phenomena with many manifestations. The place of religion and spirituality in widely diverse cultures, including discussion of magic, trance, altered states, cults, Wicca, Santeria, voodoo, and late-twentieth-century religions.

**ANT 382
CULTURE AND PERSONALITY**
3, 3/0

Prerequisite: One course in the natural and social sciences, upper-division status, or instructor permission. Cross-culture study of the role of individual variable genetic potentials and socioculturally variable norms. Structures of modal and deviant personalities.

**ANT 384
CULTURE, SOCIAL CONTROL,
AND LAW**
3, 3/0; G

Prerequisite: ANT 101, CRJ 101, or SWK 105, or instructor permission. An evolutionary, comparative cross-cultural, and ethnographic approach to the anthropology of law and social control. Conflict resolution, legal culture in various cultural groups (egalitarian, peasant, "deviant" subcultures, industrial bureaucracies, the legal profession). Practical issues for the study of legal systems, legal and illegal behavior.

**ANT 389
TOPICS IN ANTHROPOLOGY**
3, 3/0

Prerequisite: One course in the natural or social sciences, upper-division status, or instructor permission. Analysis of current areas of research interest in anthropology. Emphasis on using concepts and methods from the subfields of anthropology to study a specific problem or series of problems.

**ANT 402
CULTURAL ANTHROPOLOGY**
3, 3/0

Prerequisite: ANT 101 strongly recommended. Intensive, comparative approach to the content and process of culture problems in the interpretation of cultural materials. Cross-disciplinary approaches. Applied anthropology.

**ANT 405
HISTORY OF
ANTHROPOLOGICAL THOUGHT**
3, 3/0

Prerequisite: ANT 101 strongly recommended. Important contributions to the development of anthropological theory from the pre-anthropological philosophers, such as Locke, to the present. Includes theories of Boas, Darwin, Kroeber, Levi-Strauss, Malinowski, Rivers, Sapir, and Tylor. Required for all anthropology majors.

**ANT 409
SOCIAL STRUCTURE**
3, 3/0

Prerequisite: One course in the natural or social sciences or instructor permission. Comparative study of social structure in different cultures, emphasizing the tribal. Includes kinship, occupational groups, government, social classes, and clubs.

**ANT 411
AFRICAN FAMILY**
3, 3/0; G

The family, kinship, and marriage among the peoples of Africa. Emphasis on the interrelationships of kinship with other aspects of culture.

**ANT 412
SEMINAR IN ANTHROPOLOGY**
3, 3/0

Critique of the literature of one of the four areas of anthropological research: physical anthropology, archeology, ethnology, and linguistics. Research may be required.

**ANT 415
SEMINAR IN ARCHEOLOGY**
3, 3/0

Prerequisite: One course in the natural or social sciences, upper-division status, or instructor permission. Survey of the field of archaeology that includes the examination of particular cultures, as well as discussion of major methodological and theoretical issues.

**ANT 488
INTERNSHIP IN
ANTHROPOLOGY**
Variable credit

Prerequisites: Anthropology major or minor, upper-division status, and departmental approval. Supervised fieldwork in community agencies, organizations, and milieu where students develop and apply practical and anthropological knowledge and skills.

Students interact in diverse cultural settings, and experience and establish connections of potential use in the job market. Preparatory conferences, ongoing seminars with the faculty supervisor, a log/journal of the field experience, and a final report.

**ANT 495
SPECIAL PROJECT**

**ANT 498
HONORS RESEARCH**

**ANT 499
INDEPENDENT STUDY**

AED

ART EDUCATION

Art Education Department

**AED 100
ESSENTIALS OF VISUAL ARTS**
3, 4/0; CA

Non-art majors only. The development of visual and perceptual awareness through expressive learning processes inherent in the visual arts. Experience with a variety of media that will accommodate individual interpretations of art concepts that generate the formations, judgments, and decisions of a liberally educated individual.

**AED 200
FUNDAMENTALS OF ART
INQUIRY**
3, 3/0; CA

Functional and common-sense procedures for establishing valid criteria for making judgments about art as it is reflected in all areas of human concern. Examination and testing of usefulness of language and logic instruments.

**AED 300
FOUNDATIONS IN ART
EDUCATION**
3, 4/0

Prerequisites: Art education major or consent of department chair and successful completion of English composition/basic communication and mathematics skills competency requirements. Introductory course that serves as an entry to the professional program. Provides basic understanding of art education and its relationship to the arts/education careers and society. Required for art education majors.

**AED 301
THEORETICAL CONSTRUCTS IN
ART EDUCATION**
3, 4/0

Prerequisites: Art education major, AED 300W, or consent of department chair, and one course in psychology. Specific information and theories relevant to the teaching of art. Teaching models based on art education theories formulated to accommodate the student's preprofessional interests and needs in the context of observed and theoretically stimulated teaching situations. Required for art education majors.

**AED 302
FUNCTIONS AND PRACTICE IN
ART EDUCATION
3, 3/0**

Prerequisites: Art education major, AED 300W, AED 301W, and one course in sociology or anthropology. Identification of art content and processes necessary in the design of instructional planning, implementation, and evaluation of art concepts. Skills are gained and tested through practicum in miniteaching and/or participation teaching. Required for art education majors.

**AED 303
ELEMENTARY STUDENT
TEACHING IN ART
6, 0/0**

Prerequisites: Art education major, AED 302W, ATS 325, satisfaction of departmental requirements, and approval of AED coordinator of student teaching. Supervised student teaching at assigned levels from kindergarten through sixth grade in various types of schools and communities. Seminar discussions on professional problems of the beginning teacher.

**AED 304
SECONDARY STUDENT
TEACHING IN ART
6, 0/0**

Prerequisites: Art education major, AED 302W, ATS 325, satisfaction of departmental requirements, and approval of AED coordinator of student teaching. Supervised student teaching at assigned levels from seventh grade through senior high school in various types of schools and communities. Seminar discussions on planning and evaluating teaching experiences and professional problems of the beginning teacher. Required for art education majors.

**AED 310
ART MATERIALS EXPLORATION
FOR GROUP ACTIVITIES
3, 4/0**

Prerequisite: One visual arts studio course. Exploratory materials experiences basic to art activities. Activities-oriented processes and their ultimate use in group art activities that occur in a variety of agency, institutional, and recreational contexts. Required for art therapy studies minors.

**AED 315
ARTS IN LIVING
3, 4/0; CA**

Prerequisite: One art course. Contemporary and historic art forms as they apply to everyday living. Analysis of the individual significance and interrelatedness of architecture, industrial design, the graphic arts, painting, sculpture, music, and the theater arts. Participation in creative activities related to the course. Required for art education majors.

**AED 318
ART EDUCATION AND
MULTICULTURALISM
3, 3/0**

Prerequisite: Upper-division status. Multiculturalism as it relates to the theory and practice of art education. Teachers in training develop their cultural competence in preparation for working with diverse student populations. Students design culturally relevant art lessons and increase their awareness of and

appreciation for the arts and lifeways of various peoples and cultures.

**AED 319
ART FOR ELEMENTARY AND
EXCEPTIONAL EDUCATION
CLASSROOM TEACHERS
3, 4/0**

Prerequisite: Elementary education, exceptional education, or social work major, or instructor permission. Children's expressive abilities, interests, and needs in relation to art at several developmental levels. The management of media as an agent for developing skills, inquiry, and appreciation of the artistic process. Studio experiences with processes and materials used in elementary school settings.

**AED 365
SEMINAR IN FEMINIST ART AND
CRITICISM
3, 3/0; D**

Prerequisites: Fulfillment of English composition/basic communication requirement and sophomore status. Women's creative achievements in visual art. Varieties of feminist visual art and criticism and their relationship to contemporary culture. Portrayal of women and the ways in which cultural definitions of gender shape artistic expression.

**AED 398
COMPUTER APPLICATIONS FOR
ART EDUCATORS
3, 2/2**

Prerequisite: Art education major or instructor permission. In-depth lab experience that serves to expose art education students to a basic understanding of the computer and software. Uses for the computer in the public school art classroom. Required for art education majors.

**AED 400
STUDENT TEACHING SEMINAR
3, 3/0**

Relationship of art education theories to teaching practices used in the contemporary school art program. Crucial issues in art education. Problems of beginning art teachers. The value of current professional literature in the resolution of issues and problems. Required for art education majors. To be taken concurrently with or immediately following student teaching.

**AED 488
INTERNSHIP
Variable credit**

Prerequisites: Upper-division status and/or instructor permission, minimum cumulative GPA of 2.5, and background coursework appropriate to the internship setting. Guided, supervised field experiences for qualified students in community-based agencies or settings. Interns apply and enhance knowledge gained through formal instruction demonstrating operational skills as practitioners in prospective specializations.

**AED 495
SPECIAL PROJECT**

Prerequisite: Upper-division status. Project undertaken and meeting hours arranged individually with instructor.

**AED 499
INDEPENDENT STUDY**

Prerequisites: Sophomore, junior, or senior status and minimum cumulative GPA of 2.5 (overall, previous semester, and in major courses). Studies arranged and meeting hours undertaken individually with instructor.

ATS

ART THERAPY STUDIES

Art Education Department

**ATS 320
INTRODUCTION TO ART
THERAPY
3, 4/0; CA**

Prerequisite: One visual arts studio course or instructor permission. Initial exploration of art as a mode of human expression for children and adults in therapeutic settings, such as special education classes, mental health clinics, developmental centers, community centers, etc. Volunteer work in human-services agency. Required for art therapy studies minors.

**ATS 325
ART AND SPECIAL NEEDS
3, 4/0; D**

Prerequisites: Art therapy minor, ATS 320, and one human-services course. In-depth exploration of theoretical and practical relationships within art programs designed to serve people with exceptional needs in schools and other human-services agencies. Art activities as a diagnostic agent and as a means for establishing settings that promote individual growth, self-awareness, self-concept development, and self-expression. Supervised fieldwork in special-education settings. Required for art therapy studies minors and art education majors.

BIO

BIOLOGY

Biology Department

**BIO 100
PRINCIPLES OF BIOLOGY
3, 3/0; CM**

Non-majors only. The unifying principles of modern biology with special emphasis on cell biology, metabolism, and genetics.

**BIO 101
HUMAN BIOLOGY
3, 3/0; CM**

Non-majors only. Biological principles of the human condition with particular emphasis on physiology of normal body function with regard to nutrition, disease, psychoactive agents, reproduction and contraception, and aging. Contemporary health-related issues.

**BIO 104
ENVIRONMENTAL BIOLOGY
3, 3/0; G CM**

Non-majors only. Biological aspects of global environmental problems. Principles of ecology.

**BIO 115
GENERAL BOTANY
4, 3/3; CM**

Morphology, physiology, phylogeny, reproduction, and adaptation of plants.

**BIO 116
GENERAL ZOOLOGY
4, 3/3; CM**

Morphology, physiology, phylogeny, reproduction, and adaptation of animals.

**BIO 210
BACTERIOLOGY
3, 2/2**

Prerequisite: BIO 100. Non-majors only. Morphology and physiology of bacteria. General application to household science, sanitation, hygiene, and infectious disease.

**BIO 214
INTRODUCTION TO CELL
BIOLOGY
4, 3/3**

Prerequisites: CHE 111 and CHE 112. Structure of biological macromolecules; organization of eukaryotic and prokaryotic cells and basic cell processes.

**BIO 303
GENETICS
4, 3/3**

Prerequisites: BIO 115, BIO 116, and BIO 214. Principles of heredity. Inheritance of specific plant, animal, and human traits. Biochemical aspects of the gene. Relationship of genetics to evolution.

**BIO 305
MOLECULAR BIOLOGY
4, 3/3**

Prerequisites: BIO 115, BIO 116, BIO 214, and CHE 201. Structure, organization, and function in living matter at the molecular level.

**BIO 308
HUMAN ANATOMY AND
PHYSIOLOGY
3, 3/0; CM**

Prerequisites: BIO 100 and upper-division status. Physiology and pertinent anatomy of the major organ systems of the human body including consideration of clinical health and disease. Not applicable as a biology elective for students pursuing a B.A. in biology.

**BIO 309
LABORATORY IN HUMAN
ANATOMY AND PHYSIOLOGY
1, 0/3; CM**

Prerequisites: BIO 100 and upper-division status. Human anatomy and functions of the major anatomical systems using the techniques of rigorous animal dissection (e.g., cats and sheep organs) and physiological experiments. Not applicable as a biology elective for students pursuing a B.A. in biology.

**BIO 314
ADVANCED CELL BIOLOGY
4, 3/3**

Prerequisites: BIO 115, BIO 116, BIO 214, and CHE 201. In-depth examination of the cell. Emphasis on the contribution of the molecular approach to the understanding of cell structure and functions, in particular, the contribution of recombinant DNA technology.

BIO 315
ECOLOGY
4, 3/3

Prerequisites: BIO 115, BIO 116, CHE 111, and CHE 112. Ecosystems, biotic communities, interspecific and intraspecific relationships, biogeochemical cycles, energy flow, population ecology, introduction to analysis of community composition, effects of humanity in modifying natural environments. Several half-day or all-day field trips may be required.

BIO 316
MICROBIOLOGY
4, 2/6

Prerequisite: BIO 214. Microorganisms and techniques of observing their morphology, growth characteristics, and distribution. The relationship of microorganisms to human activities.

BIO 321
COMPARATIVE VERTEBRATE ANATOMY
4, 3/3

Prerequisites: BIO 116 and upper-division status. Function, evolution, and development of the diversity of vertebrate structure. Required laboratory exercises include rigorous dissections of representative vertebrate morphologies (e.g., preserved sharks, amphibians, cats, etc.).

BIO 322
HUMAN HEREDITY
3, 3/0; CM

Prerequisites: BIO 100 and upper-division status. *Non-majors only.* Human inheritance and the social implications of genetics to modern society.

BIO 324
BIOLOGY OF HUMAN REPRODUCTION
3, 3/0; CM

Prerequisites: BIO 100 and upper-division status. *Non-majors only.* Anatomy and physiology of the human reproductive system, development of the human embryo, and the processes of birth and lactation.

BIO 325
ICHTHYOLOGY
4, 3/3

Prerequisite: BIO 116. Study of the biology of fishes: structure and function (anatomy and physiology), systematics, evolution, diversity, zoogeography, and ecology.

BIO 402
COMPARATIVE ANIMAL PHYSIOLOGY
4, 3/3

Prerequisites: BIO 116, BIO 214, and CHE 201. Study of hormonal control, neural processing, sensory mechanisms, circulation, gas exchange, digestion, muscles, energetics, and thermoregulation using vertebrate and invertebrate examples.

BIO 405
ORGANIC EVOLUTION
3, 3/0

Prerequisites: BIO 303 and BIO 315. Empirical foundation of evolutionary theory. Emphasizes the dynamics of the process of evolution, especially as it relates to individual variation within an interbreeding population, to the variation pattern on the population

level, and to the origin of species; more recent trends, such as introgressive hybridization, polyploidy, apomixis, and genetic homeostasis are developed.

BIO 406
BIOMETRICS
4, 3/3

Prerequisites: College algebra and upper-division status. Quantitative aspects of biology, with analysis of biological data and its relationship to experimental design. Fundamentals of probability with applications to biological problems. Statistical decision making applied to measurement and enumeration data.

BIO 408
PLANT PHYSIOLOGY
4, 3/3

Prerequisites: BIO 115, BIO 214, and CHE 201. Physiological processes in plants, including photosynthesis, respiration, osmosis, translocation, transpiration, effects of hormones, soil nutrients, and tropisms.

BIO 411
ANIMAL PARASITOLOGY
4, 3/3

Prerequisite: BIO 116. Principles of parasitology. Morphology, immunology, physiology, biochemistry, and ecology of parasites. Life cycles, identification and pathological effects of representative parasites. Control and treatment. Significance of parasitism to human health.

BIO 414
MAMMALOLOGY
3, 2/3

Prerequisites: BIO 116 and upper-division status. Introduction to the study of mammals, living and extinct, including a survey of the diversity of mammalian life history strategies, behavior, ecology, morphology, and physiology. Required field trips, collection techniques, and preparation of study materials.

BIO 417
FIELD MYCOLOGY
3, 2/3

Prerequisite: BIO 115. Identification, morphology, ecology, and economic importance of the fungi most often encountered in natural environmental situations. Emphasis on the myxomycetes, ascomycetes, and basidiomycetes. Field work required.

BIO 418
LIMNOLOGY
4, 3/3

Prerequisites: BIO 115, BIO 116, BIO 315, and CHE 112. Physical, chemical, and biological factors that influence freshwater life and the ecological interactions in freshwater communities. Lectures, demonstrations, and field trips.

BIO 421
INVERTEBRATE STRUCTURE AND FUNCTION
3, 2/3

Prerequisite: BIO 116. Functional approach to the morphology, physiology, adaptation, ecology, reproduction, and evolution of the invertebrates.

BIO 425
MORPHOLOGY OF NONVASCULAR PLANTS AND FUNGI
4, 3/3

Prerequisite: BIO 115. Comparative structures, reproductive cycles, and phyletic relationships among the nonvascular plants and fungi. Interactions between structure and function and ecological adaptations.

BIO 426
MORPHOLOGY OF VASCULAR PLANTS
4, 3/3

Prerequisite: BIO 115. Comparative structures, reproductive cycles, and phyletic relationships among the vascular plants. Interactions between structure and function and ecological adaptations.

BIO 428
VERTEBRATE STRUCTURE AND FUNCTION
4, 3/3

Prerequisite: BIO 116. Comparative study of vertebrates with emphasis on their anatomy, adaptations, ecology, and phylogenetic relationships.

BIO 429
FISHERIES BIOLOGY
4, 3/3

Prerequisites: BIO 116 and BIO 315. Ecology and management of fish populations. Sampling techniques and fisheries-management techniques (including stocking, hatcheries, and aquaculture programs). Feeding, behavior, and life history of fishes.

BIO 450
RECOMBINANT DNA TECHNOLOGY
4, 2/4

Prerequisites: BIO 314, BIO 316, and BIO 305. Extensive hands-on experience using the techniques of biotechnology. Emphasis on techniques involving the construction of recombinant DNA molecules and their analysis.

BIO 488
BIOLOGY INTERNSHIP
Variable credit

Prerequisites: Minimum cumulative and biology GPA of 2.5; coursework in botany, zoology, and cell biology; and approval of faculty adviser and department chair. An opportunity to apply learned principles and methodologies in a workplace setting.

BIO 495
SPECIAL PROJECT

Prerequisite: Approval of the faculty adviser and department chair.

BIO 498
HONORS RESEARCH
3, 0/9

Prerequisites: Acceptance by the Biology Honors Committee and approval of the faculty adviser. Individual investigation of an original problem. After two semesters of honors research, students submit written papers and present data orally at a scientific meeting or in a department seminar. Minimum of 6 credit hours required for honors certification.

BIO 499
INDEPENDENT STUDY

Prerequisites: Approval of faculty adviser and department chair.

BUS

BUSINESS

Business Department

BUS 116
INTRODUCTION TO BUSINESS
3, 3/0; CT

Modern business functions. Economic and social aspects, organization and management, operations, marketing functions, management control and decision making, financial risk and management, and career information for a changing business climate.

BUS 117
INTRODUCTION TO RETAILING
3, 3/0; CT

Role and function of retailing as a channel of distribution, the relationship and responsibilities to the producer and to the consumer.

BUS 212
INTRODUCTION TO ACCOUNTING
3, 3/0

Introduction to the accounting cycle and double-entry bookkeeping. Students analyze business transactions, apply rules of debits and credits, and prepare income statements and balance sheets.

BUS 300G
INTERNATIONAL BUSINESS
3, 3/0; G

Concepts, theory, and practice of international business and the multi-national corporation. Global nature of the world economy. Environmental constraints, regional issues, and functional business operations.

BUS 301W
PRINCIPLES OF BUSINESS/MARKETING AND TECHNOLOGY EDUCATION.
3, 3/0

Introduction to teaching business/marketing and technology education courses in public schools. Principles, philosophy, and objectives. Historical development of occupational education and current issues.

BUS 302
CURRICULUM AND EVALUATION IN BUSINESS/MARKETING AND TECHNOLOGY EDUCATION
3, 3/0

Introduction to the curriculum and evaluation in business/marketing and technology education. State curriculum and standards, lesson planning, student learning, and curriculum evaluation.

BUS 303
INSTRUCTIONAL STRATEGIES IN BUSINESS AND MARKETING
3, 3/0

Instructional strategies dealing with classroom management, classroom environment, and educational technologies. 100 hours of field experience prior to student teaching required.

BUS 312
FINANCIAL ACCOUNTING
3, 3/0
Prerequisite: Sophomore status and math competence. Introduction to the fundamental accounting theories and methods, underlying financial statements, and the use of accounting information by decision makers.

BUS 313
MANAGERIAL ACCOUNTING
3, 3/0
Prerequisite: BUS 312. Managerial accounting focusing on accumulating, processing, reporting, and interpreting decision-relevant financial information that is used in managing organizations. Cash flow analysis, time value of money, cost behavior, budgeting, and elements of cost accounting.

BUS 320
PRINCIPLES OF MARKETING
3, 3/0
Survey course on concepts, policies, and practices in product marketing, and service. The decision-making process in marketing.

BUS 321
MARKETING ON THE INTERNET
3, 3/0
Prerequisite: BUS 320. Foundations and rationale for Internet marketing. Marketing objectives and strategies for Web sites, online promotion, and advertising. Web site design tools, research on customers, and legal and ethical issues. Students evaluate Web sites and design their own online marketing sites.

BUS 323
SALES METHODS & TECHNIQUES
3, 3/0
Foundation in sales principles and techniques. Emphasis on the personal development of sales skills, analysis of characteristics, behavior, and motivation of buyers, and the use of the selling process to achieve customer satisfaction.

BUS 324
BUSINESS COMMUNICATION
3, 3/0
Prerequisite: Successful completion of English composition/basic communication competency requirement and upper-division status. Fundamental principles and tools for effective communication within organizations. Experiential exercises assist in developing written and oral communication skills.

BUS 325
HUMAN RESOURCE MANAGEMENT
3, 3/0
Prerequisite: Business major. Theoretical and practical knowledge in the major areas of human resource management including selecting training and developing, evaluating and compensating employees.

BUS 326
INTRODUCTION TO MERCHANDISING
3, 3/0
The science of merchandising management together with the trends of merchandising.

BUS 327
ADVERTISING CONCEPTS AND PRACTICES
3, 3/0
Prerequisite: BUS 320. Introduction to the field of advertising including discussion of research, target marketing, media selection and evaluation, goal setting and budgeting, and the development of advertising campaigns.

BUS 328
ADVANCED ADVERTISING CAMPAIGN MANAGEMENT
3, 3/0
Prerequisite: BUS 327. Principles of communication and advertising in non-print media. Coordination of sales promotion activities and its effect on business, organizations, industries and individuals.

BUS 329
SALES MANAGEMENT
3, 3/0
Sales management function within modern organizations including sales-force operation, sales strategies, leadership, ethics, recruitment, selection, and motivation of staff. Sales management as a vital business function within the context of a global economy.

BUS 334
BUSINESS LAW I
3, 3/0
Legal principles applicable to business enterprises and operations. The advisory and judicial systems; business organizations. Contracts and sales; commercial paper, secured transactions; property; torts; and appropriate sections of the Uniform Commercial Code.

BUS 335
BUSINESS LAW II
3, 3/0
Prerequisite: BUS 334. The nature of real and personal property; trusts, wills and estates; creditor's rights and secured transactions; government regulation of business; administrative law; insurance, and evidence. Topics may include taxation of income, arbitration in resolving contract disputes, and Rule 10 b-5 of the Securities and Exchange Commission.

BUS 336
VISUAL MERCHANDISING
3, 3/0
Principles of display through application, experimentation, and evaluation of basic techniques and its importance in selling merchandise. Use of color, harmony, and arrangement.

BUS 340
SECURITIES
3, 3/0
Prerequisite: Upper-division status. Securities and the securities market. Special emphasis on the operations and the securities market, the role it plays in the economy, and its interaction with the macroeconomics system.

BUS 341
COMMODITIES
3, 3/0
Prerequisite: Upper-division status. Commodities futures trading. Special emphasis on terminology, hedging procedures, trading procedures, and price-making influences.

BUS 347
RETAIL MANAGEMENT
3, 3/0
Introduction to trends and developments in retailing and to the operation of retail organizations. Strategic planning, financial control, merchandising, site selection, store organization, pricing and promotion.

BUS 348
ELECTRONIC COMMERCE
Prerequisites: Business major and BUS 320. Introduction to the principles and practices of electronic commerce including EDI, electronic payment, online promotion, electronic shopping and distribution, online stores and malls, security, intellectual property rights, and legal issues. Select tools and skills required for navigating the Internet and creating a Web site.

BUS 350
CURRENT PRACTICES IN BUSINESS TECHNOLOGY
3, 3/0
Instruction in the use of information technology and business computer applications including spreadsheets, graphic presentations, networking, database management, word processing and office automation. Emphasis on using computers and computer-based information in the decision-making process

BUS 360
PRINCIPLES OF MANAGEMENT
3, 3/0
Introduction to the basic functions of management, including strategic and operational planning, developing organizational structure and behavior, leadership, motivation, and effective control systems.

BUS 363
BUSINESS IN THE WESTERN HEMISPHERE
3, 3/0
Survey of business practices in the Western Hemisphere including economic, cultural and political differences among countries, regional trade agreements, and trade practices. Select countries are compared in terms of management, marketing and human resources practices, organizational communications, and business ethics.

BUS 365
ENTREPRENEURSHIP
3, 3/0
The functions performed by entrepreneurs such as searching for opportunities and gathering resources to convert into growth-oriented, profitable ventures. Students conduct research, identify opportunities, and prepare a business plan.

BUS 378
BUSINESS PROFESSIONAL PRACTICE
3, 3/0
Business major may elect to take up to 12 credit hours of field experience. Introductory, part-time experience usually generates 3 credit hours, whereas a full-time culminating experience could generate as many as 12 credit hours. Credit, training, and evaluation criteria to be arranged by business instructor in charge of field experience.

BUS 403
CONSUMER BEHAVIOR
3, 3/0
Prerequisite: BUS 320. Psychological, sociological, and cultural factors that influence consumer behavior and decision making. Emphasis on the importance of understanding consumer behavior in formulating marketing programs and marketing strategies.

BUS 404
MARKETING RESEARCH
3, 3/0
Prerequisite: BUS 320. Research methods and techniques used to collect data and provide information for solving marketing problems, design, sampling, data collection, analysis and interpretation, and report preparation. Orientation from the perspective of users of marketing research.

BUS 410
ACCOUNTING ANALYSIS
3, 3/0
Prerequisite: BUS 313 and upper-division status. Introduction to management fundamentals and economic concepts of the firm. Use of accounting concepts and techniques in preparing, presenting, and interpreting the accounting information used by management in planning and controlling the operations of the firm.

BUS 412
INCOME TAXATION
3, 3/0
Fundamentals of federal income taxation. Course will stress the concepts related to gross income, deductions, credits, and property transactions.

BUS 413
TAXATION OF CORPORATIONS
3, 3/0
Federal income taxation of corporations and shareholders, includes organizing a corporation, establishing capital structure, determining tax liability, dividends and other non-liquidating distributions, stock redemptions, stock redemptions and liquidations, and S corporations.

BUS 420
INTERNATIONAL MARKETING
3, 3/0
Prerequisite: BUS 320. Concepts, theory, and practice of international marketing. Competitive global environment, trade issuers, cultural factors, and global marketing strategy formulation and implementation.

BUS 424
INTERNATIONAL BUSINESS COMMUNICATION
3, 3/0
Prerequisite: BUS 324. Preparation for the complex communications tasks encountered in the world of international business. Cultural aspects that influence communication including language, environment and technology, social organization, contexting, authority conception, nonverbal communication, and temporal conception. Emphasis on understanding social and cultural differences and developing effective communication strategies for the global corporation.

BUS 426
CREATIVE OPPORTUNITIES IN
MANAGEMENT PRACTICES
3, 3/0

Prerequisite: BUS 360 and BUS 325, upper-division status. Detailed analysis of creative problem solving techniques. Case problems and business projects that reinforce management functions and approaches. Places students in the role of an individual manager and team members in practical application of management theory.

BUS 428
ADVANCED MERCHANDISING
3, 3/0

Prerequisite: BUS 326 or instructor permission. Techniques of merchandising fashion apparel, accessories, housewares, major and minor appliances, and furniture. Major approaches used in planning and analyzing sales and stock records, and the use of operating and financial data to make profitable merchandising decisions as well as market planning.

BUS 430
BUSINESS STRATEGY
3, 3/0

Prerequisite: Business major. Methods and techniques commonly used in strategic management decision making. Provides a background in strategic analysis and implementation of strategy in a competitive global environment. Employs competitive simulations, case studies, and applied research projects.

BUS 440
BUSINESS SENIOR SEMINAR
3, 3/0

Prerequisite: Seniors status. Designed to help business students in the transition to professional employment. Career paths and employment opportunities, employee benefit packages and policies, Affirmative Action programs, Equal Employment Opportunity, on-the-job considerations, and other related subjects.

BUS 473
INTERNATIONAL MANAGEMENT
3, 3/0

Through an approach that blends theory and practical exercises, students will learn the fundamentals of managing in a global economy.

BUS 460
PRODUCTION AND
OPERATIONS MANAGEMENT
3, 3/0

Prerequisite: BUS 360. Overview of the major concepts and models in the production and operations process in manufacturing and services organizations. Includes detailed examination of production systems, materials planning, project management, and quality.

BUS 490
FIELD EXPERIENCE
Credit to be arranged.

Prerequisite: Junior or senior standing. Provides non-business students the opportunity to have experience related to their majors in public or private agencies, business organizations, educational institutions. Registration by faculty permission. Obtain necessary forms in CS 301.

CHE

CHEMISTRY

Chemistry Department

CHE 100
CHEMISTRY AND SOCIETY
3, 3/0; CM

Non-mathematical approach to the study of matter. Presentation of the fundamentals of chemistry followed by socially relevant topics such as toxic-waste management, environmental pollution, space technology, agricultural chemistry, chemistry of consumer products, food processing, polymers, and plastics.

CHE 101
GENERAL CHEMISTRY I
3, 2/3; CM

Basic principles of chemistry, including atomic and molecular structure; gases, liquids, solids, and solutions; chemical reactions; acids and bases. Not open to chemistry majors.

CHE 102
GENERAL CHEMISTRY II
3, 2/3; CM

Prerequisite: CHE 101. Continuation of CHE 101. Includes chemical equilibria, electrochemistry, metals and nonmetals, some fundamentals of organic chemistry, polymers, fibers and plastics, natural products, and some fundamentals of biochemistry. Not open to chemistry majors.

CHE 111
FUNDAMENTALS OF
CHEMISTRY I
4, 3/3; CM

Fundamental principles of chemistry covering the nature and structure and properties of the atom, chemical bonding, geometry of molecules, the periodic table, states of matter, stoichiometry, and solution chemistry.

CHE 112
FUNDAMENTALS OF
CHEMISTRY II
4, 3/3; CM

Prerequisite: CHE 111. Continuation of CHE 111. The concepts of kinetics, equilibria, and energetics and preparative materials for further study in chemistry or other areas of science. Laboratory work in semimicro qualitative inorganic analysis and physicochemical experiments. Required for chemistry and forensic chemistry majors.

CHE 201
ORGANIC CHEMISTRY I
3, 3/0

Prerequisite: CHE 112. Chemistry of carbon compounds. Bonding, stereochemistry, and structural theory. Fundamental reactions of the functional groups considered from the mechanistic standpoint.

CHE 202
ORGANIC CHEMISTRY II
3, 3/0

Prerequisite: CHE 201. Continuation of CHE 201. The reactions and mechanisms of organic functional groups including aromatic compounds, alcohols, aldehydes, carboxylic acids, and acid derivatives. Spectroscopic techniques (IR, UV, NMR) for the identification of organic molecules are also included.

CHE 203
ORGANIC CHEMISTRY
LABORATORY I
1, 0/3

Prerequisite: CHE 201 or concurrent registration. Laboratory techniques in organic chemistry including distillation, crystallization, extraction, sublimation, and chromatography are learned by application to the synthesis and purification of organic compounds. Experiments chosen from a variety of possible topics such as isolation of natural products, separation of mixtures, and synthesis.

CHE 204
ORGANIC CHEMISTRY
LABORATORY II
1, 0/3

Prerequisite: CHE 202. *Prerequisite or corequisite:* CHE 203. Continuation of CHE 203. Synthesis, isolation, purification, and identification of organic compounds with emphasis placed on spectroscopic methods of structure determination. Experiments chosen from a variety of possible topics such as multi-step synthesis, mechanistic studies, and qualitative organic analysis.

CHE 300
MEDICATIONS: CHEMICALS FOR
YOUR HEALTH
3, 3/0

Prerequisite: CHE 100, CHE 101, or CHE 111. The structure, uses, and physiological effects of common medications, at a level appropriate for the non-science major. Emphasis on consumer issues related to safe and effective use of prescription and nonprescription drugs; drug development and approval; alternative medicines, vitamins, generic drugs, and consumer guides for using drugs wisely. Not open to chemistry or forensic chemistry majors. Elective for others.

CHE 301
ANALYTICAL CHEMISTRY
4, 2/6

Prerequisite: CHE 112. Theory and laboratory applications of quantitative analytical chemistry. Gravimetric, volumetric, electrochemical, and spectrophotometric methods.

CHE 305
PHYSICAL CHEMISTRY I
3, 3/0

Prerequisites: CHE 202, MAT 263, and PHY 112. The first semester of a two-semester sequence in physical chemistry. Topics include gas laws, laws of thermodynamics, state functions, thermochemistry, chemical equilibria, Maxwell relations, and chemical potential.

CHE 306
PHYSICAL CHEMISTRY II
3, 3/0

Prerequisite: CHE 305. The second semester of a two-semester sequence in physical chemistry. Topics include quantum chemistry, atomic and molecular structure, molecular and atomic spectroscopies, kinetic theory of gases, and kinetics.

CHE 307
PHYSICAL CHEMISTRY
LABORATORY I
1, 0/3

Prerequisites: CHE 204, CHE 301, and CHE 305 or concurrent registration. A laboratory study of the principles of physical chemistry

covered in CHE 305. Topics include colligative properties, electrical conductance, azeotropic mixtures, adsorption equilibria, and determination of equilibrium constants. Data analysis using statistical methods and error analysis is required.

CHE 308
PHYSICAL CHEMISTRY
LABORATORY II
1, 0/3

Prerequisites: CHE 307 and CHE 306 or concurrent registration. A laboratory study of principles of physical chemistry covered in CHE 306. Topics include determination of rate laws; ultraviolet, visible, and infrared spectroscopy; and photochemistry. Data analysis using statistical methods and error analysis is required.

CHE 310
LITERATURE OF CHEMISTRY
1, 1/0

Prerequisite or corequisite: CHE 201. Sources of chemical literature. Experiences in chemical information searching and retrieval, including examples of computer searching.

CHE 312
CHEMISTRY AND
CRIMINALISTICS
3, 3/0

Prerequisite: CHE 102, CHE 201, or CHE 321; or CHE 100 with instructor permission. Chemistry as an investigative aid in the process of criminal justice. General chemical techniques used in criminal investigations. The function of the criminalist from the gathering of evidence to the final presentation of expert testimony. Required of all forensic chemistry majors.

CHE 315
ENVIRONMENTAL CHEMISTRY
3, 3/0; G

Prerequisite: CHE 112 or CHE 102 with instructor permission. Discussion of chemical reactions in air, water, and soil. Effect of human activities on the chemical environment. Pollution-control methods and devices.

CHE 321
PRINCIPLES OF ORGANIC
CHEMISTRY
4, 1/3

Prerequisite: CHE 102 or CHE 112. Survey of organic chemistry including functional groups and their chemical behavior. Not open to chemistry or forensic chemistry majors.

CHE 322
BIOLOGICAL CHEMISTRY
4, 3/3

Prerequisite: CHE 321 or CHE 202. Structure and functions of the substances of biochemical interest found in living systems, supplemented by illustrative laboratory work. Not open to chemistry majors.

CHE 331
PRINCIPLES OF PHYSICAL
CHEMISTRY
3, 3/0

Prerequisite: CHE 202, MAT 126, PHY 108, or instructor permission. A one-semester survey course exploring the principles of physical chemistry, oriented toward the needs of forensic chemistry majors and students in environmental and health-related sciences. Topics include thermodynamics, kinetics, quantum

chemistry, and atomic and molecular spectroscopies. Required for forensic chemistry majors.

CHE 399
INTERNSHIP IN CHEMISTRY
Variable credit

Prerequisite: Approval of the Co-Op Committee. Hands-on experience in approved research and/or development project of current interest to local chemical industry. Student is a full-time employee of the industry, drawing full pay for the designated period.

CHE 403
INSTRUMENTAL ANALYSIS
4, 2/6
Prerequisites: CHE 301 and CHE 305 or CHE 331. Chemical analysis and structure determination through study of the theory and operation of instruments involving visible, ultraviolet, infrared, and atomic absorption spectrophotometry; emission spectroscopy, colorimetry; flame photometry; chromatography; nuclear magnetic resonance spectroscopy.

CHE 412
INTERNSHIP IN CRIMINALISTICS
3, 0/0

Prerequisites: CHE 312, CHE 403, instructor permission, and senior status. Field experience in a forensic laboratory involving routine and research work in forensic chemistry. Note: Police laboratories sometimes require background checks and/or drug screens prior to placement. While not required by the college, these can affect students' abilities to complete the program. Required for all forensic chemistry majors.

CHE 430
ORGANIC CHEMISTRY III
3, 3/0

Prerequisite: CHE 305. Advanced topics in theoretical and physical organic chemistry with emphasis on reaction types, mechanisms, and structure.

CHE 460
INORGANIC CHEMISTRY
3, 3/0

Prerequisite: CHE 305 or CHE 331. Introduction to modern inorganic chemistry, with special emphasis on periodic variations of structural and bonding patterns among inorganic compounds of the main group and transition elements. Kinetic and thermodynamic factors that govern the preparation and stabilities of inorganic compounds.

CHE 461
INORGANIC CHEMISTRY
LABORATORY
2, 0/6

Prerequisite: CHE 301. *Prerequisite or corequisite:* CHE 460. Laboratory experience in the synthesis and characterization of selected inorganic compounds using a variety of techniques.

CHE 470
BIOCHEMISTRY I
3, 3/0

Prerequisites: CHE 202 and CHE 305 or instructor permission; BIO 214 recommended. The structure, function, and metabolism of compounds found in living systems. Relationship of enzyme activity to cellular control. The chemistry of genetic information, storage, and expression. Required of B.A. majors.

CHE 471
BIOCHEMICAL TECHNIQUES
1, 0/3

Prerequisites: CHE 202 and CHE 301. *Prerequisite or corequisite:* CHE 470. Introduction to techniques in the modern biochemistry laboratory. Participation in laboratory experiments illustrating these techniques and general biochemical principles.

CHE 495
SPECIAL PROJECT

Prerequisite: Approval of faculty project adviser.

CHE 499
INDEPENDENT STUDY
Prerequisite: Approval of faculty project adviser.

CHI

CHINESE

See Modern and Classical Languages

COM

COMMUNICATION

Communication Department

COM 100
INTRODUCTION TO MASS COMMUNICATION
3, 3/0; CH
Historical development, present patterns, and potentialities of the media in a climate of freedom and responsibility; standards of critical analysis, aesthetic discrimination, and intelligent selection in using media.

COM 103
INTRODUCTION TO HUMAN COMMUNICATION
3, 3/0; CH
Investigation of the cultural basis of human communication. Emphasis on rhetorical forms available for the achievement and implementation of social power; focus on the scientific study of communication, especially theory, constructs, abstractions, and logic.

COM 205
INTRODUCTION TO ORAL COMMUNICATION
3, 3/0; CH
The basics of oral communication, designed to examine the principles and contexts of communication, with special focus on the communication process, interviewing, group problem solving, public speaking, and criticism of public messages.

COM 210
INTRODUCTION TO WRITING FOR THE MEDIA
3, 2/2
Discussions and laboratory practice in organizing and writing for print and electronic media; introduction to news, feature, and advocacy writing, with applications to the

fields of journalism, public relations, and advertising.

COM 215
INTRODUCTION TO VISUAL COMMUNICATION
3, 3/0
Analysis of how visual information is produced and consumed through an exploration of the role of images and design in the communication process.

COM 301
PUBLIC RELATIONS/ADVERTISING
3, 2/2
Prerequisite: COM 210. The principles of public relations and advertising through fact finding, planning, communication, and evaluation; examination of theories; and uses and responsibility of public relations and advertising in contemporary society.

COM 302
INFORMATION GATHERING
3, 3/0
Prerequisite: COM 210. Students learn information gathering techniques, including interviewing, online research and survey research methodology for journalism, broadcast news, and public communication.

COM 303
WRITING FOR NEWS PUBLICATIONS
3, 2/2
Prerequisite: COM 210. Discussion and extensive laboratory practice in advanced news writing techniques, including working under extreme deadline pressure.

COM 304
BROADCAST COPYWRITING
3, 2/2
Prerequisite: COM 210. Discussion and laboratory practice organizing and writing copy for various electronic media, including commercials, promotional announcements, corporate video, and narrative scripts.

COM 305
NEWS REPORTING
3, 2/2
Prerequisite: COM 303. Principles and practice in the news-gathering and writing process, with emphasis on news recognition, interviewing and reporting, news beats, sources, research, and accuracy; comprehensive reporting through work with the Bengal News Service.

COM 306
PUBLIC SPEAKING
3, 3/0
Prerequisite: COM 205. Organization, delivery, and evaluation of public speech from a performance and analytical framework for professional, social, public, and small group situations.

COM 307
COMMUNICATION AND GROUP PROCESSES
3, 3/0
Prerequisite: COM 205. Interdisciplinary approach to the theoretical and practical dimensions of communication in small-group decision-making and problem-solving.

COM 308
PUBLIC RELATIONS WRITING
3, 3/0
Prerequisite: COM 210. Public relations writing and editing with practice in applying techniques discussed.

COM 309
PERSUASION
3, 3/0
An examination of the theory and practice of persuasion from a variety of contexts, such as the media, public communication, advertising, and interpersonal communication. Through class lectures, discussions, and presentations, students gain an understanding of how to be persuasive communicators.

COM 310
INTERNATIONAL COMMUNICATION
3, 3/0; G
Prerequisite: Upper-division status. Analysis of the role of international communication in today's global society through a comparative study of the world's press and broadcasting systems. Includes journalistic values of other countries, differing philosophies of broadcasting, and the process of international communication within the framework of North-South, social, economic, and political divisions of the late twentieth century.

COM 317
BROADCAST PROGRAMMING AND MANAGEMENT
3, 3/0
Examination of the strategy of broadcast programming and its relationship to broadcast sales and management; analysis of radio, television, and cable programming and their dependence on sales and management perspectives at a station.

COM 319
NEWS EDITING
3, 4/0
Prerequisites: COM 210 and COM 303. Fundamentals of copy editing, headline writing, and newspaper layout and make-up. Practice in the relevant skills needed in the electronic newsroom.

COM 321
RHETORICAL CRITICISM
3, 3/0; CH
Prerequisite: Upper-division status or instructor permission. Analysis of persuasive messages, designed to teach students to recognize and respond analytically to influential strategies used by public persuaders; Focus on political speeches, commercial advertising, protest music, and other forms of purposeful communication.

COM 322
COMMUNICATION GRAPHICS AND DESKTOP PUBLISHING
3, 2/2
Prerequisite: COM 215. A course primarily for advanced students in communication graphics, emphasizing the application of effective, targeted visual communication to publications using desktop publishing.

COM 324
TECHNICAL PRODUCTION FOR
TELEVISION AND RADIO
3, 3/0

In-depth analysis of digital and analog technologies used in television and radio production; covers media computer systems, television systems, and sound design.

COM 325
FEATURE AND MAGAZINE
ARTICLE WRITING
3, 3/0

Prerequisite: COM 210. Analysis of and practice in magazine article and newspaper feature writing, including freelancing procedures.

COM 327
GREAT WRITING AND
REPORTING OF AMERICAN
JOURNALISM
3, 3/0; CH

Exploration of excellence in reporting and writing; analysis of great journalistic writings and why they endure fame.

COM 328
RADIO STUDIO OPERATIONS
3, 2/2

Introduction to the fundamentals of radio broadcasting, and radio production techniques, designed to provide a laboratory experience in the principles and techniques of the radio station.

COM 329
BEGINNING TELEVISION
PRODUCTION
3, 2/3

Introduction to the theory, aesthetics, and fundamentals of television production through lecture and in-studio production projects.

COM 333
MINORITY VOICES AND THE
MEDIA
3, 3/0; D

Critical exploration of representation in the media, focusing on women, African Americans, gays and lesbians, and other traditionally underrepresented groups.

COM 336
COMMUNICATION AND
WEB PUBLISHING
3, 2/2

Introduction to the role of the World Wide Web in mass communication fields, including beginning and advanced training in Web page design, Web strategies, and an introduction to related software.

COM 337
BROADCAST NEWS
3, 3/0

Theory, forms, and techniques of writing and presenting news for radio and television, with practical experience in the classroom and studio.

COM 338
BROADCAST FIELD REPORTING
3, 2/2

Prerequisite: COM 337. Discussion and practice in television field reporting and news writing techniques used in reporting on location; includes working under deadline pressure for writing, editing, and reporting packages.

COM 388
BROADCAST PRACTICUM
Variable credit

Prerequisite: Upper-division status. Practicum experience in radio and television; participation in campus productions and broadcasting workshops as crew members, technicians, anchors, reporters, or announcers. One credit awarded for every 3.3 hours of crewing per week.

COM 390
SPECIAL TOPICS:
JOURNALISTIC WRITING
3, 3/0

Prerequisite: COM 210. Specialized reporting; includes extensive study, research, analysis, and journalistic writing on a special topic, such as sports, business, health, technical, or environmental reporting.

COM 400
COMMUNICATION LAW
3, 3/0

Study of freedom of speech and the press in the United States, particularly the rights and responsibilities of the media and constraints placed on them under law: libel, privacy, journalistic privilege, free press/fair trial, obscenity, advertising law.

COM 407
ORGANIZATIONAL
COMMUNICATION
3, 3/0

Structure, behavior, and message strategies in an organization, including practice in creating and exchanging effective verbal and non-verbal communication.

COM 408
PUBLIC RELATIONS CASE
STUDIES
3, 3/0

Prerequisites: COM 301 and COM 308. A course for advanced students in public communication, stressing the application of communication principles, techniques, and programs to real-life organization problems and opportunities.

COM 410
MASS COMMUNICATION
HISTORY
3, 3/0

Prerequisite: Upper-division status. Historical survey of the technology and social evolution of journalism and the broadcasting industries, including an analysis of their roles in American society.

COM 415
COMPUTER-ASSISTED
REPORTING
3, 2/2

Computer assisted research and reporting, including use of online sources, the Internet, and spreadsheets and database managers to analyze data.

COM 418
CAMPAIGNS IN PUBLIC
RELATIONS AND ADVERTISING
3, 3/0

Prerequisite: COM 308. Writing techniques for publicity and advertising; practice in purposive communication including news releases, pamphlets, publicity campaigns, advertising copy and layout, type selection, and media selection.

COM 422
MASS MEDIA CRITICISM
3, 3/0

Prerequisite: Upper-division status. Introductory course in the analysis and criticism of such mass-media artifacts as advertisements, newscasts, political messages, documentaries, situation comedies, soap operas, and children's programming, aimed at providing students with an understanding of the persuasive impact of such communication.

COM 424
VIETNAM AND THE MEDIA
3, 3/0

Prerequisite: Upper-division status. Examination of the role of print and electronic media in the coverage, depiction, and "re-creation" of the Vietnam War and the Vietnam veteran.

COM 425
MEDIA CRITICISM AND
PRESIDENTIAL CAMPAIGNS
3, 3/0

Critical examination of the role of mass media in American presidential campaigns.

COM 428
ADVANCED RADIO
PRODUCTION
3, 3/0

Prerequisite: COM 328. Advanced course in all aspects of audio production, with particular emphasis on commercial radio production, including programming, production, and promotion.

COM 429
ADVANCED TELEVISION
PRODUCTION
3, 3/0

Prerequisite: COM 329. Practical program with emphasis on individual training in specialized television production techniques.

COM 439
TELEVISION DIRECTING AND
PRODUCING
3, 2/2

Prerequisite: COM 329. Advanced television directing and producing. Students produce and direct television programs using campus facilities. Field trips to local professional television centers offered.

COM 440
ELECTRONIC NEWS GATHERING
3, 2/2

Prerequisite: COM 329. A perspective of electronic news-gathering based on its history; the techniques of shooting and editing videotaped news stories. With 3/4-inch portable equipment, students shoot stories for news and feature programs.

COM 450
COMMUNICATION AND
SOCIETY
3, 3/0

The role of communication in society and the resulting ethical responsibilities of communication professionals. Required of all communication majors after completion of 90 credit hours.

COM 488
INTERNSHIP
Variable credit

Prerequisites: Upper-division status and instructor permission. Supervised field experiences in a professional setting for students who have completed extensive academic preparation in the discipline. Fifty hours of field work in journalism, broadcasting, or public relations/advertising per credit.

COM 495
SPECIAL PROJECT

COM 499
INDEPENDENT STUDY

Prerequisite: Instructor permission.

CIS

COMPUTER INFORMATION SYSTEMS

Computer Information Systems Department

CIS 101
COMPUTER FUNDAMENTALS
3, 3/0; CT

The character, organization, and use of the computer. The function of the basic components of the computer. A broad survey of application software, as well as its impact on society. Hands-on experience using common software applications such as word processing, spreadsheets, databases, and communications required. Does not fulfill CIS elective requirements for CIS majors.

CIS 111
INTRODUCTION TO
PROGRAMMING
3, 3/0; CT

Prerequisite: CIS 101 or equivalent. Description of computers. Concepts of languages and programming. Computer language programming, including basic properties of languages such as branching, looping, table handling, and subprograms and their application to problem solving. Enhancement of programming skills through practical experience. Does not fulfill CIS elective requirement for CIS majors.

CIS 151
COMPUTER-BASED
INFORMATION PROCESSING I
3, 3/0

Description of computers, concepts of languages and programming. Basic properties of computer languages such as branching, looping, array handling, subprograms and functions and their application to the solution of a variety of problems. Emphasis on structured programming language with enhancement of programming skills through use of a contemporary computer programming language to write applications programs. Required for majors. Prospective CIS majors must earn a minimum grade of C in this course.

**CIS 251
COMPUTER-BASED
INFORMATION PROCESSING II**
3, 3/0

Prerequisite: CIS 151 or equivalent.
Continuation of CIS 151. Pointers, data structures, files, lists, abstract data types, and classes. Emphasis on structured programming process using a high-level language.

**CIS 311
COMPUTER MODELS FOR
DECISION MAKING**
3, 3/0

Prerequisite: CIS 370 or instructor permission. Introduction to concepts of management science and techniques of operations research. The development and use of paradigms in the process of decision making. The use of prewritten computer programs to solve problems in management science. Computer laboratory work is required.

**CIS 315
COMPUTER ORGANIZATION**
3, 3/0

Prerequisite: CIS 151. This course breaks the basic organization of a computer system into a hierarchy of basic levels and broadly covers the interconnection between the fundamental building blocks of a computer and the relationship between hardware and software. CPU organization, digital logic level, micro-architecture level, instruction set level, operating system level, assembly language level, and parallel architectures.

**CIS 351
STRUCTURED PROGRAMMING**
3, 3/0

Prerequisite: CIS 251. Introduction to additional structured techniques or structured programming languages. Programs, assignments, and examples to extend the student's knowledge of data structures and file structures, as well as to illustrate language features.

**CIS 361
FUNDAMENTAL CONCEPTS IN
OBJECT-ORIENTED
PROGRAMMING**
3, 0/0

Prerequisite: CIS 251. An introduction to object-oriented programming. Introduces transfer students who have had the equivalent programming experience in a procedural-oriented environment to the paradigms of the object-oriented environment. Required for CIS majors who have no previous experience with object-oriented programming.

**CIS 370
SYSTEMS ANALYSIS AND
DESIGN**
3, 3/0

Prerequisite: CIS 151. Introduction to information analysis and system design. Topics include the systems concepts, defining a system, systems analysis, hardware elements, software elements, case studies. Required for majors.

**CIS 375
PROGRAMMING FOR THE
INTERNET ENVIRONMENT**
3, 3/0

Prerequisite: CIS 251. Overview of the Internet, its components, protocols, and soft-

ware. A variety of software applications used to create and maintain Web sites, distribute and collect information, and validate user input. How to write applications specifically for this environment. CIS elective.

**CIS 380
MICROCOMPUTER
APPLICATIONS**
3, 3/0

Prerequisite: CIS 370. Microcomputer hardware and operating systems. Students work with several current software packages used for business applications. Required for majors.

**CIS 400
VISUAL BASIC PROGRAMMING
FOR THE WINDOWS
ENVIRONMENT**
3, 3/0

Prerequisite: CIS 251. In contrast to conventional sequential programming, Visual Basic is used to write Windows-based, object-oriented, event-driven programs. Hardware and software necessary for multimedia productions are discussed and used to write Visual Basic programs. Required for majors.

**CIS 405
COMPREHENSIVE COBOL
PROGRAMMING**
3, 3/0

Prerequisite: CIS 251. Intensive study of COBOL and its use for commercial applications, with emphasis on COBOL fundamentals and advanced features, program design and style, and file handling. Programming projects involve commercially oriented applications programs.

**CIS 410
COMPUTER OPERATING
SYSTEMS**
3, 3/0

Prerequisite: CIS 315. Computer operating systems, their functions, components, scheduling and execution of jobs, task management, and interrupts. A comparison and exploration of contemporary operating systems.

**CIS 411
DATABASE SYSTEMS**
3, 3/0

Prerequisite: CIS 370. The basic concepts and uses of data and database systems. Topics include organization, analysis, and function of database systems. Components of representative relational, network and hierarchical databases will be presented along with programming and design. Required for majors.

**CIS 420
DATABASE MANAGEMENT
SYSTEMS**
3, 3/0

Prerequisite: CIS 411. Advanced concepts of database management, including data modeling, features and uses of database management systems, data and database administration, and data dictionary.

**CIS 425
OBJECT-ORIENTED
DEVELOPMENT**
3, 3/0

Prerequisites: CIS 251 and CIS 370. Object-oriented approach to programming and design, along with its history and rationale. Hands-on programming experience using an appropriate object-oriented programming language.

**CIS 435
COMPUTER SEMINAR**
3, 3/0

Prerequisite: Instructor permission. Selected topics from subjects not covered in formal courses.

**CIS 442
ADVANCED SYSTEMS
APPLICATIONS**
3, 3/0

Prerequisite: CIS 411. Information systems in complex organizations. Techniques of information systems analysis and design. Detailed study of a representative real-world information system. Case studies, group work, and oral presentations.

**CIS 470
DATA COMMUNICATIONS**
3, 3/0

Prerequisite: CIS 315. Survey of technical, regulatory, systems, and management aspects of computer data communications. Theory of communications, concepts of hardware implementing the theory, and protocols and conventions essential to efficient operation. Creation of LAN's, packet-switching networks, and other forms of organization. Communication integrity and regulatory issues central to data communications systems planning and implementation.

**CIS 488
INTERNSHIP**
Variable credit

Prerequisites: CIS 380, upper-division status, and instructor permission. Qualified students are placed in functioning organizations to work as trainees, on special projects or studies, or in a relevant aspect of information systems.

**CIS 495
SPECIAL PROJECT**

**CIS 499
INDEPENDENT STUDY**

CRS

CREATIVE STUDIES

Center for Studies in Creativity

**CRS 205
INTRODUCTION TO CREATIVE
STUDIES**
3, 3/0

Students learn to recognize and nurture creative potential. Focus on four aspects of creativity: the creative person, the creative process, the creative product, and the creative environment. Further emphasis on the interactive nature of these elements and individual application in personal and professional settings.

**CRS 302
CREATIVE APPROACHES TO
PROBLEM SOLVING**
3, 3/0

Prerequisites: CRS 205, ENG 101, and ENG 102. Creative problem-solving methods and techniques. Emphasis on the application of these technologies to challenges, goals, and

opportunities students face in their personal and professional lives.

**CRS 303
CREATIVE LEADERSHIP
THROUGH EFFECTIVE
FACILITATION**
3, 3/0

Learn and practice leadership and facilitation concepts as they relate to creative problem-solving groups; students examine their own leadership styles and study specific methods and techniques to apply concepts and skills.

**CRS 304
DEVELOPING CREATIVE
PROBLEM-SOLVING
FACILITATION SKILLS**
3, 3/0

Prerequisites: CRS 205 and CRS 302. Develop and apply facilitation and leadership skills in a variety of settings. Participate in supervised practice using creative problem-solving techniques with groups and individuals.

**CRS 305
SEMINAR/METAPHORICAL
PROBLEM SOLVING**
1, 1/0

Prerequisites: CRS 205, CRS 302, and instructor permission. Topics of current interest related to theories, methods, and models of metaphorical problem solving, with a particular emphasis on synectics.

**CRS 306
SEMINAR/CRITICAL/ANALYTIC
PROBLEM SOLVING**
1, 1/0

Prerequisites: CRS 205, CRS 302, and instructor permission. Topics of current interest related to methods, techniques, and models of problem solving with particular emphasis on creative analysis and Kepner-Tregoe approaches.

**CRS 320
APPLICATIONS OF CREATIVITY
AND INNOVATION**
3, 3/0

Prerequisite: CRS 205. Exploration of how creative people apply creative processes within a creative environment to produce novel and useful products. The nature of creative people and factors that encourage or inhibit creative outcomes. Research in the field is examined to provide personal experience about the application of creativity in the arts, science, education, and business. Students develop their personal creative ability through class activities, readings, and interaction.

CRJ

CRIMINAL JUSTICE

Criminal Justice Department

**CRJ 101
INTRODUCTION TO CRIMINAL
JUSTICE**
3, 3/0; CT

The structure, function, practices, policies, and objectives of the criminal justice system.

Emphasis on three themes underlying all stages of the criminal justice system: (1) resource scarcity, (2) discretionary powers, and (3) interdependence or exchange relationships among criminal justice agencies.

**CRJ 101
CRIMINAL LAW AND
PROCEDURES**
3, 3/0; CT

Prerequisite: CRJ 101. The substantive and procedural processes used by the criminal justice system. Various laws and procedures applied by law enforcement, prosecutors, attorneys, and the judiciary, presented and discussed to provide an overall understanding of criminal law and its procedures.

**CRJ 202
THE POLICE PROCESS**
3, 3/0

Comprehensive introduction to the basic elements of policing in the United States, designed to acquaint students with the most current knowledge about police organizations, police officers, police work, and more critical police problems.

**CRJ 203
CRIME, IDEOLOGY, AND THE
ADMINISTRATION OF JUSTICE**
3, 3/0

Prerequisite: CRJ 101. The social, political, cultural, and economic forces that shape the historical and contemporary ideologies of crime. The influences of different ideologies of crime upon the policies and practices of the criminal justice system.

**CRJ 204
THE CORRECTIONAL PROCESS**
3, 3/0

The correctional process from sentencing to parole. Examining legal and administrative processes used in establishing postconviction remedies, criminal sanctions, and social controls on adult offenders. Emphasis on understanding the structure and function of the American correctional system and the processes in establishing correctional custody and treatment.

**CRJ 301
POLICE ORGANIZATION AND
MANAGEMENT**
3, 3/0

Prerequisites: CRJ 101 or instructor permission, upper-division status. Analysis of administrative theory and practice in police systems with emphasis on organization and function, and on issues unique to those systems.

**CRJ 302
CRIMINAL JUSTICE AND THE
COMMUNITY**
3, 3/0; CT

Patterns of crime in the community and the community's response. Differences between urban and suburban areas, as well as by age, gender, and race. Practices and effects of diversion, community-based corrections, victim-witness programs, crime watch, court watch, restitution, mediation, and dispute-resolution programs.

**CRJ 305
THE JUVENILE JUSTICE SYSTEM**
3, 3/0

Prerequisites: CRJ 101, SOC 390, and upper-division status. The structure and function of the juvenile justice system. Statutes and court decisions used to determine jurisdiction over youth. Critical decision-making stages of the juvenile court process. Review of the research concerning the relative effectiveness of treatment and social control programs for youth. Emphasis on the historical, cultural, social, and legal influences governing the processes, priorities, and practices of juvenile justice.

**CRJ 306
PROBATION, PAROLE, AND
COMMUNITY CORRECTIONS**
3, 3/0

Prerequisites: CRJ 101 and upper-division status. Review of probation, parole, and community corrections; their histories and organizational structures; the nature and effects of the process by which offenders are handled, as well as the dynamics and trends toward change in the field of probation, parole, and community-based corrections.

**CRJ 307
COMPARATIVE CRIMINAL
JUSTICE SYSTEM**
3, 3/0; G

Prerequisite: CRJ 101. The major contemporary criminal justice systems and their operations under various cultural contexts. The social, economic, political, and ideological forces that have impacted present-day systems. Methodological issues of comparative research.

**CRJ 308
CRIME PREVENTION**
3, 3/0

Prerequisite: CRJ 101. The nature and effects of three levels of efforts at crime prevention: (1) those administered by the formal justice system to prevent offenders from repeating offenses, (2) those designed to deal with people identified as likely to commit crime, and (3) those designed to modify the physical and social environments that foster crime.

**CRJ 315
RESEARCH METHODS IN
CRIMINAL JUSTICE**
3, 3/0

Prerequisites: CRJ 101, ECO 305 or equivalent statistics course, and upper-division status. Introduction to the research process as practiced in criminal justice: definition of problem, delineating theory, various methods of data collection, examination of validity and reliability. Research devices used in everyday criminal justice. Students participate in some aspect of research.

**CRJ 317
CONSTITUTIONAL ISSUES IN
CRIMINAL JUSTICE**
3, 3/0

Prerequisites: CRJ 101 and upper-division status. Constitutional issues in criminal justice through a review of United States Supreme Court decisions regarding law enforcement, prosecution, defense, judicial process, corrections, and community supervision. Other constitutional issues related to the administration of justice, such as the crimi-

nality of certain behaviors and the roles of criminal justice personnel.

**CRJ 320
CRIMINAL COURTS**
3, 3/0

Prerequisite: CRJ 101. The trial criminal courts, with emphasis on courts for adult offenders. Legal, social, and political processes that affect the dynamics of the criminal trial process. Problems, possible reforms, and decision-making of the participants. Interrelationships that affect and influence court decisions and justice.

**CRJ 325
SKELETAL INVESTIGATIONS:
FORENSIC ANTHROPOLOGY**
3, 0/0

Examination of human skeletal anatomy and the techniques used by forensic anthropologists to identify skeletal remains. Students work with skeletal material to learn to determine age, sex, race, stature, disease, trauma, and other features that aid in personal identification.

**CRJ 402
ADVANCED ADMINISTRATION
IN CRIMINAL JUSTICE**
3, 3/0

Prerequisites: CRJ 101; upper-division status; and completion of introductory course in public administration, business management, or criminal justice administration. Advanced course in management concepts and issues applicable to the administration of criminal justice agencies. Emphasis on a systems model of organizational analysis. External environment of crime control policy and its impact upon agency operations. Internal agency management. The responsibilities and functions of crime control agency managers.

**CRJ 404
WHITE-COLLAR AND
CORPORATE CRIME**
3, 3/0

Prerequisites: CRJ 101, CRJ 203, and upper-division status. Physical and financial harm caused by wayward corporations, corporate officials, employees, and other white-collar offenders. Emphasis on ethical and legal decision making and regulatory monitoring, and control of white-collar and corporate activity.

**CRJ 406
CORRECTIONAL INSTITUTIONS
AND PROGRAMS**
3, 3/0

Prerequisites: CRJ 101, CRJ 204, and upper-division status or instructor permission. Comprehensive survey of adult institutional corrections systems, their programs and services, and the policies and procedures governing the operational, legal, and structural context of correctional environments. Emphasis on the research literature focused on the impacts and outcomes of various correctional intervention strategies.

**CRJ 408
PROSEMINAR IN CRIMINAL
JUSTICE**
3, 3/0

Investigation, examination, and discussion of topics of current interest in criminal justice. Techniques and analysis of criminal justice research.

**CRJ 409
ADVANCED ISSUES IN LAW
ENFORCEMENT**
3, 3/0

Prerequisites: CRJ 101, CRJ 202, and upper-division status or instructor permission. Advanced course on contemporary issues in law enforcement. Provides insight and depth into a broad range of topics and exposes students to experts and specialists from various relevant disciplines.

**CRJ 410
ORGANIZED CRIME**
3, 3/0

Prerequisites: CRJ 101, CRJ 203, and upper-division status. Views on organized crime, the controversy surrounding the phenomenon, and efforts at control. Definition of organized crime, its developmental history, and models that define the structure of organized crime in the United States. Theories that explain the existence of organized crime, activities that constitute the "business" of organized crime, the relationship between organized crime and official corruption, techniques used to combat organized crime, and policy implications inherent in responses to organized crime.

**CRJ 420
ADVANCED ISSUES IN
PUNISHMENT AND
CORRECTIONS**
3, 3/0

Prerequisites: CRJ 101, CRJ 204, or CRJ 406 and SOC 383; upper-division status. Critical analysis of contemporary policies, practices, and issues arising from the control and punishment of criminal offenders. Emphasis on the complexity of recent issues, such as disparity in criminal sentencing, use of the death penalty, institutional overcrowding, treatment of institutionalized people, and community supervision of nonincarcerated offenders. Focus of analysis will vary with interests of faculty and students.

**CRJ 425
RACE AND THE
ADMINISTRATION OF JUSTICE**
3, 3/0; D

Prerequisite: CRJ 101 and upper-division status. The current state of race relations in society and the criminal justice system. Examination of the historical experiences of different racial and ethnic groups in the United States, including the use of law and the criminal justice system as a means of social subordination, affecting the criminality of minority groups and informal aspects of criminal justice such as power, discretion, and authority.

**CRJ 430
GENDER AND THE
ADMINISTRATION OF JUSTICE**
3, 3/0; D

Prerequisite: CRJ 101 and upper-division status. Gender differences and their effects on criminal behavior, law, and the criminal justice process. Perspectives on the historical subordination of women in American society and culture, crimes of which women are disproportionately victims. Extent, types, characteristics, and theories of female criminality. Criminal justice policies and practices that result in the differential treatment of female victims, offenders, and practitioners.

CRJ 470
ADVANCED SEMINAR IN
CRIMINAL JUSTICE
3, 3/0

Prerequisites: CRJ 101, 203, 315, upper-division status, and a minimum of 24 credit hours of criminal justice coursework. Integration of knowledge acquired throughout the criminal justice curriculum into a holistic conceptualization of theory, practice, research, and planning. Emphasis on developing advanced scholarship, conceptualization, and critical thinking through writing within the discipline.

CRJ 495
SPECIAL PROJECT

CRJ 497
INTERNSHIP IN CRIMINAL
JUSTICE
3, 3/0

Prerequisites: Senior level standing, 3.0 GPA and instructor permission. A comprehensive, supervised field experience in criminal justice and related social service agencies. Requires a minimum of 10 hours work in the agency during a 14-week period (140 total hours) and a weekly academic seminar on campus. The purpose of the internship is to integrate knowledge learned in the academic environment with the experience of day-to-day work in a professional environment.

CRJ 499
INDEPENDENT STUDY

CTE

CAREER AND TECHNICAL EDUCATION

Educational Foundations Department

CTE 100
COMPREHENSIVE THEORETICAL
TRADE OR TECHNICAL SKILLS
15, 0/0

Credit is awarded for satisfactory completion of trade theory. Assessment of competency is based on verification of four years' employment in a trade normally taught in vocational high-school programs. Graduates of community college technical programs in appropriate trades are required to verify two years' employment. The National Occupational Competency Testing Institute Examination and/or other assessment techniques may be used to determine credit of 15 semester hours.

CTE 200
COMPREHENSIVE TRADE OR
TECHNICAL PERFORMANCE
SKILLS
15, 0/0

Credit is awarded for satisfactory completion of trade theory. Assessment of competency is based on verification of four years' employment in a trade normally taught in vocational high school programs. Graduates of community college technical programs in appropriate trades are required to verify two years' employment. The National Occupational Competency Testing Institute Examination and/or other assessment techniques may be used to determine credit of 15 semester hours.

CTE 301
FOUNDATIONS OF CAREER AND
TECHNICAL SUBJECTS
EDUCATION
3, 3/0

Prerequisite: CTE major. Introduction and entry to the professional teacher-preparation program. Sociological, historical, and philosophical base provides a basic understanding of career and technical education and its relationship to career and technical occupations within society. Includes identification of current terminology, professional responsibilities, and curriculum content for past and future development of courses.

CTE 302
COURSE ORGANIZATION
3, 3/0

Techniques of analyzing a trade. Developing content to prepare students for employment; the organization of the New York State approved curriculum for occupational education. Developing course materials using New York State materials.

CTE 306
LABORATORY MANAGEMENT
3, 3/0

Organizational factors that influence the success of career-technical education teachers. Includes facility planning, redesign, and managerial phases of the career-technical teacher's responsibilities.

CTE 311
CAREER MENTORING
INTERNSHIP
3, 1/2

Prerequisites: CTE major, CTE 302. Overview of career awareness for exploration, guidance, and workplace skills. Classroom pedagogy and field experiences provide mentoring opportunities with middle school and high school students or with adults seeking retraining for new career choices. Majors obtain teaching skills while providing service to the community at off-campus locations during class times. Includes demonstrations of various trade skills and career fairs. Classes meet on and off campus.

CTE 350
SCHOOL AND COMMUNITY
RELATIONSHIP FIELD
EXPERIENCE
3, 1/2

Prerequisite: CTE major. Overview of school and community relations. Classroom and field experience involves students in the concepts of planning and executing a successful vocational-career promotional event. Students are placed off campus at community sites and/or middle school or high school locations. Thirty hours of internships and promotional events at off-site locations are required.

CTE 402
ASSESSMENT TECHNIQUES IN
CAREER AND TECHNICAL
SUBJECTS
3, 3/0

Prerequisite: CTE 302. Overview of assessment in classroom, laboratory, internship, and clinical situations. Principles of effective assessment include different approaches and methods of assessment, evaluation, and testing techniques. Addresses portfolio development, reflective journals, authentic and per-

formance assessment, and objective testing as applicable to career and technical subjects.

CTE 404
METHODS OF TEACHING
CAREER AND TECHNICAL
SUBJECTS
3, 3/0

Basic principles and methods of teaching career and technical subjects. Prepares craftspeople, technicians, and engineers to effectively impart knowledge to learners.

CTE 413
STUDENT TEACHING CAREER
AND TECHNICAL EDUCATION
6, 0/6

Prerequisites: CTE 404 and NOCTI Trade Examination or equivalent. Supervised teaching in career-technical classes in selected career-technical schools, in various types of schools and communities. Three hundred hours of practice teaching in off-site campus programs required. Conferences and reports based upon teaching assignments are required. Seminar discussions consist of professional problems of the beginning teacher. Students should be prepared to accept assignment at any school designated by the student-teacher coordinator. Student-teaching assignments are located throughout Western New York.

CTE 415
PROFESSIONAL DEVELOPMENT
SEMINAR
3, 3/0

Prerequisite: Successful completion of the English basic skills competency requirement. Synthesis of pedagogical courses and practice-teaching experience. Analysis of problems that confront teachers.

CTE 421
OCCUPATIONAL EDUCATION
FOR INDIVIDUALS WITH SPECIAL
NEEDS
3, 3/0

Planning, delivering, coordinating, and delivering programs for individuals with special needs found in secondary and postsecondary schools, rehabilitation centers, and correctional facilities. Development of methods and techniques for teaching and assessing the work potential of individuals with special needs. Development of self-help devices/adaptive equipment. Identifying instructional resources.

CTE 435
CURRICULAR PROBLEMS OF
CAREER AND TECHNICAL
SCHOOLS
3, 3/0

Prerequisites: CTE 302 and CTE 404. Basic principles and foundations of curriculum development for trade and technical programs. Technological, sociological, and educational factors that effect change in curriculum. The integral parts of a curriculum and newer concepts of curriculum programs and materials. Emphasis on curricular problems of teachers and administrators in their individual schools.

CTE 450
ORGANIZATION OF DIVERSIFIED
COOPERATIVE WORK-STUDY
PROGRAMS
3, 3/0

Information for technology education or occupational education majors interested in establishing diversified cooperative programs. Includes procedures for promoting a new program, working with advisory boards, developing employment opportunities, arranging trainee outlines, planning instructional facilities, and securing New York State Regents accreditation.

CTE 455
OPERATION OF DIVERSIFIED
COOPERATIVE WORK-STUDY
PROGRAMS
3, 3/0

Prerequisite: CTE 450. Conducting effective instruction in diversified cooperative programs. Includes interviewing employers, supervising trainees, interpreting legal aspects, preparing records and reports, and conducting classes in related theory.

CTE 479
POSTSECONDARY INSTRUCTION
PRACTICUM
6, 1/5

Prerequisites: CTE 302, CTE 404, and NOCTI Trade Examination or equivalent; career and technical education major; completion of at least 18 credit hours in required CTE courses. Part- or full-time teaching assignment in a post secondary-level, career-technical education program. Develops and refines skills and understandings of the teaching-learning process as it relates to career-technical teaching, under the guidance and supervision of college faculty. S or U grade only.

CTE 489
INDUSTRIAL TRAINER
PRACTICUM
6, 3/3

Prerequisites: CTE 302, CTE 404, and NOCTI Trade Examination or equivalent; career and technical education major; completion of at least 18 credit hours in CTE required courses; CTE program coordinator approval. Part- or full-time assignment in a business or industrial training program. Develops and refines skills and understanding of occupational training practices, under the guidance and supervision of business and industry training personnel and college faculty. S or U grade only.

CTE 492
OCCUPATIONAL PRACTICUM
6, 3/3

Prerequisites: CTE 100 and CTE 200 (NOCTI Trade Examination) or equivalent; career and technical education major. Advanced specialization development for students with prior occupational experience such as on-the-job upgrading, occupational workshops, and inservice institutes. May be taken for credit more than once by advisement.

CTE 495
SPECIAL PROJECT

CTE 497
SPECIAL WORKSHOP

DAN

DANCE

Performing Arts Department

DAN 200 BEGINNING MODERN TECHNIQUE I 3, 1/4; CA

Technical dance instruction. Exploration of movement in relation to time, space, energy, and principles of alignment. Modern dance history.

DAN 201 TEACHING CREATIVE MOVEMENT FOR CHILDREN 3, 1/4

Preparation to teach creative movement to children, kindergarten through sixth grade. Emphasis on studio work directing noncompetitive creative play, cooperative group problem solving, and structured improvisations.

DAN 220 BEGINNING BALLET 3, 1/4; CA

Intensive introduction to ballet through technical instruction, anatomical and aesthetic foundation, ballet history, and vocabulary.

DAN 224 DANCE APPRECIATION 3, 3/0; CA

Introduction to the history and philosophy of dance from ancient times to the present. Emphasis on the development of ballet and modern dance. Includes evaluation and criticism of dance.

DAN 230 SURVEY OF AFRICAN AMERICAN DANCE 3, 3/0; D

Technique, practice, readings, and projects in dance and black culture. Current practices of black dance in relation to Euro-American techniques.

DAN 234 HISTORY OF THE BLACK DANCE MOVEMENT 3, 3/0; D

The development of African American dance and the contributions of African American dancers. Emphasis on how traditional African dance forms evolved into and influenced the contemporary dance vernacular.

DAN 250 JAZZ DANCE 3, 1/4

Prerequisite: DAN 200, DAN 220, or *equivalent*. Technique, studies, and compositional problems illustrating the diverse possibilities of jazz dance, with special attention to the ethnic foundation of this form.

DAN 302 MODERN DANCE TECHNIQUE II 3, 1/4; CA

Prerequisite: DAN 200 or *instructor permission*. Fundamental principles of movement in relation to dynamics, rhythm, and space. Introduction to improvisation and modern dance history. Designed to develop and strengthen technical dance skills.

DAN 303 DANCE COMPOSITION 3, 1/4

Techniques of composition. Practical research in choreography through improvisation. Creation of individual and group compositions.

DAN 310 DANCE FOR THE MUSIC THEATER 3, 1/4

Continuation of DAN 250 emphasizing the technique and history of the diverse dance forms required in the music theater.

DAN 312 MODERN DANCE TECHNIQUE III 3, 1/4

Prerequisite: DAN 302 or *instructor permission*. Continuation of DAN 302. Emphasis on expanding and deepening technical range, quality of movement, and creative ability through improvisation and modern dance history.

DAN 320 REHEARSAL AND PRODUCTION 1, 0/2

Students participate in building a finished dance production, including audition, dance rehearsals, technical rehearsals, and performances. By audition only. May be repeated.

DAN 330 BALLET II 3, 1/4; CA

Prerequisite: DAN 220 or *instructor permission*. Comprehensive examination of the technique and historical background of ballet explored in depth through studio work and lecture. Emphasis on strengthening technical range and understanding of basic concepts and vocabulary.

DAN 340 BALLET III 3, 1/4

Prerequisite: DAN 330 or *instructor permission*. Intermediate-level ballet technique course with emphasis on applications of idiom-kinetics.

DAN 350 TAP DANCE FOR THE STAGE: ELEMENTARY 1, 0/2

Prerequisite: DAN 200, DAN 220, or *instructor permission*. First course in a two-semester sequence for majors and minors in the performing arts. Minimum two hours of outside practice weekly plus familiarity with selected readings. Students comprehend and execute an elementary vocabulary of stage tap.

DAN 401 TEACHING DANCE 3, 3/0

Prerequisites: DAN 302 and *instructor permission*. The methods and materials used in

teaching dance to students of various ages and backgrounds, explored through research and practical teaching experience. Anatomical and kinesiological principles, injury prevention and treatment.

DAN 450 TAP DANCE FOR THE STAGE: INTERMEDIATE 1, 0/2

Prerequisite: DAN 350 or *instructor permission*. Advanced vocabulary, styles, and solo/duet work. Some creative work required. Comprehend and execute a substantial portion of traditional Broadway requirements.

DAN 495 SPECIAL PROJECT

DAN 499 INDEPENDENT STUDY

DES

DESIGN

Design Department

DES 101 INTRODUCTION TO DESIGN TWO DIMENSIONAL I 3, 0/6; CA

Basic skills and concepts in two-dimensional design. Logical and intuitive approaches to pure form and natural sources. Emphasis on development of individual solutions.

DES 102 INTRODUCTION TO DESIGN TWO DIMENSIONAL II 3, 0/6

Prerequisite: DES 101. Continuation of DES 101, involving in-depth assignments stressing composition and form, idea development, design process, and color dynamics, while strengthening skills and control.

DES 103 INTRODUCTION TO DESIGN THREE DIMENSIONAL I 3, 0/6; CA

Fundamentals of three-dimensional design, with emphasis on the development of skills related to spatial manipulation via form and structure. Development of manipulative skills in various media.

DES 104 INTRODUCTION TO DESIGN THREE DIMENSIONAL II 3, 0/6

Prerequisite: DES 103. Advanced concepts and manipulation skills related to three-dimensional design. Conceptualization, visualization, and evaluation related to design objectives.

DES 105 MECHANICAL AND PERSPECTIVE DRAWING 3, 0/6

Descriptive drawing, including orthographic, isometric, and perspective projection, as an aid in visualizing and planning the construction of three-dimensional art objects.

DES 114 WORKSHOP IN CRAFTS 3, 0/6; CA

Creative experience in crafts, individual projects. Non-art majors only.

DES 190 DESIGN SYMPOSIUM 3, 3/0; CA

Non-technical study of design as it relates to varied fields in our culture. Brief review of design function in architecture, planning, and environment, and metal, wood, ceramics, textiles, advertising, and industrial design. Non-art majors only.

DES 215 INTRODUCTION TO DESIGN HISTORY 3, 3/0

General introduction to design history and criticism, tracing the evolution of form and meaning from primitive cultures through the contemporary world. Special emphasis on the Industrial Revolution and modern and post-modern culture.

DES 220 CERAMICS I 3, 0/6

Exploration of clay as a medium of expression. Methods of forming. Preparation and application of glaze. Firing; theory, study of form and function.

DES 230 INTRODUCTION TO JEWELRY MAKING 3, 0/6

Prerequisite: DES 101. Exploration of materials and processes in jewelry making, emphasizing creative design.

DES 235 DESIGN IN METAL 3, 0/6

Metalworking as a medium for expression and object design, utilizing the unique qualities of various metals and working techniques.

DES 242 FIBERS I 3, 0/6

Introduction to traditional and current trends in weaving and surface design, including table-loom weaving, batik, and silkscreen printing. Assignments develop good design through creative expression.

DES 250 WOOD DESIGN I 3, 0/6

Wood as a medium for expression and object design. Technical and aesthetic problems.

DES 260 INTRODUCTION TO INTERIOR DESIGN 3, 0/6

Introduction to the theory and practice of interior design. Emphasis on the impact of interior space on physical, social, psychological, and aesthetic needs of people. Field trips.

DES 262 AUTOCAD I FOR INTERIOR DESIGN 3, 0/6

Prerequisite: DES 105. Introduction to AutoCAD (computer-aided design program)

with emphasis on interior design. Covers AutoCAD commands and drafting tasks consistent with accepted standards.

DES 270
VISUAL COMMUNICATION I
3, 0/6

Prerequisite: DES 101, DES 102, DES 103. Introductory course in communication design involving basic design problems including logotype, stationary, and page layout. Examination of design and printing processes, as well as professional practices and issues.

DES 271
LETTERING AND TYPOGRAPHY I
3, 0/6

Prerequisite: DES 270. Uses of typographic forms in graphic design. Problems in expression and appropriate application and layout. Type specification, indication, copyfitting. Origins of the Western alphabet.

DES 277
COMPUTER GRAPHICS I
3, 0/6

Prerequisite: DES 101. Introduction to the Macintosh computer as a graphic design tool. Develop a working understanding of a graphic design page-layout and drawing program. Class sessions include visual presentations, hands-on tutorials, and critiques of assignments.

DES 307
COLOR THEORY
3, 0/6

Prerequisites: DES 101 and DES 103. Origins, meaning, and dimensions of color. Lectures and studio problems in various media, exploring the compositional effects of color.

DES 308
FORM AND FUNCTION
3, 0/6

Prerequisites: DES 101 and DES 103. Practical application of two- and three-dimensional design principles to the analysis, evolution, and development of utilitarian forms in a changing environment.

DES 309
ARCHITECTURAL DRAFTING AND PERSPECTIVE DRAWING
3, 0/6

Prerequisite: DES 105. Studio exploration of architectural drafting conventions and perspective drawing methods used to produce mechanically generated drawings.

DES 310
INTERIOR DESIGN I
3, 0/6

Prerequisites: DES 101, DES 103, DES 105, DES 260, and DES 309. Studio introduction to interior design problem-solving processes, design analysis techniques, conceptual ideation, and spatial studies using communication methods in various two- and three-dimensional media.

DES 312
HISTORY OF CRAFT: INDUSTRIAL REVOLUTION TO THE PRESENT
3, 3/0

Prerequisite: DES 215. Historical and theoretical foundations of crafts from the Industrial Revolution to the present. Developments in crafts in traditional forms, hand-based pro-

duction methods, new technologies, new media and new concepts of craft, and specific cultural and intellectual contexts.

DES 314
HISTORY OF GRAPHIC DESIGN: INDUSTRIAL REVOLUTION TO THE PRESENT
3, 3/0

Prerequisite: DES 215 or instructor permission. Historical and theoretical foundations of graphic design from the Industrial Revolution to the present. Developments in graphic design in new technologies and new media, and specific cultural and intellectual contexts.

DES 316
DESIGN IN THE NINETEENTH CENTURY
3, 3/0

Prerequisite: DES 215 or instructor permission. Historical and theoretical foundations of design from the end of the eighteenth century to World War I. Emphasis on the effects of the Industrial Revolution on graphic design, industrial design, interiors, costume, and crafts.

DES 317
DESIGN IN THE TWENTIETH CENTURY
3, 3/0

Prerequisite: DES 215 or instructor permission. Historical and theoretical foundations of design in the twentieth century, concentrating on developments in graphic, industrial, and craft design from the 1890s to the present, and emphasizing the unique conditions of the present century with respect to new technology and new media.

DES 318
SET DESIGN I
3, 0/6

Prerequisite: Upper-division status or one theater or design course. Introduction to theatrical set design. Basic design components of line, form, mass, composition, balance, color and texture as they relate to set design; development of skills in script analysis, research, color theory, drafting techniques, and mechanical perspective drawing.

DES 320
CERAMICS II
3, 0/6

Prerequisite: DES 220. Exploration of ceramic form, glaze, and firing methods through assigned problems and individual interests. Lecture and laboratory in glaze materials and glaze design.

DES 321
CERAMICS: JUNIOR STUDIO
3, 0/6

Prerequisite: DES 320. Advanced study and experience in the total ceramic process through assigned problems according to individual personal interests.

DES 330
APPLIED JEWELRY TECHNIQUES
3, 0/6

Prerequisite: DES 230. Basic and advanced jewelry techniques including lost-wax casting and stone setting. Continued emphasis on the personal, conceptual, and creative development of jewelry design.

DES 331
JEWELRY: JUNIOR STUDIO
3, 0/6

Prerequisite: DES 330. Advanced exploration of materials and processes used in jewelry making with emphasis on design aspects. Individually selected projects.

DES 336
METALSMITHING
3, 0/6

Prerequisite: DES 235 or DES 330. Advanced concentration in metalworking as a continuation of forming techniques introduced in DES 235.

DES 337
METALSMITHING: JUNIOR STUDIO
3, 0/6

Prerequisite: DES 336. Practical application of metalworking techniques with emphasis on raising, forging, welding, riveting, casting, spinning, and other forming methods. Parallel study of leading designers, craftspeople. Tutorial relationship with instructor. Extra class assignments, including minimum studio hours equal to class hours.

DES 342
FIBERS II
3, 0/6

Prerequisite: DES 242. Intermediate exploration in traditional and experimental techniques of weaving and surface design, including floor-loom weaving and photographic silkscreen printing with an emphasis on creative expression.

DES 344
FIBERS—JUNIOR STUDIO
3, 0/6

Prerequisites: DES 242 and DES 342. Study and experience in complex weaving and surface design, including multiple-harness weaving and application of printing techniques. Aesthetic and functional considerations.

DES 350
TECHNICAL PROCESSES IN WOOD
3, 0/6

Prerequisite: DES 250. Exploratory course in contemporary design examining current technical processes used in the field. Emphasis on joinery, laminating, steam bending, vacuum forming, veneering, and finishing.

DES 351
WOOD DESIGN: JUNIOR STUDIO
3, 0/6

Prerequisite: DES 350. Design and creation of a major project in wood, approached from the viewpoint of the designer-craftsperson, using a range of techniques and hand, power, and machines tools as needed.

DES 360
INTERIOR DESIGN II
3, 0/6

Prerequisite: DES 310. Small-scale residential and commercial projects to facilitate the exploration of functional criteria inherent in the design of interior spaces. Anthropometric requirements. Emphasis on physical, sociological, and psychological client needs. Research, analysis, and programming skills needed for designing interior spaces. Field trips.

DES 361
INTERIOR DESIGN III
3, 0/6

Prerequisite: DES 360. Exploration of commercial interior design, concentrating on the development of design process, programming studies, research of physical and psychological requirements, space-planning strategies, and appropriate means of communication, given specific constraints or guidelines.

DES 362
AUTOCAD II FOR INTERIOR DESIGN
3, 0/6

Prerequisite: DES 262. Advanced AutoCAD (computer-aided design program), with emphasis on interior design. Covers increasingly complex commands using drafting skills required for interior-design applications.

DES 363
FURNITURE THEORY AND APPLICATION
3, 3/0

Exploration of furniture elements found within interior design. Interrelationship of construction, strength of materials, and style. Evolutionary influence of mass production, material development, and ergonomics. Field trips.

DES 364
CONSTRUCTION FUNDAMENTALS I
3, 3/0

Prerequisites: DES 105 and DES 260. Basic construction systems and materials as they relate to the built environment. Principles of structure and behavior (engineering principles) and enclosure and aesthetics (architectural design principles). Material properties, including those of wood, concrete, stone, metal, synthetics, and glass, as they affect installation and appearance. Field trips.

DES 365
CONSTRUCTION FUNDAMENTALS II
3, 3/0

Prerequisite: DES 364. Advanced construction techniques and materials used in the built environment, with specific emphasis on building systems. Principles and philosophy of current building systems, as they relate to appearance, composition, and installation. Field trips.

DES 366
MATERIALS/SPECIFICATIONS
3, 3/0

Prerequisite or corequisite: DES 360. Interior finishes and materials used for floors, walls, windows, ceilings, and various interior components as they apply to interior spaces. Emphasis on specification guidelines, including product performance, code restrictions, and environmental concerns. Field trips.

DES 367
PROFESSIONAL PRACTICE
3, 3/0

Prerequisite: DES 310; *prerequisite or corequisite:* DES 366. Preprofessional preparation through the study of business principles and practices found in the field of interior design. Includes project administration and the development of contracts, forms, and documents used in the marketplace.

DES 368
LIGHTING DESIGN
3, 3/0

Prerequisite: DES 360. Illumination principles, design criteria, specifications, and systems applied to public and private architectural interiors. Hands-on experience using a lighting lab and 3-D projects reinforces lecture material in a studio setting. Field trips.

DES 369
INTERIOR DETAILING
3, 0/6

Prerequisites: DES 360 and DES 365.
Prerequisites or corequisites: DES 361 and DES 368. The practicalities of taking design from concept to construction. Emphasis on drawing as communication with various building trades, and how they work in concert to manifest the designer's rendering. Refinement of manual drafting skills. Introduction to and changes imposed by the electronic media in the process. Field trips.

DES 370
VISUAL COMMUNICATION II
3, 0/6

Prerequisite: DES 271. Design problems in visual communication. Emphasis on creative problem solving and appropriate application to promotional and editorial communication.

DES 374
ADVERTISING DESIGN
3, 0/6

Prerequisites: DES 271 and DES 380. Principles of advertising design as visual communication, motivation, and persuasion. Problems in advertising and publication design. Illustration, media, and techniques. Typographic design and reproduction processes.

DES 377
COMPUTER GRAPHICS II
3, 0/6

Prerequisite: DES 277. Intermediate-level course using computer-imaging programs. Creative problem solving with photomontage, posters, and publication design assignments. Visual presentations, hands-on tutorials, and critiques of assignments.

DES 380
ILLUSTRATION
3, 0/6

Prerequisite: DES 270. Creative problem solving illustration assignments. In-depth exploration of illustration media and techniques. Examination of professional practice and business issues.

DES 414
SENIOR SEMINAR/EXHIBITION
4, 3/2

A series of lectures and discussions concerning topics such as self-presentation concepts. Job and professional interviews. Business practices, record keeping, and taxes. Legal contracts and copyrights. Exhibitions and promoting personal work.

DES 419
EXHIBITION TECHNIQUES
3, 0/6

Basic design theory and communications in the field of exhibits, displays, and signage. Emphasis on structural concepts, lighting, kinetics, function, materials, and aesthetics. Additional credit by special arrangement with instructor.

DES 421
CERAMICS: SENIOR STUDIO
3-12 (3 hrs/sem), 0/6 – 0/12

Prerequisite: DES 321. Development and presentation of the student's personal direction in clay, culminating in a portfolio presentation and a final show.

DES 431
JEWELRY: SENIOR STUDIO
3-12 (3 hrs/sem), 0/6 – 0/12

Prerequisite: DES 331. Concentration of studio work by the senior major in jewelry. Students plan and execute a series of problems and projects in consultation with the instructor.

DES 437
METALSMITHING: SENIOR STUDIO
3-12 (3 hrs/sem), 0/6 – 0/12

Prerequisite: DES 337. Practical application of metalworking techniques with emphasis on raising, forging, welding, riveting, casting, spinning, and other forming methods. Parallel study of leading designers, craftspeople. Tutorial relationship with instructor. Extra class assignments, including minimum studio hours equal to class hours.

DES 444
FIBERS—SENIOR STUDIO
3-12 (3 hrs/sem) 0/6–0/12

Prerequisites: DES 242, DES 342, and DES 344. Concentration of studio work in surface design and weaving by senior fiber majors. Students plan and execute a series of problems and projects in consultation with the instructor, leading to an exhibition. Portfolio preparation for graduating seniors.

DES 451
WOOD DESIGN: SENIOR STUDIO
3-12 (3 hrs/sem) 0/6–0/12

Prerequisite: DES 351. Concentration of studio work by senior wood majors. Students plan and execute a series of problems and projects in consultation with the instructor.

DES 460
INTERIOR DESIGN IV
3, 0/6

Prerequisite: DES 361. Complex design issues, with emphasis on mixed-use, unconventional design problems. Design paradigms applied to large-scale commercial studio projects offer opportunities for computer-assisted design application. Field trips.

DES 461
INTERIOR DESIGN V
3, 0/6

Prerequisite: DES 460. Final studio experience featuring one major design project. Students are expected to focus their design initiative with increased objectivity and to adopt a comprehensive approach to the interior design process using proposal, research, and design. Field trips.

DES 473
GRAPHIC DESIGN
3, 0/6

Prerequisite: DES 380. Advanced problems in advertising, publication, and packaging design. Materials, techniques, and computer processes used in preparation of visual and design presentations/mechanicals. Emphasis

on individual solutions to problems typical of those confronting the professional graphic designer.

DES 475
GRAPHIC DESIGN PRACTICUM
Variable credit

Prerequisite: Completion of all required courses in graphic design specialization. Practical experience in an advertising agency, design studio, or corporate design office under the sponsorship of an art director, working two days a week for 6 credit hours. Or experience with practical problems in a simulated agency situation, working 10 hours a week for 3 credit hours. Admission by permission of graphic design advisers after portfolio review.

DES 479
MULTIMEDIA COMPUTER DESIGN
3, 0/6

Prerequisites: DES 277 and DES 377. Introduction to computer design and the authoring process in multimedia. Experience with digital images, video, and sound using current software, culminating in creative interactive presentations and Web page documents.

DES 480
ILLUSTRATION II
3, 0/6

Prerequisite: DES 380. Advanced problems and creative solutions in editorial and advertising illustration using computer drawing software programs. In-depth examination of business issues and professional practice in the illustration field.

DES 488
INTERNSHIP
Variable credit

Prerequisite or corequisite: DES 460. Guided, supervised exposure to professional interior design operations through on-the-job experience in an authorized design firm, department, studio, or showroom. For 3 credit hours, student completes 120 contract hours, provides a written report of the work experience, and receives written evaluation from the employer.

DES 495
SPECIAL PROJECT

DES 499
INDEPENDENT STUDY

ECO

ECONOMICS

Economics and Finance Department

ECO 101
THE ECONOMIC SYSTEM
3, 3/0; CS

Overview course. Development of fundamental economic concepts, basic economic institutions and their history, and contemporary economic issues. Supply and demand, markets, gross national product (GNP), inflation and recession, and the role of government.

Economic issues such as energy, environment, education, and health care included when appropriate. Will not count toward the credit hour requirement of majors. May not be taken concurrently with or subsequent to ECO 201 or ECO 202.

ECO 103
ECONOMIC HISTORY OF THE UNITED STATES
3, 3/0; CS V1

The history of the United States from an economic perspective. U.S. history is understood by studying the development of economic institutions and social change. Causes and effects of changing labor organization and relations, production technique, business and industrial organization, trade patterns, and economic policy.

ECO 110
PERSONAL FINANCE
3, 3/0

Prerequisite: Successful completion of mathematics basic skills competency requirement. Basics of personal and household finance. Saving, debt reduction, home and automobile financing, retirement planning, investment, and insurance.

ECO 201
PRINCIPLES OF MACROECONOMICS
3, 3/0; CS

The major economic forces—consumer expenditure, business investment, and government spending—and their influence on national income. Money and banking, monetary and fiscal policies, inflation and recession, economic growth, and international monetary problems. Required for economics majors. Either ECO 201 or ECO 202 may be taken first.

ECO 202
PRINCIPLES OF MICROECONOMICS
3, 3/0; CS

Individual units in the economy—consumers, firms, and resource owners—and how their decisions influence market prices and industrial output. Supply and demand, competition and monopoly, corporations, capitalism and socialism, labor, and international trade. Required for economics majors. Either ECO 201 or ECO 202 may be taken first.

ECO 220
ECONOMICS OF SPORTS
3, 3/0

The principles of economic analysis through investigation of the sports industry. Profits, labor conflicts, and other special features of professional and collegiate sports.

ECO 300
LABOR ECONOMICS
3, 3/0

Prerequisite: ECO 202. Competing theories of labor-market operation in market economies. Problems of labor markets (such as unemployment and discrimination). History of the evolution of labor markets in the United States and the role of government in affecting outcomes. Current issues, including increasing international competition in product and labor markets, the impact of technological change in altering workforce skill and educational requirements, and structural change in compensation and occupational distribution.

**ECO 301
ECONOMICS OF LABOR
RELATIONS**

3, 3/0; CS

Present-day techniques in labor-management negotiations, the collective bargaining agreement, the development and structure of organized labor, labor law, and labor economics.

**ECO 302
WOMEN IN THE ECONOMY**

3, 3/0; D

Prerequisite: ECO 201 or ECO 202 recommended. Women's position in the U.S. economy, how it has changed, how it compares to that of men and to the economic positions of women in other countries. Theoretical and empirical issues in analyzing women's economic status.

**ECO 304
MONEY AND BANKING**

3, 3/0

Prerequisites: ECO 201 and MAT 110 or equivalent. The nature and function of money. The American monetary system and the role of the banking system. The structure and functions of the Federal Reserve System. Fundamental monetary theory and its relation to monetary policy. Current problems relating to the impact of monetary policy on prices and employment.

**ECO 305
STATISTICS FOR ECONOMICS**

3, 3/0

Introduction to elementary statistical principles, descriptive statistics, and statistical inference. Applications in economics, business, and criminal justice. Required for majors.

**ECO 307
INTERMEDIATE
MICROECONOMICS**

3, 3/0

Prerequisites: ECO 202 and MAT 110 or equivalent. Advanced study of individual units in the economy and how their decisions influence market prices and industry output. Includes the theory of consumer demand, the theory of the firm, resource allocation, income distribution, and welfare economics. Required for majors.

**ECO 308
INTERMEDIATE
MACROECONOMICS**

3, 3/0

Prerequisites: ECO 201 and MAT 110 or equivalent. Advanced study of aggregate economic activity and its influence on national income. Includes classical and Keynesian theory, monetary and fiscal policies, business cycles, forecasting, and economic growth. Required for majors.

**ECO 312
URBAN ECONOMICS**

3, 3/0; D

Prerequisite: ECO 202 or instructor permission. Application of economic analysis to urban growth, land use, poverty, housing, segregation, pollution, congestion, and urban public finance.

**ECO 314
CORPORATION FINANCE**

3, 3/0

Prerequisites: ECO 202, BUS 312, and CIS 101 or equivalent. Introduction to analytical techniques and terminology of corporate financial management. Includes the financial environment, yield-curve analysis, ratio analysis, the Du Pont system, pro-forma balance sheets and income statements, the Capital Asset Pricing Model, the intrinsic value of stocks and bonds, the time value of money, capital budgeting, and working capital management.

**ECO 320
MANAGERIAL ECONOMICS**

3, 3/0

Prerequisites: ECO 202, ECO 305, and MAT 110 or equivalent. Using economic analysis to formulate and provide guides to the solution of management decision and control problems, and the development of appropriate business policies.

**ECO 325
INDUSTRIAL ORGANIZATION**

3, 3/0

Prerequisite: ECO 202 or instructor permission. The links between economic theory and structure, conduct, and performance of national and international industry over time. Designed for economics and business majors. Emphasis on price theory, inter- and intrafirm relationships and industrial policy.

**ECO 345
ESTATE PLANNING**

3, 3/0

Prerequisite: Upper-division status. Estate planning provides financial security during retirement years and facilitates the intended and orderly disposition of property upon disability or death. This course addresses concepts and techniques of lifetime financial planning that may lead to increases in one's estate and the conservation of existing assets. Includes a critical evaluation of traditional planning techniques and analysis of major advanced methods, including various living trusts, irrevocable life insurance trusts, charitable remainder trusts, and family-limited partnerships.

**ECO 350
PUBLIC FINANCE**

3, 3/0

Prerequisites: ECO 202 and MAT 110 or equivalent; ECO 307 recommended. The nature and growth of public expenditures; principles of taxation; federal, state, and local revenue; introduction to fiscal policy and theory; significance of public debt; selected problems in intergovernmental fiscal relations.

**ECO 355
THE ECONOMICS OF ENERGY
AND THE ENVIRONMENT**

3, 3/0

Prerequisite: ECO 202 or instructor permission. Micro- and macroeconomic activity imposed by the availability of energy resources and by environmental considerations. Alternative policy strategies relating to energy and the environment are evaluated in terms of their economic impact.

**ECO 360
INTRODUCTION TO THE
ECONOMIC ANALYSIS OF LAW**

3, 3/0

Prerequisite: ECO 307 or instructor permission. Introduction to the study of law from an economic perspective. No prior knowledge of law is required, and all economic concepts needed are presented. Uses economic concepts and reasoning to explain and predict consequences of legal rules. Includes important issues found in court cases involving contracts, property law, liability, and environmental law.

**ECO 400
INTERNATIONAL FINANCE**

3, 3/0

Prerequisites: ECO 201, ECO 202, and ECO 314; ECO 308 recommended. Basic theories in international finance and applications, including analysis of exchange-rate markets, international capital markets, multinational capital budgeting, cash management, and international banking. Provides a strong background in international financial markets and international financial policy.

**ECO 401
INTERNATIONAL ECONOMICS**

3, 3/0; G

Prerequisites: ECO 201 and ECO 202; ECO 307 recommended. Basic theories of international trade. The international monetary mechanism and the institutions that facilitate its operation. Foreign economic policy and contemporary problems relating to tariffs, payments, balances, devaluation, and gold as a means of setting international payments in balances.

**ECO 403
COMPARATIVE ECONOMIC
SYSTEMS**

3, 3/0; G

Prerequisites: ECO 201 and ECO 202 or instructor permission. Essential characteristics of different market economies as they have evolved to the present, their strengths and weaknesses, increasing social control, trading and monetary unions, contrast with socialist systems.

**ECO 404
ECONOMIC DEVELOPMENT**

3, 3/0; G

Prerequisite: Minimum of two economics courses, not including ECO 101. The difficulties of economic development, industrialization, and worldwide poverty. Competing theories of economic growth and structural change. Problems of population, natural resources, and environment. The growing interdependency of the U.S. and lesser-developed countries' (LDCs) economies. The crucial role of women in development, as well as ethnic and other social and cultural relationships. LDCs debt crisis and international finance. Macro- and microeconomic planning models. The policy-making process, development strategies, and specific case studies of LDCs in Africa, Asia, and Latin America.

**ECO 405
HISTORY OF ECONOMIC
THOUGHT**

3, 3/0

Prerequisites: ECO 201 and ECO 202 or instructor permission. The attempts of key

economic thinkers from Aristotle to the present to analyze economic phenomena and provide guidance for economic policy.

**ECO 411
REGIONAL ECONOMIC
ANALYSIS**

3, 3/0

Prerequisites: ECO 201 and ECO 202 or instructor permission; MAT 110 recommended. Analysis of location on economic activity, urbanization patterns, and regional growth and development. Techniques in measuring the level of economic activity of a region, using Western New York as a model. The impact of the Buffalo urban area on the development of the surrounding region.

**ECO 412
URBAN ECONOMICS**

3, 3/0

Prerequisite: ECO 201 or ECO 202 or instructor permission. Application of economic analysis to urban growth, land use, poverty, housing, segregation, pollution, congestion, and urban public finance.

**ECO 414
INVESTMENT MANAGEMENT**

3, 3/0

Prerequisite: ECO 314. Operating and efficiency characteristics of security markets. The application of institutional, technical, and theoretical approaches to security analysis and evaluation of investment portfolios.

**ECO 415
CASES IN CORPORATION
FINANCE**

3, 3/0

Prerequisite: ECO 314; ECO 307 recommended. Application of the case approach to problems in business finance. Includes working capital financing, term borrowing, capital budgeting, and mergers and acquisitions.

**ECO 416
ADVANCED CORPORATION
FINANCE**

3, 3/0

Prerequisites: ECO 307 and ECO 314. Advanced study of the practice and theory of corporation finance, focusing on topics not covered in introductory corporation finance. Includes advanced debt policy, options, leasing, mergers, international financial management, and pension plans.

**ECO 417
DERIVATIVE SECURITIES**

3, 3/0

Prerequisite: ECO 314. How modern securities are created from their basic components. Includes circus swaps, artificial Treasury bills, artificial cash, synthetic puts, and portfolio insurance products.

**ECO 418
BOND MARKETS**

3, 3/0

Prerequisite: ECO 314. Introduction to bond management. Includes bond pricing, yield measurements, return measurements, duration, convexity, Treasury securities, agency securities, corporate debt, municipal bonds, the term structure of interest rates, mortgage loans, pass-through securities, CMOs, return characteristics of derivative products, and bond hedging using options and futures.

**ECO 424
ECONOMETRICS
3, 3/0**

Prerequisites: MAT 126, ECO 201 or ECO 202, and ECO 305 or equivalent statistics course. Introduction to applied statistical analysis, with primary emphasis on business and economic applications. Provides quantitative background for graduate study in economics, business, public administration, and related social science, as well as for many types of employment.

**ECO 488
INTERNSHIP
Variable credit**

Prerequisites: ECO 201, ECO 202, and one relevant elective; minimum cumulative GPA of 2.5; upper-division status.

Application and integration of economic concepts and methodologies in an off-campus field setting, under the direction of a faculty sponsor, with the cooperation of a designated field supervisor. A maximum of 3 credit hours of ECO 488, ECO 495, or ECO 499 may be applied toward the major.

**ECO 490
SENIOR SEMINAR IN
ECONOMICS AND FINANCE
3, 3/0**

Prerequisites: Economics major with senior status; ECO 305, ECO 307, and ECO 308; ECO 424 recommended. Capstone course in economics. Required of all senior economics majors. Investigation and presentation of findings of selected advanced topics in economics. Senior paper on a topic in economics or financial economics required.

**ECO 495
SPECIAL PROJECT**

Prerequisites: Minimum cumulative GPA of 3.0 (in major and overall); ECO 307 and ECO 308 or approval by Curriculum Committee. A maximum of 3 credit hours of ECO 488, ECO 495, ECO 499 may be applied toward the major.

**ECO 498
HONORS RESEARCH
Variable Credit**

Prerequisite: Admission to honors program in economics. A review of the literature and development of the theoretical issues relevant to the research topic.

**ECO 499
INDEPENDENT STUDY**

Prerequisites: Minimum cumulative GPA of 3.0 (in major and overall); ECO 307 and ECO 308 or approval by Curriculum Committee. A maximum of 3 credit hours of ECO 488, ECO 495, or ECO 499 may be applied toward the major.

EDF

EDUCATIONAL FOUNDATIONS

Educational Foundations Department

**EDF 100
ADULTS AND LEARNING
1, 1/0**

Issues central to adults returning to college: the nature of participation in adult-learning, adult-learning theory, and the vital role adult education plays in a rapidly changing technological and global society. Primarily for first-time or returning adult students.

**EDF 189
ADULT LEARNERS IN HIGHER
EDUCATION
1, 1/0**

Entry-level course for returning adult students. An overview of adult learning in a modern technological society. Examines issues and opportunities typically encountered by adult students in the collegiate learning environment.

**EDF 200
INTRODUCTION TO
EDUCATION IN THE INNER CITY
3, 3/0**

The formation and development of the inner city from early immigration to the present. School development's inextricable link to socioeconomic and political development of the inner city. Inner-city. Schools' responses to changing demographics and the implications such changes have for policy making and educational practice. Students spend 10 hours in an inner-city school setting.

**EDF 201
INTRODUCTION TO
ELEMENTARY EDUCATION
3, 3/0**

Introduction to elementary-school teaching for students interested in the education profession. Applicants of major theories. Developmentally appropriate practices relative to New York State learning standards. Classroom management and discipline. Participation in the reflective writing process. Field experience required.

**EDF 202
CHILD DEVELOPMENT AND
EDUCATION
3, 3/0**

Introduction to the study of child behavior and development with emphasis on implications for teaching and learning. Focus on the child in school, from early childhood through preadolescence. Includes child-study and observation methods; theories of development; nature and sources of individual development from biological, cultural, and behavioral perspectives, with emphasis on cognitive, social, emotional, and physical areas of development as they apply to the classroom. Required for elementary education and exceptional education majors according to program; elective for others beyond freshman level.

**EDF 203
SCHOOL AND SOCIETY
3, 3/0**

Prerequisite: Successful completion of the English composition/basic communication competency requirement. Education as a function of a democratic society. Sociological and historical backgrounds of schools. Current issues and problems affecting schools. Objectives, control, and financial support of education in New York State and the United States. Directed observation. Required of elementary-education and exceptional-education majors according to program; elective for others beyond freshman level.

**EDF 207
LEARNING IN COLLEGE:
ORIENTATION FOR
UNDERGRADUATES
3, 3/0**

Acquaints students with the psychological and sociological understanding necessary for college achievement and adjustment. Includes human development during adulthood, higher education in the United States, communication, self-awareness, learning, vocational goals, and the college as a sociocultural system.

**EDF 221
THE HISTORY OF BLACK
EDUCATION IN AMERICA
3, 3/0**

The role of blacks in the American educational system. Changes that have taken place in order to improve or retard education for blacks. Approaches for providing meaningful education for blacks now and in the future.

**EDF 222
THE DEVELOPMENT OF
MODERN EDUCATION IN
AFRICA
3, 3/0**

Educational changes in Africa from the colonial era to the present and their effect on social and political issues in Africa and abroad.

**EDF 225
ETHNIC STUDIES IN THE
ELEMENTARY SCHOOL
3, 3/0**

Ethnic diversity in American life and education. Cultural minorities, e.g., Native Americans, blacks, Spanish-speaking groups, Jews. White ethnic groups and mainstream American life and education.

**EDF 302
EDUCATIONAL PSYCHOLOGY:
ELEMENTARY EDUCATION
3, 3/0**

Learners, the learning process, evaluating learning, and establishing a classroom environment to maximize learning. Required of elementary education and exceptional education majors according to program.

**EDF 303
EDUCATIONAL PSYCHOLOGY
3, 3/0**

Prerequisite: Successful completion of the English composition/basic communication competency requirement. Psychological principles underlying learning and effective teaching. The effect of social and personality

factors on learning, assessment, and evaluation of individual progress. Diagnosis of difficulties in learning, discipline, programming, and planning as related to instruction. Directed observations. Required for secondary education majors according to program.

**EDF 309
ADULTHOOD
3, 3/0**

Prerequisite: Successful completion of the English composition/basic communication competency requirement. Human development during adult years. Includes consideration of physiological and psychological development of the individual from young adulthood through old age. Changing roles, conflicts, adjustments, dilemmas, aspirations, potentials, responsibilities, rights, and freedoms, as indicated in theory and research.

**EDF 311
FAMILY VIOLENCE
3, 3/0**

Prerequisite: Successful completion of the English composition/basic communication competency requirement. Comprehensive overview and critical investigation into the field of family violence. Includes child abuse, dating violence, spouse abuse, sibling violence, adolescent maltreatment, parent abuse, and elder abuse. Explores history, prevalence, susceptibility factors, patterns of social interaction, demographics, sexual and emotional abuse, and the violence-prone personality. Theoretical perspectives on family violence, including cycle theory of violence, integrated within broader social science perspectives.

**EDF 345
PARENTING
3, 3/0**

Prerequisite: Successful completion of the English composition/basic communication competency requirement. Relevant issues facing parents and professionals who work with them in today's changing society. Includes classical and current research, with emphasis on practical application and implication. Developmental approach to understanding parent-child relationships. Working more effectively with parents of varied cultural backgrounds, family structures, lifestyles, and at-risk factors.

**EDF 346
TEENAGE SEXUALITY
3, 3/0**

Teenage sexuality and factors influencing its emergence. The incorporation of sexuality education into the teaching-learning process at home and in school. Cooperative efforts by parents and teachers. Development of skills in communicating with teenagers about their sexuality. Strategies for teens to deal with sexuality concerns more effectively. Community resources for teens, parents, teachers. Special issues and problems.

**EDF 351
HUMAN DEVELOPMENT
DURING MIDDLE CHILDHOOD
3, 3/0**

Child development and behavior with emphasis on teaching/learning implications. Includes developmental processes of middle childhood, methods of studying children, problems of child behavior and development, and analysis of learning at home and in ele-

mentary school. Required for elementary education and exceptional education majors. Permissible substitutions EDU 350, EDU 352; elective for others.

**EDF 353
HUMAN DEVELOPMENT
DURING EARLY ADOLESCENCE
AND ADOLESCENCE
3, 3/0**

Introduction to preadolescent and adolescent behavior and development, with emphasis on implications for teaching. Includes the nature of adolescence, developmental and behavioral characteristics, learning and education, problems and issues of adolescents in today's society, ways teachers can study adolescents, and self-understanding.

**EDF 362
BEHAVIOR AND CLASSROOM
MANAGEMENT
3, 3/0; CT**

Prerequisites: EDF 202; EDU 211 (*childhood education majors only*). *Prerequisite or corequisite:* EDU 400/401. Managing the classroom environment to facilitate effective instruction. Includes various models of behavior management. Exceptional education majors must take concurrently with EXE 363.

**EDF 403
HISTORICAL AND
PHILOSOPHICAL FORCES
INFLUENCING SECONDARY
EDUCATION
3, 3/0**

Prerequisite: Successful completion of the *English composition/basic communication competency requirement*. European, religious, and secular influences in American education. Evolving concepts of education in a democracy. Social and economic pressures in education. Development of the secondary school. Conflicting philosophies in current education. Required for secondary education majors according to program.

**EDF 410
PHILOSOPHY OF EDUCATION
3, 3/0**

Influential theories of education and their effect upon education, past and present. Effect of democratic, as opposed to authoritarian, concepts of the "good life" upon school policy and practice. Nature and function of academic freedom. The public school and the religious dimension of life. Importance of continuity between avowed educational values and actual practices. Elective for upper-division students.

**EDF 412
COMPARATIVE EDUCATION
3, 3/0**

Education's influence in world affairs. Comparison of educational problems and solutions in various countries. Relationship of education programs to cultural heritage and its future. Selection of program studies in terms of student interests and current developments. Elective for upper-division students.

**EDF 495
SPECIAL PROJECT**

**EDF 497
WORKSHOP**

**EDF 499
INDEPENDENT STUDY**

EDU

EDUCATION

**Elementary Education and
Reading Department**

**EDU 120
READING AND STUDY
STRATEGIES
3, 3/0**

Competency-based course designed to improve students' college reading and study skills. Includes lecture and laboratory work. Students are advised to take this course based on Reading Placement Test results.

**EDU 121
TUTORING NATIVE AMERICAN
STUDENTS**

Variable credit

Prerequisites: Successful completion of *English composition/basic communication and mathematics competency requirements; instructor permission*. Variable-credit course. Develops sociocultural awareness and trains tutors for community-based experiences in tutoring Native American students at the Buffalo Native American Magnet School. Prepares students for experiences with unique interactions between culture and education.

**EDU 150
ADVANCE READING AND STUDY
STRATEGIES
3, 3/0**

Strategies for effective learning. Includes study, note-taking, and examination strategies; time management; and preparing research papers.

**EDU 201
INTRODUCTION TO
EDUCATION
3, 3/0**

Introduction to elementary school teaching. Application of major theories, consideration of developmentally appropriate practices relative to New York State Learning Standards. Introduction to classroom organization, classroom management, and discipline; and participation in the reflective writing process are emphasized. Field experience required.

**EDU 211
INTRODUCTION TO LITERACY
3, 3/0**

Prerequisite: *Prechildhood major*. *Prerequisite or corequisite:* EDU 201 or EXE 101. Current literacy theories and practices supportive of diverse populations and congruent with New York State Learning Standards. School-based activities that support course objectives are required.

**EDU 220
PROGRAMS FOR INFANTS AND
TODDLERS
3, 3/0**

Majors only. Prerequisites: EDF 202, EDU/EDF 201, EDU 211. Introduction to the field of early childhood education. Familiarity with the developmental needs and program requirements for infants and toddlers. Students plan developmentally appropriate activities to use with these age groups and implement them in a field placement. Special

attention is given to the assessment of young children.

**EDU 310
TEACHING SOCIAL STUDIES IN
THE ELEMENTARY SCHOOL
3, 3/0**

Majors only. Prerequisite or corequisite: EDU 311 or EDU 312. Current trends and pedagogical issues in social studies standards-based education. Development and implementation of creative extensions of social studies through visual and performing arts.

**EDU 329
INTEGRATED THEMATIC
INSTRUCTION FOR YOUNG
CHILDREN
3, 3/0**

Prerequisites: EDU 211 and EDU 220. Use of knowledge of child development and learning to provide opportunities that support the physical, social, emotional, cognitive, and aesthetic development of preschool, kindergarten, and primary-aged children.

**EDU 372
COMPUTER APPLICATIONS IN
EDUCATION
3, 3/0**

Prerequisites: Admission to program; EDU 211 and EDU 220. Introduction to educational technology. Development of a productivity portfolio that documents competence in word processing, databases, print merging, spreadsheets, and charting. Instructional strategies for using Macintosh and IBM-compatible computer programs for presentations, small-group lessons, or computer lab settings. Educational use of telecommunications, hypermedia, scanners, digitizers, liquid crystal display panels, videodisc players, CD-ROM drives, interactive multimedia, and local area networks.

**EDU 400
PRACTICUM IN TEACHING
6, 0/0**

Prerequisites: Minimum cumulative GPA of 2.50; minimum grade of C in methods courses related to respective major (EDU 220, EDU 310, EDU 311, EDU 312, or EDU 329); successful completion of *English composition/basic communication and mathematics competency requirements*. Supervised teaching experience in two school settings at two developmental levels five full days a week for approximately 14 consecutive weeks. Effective demonstration of content knowledge, pedagogical preparation, instructional delivery, classroom management, knowledge of student development, collaboration with school professionals, and reflectivity of practice are required. Only EXE/EDF 362 or EDU/EDF/EXE 372 (EDU 417 for early childhood certification) may be taken with student teaching for a total of 15 credit hours. Required for elementary education majors or with special permission of department chair. Extension students or exceptional education majors take EDU 404. Early childhood majors take EDU 410.

**EDU 401
PRACTICUM IN TEACHING:
INTERMEDIATE
6, 0/0**

Prerequisites: Minimum grade of C in EDU 314 and EDU 315; minimum cumulative

GPA of 2.5; successful completion of English composition/basic communication and mathematics competency requirements.

Supervised teaching in elementary grades five days a week. Individual conferences and seminars with college supervisor. Tutorial and group instruction. Daily and long-range planning, teacher-pupil planning, unit teaching, audiovisual aids, classroom management, record-keeping, evaluation techniques. Required for elementary education majors or with special permission of the chair. Elementary education extending majors and exceptional education majors take EDU 404.

**EDU 402
SEMINAR IN EDUCATION
3, 3/0**

Nature and function of a philosophy of education. Teaching research methods and techniques, crucial issues in education, problems of beginning teachers. To be taken concurrently with, or preferably subsequent to, EDU 401. Required for all elementary education majors.

**EDU 404
PRACTICUM IN ELEMENTARY
SCHOOL TEACHING
6, 30/0**

Prerequisites: Minimum cumulative GPA of 2.50; minimum grade of C in methods courses in respective major (EDU 220, EDU 310, EDU 311, EDU 312, or EDU 329); successful completion of *English composition/basic communication and mathematics competency requirements*. Supervised teaching experience in an elementary-grade setting five days a week for approximately seven consecutive weeks. Effective demonstration of content knowledge, pedagogical preparation, instructional delivery, classroom management, knowledge of student development, collaboration with school professionals, and reflectivity of practice are required. Only EXE/EDF 362 or EDU/EDF/EXE 372 (EDU 417 for early childhood majors) may be taken with student teaching for a total of 15 credit hours.

**EDU 405
PARENT-INFANT EXPERIENCE
3, 3/0**

Overview of the infant period (birth to 36 months) and techniques and materials to be used with parents to facilitate infant development. Innovative infant programs are examined and practical experience with parents and infants is provided. Elective for upper-division students.

**EDU 416
TEACHING LITERACY IN MIDDLE
AND SECONDARY SCHOOLS
3, 3/0**

Special problems in reading encountered in middle and secondary schools. Includes the reading process, reading skills, and techniques for assessing developing reading skills. Special emphasis on critical reading in content areas.

**EDU 417
PARENTS, SCHOOLS, AND
COMMUNITY
3, 3/0**

Prerequisites: Fulfillment of *English composition/basic communication requirement; upper-division status*. Building partnerships among parents, schools, and diverse commu-

nities. Collaboration with families and implementation of techniques while student teaching. Special attention to linking families with services offered in the school and community.

**EDU 426
EMERGENT LITERACY**
3, 3/0

Prerequisite: EDU 211. Areas of literacy development typical to preschool and primary-grade children. Emphasis on strategies and practices that foster various aspects of early reading, writing, speaking, and listening in young children. Introduction to components of a literate early-childhood environment, classroom management, and literacy-assessment techniques currently endorsed for educators of emergent readers.

**EDU 499
INDEPENDENT STUDY**
3, 0/0

ENG

ENGLISH

English Department

**ENG 101
COLLEGE WRITING I**
3, 3/0; B

Initiation into all phases of the writing process. The study and writing of expository and analytic prose, patterns of organization, and the features of good writing. Writing assignments emphasize rhetorical strategies and essay structure.

**ENG 102
COLLEGE WRITING II**
3, 3/0; B

Prerequisite: Placement into ENG 102 via score of 3 or higher on AP English exam, or successful completion of ENG 101. Further development of students' writing (beyond ENG 101). Writing assignments emphasize argument and persuasion, advanced rhetorical strategies, analysis/synthesis, and research methods.

**ENG 130
BIBLICAL AND CLASSICAL
LITERATURE**
3, 3/0; CH

Greek, Roman, and Biblical literature.

**ENG 131
MIEVEAL AND RENAISSANCE
LITERATURE**
3, 3/0

Major European writers before 1600.

**ENG 151
INTRODUCTION TO POETRY**
3, 3/0; CH

Verbal and formal techniques of English and American poetry. Prosody, verse forms, conventions, genres, diction, and imagery.

**ENG 190
INTRODUCTION TO LITERARY
ANALYSIS AND INTERPRETATION**
3, 3/0

Prerequisites: ENG 101 and ENG 102, or the equivalent. An introduction to the basics of literary analysis and interpretation. The

basic types of responses to literature, the defining characteristics of poetry and fiction, and skills of close reading of literary texts (literary interpretation). Students should take this class immediately after completing their freshman writing requirement or within the first year of transferring into the English major.

**ENG 200
FIELD EXPERIENCE IN
SECONDARY ENGLISH
EDUCATION**
3, 3/0

Introduction to the secondary school as an institution and to the teaching of English as a profession. Required observations of teaching English and other areas, K–12. Limited experimentation with teaching secondary English.

**ENG 205
HISTORY OF CINEMA I**
3, 3/0; CH

The development of the motion picture from its earliest form in the 1890s to the inception of sound.

**ENG 206
HISTORY OF CINEMA II**
3, 3/1; CH

The development of the motion picture from the inception of sound to the present.

**ENG 210
ENGLISH LITERATURE I:
SELECTED TOPICS**
3, 3/0; CH

Topics, themes, and authors in English literature to 1700.

**ENG 211
ENGLISH LITERATURE II:
SELECTED TOPICS**
3, 3/0; CH

Topics, themes, and authors in English literature from 1700 to 1900.

**ENG 220
AMERICAN LITERATURE I:
SELECTED TOPICS**
3, 3/0; CH

Topics, themes, and authors in American literature before the Civil War.

**ENG 221
AMERICAN LITERATURE II:
SELECTED TOPICS**
3, 3/0; CH

Topics, themes, and authors in American literature after the Civil War.

**ENG 230
COMPARATIVE LITERATURE**
3, 3/0

Recurring ideas, themes, and theories in world literature.

**ENG 231
WOMEN IN LITERATURE:
SELECTED TOPICS**
3, 3/0; CH

The images of women in literature as they reflect attitudes about women and their roles. Emphasis on authors and eras varies with instructors. May be taken for credit more than once.

**ENG 240
AFRICAN AMERICAN LITERATURE
TO 1940**
3, 3/0; D

Black American slave narratives, poetry, fiction, essays, and drama. The influence of the African oral tradition on the black American writer. The Harlem Renaissance of the 1920s and its relation to the development of black revolutionary thought.

**ENG 241
AFRICAN AMERICAN LITERATURE
SINCE 1940**
3, 3/0; D

Black revolutionary thought and artistry in such writers as Richard Wright, William Demby, Ralph Ellison, LeRoi Jones, James Baldwin, Don L. Lee, Gwendolyn Brooks, Nikki Giovanni, John Henrik Clarke, and Ed Bullins.

**ENG 250
LITERARY CRITICISM**
3, 3/0

Introduction to the basic questions of theoretical and practical literary criticism. Intended for students who have, or are considering, an English major or concentration.

**ENG 252
BRITISH MODERNISM**
3, 3/0; CH

British modernism, roughly the period from 1900 to 1940. The historical, intellectual and cultural background as well as the study of some of the major literary figures and their work.

**ENG 253
TWENTIETH-CENTURY
LITERATURE II**
3, 3/0; CH

Literature in English from 1945 to the present.

**ENG 260
CHILDREN'S LITERATURE**
3, 3/0

Prerequisite: Sophomore, junior, or senior status. Types of children's literature, with attention to the principles of book selection and reading interests of children.

**ENG 300
WRITING FOR THE PROFESSIONS**
3, 3/0

Prerequisite: Fulfillment of English composition/basic communication requirement. Practice for students who wish to improve their competence in writing and editing for a variety of professions.

**ENG 301
ADVANCED COMPOSITION**
3, 3/0

Prerequisite: Fulfillment of English composition/basic communication requirement. Practice in writing expository papers. Writing assignments emphasize stylistic strategies, diction, and revision.

**ENG 303
LITERATURE IN FILM**
3, 3/1

The motion picture as a vehicle for literature. Analysis and comparison of verbal and pictorial forms.

**ENG 304
FORMS OF FILM**
3, 3/1

Breadth and depth of selected film forms. Emphasis on the film as art, medium of communication, and social document. May be taken for credit more than once when content varies.

**ENG 305
CREATIVE WRITING: NARRATIVE**
3, 3/0

Prerequisite: Fulfillment of English composition/basic communication requirement. The writing of narrative.

**ENG 306
CREATIVE WRITING: POETRY**
3, 3/0

Prerequisite: Fulfillment of English composition/basic communication requirement. The writing of poetry.

**ENG 307
TUTORING AND TEACHING
WRITING**
3, 3/0

Prerequisite: Fulfillment of English composition/basic communication requirement. Writing-intensive course for undergraduate students who wish to develop better writing skills and gain a theoretical foundation and practical experience in writing center tutoring. Explores the role and the craft of the writing tutor. Students gain practical experience in the writing center.

**ENG 308
PEER TUTORING PRACTICUM**
0, 0/0

Prerequisites: Fulfillment of English composition/basic communication requirement; minimum cumulative GPA of 2.5 in English courses. Students meet weekly with Writing Center director, conduct tutoring sessions, and gain practical experience as writing tutors in the Writing Center.

**ENG 309
TEACHING AND EVALUATING
WRITING**
3, 3/0

Prerequisite: Fulfillment of English composition/basic communication requirement. Methods for teaching and evaluating writing. Includes theories of composition and rhetoric, approaches to teaching composition, ways to respond to writing-in-progress and completed texts, methods of measuring growth, and means to evaluate writing performance.

**ENG 310
MODERN EUROPEAN
LITERATURE**
3, 3/0

Prerequisite: 3 credit hours of literature. Selected European writers after 1600.

**ENG 311
TEACHING LANGUAGE**
3, 3/0

Prerequisite: Fulfillment of English composition/basic communication requirement. English-language teaching strategies for secondary education majors. Grammar, usage, and mechanics instruction; the history of English; the right to one's own language; sociopolitical dimensions of language; discussions of correctness within a range of dis-

course levels; and instruction in family-literacy practices.

**ENG 313
MILTON
3, 3/0**

Prerequisite: 6 credit hours of literature.
Representative works of John Milton.

**ENG 314
CHAUCER
3, 3/0**

Prerequisite: 6 credit hours of literature.
Representative works of Geoffrey Chaucer.

**ENG 315
SHAKESPEARE I
3, 3/0**

Prerequisite: 3 credit hours of literature. The earlier comedies, tragedies, and histories.

**ENG 316
SHAKESPEARE II
3, 3/0**

Prerequisite: 3 credit hours of literature.
The later comedies, tragedies, and histories.

**ENG 317
SHAKESPEARE FOR FUTURE
TEACHERS
3, 3/0**

Prerequisite: Fulfillment of English composition/basic communication requirement.
Intensive study of the Shakespeare plays most often taught in high school English classes. Emphasis on strategies for teaching Shakespeare and on particular needs of high school teachers in multicultural settings.

**ENG 330
LITERATURE OF THE BIBLE
3, 3/0; CH**

Prerequisite: 3 credit hours of literature.
The Bible as literature.

**ENG 331
FRENCH LITERATURE IN
TRANSLATION
3, 3/0**

Prerequisite: 3 credit hours of literature.
Selected masterpieces of contemporary French literature in translation. Knowledge of French not required. French majors must obtain approval of department chair and course instructor.

**ENG 332
RUSSIAN LITERATURE IN
TRANSLATION
3, 3/0**

Prerequisite: 3 credit hours of literature.
Writers such as Gogol, Pushkin, Turgenev, Goncharova, Tolstoy, Dostoyevsky, and Chekhov. Knowledge of Russian not required.

**ENG 345
WORLD LITERATURE AFTER 1945
3, 3/0; G**

Prerequisite: 6 credit hours of literature.
Post-World War II literature around the globe. Poetry and fiction along with the cultural background of at least two continents.

**ENG 350
TWENTIETH-CENTURY DRAMA I
3, 3/0**

Prerequisite: 3 credit hours of literature.
Drama from the 1880s to the end of World War II of such playwrights as Ibsen, Strindberg, Chekhov, Lorca, Synge, O'Casey, and O'Neill.

**ENG 351
TWENTIETH-CENTURY DRAMA II
3, 3/0**

Prerequisite: 3 credit hours of literature.
Drama since World War II. Includes epic theater, absurdism, and theater of cruelty of such playwrights as Brecht, Ionesco, Beckett, Genet, Miller, Albee, Pinter, Baraka, and Arabal.

**ENG 353
NATIVE AMERICAN LITERATURE
3, 3/0**

Prerequisites: Upper-division status and fulfillment of English composition/basic communication requirement. Selected aspects of traditional and contemporary Native American literature in its cultural, historical, and aesthetic contexts.

**ENG 354
ETHNIC AMERICAN MINORITY
LITERATURE
3, 3/0; D**

The background, development, and contemporary contribution of ethnic American minority literature (folk, poetry, short story, novel, biography, and play) and individual authors. The literary characteristics of the literature, its contribution to the field of American literature, and its place in today's society.

**ENG 355
THE SHORT STORY
3, 3/0; CH**

Major writers in the development of short fiction. May include Poe or Gogol, Pirandello, Joyce, Faulkner, Camus, Malamud, Böll, Sillitoe, or W. M. Kelley.

**ENG 356
FUTURISTIC FICTION
3, 3/0**

Prerequisite: 3 credit hours of literature.
The background, development, and present status of futuristic fiction. Short-story and novel forms. The quality of the literature and its place in today's society.

**ENG 360
REALISTIC FICTION FOR
CHILDREN
3, 3/0**

Literary characteristics, recurring themes, significant authors, and major categories of realistic fiction for children. Reading and discussion of classic and contemporary realism. Study and discussion of illustrations in realistic fiction in terms of their relationship to literary elements.

**ENG 361
CONTEMPORARY LITERATURE
3, 3/0; CH**

Prerequisite: Fulfillment of English composition/basic communication requirement.
Reading, discussion, and analysis of literature written in the last 25 years. Literary features and literary theories.

**ENG 370
FOUNDATIONS OF LANGUAGE
3, 3/0**

The structure of language with emphasis on English, relation to speech and writing. Language families and their relationships. Language change. Significance of regional and social dialects.

**ENG 390
LITERARY CRITICISM AND
THEORY
3, 3/0**

Prerequisites: ENG 190, 3 credits of literature, English major status. The major movements, critics, and ideas that comprise modern literary theory, such as formalism, psychoanalytical theory, feminism, Marxism, new historicism.

**ENG 402
ADVANCED CREATIVE WRITING:
NARRATIVE
3, 3/0**

Prerequisite: Fulfillment of English composition/basic communication requirement.
Creative workshop for students who wish to attempt longer forms of narrative than the short story.

**ENG 403
ADVANCED CREATIVE WRITING:
POETRY
3, 3/0**

Prerequisite: Fulfillment of English composition/basic communication requirement.
Creative workshop for students experienced and/or talented in the writing of poetry.

**ENG 415
SEVENTEENTH-CENTURY
ENGLISH LITERATURE
3, 3/0**

Prerequisite: 6 credit hours of literature.
Literature of seventeenth-century England.

**ENG 416
EIGHTEENTH-CENTURY ENGLISH
LITERATURE
3, 3/0**

Prerequisite: 6 credit hours of literature.
Literature of eighteenth-century England.

**ENG 417
ENGLISH NOVEL TO 1800
3, 3/0**

Prerequisite: 6 credit hours of literature.
The English novel before 1800.

**ENG 418
ENGLISH NOVEL: 1800–1900
3, 3/0**

Prerequisite: 6 credit hours of literature.
Representative nineteenth-century English novels.

**ENG 419
ROMANTIC MOVEMENT IN
ENGLISH LITERATURE
3, 3/0**

Prerequisite: 6 credit hours of literature.
Representative English romantic writers.

**ENG 420
EARLY VICTORIAN LITERATURE
3, 3/0**

Prerequisite: 6 credit hours of literature.
English writers 1832–1859.

**ENG 421
LATER VICTORIAN LITERATURE
3, 3/0**

Prerequisite: 6 credit hours of literature.
English writers 1859–1914.

**ENG 422
JAMES JOYCE AND HIS
CONTEMPORARIES
3, 3/0**

Prerequisite: 6 credit hours of literature.
The major fiction of James Joyce. Supplemental readings of other writers of the period.

**ENG 441
ROMANTIC MOVEMENT IN
AMERICAN LITERATURE
3, 3/0**

Prerequisite: 6 credit hours of literature.
American romantic writers.

**ENG 442
AMERICAN NOVEL TO 1900
3, 3/0**

Prerequisite: 6 credit hours of literature.
The nineteenth-century American novel.

**ENG 443
AMERICAN POETRY AFTER 1900
3, 3/0**

Prerequisite: 6 credit hours of literature.
The rich and diverse terrain of American poetry of the twentieth century from a historical perspective. Major figures and major movements, and the interrelationships among them.

**ENG 444
THE AMERICAN NOVEL AFTER
1900
3, 3/0**

Prerequisite: 6 credit hours of literature.
Representative American novels after 1900. Includes major modes of American fiction and the relationships among them. Historical, social, and artistic developments of the twentieth century. Possible topics include the realist, modernist, naturalist, or postmodernist novel; working-class novels; the domestic novel; the psychological novel; the historical novel.

**ENG 445
AMERICAN REALISM
3, 3/0**

Prerequisites: ENG 190, 6 credits of literature. A focused study of a major American literary movement, Realism, its major and minor figures, and the historical and cultural milieu of nineteenth-century America out of which Realism emerged.

**ENG 450
STUDIES IN POETRY
3, 3/0**

Prerequisite: 6 credit hours of literature. A particular aspect of poetry: theme, motif, philosophy, concept, or literary movement in English, American, or world literature. May be taken for credit more than once when content varies.

**ENG 451
STUDIES IN FICTION
3, 3/0**

Prerequisite: 6 credit hours of literature. Selected aspects of the novel, novella, or short story: theme, motif, concept, or movement in English, American, or world literature. May be taken for credit more than once when content varies.

**ENG 452
STUDIES IN DRAMA
3, 3/0**

Prerequisite: 6 credit hours of literature. Particular aspects of drama: theme, motif, philosophic concept, or literary movement in English, American, or world literature. May be taken for credit more than once when content varies.

**ENG 454
TWENTIETH-CENTURY NOVEL I
3, 3/0**

Prerequisite: 6 credit hours of literature. Major British and American novels from 1914 to 1945.

**ENG 455
THE BRITISH NOVEL AFTER 1900
3, 3/0**

Prerequisites: ENG 190, 6 credits of literature. A study of major twentieth-century British novels. Philosophies and theories suggested by the texts, including modernism and postmodernism, and the cultural climate since 1900 explored.

**ENG 461
YOUNG-ADULT LITERATURE
3, 3/0**

Prerequisite: 6 credit hours of literature. Literature appropriate to students in grades 7–12.

**ENG 462
METHODS AND MATERIALS IN
TEACHING SECONDARY
SCHOOL ENGLISH
3, 3/0**

Prerequisites: EDF 303 and minimum cumulative GPA of 2.0. Secondary school curriculum materials and methods of instruction. Open only to upper-division students majoring in secondary English or elementary education majors seeking certification in English. To be taken the semester before student teaching.

**ENG 463
METHODS, MATERIALS, AND
PROFESSIONAL DEVELOPMENT
FOR TEACHERS OF ENGLISH
6, 3/6**

Prerequisites: EDF 303, ENG 200; minimum cumulative GPA of 2.75 in major. Methods and materials necessary to become an effective teacher of English. Includes secondary school curriculum, New York State standards for the language arts, planning, assessment, and classroom management. Additional emphasis on professional development with on-site observations, practice teaching sessions, and interactions with public-school teachers and personnel.

**ENG 464
STUDENT TEACHING IN MIDDLE
SCHOOL/JUNIOR HIGH SCHOOL
ENGLISH
6, 0/0**

Prerequisites: ENG 200, ENG 309, ENG 462 or ENG 463, EDF 303, EDF 403, and EDU 416; minimum cumulative GPA of 2.0, 2.75 in English and professional education courses. Full-time practice teaching, five days a week for seven weeks in a middle school/junior high school situation. College supervision biweekly. Elementary extension students teach one situation. Required for

upper-division students in secondary English and elementary education extension students.

**ENG 465
STUDENT TEACHING IN SENIOR
HIGH SCHOOL ENGLISH
6, 0/0**

Prerequisites: ENG 200, ENG 309, ENG 462 or ENG 463, EDF 303, EDF 403, and EDU 416; minimum cumulative GPA of 2.0, 2.75 in English and professional education courses. Full-time practice teaching, five days a week for seven weeks in a senior high school situation. College supervision biweekly. Required for upper-division students in secondary English.

**ENG 490
ENGLISH SEMINAR
3, 3/0**

Prerequisite: 6 credit hours of English. Specific writers, genre, period, theme, etc. May be taken for credit more than once when content varies.

**ENG 495
SPECIAL PROJECT**

**ENG 499
INDEPENDENT STUDY**

ENS

**ENVIRONMENTAL SCIENCE
Earth Sciences and Science
Education Department**

**ENS 300
ENVIRONMENTAL STUDIES
3, 3/0**

Prerequisite: BIO 104, CHE 100, or SCI 231. Introduction to classical environmental literature. Global environmental problems, environmental legislation, and the status of global environmental policy.

ENT

**ENGINEERING
TECHNOLOGY
Technology Department**

**ENT 300
ANALYTICAL METHODS FOR
TECHNOLOGISTS
3, 3/0**

Prerequisite: MAT 126. Application of calculus and analytic geometry to problems in technology. Introduction to ordinary differential equations used to analyze mechanical and electrical quantities in technology. Required for all engineering technology majors.

**ENT 301
MECHANICS I
3, 3/2**

Prerequisite: PHY 107. The basic principles and applications of statics and strength of materials. Topics include equilibrium of rigid bodies, friction, centroids, properties of areas, trusses, frames, tension/compression stresses in

bars, and beam-bending stress. Required for all engineering technology majors.

**ENT 302
MECHANICS II
3, 3/2**

Prerequisites: ENT 300 and ENT 301. Principles and applications of dynamics, including translation, rotation, dynamic equilibrium, work-energy methods, and impulse-momentum methods. Required for all engineering technology majors.

**ENT 303
KINEMATICS
3, 3/2**

Prerequisite: ENT 302. The relative motions of machine parts. Both graphical and analytical techniques are presented for position, velocity, and acceleration analysis of linkages, chains, rolling bodies, gears, and miscellaneous mechanisms. Required for mechanical engineering technology majors.

**ENT 308
APPLICATIONS OF ELECTRONICS
IN SCIENCE AND ART
3, 3/2**

Prerequisite: Upper-division status. Overview of current and future applications of electronics in various fields. Combines lectures and on-campus field trips for exposure to specific applications, supported by laboratory experiments to provide visual and tangible reinforcement of basic concepts.

**ENT 311
THERMODYNAMICS
3, 3/2**

Prerequisites: ENT 300 and PHY 107. An introduction to the principles of classical thermodynamics. Technical applications of heat-power systems, refrigeration systems, and fluid machinery. Required for mechanical and electrical power and machines engineering technology majors.

**ENT 312
FLUID MECHANICS
3, 3/2**

Prerequisite: ENT 311. Application of fluid mechanics to analysis of fluid circuits, channel flows, and fluid machines. Analysis, design, and operation of instrumentation for measuring pressure and flow. Theory of dimensionless groups for models and prototypes. Hydraulic flow controllers and pressure controllers. Required for mechanical and electrical power and machines engineering technology majors.

**ENT 313
COMPUTER METHODS FOR
TECHNOLOGISTS
3, 3/0**

Prerequisite: ENT 300. The applications of commercial software for analysis and design problems in engineering technology. Required for mechanical and electrical power and machines engineering technology majors.

**ENT 331
ELECTRICAL CIRCUITS
AND DEVICES I
3, 3/2**

Prerequisite: PHY 108. Basic concepts of electrical circuits and systems, both DC and AC. Includes loop and node analysis, superposition, maximum power transfer, alternating

current analysis, phasors, inductors, capacitors, resonance, transformers. Required for mechanical and electrical power and machines engineering technology majors.

**ENT 332
ELECTRICAL CIRCUITS
AND DEVICES II
3, 3/2**

Prerequisite: ENT 331. Magnetic fields and the magnetic circuit; the ideal transformer; realistic power transformers; direct current machinery—three phase generator; the rotating magnetic field and alternating current machinery; single phase and polyphase motors; synchronous motors and generators. Required for mechanical and electrical power and machines engineering technology majors.

**ENT 341
ELECTRONICS
3, 3/2**

Prerequisite: ENT 331. Introductory analysis of electronic circuits, with emphasis on semiconductor devices. Required for electrical engineering technology, electronics, and power and machines majors.

**ENT 342
NETWORKS
3, 3/0**

Prerequisites: ENT 300 and ENT 331. Network analysis methods, generalized waveform analysis, electrical circuit parameters, equivalent circuits, initial circuit conditions, steady-state and transient solutions, Laplace transform methods and applications to network analysis, transform methods in linear system analysis, transfer function concepts and sinusoidal steady-state analysis. Required for electrical engineering technology, electronics and power and machines majors.

**ENT 351
ANALOG ELECTRONICS
3, 3/2**

Prerequisites: ENT 341. Analysis and design of electronic circuits (discrete and integrated) with emphasis on linear analog applications and use of computer simulation software. Required for electrical engineering technology, electronics majors.

**ENT 352
DIGITAL ELECTRONICS
3, 3/2**

Prerequisite: ENT 351. Analysis and design of electronic circuits, discrete and integrated, with emphasis on pulse and digital applications. Required for electrical engineering technology, electronics majors.

**ENT 371
ELECTRIC MACHINES
3, 3/2**

Prerequisite: ENT 332. DC and AC machines and transformers are studied as an integral part of electric power systems. Single and three-phase induction and synchronous machines, DC motors and fractional horsepower motors, including stepper motors, are included. Solid state motor control is introduced. Computer tools for study of motor performance is included. Laboratory experiments illustrate motor performance and measurement techniques. Required for electrical engineering technology, power/machines majors.

**ENT 401
STRESS ANALYSIS
3, 3/2**

Prerequisites: ENT 301 and TEC 311. An advanced course in strength of materials that focuses on the analytical, numerical, and experimental methods of stress analysis as applied to structures and machine elements. Axial stresses and deformation, bending and torsion of beams and shafts, plane stress, plane strain, elastic stability, yield criteria, combined stresses, and energy methods. Required for mechanical engineering technology majors.

**ENT 402
SHOCK AND VIBRATION
ANALYSIS
3, 3/2**

Prerequisites: ENT 302 and ENT 401. The theoretical, analytical, and experimental methods used in the analysis of shock and vibration in machine elements and structures. Topics include free and forced vibration of one- and multi-degree-of-freedom systems, with an introduction to lumped parameter systems and continuous systems. The laboratory stresses familiarization with the instrumentation and experimental techniques used in vibration analysis. Required for mechanical engineering technology majors.

**ENT 411
HEAT TRANSFER
3, 3/2**

Prerequisite: ENT 312. The process of heat transfer and its applications to the fields of processing technology, energy conversion, and machine design. Topics covered include conduction, convection, radiation, heat exchanger design, combined modes of heat transfer, and applications to design. Required for mechanical engineering technology majors.

**ENT 421
MACHINE DESIGN I
3, 3/2**

Prerequisite: ENT 303. The techniques used to design and specify machine elements, i.e., shafts, springs, fasteners, belts, clutches, brakes, chains, bearings, gears, cams, etc. Required for mechanical engineering technology majors.

**ENT 422
MACHINE DESIGN II
3, 2/3**

Prerequisites: ENT 421, ENT 411, and ENT 401. Advanced topics in machine and system design. Each student will be required to complete a major design project that includes preliminary analysis, working drawings, fabrication, and testing of a prototype. Required for mechanical engineering technology majors.

**ENT 431
DIGITAL SYSTEMS I
3, 3/2**

Prerequisite: ENT 331. Boolean algebra, combinational circuit analysis and design, gates, sequential circuits, flip-flops, counters, logic types, interfacing, A/D inverters, encoders/decoders, mux/demux, and memory devices. Experiments are designed to develop facility in analyzing, testing, troubleshooting, and designing digital circuits. Required for electrical engineering technology, electronics, and power and machines majors.

**ENT 432
MICROPROCESSORS
3, 3/2**

Prerequisite: ENT 431. An introduction to the theory and application of microprocessors and microcontrollers including programming, interfacing, prototyping and troubleshooting. Required of electrical engineering technology majors.

**ENT 433
MICROPROCESSOR
APPLICATIONS AND ROBOTICS
3, 3/2**

Prerequisite: ENT 432. Theoretical and practical background of the technology used in the application of microprocessors. Programming hardware, interfacing, and application of microprocessors. The elements of robotics with emphasis on the construction and programming of robots.

**ENT 441
COMMUNICATION
TRANSMISSION TECHNOLOGY
3, 3/2**

Prerequisites: ENT 332, PHY 108, OR PHY 112. Introduction to the development and technology of digital, RF, microwave and optical fiber communications including transmission line types and characteristics, components, measurement of reflections, power, impedance, and wavelength. Signal structure and protocols used in data communications are presented. Computer analysis and design of digital and carrier communication circuits is emphasized. Required for electrical engineering technology, electronics majors.

**ENT 442
RF AND MICROWAVE
COMMUNICATIONS
3, 3/2**

Prerequisite: ENT 441. Introduction to wireless communication technology. Free-space and near-earth propagation effects including RF safety, multipath, and antennas are covered. Receiver and transmitter design, components, and performance. Emphasis on digital representation of signals and transmission of digital data, types of modulation and channel capacity. Systems and applications are emphasized. Required for electrical engineering technology, electronics majors.

**ENT 461
CONTROL SYSTEMS I
3, 3/2**

Prerequisite: ENT 341, ENT 342, ENT 302, and senior standing. Applies frequency domain techniques to open-loop and closed-loop systems with emphasis on stability and performance. Classical methods of control engineering are presented: Laplace transforms and transfer functions, root locus analysis, Routh-Hurwitz stability analysis, steady-state error for standard test signals, and second-order system approximations. MATLAB is introduced and utilized extensively for computer aided analysis. Laboratory exercises provide practical application of the control-system theory. Required for electrical engineering technology majors.

**ENT 462
CONTROL TECHNOLOGY II
3, 3/2**

Prerequisite: ENT 461. Project centered. Students build, tune, simulate, and model a system (such as a magnetic levitation apparatus) for the purpose of demonstrating skills acquired during previous academic work. Project focuses on practical application of the control-system theory developed in Control Systems I. Required for electrical engineering technology majors.

**ENT 471
POWER SYSTEMS I
3, 3/2**

Prerequisite: ENT 332. Basic elements of power systems, energy sources, substation configuration, load cycles, balanced three-phase circuits, power factor correction, transmission line configurations and impedance, voltage regulation of transformers, and the per unit system are studied. Load flow, fault analysis, and economic operations are introduced. Required for electrical engineering technology, power/machines majors.

**ENT 472
POWER SYSTEMS II
3, 3/2**

Prerequisite: ENT 471. The symmetrical component method is used for fault analysis. Power system demand calculations, relay protection applications, supervisory control, power quality, and system reliability are introduced. Required for electrical engineering technology, power/machines majors.

**ENT 495
SPECIAL PROJECT**

**ENT 497
WORKSHOP**

**ENT 499
INDEPENDENT STUDY**

EXE

EXCEPTIONAL EDUCATION

Exceptional Education Department

**EXE 100
NATURE AND NEEDS OF
INDIVIDUALS WITH SPECIAL
NEEDS
3, 3/0; D CT**

Individuals who are exceptional due to factors of intelligence, physical development, behavior, and sensory abilities. The causes, characteristics, and implications—educational, social, and vocational—of individuals who deviate from the average or normal. Required for exceptional education majors.

**EXE 245
COMMUNITY SERVICE WITH
INDIVIDUALS WITH SPECIAL
NEEDS
1–3, 1–3/3–9**

Service in community agencies with individuals who are exceptional. May be taken for 1, 2, or 3 credit hours.

**EXE 314
PSYCHOLOGY OF INDIVIDUALS
WITH SPECIAL NEEDS
3, 3/0; CT**

Behavior trends common to various types of exceptionality. Description, analysis, examination of educational implications.

**EXE 360
FOUNDATIONS OF TEACHING
INDIVIDUALS WITH DISABILITIES
3, 3/0**

Prerequisite: EXE 100. *Corequisite:* EXE 361. Adaptations and instructional procedures necessary for effective instruction of students with disabilities in various educational settings. Required for exceptional education majors. Must be taken concurrently with EXE 361.

**EXE 361
FIELD EXPERIENCE IN
FOUNDATIONS OF TEACHING
INDIVIDUALS WITH DISABILITIES
1, 1/0**

Prerequisite: EXE 100. *Corequisite:* EXE 360. Application of adaptations and instructional procedures learned in EXE 360. Required for exceptional education majors. Must be taken concurrently with EXE 360.

**EXE 362
BEHAVIOR AND CLASSROOM
MANAGEMENT
3, 3/0; CT**

Prerequisites: EDF 202, EDU 211 (childhood education majors only). May be taken concurrently with EDU 400/401. Managing the classroom environment to facilitate effective instruction. Various models of behavior management. Exceptional education majors must take this course concurrently with EXE 363.

**EXE 363
FIELD EXPERIENCE IN BEHAVIOR
MANAGEMENT
1, 1/0**

Prerequisites: exceptional education major; EXE 100, EXE 360, and EXE 362.

Application of principles of behavior management learned in EXE 362 through on-site participation. Must be taken concurrently with EXE 362. Required for exceptional education majors.

**EXE 364
EDUCATING STUDENTS WITH
SEVERE DISABILITIES
3, 3/0**

Prerequisite: EXE 100. Characteristics and needs of individuals with severe disabilities and those of their families. Methods to teach and support individuals and families.

**EXE 365
EVALUATION AND ASSESSMENT
IN SPECIAL EDUCATION
3, 3/0**

Prerequisites: EXE 100, EXE 360, EXE 366. Introduction to the educational evaluation and assessment of students with disabilities.

**EXE 366
FIELD EXPERIENCE IN
EVALUATION AND ASSESSMENT
1, 1/0**

Prerequisites: EXE 100 and EXE 360. *Corequisite:* EXE 365W. Application of principles of evaluation and assessment learned in

EXE 365W through on-site participation. Required for exceptional education majors.

**EXE 367
CURRICULUM FOR CHILDREN
WITH MILD DISABILITIES
3, 3/0**

Prerequisite: EXE 100. *Corequisite:* EXE 368. Description and discussion of curricular design and implementation for children with disabilities. Required for exceptional education majors.

**EXE 368
FIELD EXPERIENCE IN
CURRICULUM FOR CHILDREN
WITH MILD DISABILITIES
2, 2/0**

Prerequisite: EXE 100. *Corequisite:* EXE 367W. Application of curriculum design and implementation for children with disabilities. Required for exceptional education majors.

**EXE 369
CURRICULUM FOR
ADOLESCENTS WITH MILD
DISABILITIES
3, 3/0**

Prerequisites: EXE 100 and EXE 372. *Corequisite:* EXE 370. Adaptations and instructional procedures necessary for effective instruction of students with disabilities in high school and middle school. Recommended for secondary education majors.

**EXE 370
FIELD EXPERIENCES IN
CURRICULUM FOR
ADOLESCENCE WITH MILD
DISABILITIES
2, 2/0**

Corequisite: EXE 369. Application of adaptations and instructional procedures necessary for effective instruction of students with disabilities in high school and middle school.

**EXE 371
FOUNDATIONS OF TEACHING
CHILDREN WITH DISABILITIES
3, 3/0**

Prerequisite: EDU 211. Adaptations, procedures, and management systems necessary for effective instruction of children with disabilities in general education settings. Required for elementary education majors.

**EXE 372
FOUNDATIONS OF TEACHING
ADOLESCENTS WITH
DISABILITIES
3, 3/0**

Prerequisite: EXE 100. Adaptations and instructional procedures necessary for effective instruction of adolescents with disabilities. Recommended for secondary education majors.

**EXE 385
OBSERVATION AND
PARTICIPATION IN SPECIAL
EDUCATION
6, 0/0**

Prerequisites: Minimum cumulative GPA of 2.50. Classroom observation and participation. Selection, organization, and presentation of curriculum material at different grade levels. Evaluation of pupil progress in classes for students with disabilities. By advisement only.

**EXE 420
PRACTICUM IN SPECIAL
EDUCATION
6, 3/0**

Prerequisites: Minimum grade of C in EXE 365, 366, 367 or 369, 368, or 370; minimum cumulative GPA of 2.5 (overall and in major courses). Practice teaching with students with disabilities in public school classes, private agencies, or residential settings. Required for senior exceptional education majors.

**EXE 495
SPECIAL PROJECT**

**EXE 499
INDEPENDENT STUDY**

FAR

FINE ARTS

Fine Arts Department

In addition to regular class meetings, all fine arts studio courses require at least three hours per week of outside preparation.

Students are expected to assume the costs of materials they use in fine arts courses.

**FAR 100
INTRODUCTION TO FINE ARTS
3, 0/6; CA**

The critical bases of procedures in the fine arts. Introductory problems in studio performance. Lecture and studio experiences. Non-art majors only.

**FAR 101
DRAWING I
3, 0/6; CA**

Fundamentals of drawing based primarily on the study and representation of objects and nature forms, with problems of analysis, composition, and structure in various media. Lecture and studio experiences.

**FAR 102
DRAWING II
3, 0/6**

Prerequisite: FAR 101. Drawing the nude using various media with an emphasis on proportion, anatomy, and pictorial structure. Lecture and studio experience.

**FAR 103
MODELING
3, 0/6**

Modeling as an introductory experience in the exploration of three-dimensional form. Development of perceptual and analytical attitudes. Lectures and modeled work dealing with the human figure.

**FAR 210
INTRODUCTORY PAINTING
3, 0/6; CA**

Prerequisite: FAR 101. Introduction to the methods, techniques, standards, and values of painting. Exploration of color, form, and compositional problems. Lecture and studio experiences.

**FAR 220
INTRODUCTORY PHOTOGRAPHY
3, 0/6; CA**

Fundamentals of 35 mm camera craft, black and white film development, exposure metering, print enlarging and developing, print finishing and presentation, and an introduction to the use of computer, film scanner, and ink jet printer for digital imaging. Includes lectures, darkroom, and field experiences. Note: 35 mm camera with built in exposure meter and a manual mode capacity is required.

**FAR 230
INTRODUCTORY PRINTMAKING
3, 0/6; CA**

Prerequisite: FAR 101. Introduction to printmaking and its basic processes and techniques, involving demonstrations, lectures, and studio experiences in one or more areas such as intaglio, lithography, and relief.

**FAR 240
INTRODUCTORY SCULPTURE
3, 0/6; CA**

Prerequisite: FAR 101. The fundamentals of sculptural form. Additive, subtractive, and constructive approaches to sculpture through lecture and studio experiences.

**FAR 250
ART HISTORY I
3, 3/0; CA V2**

The history of painting, sculpture, architecture, and the related arts from prehistoric times to the Gothic period.

**FAR 251
ART HISTORY II
3, 3/0; CA V2**

The history of painting, sculpture, architecture, and the related arts from the Renaissance to the modern period in Europe and the United States.

**FAR 300
DRAWING III
3, 0/6**

Prerequisite: FAR 102. Continuation of FAR 102, with emphasis on the human figure and its relationship to an environment and pictorial structure. Lecture and studio experience. Course may be repeated twice.

**FAR 311
INTERMEDIATE PAINTING I
3, 0/6**

Prerequisite: FAR 210. Continuation of FAR 210, working toward a greater awareness of a personal statement. Lecture and studio experience.

**FAR 312
INTERMEDIATE PAINTING II
3, 0/6**

Prerequisite: FAR 311. Continuation of FAR 210 and FAR 311, allowing opportunity for more thorough fundamental awareness at a more intense concentration. Lecture and studio experience.

**FAR 313
ADVANCED PAINTING
3, 0/6**

Prerequisite: FAR 312. Advanced painting, with media, style, and content based on individual needs. Concentration on individually selected areas of painting. Lecture and studio experience. Course may be repeated up to three times.

**FAR 316
PAINTING IN SIENA
3, 0/6**

Prerequisite: FAR 210 (for art credit). No prerequisite for non-art credit. Upper-level painting course, taught in Siena, Italy. Students work at their level of experience, in the materials and techniques available in Siena.

**FAR 321
INTERMEDIATE PHOTOGRAPHY I
3, 0/6**

Prerequisite: FAR 220. An intermediate course in photography emphasizing the making of creative images. Intermediate 35 mm camera technique and the use of on-camera electronic flash are taught. The basic Zone system is taught to improve exposure-metering skills, to introduce controls for monitoring the development of film, and to familiarize students with contrast curves used in Photoshop. Includes lectures, darkroom work, equipment demonstrations, basic computer instruction, and fieldwork. Note: 35 mm camera with built in exposure meter, and a manual mode capability is required. Tripod, flash, and hand-held meter are desirable.

**FAR 322
INTERMEDIATE PHOTOGRAPHY II
3, 0/6**

Prerequisite: FAR 220 or instructor permission. Uses computer, Photoshop, film scanning, ink jet printing, and color management to make creative pictures. Establishes basic skills for computer-based image making in photography, and may be taken by any student with a 35 mm camera and a basic knowledge of photography. Includes lectures, darkroom work, equipment demonstrations, instruction in computer use, instruction in Photoshop, and fieldwork.

**FAR 323
ADVANCED PHOTOGRAPHY
3, 0/6**

Prerequisite: FAR 322. Devoted to creative work in photography and related digital technology. Advanced camera skills are taught using medium-format and digital cameras. Advanced film exposure and lighting techniques are taught. Intermediate and advanced Photoshop skills are taught, as well as basic use of Illustrator, Painter, and Poser. A medium format camera (120/220 film size), tripod, hand-held exposure meter, and electronic flash are required. An internship taken concurrently with the last semester of Advanced Photography is encouraged. Course may be repeated up to three times.

**FAR 325
HISTORY OF PHOTOGRAPHY
3, 3/0**

The invention and development of photography from the early-nineteenth century to the present. Photography as art, science, communication, and influence upon social patterns and customs.

**FAR 327
NONSILVER PHOTOGRAPHIC
PROCESSES
3, 0/6**

Prerequisite: FAR 220. Investigation of light-sensitive, nonsilver photographic processes: cyanotype, Vandyke brown, casein, and gum bichromate. Instruction in basic processes,

then pursue individually assigned problems. Papers, fabrics, and other working materials and supplies are provided by the student.

FAR 328
STUDIO PHOTOGRAPHY
3, 0/6

Prerequisite: FAR 220. Introduction to current studio practices used to produce still photographs for commercial and other uses. Includes medium-format camera, view camera, and studio-lighting techniques. Emphasis on directed and fabricated photographic images. Professional-quality camera, hand-held lightmeter, and tripod required.

FAR 319
INTERMEDIATE PRINTMAKING I
3, 0/6

Prerequisite: FAR 230. Continuation of FAR 230. Emphasis on personal expression and creative possibilities. Includes lecture, demonstrations, and studio experience.

FAR 322
INTERMEDIATE PRINTMAKING II
3, 0/6

Prerequisite: FAR 331. Continued exploration of printmaking with emphasis on personal expression and creative possibilities. Includes lecture, demonstrations, and studio experience.

FAR 333
ADVANCED PRINTMAKING
3, 0/6

Prerequisites: FAR 331 and FAR 332. Advanced printmaking. Media determined by the student in consultation with the instructor. Includes lecture and studio experiences. May be repeated up to three times.

FAR 335
PAPERMAKING
3, 0/6

Prerequisite: One studio course in fine arts or design. The theory and practice of handmade papermaking involving demonstrations, lectures, and studio experience. Required for B.F.A. printmaking majors (0165).

FAR 341
INTERMEDIATE SCULPTURE I
3, 0/6

Prerequisite: FAR 240. Further exploration of sculptural form with more complete study of numerous sculptural approaches and techniques. Practice in planning and executing sculpture projects.

FAR 342
INTERMEDIATE SCULPTURE II
3, 0/6

Prerequisite: FAR 341. Continuation of FAR 341 with further emphasis on exploration of variations within each technique and approach. Development of personal modes of expression.

FAR 343
ADVANCED SCULPTURE
3, 0/6

Prerequisite: FAR 342. Concentration on individually selected areas of development in sculpture based on personal interest, needs, and experience. May be repeated up to three times.

FAR 345
FIGURE MODELING
3, 0/6

Prerequisite: FAR 240. Figure modeling as a basic sculptural discipline. Portrayal and interpretation of the human form. Anatomy lectures and work from live models.

FAR 346
SCULPTURE IN SIENA
3, 0/6

Prerequisite: FAR 240 (for art credit); no prerequisite for non-art credit. Upper-level course in sculpture taught in Siena, Italy. Students work at their level of experience, in the materials and techniques available in Siena.

FAR 352
ART AND CULTURE OF ISLAM
3, 3/0

Prerequisites: FAR 250 and FAR 251. The art of Islam in its cultural context, beginning in the seventh century A.D. and terminating in the twentieth century A.D. The development of Islamic art in relation to the Islamic system of life and belief and regional variation in Islamic art, both sacred and secular are explored throughout the eastern Mediterranean, the Medieval West and the Near East.

FAR 353
ART AND CULTURE OF EGYPT AND THE NEAR EAST
3, 3/0

Prerequisites: FAR 250 and FAR 251. The ancient art and culture of Egypt and the Near East from their beginnings in the Neolithic period circa ninth millennium B.C. through the Roman conquest. The cultural and environmental context of art in Egypt and the Near East with emphasis on the development of civilization in the fourth millennium B.C., on craft specialization, and on ethnic diversity resulting in regional styles in art.

FAR 354
ART AND CULTURE OF GREECE
3, 3/0

Prerequisites: FAR 250 and FAR 251. Examination of the history of art in the cultural and environmental context of Greece from its beginnings in the Neolithic period, ca. 6000 B.C. through the Roman Conquest (first century B.C.). The architecture, sculpture, painting, and minor arts of Greece studied in their cultural context.

FAR 355
ART AND CULTURE OF ROME
3, 3/0

Prerequisites: FAR 250 and FAR 251. The history of Roman art during its two main periods, the Republican period and the Roman Empire (ca. third century B.C. through the fourth century A.D.). Consideration of early influences on the art and culture of Latium, including the art of the Near East and culture of the Villanovans and Etruscans, and the art of Archaic, Classical, and Hellenistic Greece.

FAR 356
EARLY MEDIEVAL ART
3, 3/0

Prerequisites: FAR 250 and FAR 251. The art and culture of Europe, Byzantium, and the Near East in the context of the development of

Christianity from its early roots through the early twelfth century A.D. Regional forms in art including sacred and secular building construction, manuscript illumination, metalworking, enamelling, and sculpture are examined with emphasis on historical context and religious and philosophical meaning.

FAR 357
LATE MEDIEVAL ART
3, 3/0

Prerequisites: FAR 250 and FAR 251. Architecture, sculpture, painting and the decorative arts of the period from ca. 1100 A.D. through the end of the fourteenth century A.D. The new aesthetic of Gothic in the context of philosophical and theological developments in Western Europe, the Crusades, and the growth of cities.

FAR 358
EARLY RENAISSANCE ART IN ITALY
3, 3/0

Prerequisites: FAR 250 and FAR 251, except in Siena. Painting, sculpture, and architecture of fifteenth-century Italy. Special attention to Donatello, Brunelleschi, and Alberti. Consideration of important earlier artists and movements, and of the aesthetic implications of the rebirth of classical tradition in Western civilization.

FAR 359
HIGH RENAISSANCE AND MANNERISM
3, 3/0

Prerequisites: FAR 250 and FAR 251. Italian art and architecture of the sixteenth century. Special attention to Bramante, Leonardo, Raphael, and Michelangelo, and the emergence of Mannerism.

FAR 360
LATE GOTHIC AND RENAISSANCE ART
3, 3/0

Prerequisites: FAR 250 and FAR 251. Artistic production, including illuminated manuscripts, in the Netherlands, France, Germany, and England from the late fourteenth through the early sixteenth centuries.

FAR 361
ITALIAN BAROQUE ART
3, 3/0

Prerequisites: FAR 250 and FAR 251. Architecture, sculpture, and painting in Italy during the seventeenth and eighteenth centuries. Emphasis on key centers such as Rome, Venice, Turin, and Naples.

FAR 362
NINETEENTH-CENTURY ART
3, 3/0

Prerequisites: FAR 250 and FAR 251. Architecture from the neoclassicism of the Adam brothers to the skyscraper. Painting from David to Cézanne in France, the Nazarenes, and Pre-Raphaelites in Germany and England. Sculpture from Houdon and Canova to Rodin in relationship to the social, political, economic, and intellectual climate of the times.

FAR 363
TWENTIETH-CENTURY ART
3, 3/0

Prerequisites: FAR 250 and FAR 251. Major trends and works of the twentieth century. Emphasis on historical, artistic, judgmental, and cultural meanings as they reflect twentieth-century and past civilizations. Includes painting, sculpture, architecture, and other areas.

FAR 364
ART AFTER 1940
3, 3/0

Prerequisites: FAR 250 and FAR 251. Survey of modern and contemporary art in the United States and Europe from approximately 1940 to the present. Painting, sculpture, performance, and video art will be examined in terms of style and/or political-historical contexts. Among others, the course examines the art of Jackson Pollack, Andy Warhol, Lucian Freud, Romare Bearden, Maya Lin, Cindy Sherman, and Mark Tansey.

FAR 365
AMERICAN ART I
3, 3/0

Prerequisites: FAR 250 and FAR 251. Architecture, painting, and sculpture in the United States from the seventeenth century to World War I.

FAR 367
BAROQUE OF NORTHERN EUROPE
3, 3/0

Prerequisites: FAR 250 and FAR 251. Architecture, sculpture, and painting of the seventeenth and eighteenth centuries in Northern Europe. Emphasis on development in France, Holland, and Germany.

FAR 368
OTTONIAN AND ROMANESQUE ART
3, 3/0

Prerequisites: FAR 250 and FAR 251. Architecture, sculpture, painting, and decorative arts of Europe from the origins of a Romanesque style in the eleventh century through its culmination in the late twelfth century, from the era of the Bayeux Tapestry and the churches of Pilgrimage Road to the age of Abbot Suger.

FAR 372
MASTERWORKS OF ARCHITECTURE
3, 0/0

Introduction to masterworks of architecture, emphasizing architecture as a living organism. Buildings selected from various periods, cultures. Styles from early civilizations to the present day, including places of worship and interment, public and commercial structures, and private residences.

FAR 375
INTRODUCTION TO ASIAN ART
3, 3/0

Prerequisites: FAR 250 and FAR 251, junior or senior standing. The principle concepts in the art of China, Japan, and India. The relevance of the philosophies of Hinduism, Buddhism, Jainism, Zen tradition, Taoism, and Confucianism to the development of Asian art. Brief histories of civilizations as frameworks

for understanding aesthetic and philosophical Asian concepts.

**FAR 400
DRAWING IV
3, 0/6**

Prerequisite: FAR 300. Advanced drawing with media and content based on individual needs. Concentration on individually selected area of development in drawing. Use of model. Lecture and studio experiences. Course may be repeated twice.

**FAR 410
SENIOR STUDIO IN PAINTING
6, 0/12**

Prerequisite: FAR 313, painting major, senior status. A 6 credit-hour concentration of studio work. Students plan and execute series of problems and projects in consultation with major adviser.

**FAR 420
SENIOR STUDIO IN
PHOTOGRAPHY
6, 0/12**

Prerequisite: FAR 323, photography major, senior status. A 6 credit-hour concentration of studio work by the senior major in photography. The student, in consultation with his or her major adviser for this course, will outline, plan, and execute a complex and related series of pictures to be made during the semester, which result in a skillful, intelligent, and coherent body of work.

**FAR 430
SENIOR STUDIO IN
PRINTMAKING
6, 0/12**

Prerequisite: FAR 333, printmaking major, senior status. A 6 credit-hour concentration of studio work. Students plan and execute series of problems and projects in consultation with major adviser.

**FAR 440
SENIOR STUDIO IN SCULPTURE
6, 0/12**

Prerequisite: FAR 343, sculpture major, senior status. A 6 credit-hour concentration of studio work. Students plan and execute series of problems and projects in consultation with major adviser.

**FAR 469
ART AND ARCHITECTURE IN
SIENA
3, 3/0**

Firsthand study of Gothic and Renaissance art in Siena, Italy. Includes classroom lectures and visits to the city's major monuments and collections.

**FAR 470
SENIOR SEMINAR IN FINE ARTS
3, 3/0**

Prerequisite: FAR 313, FAR 323, FAR 333, or FAR 343, fine arts major. Final evaluative process regarded as a culminating experience in the program. Discussions and lectures in major areas. Theory and significance of selected problems. Critical analysis of the student's work resulting in the preparation of a professional portfolio.

**FAR 471
SENIOR SEMINAR IN ART
HISTORY
3, 3/0**

Prerequisites: FAR 454, FAR 457, and FAR 459; senior status; art history major; or instructor permission. Readings, discussions, and research on selected problems in the history of art from antiquity to the twentieth century. Emphasis on gathering and interpreting source material.

**FAR 488
INTERNSHIP
Variable credit**

Prerequisite: Permission of faculty supervisor; minimum cumulative GPA of 2.0; background of courses or experiences within area of interest; permission of student adviser or major department chair and supervising faculty member and chair of credit-granting department. Guided, supervised field experiences (experiential learning).

**FAR 495
SPECIAL PROJECT**

**FAR 497
WORKSHOP**

**FAR 499
INDEPENDENT STUDY**

FLE

**FOREIGN LANGUAGE
EDUCATION**

See Modern and Classical Languages

FRE

FRENCH

See Modern and Classical Languages

FTT

**FASHION AND TEXTILE
TECHNOLOGY**

Technology Department

**FTT 107
SURVEY OF THE FASHION AND
TEXTILE INDUSTRY
3, 3/0; CT**

Survey course of the textile and fashion industry. Provides overview of the product development process: design, terminology, industrial construction processes, quality of the finished product, and career opportunities in the field.

**FTT 108
FASHION FUNDAMENTALS
3, 2/2**

Techniques of apparel construction using commercially available patterns. Includes

sewing equipment, fabric selection, fit alterations, and appropriate selection of garments based on design principles. Evaluation of constructed garments is related to comparable apparel available through retail sources.

**FTT 109
DESIGN ROOM TECHNIQUES
3, 2/2**

Prerequisite: FTT 108 or instructor permission. Design-room techniques used in both couture and mass production of apparel. Emphasis on alteration techniques used to achieve proper fitting of garments and mastery of selected couture and industrial construction processes.

**FTT 150
INTRODUCTION TO FASHION
MERCHANDISING
3, 3/0; CT**

Introduction to fashion merchandising, including basic market structure, operational patterns, occupational roles, and future trends in merchandising.

**FTT 206
INTRODUCTION TO TEXTILES
3, 3/0; CT**

Introduction to the care, selection, and use of textile products. Includes the study of fibers, yarns, fabric construction, color application, and finishes in relation to fabric behavior, fabric maintenance, and fabric performance. Appropriate for majors and nonmajors with little or no background in chemistry. Serves as introductory course to the other departmental textile offerings, FTT 336 and FTT 449.

**FTT 250
FASHION BUYING AND
MERCHANDISING PRINCIPLES
3, 3/0**

Prerequisites: FTT 150. Provides marketing skills specific to fashion merchandising. Market segmentation, qualitative and quantitative fashion merchandising objectives, techniques for buying and controlling fashion inventories, and manual calculations of mathematical formulas and forms used by retailers.

**FTT 303
FASHION ILLUSTRATION
3, 2/2**

The fashion figure, poses, garment and fabric sketching. Students illustrate a garment collection for professional portfolio development.

**FTT 304
PRINT RENDERING FOR
INDUSTRY
3, 2/2**

Introduction to apparel/home furnishing textile print design for industry. Emphasis on basic understanding of the apparel/home furnishing market, the mastery of design skills specific to textile print design for industry, layout techniques, and industry practices.

**FTT 308
FASHION CAD
3, 2/2**

Prerequisites: junior/senior standing. Opportunities for building foundation skills in apparel and textile design and development using world standard off-the-shelf design software and specialized plug-ins. Develop and digitally illustrate an apparel/fabric collection for professional portfolio development.

Computerized fashion/textile visual design and product development presentations using world standard design software is becoming a skill expectation for entry-level employment in the apparel/textile industry.

**FTT 309
TECHNICAL FASHION DRAWING
1, 1/0**

Prerequisites: FTT 107 or FTT 108, or FTT 303. Basic Karat CAD technical drawing knowledge and digital skills for entrance into computerized apparel industry technical spec development employment positions.

**FTT 310
FUNDAMENTALS OF APPAREL
PRODUCTION
3, 3/0**

Prerequisites: FTT 107 or FTT 108, FTT 206, and FTT 336. Overview of the apparel industry. Includes the structure and organization of the industry. Design sources, techniques of pattern development; selection of raw materials. Manufacturing processes; and quality specifications of the finished product.

**FTT 325
DRAFTING AND GRADING
TECHNIQUES IN APPAREL
DESIGN
3, 2/2**

Prerequisites: FTT 108 and FTT 109 or instructor permission. Introduction to technical pattern-making skills. Emphasis on the development of basic drafting and grading skills. Students produce a drafted sloper that is graded into a graded nest.

**FTT 326
APPAREL DESIGN I: FLAT
PATTERN
3, 2/2**

Prerequisites: FTT 108 and FTT 109 or instructor permission. Introduction to the flat-pattern method of pattern making. Emphasis on the design and completion of selected items of apparel developed from a master pattern.

**FTT 327
APPAREL DESIGN II:
COMPUTERIZED PATTERN
MAKING
3, 2/2**

Prerequisite: FTT 326. Advanced apparel design via manual and computerized flat-pattern experiences. Emphasis on the development of an apparel line using commercial software.

**FTT 328
APPAREL DESIGN III: DRAPING
3, 2/2**

Prerequisite: FTT 326 or instructor permission. Creation of basic garment patterns via draping method. Experience with the manipulation of a two-dimensional fabric to cover three-dimensional forms using a variety of fabrics to achieve individualized designs.

**FTT 330
CLOTHING FOR THE DISABLED
3, 2/2**

Prerequisites: FTT 108 and FTT 109 or instructor permission. Introduction to the clothing needs of the physically and developmentally disabled. Emphasis on understanding the clothing needs of and clothing solu-

tions for this special population. Students design and produce a functional and fashionable line of clothing for selected clients.

**FTT 336
TEXTILE EVALUATION
3, 2/2**

Prerequisite: FTT 206. Advanced-level course in textiles designed to provide an understanding of fabric-performance evaluation. Emphasis on the standard test methods. Equipment and techniques used in determining physical and aesthetic properties of textile products and legal requirements for consumer safety. These properties are used by the textile/apparel industry to determine the appropriateness of textiles for end use in textile products.

**FTT 347
CLOTHING IN RELATION TO
HUMAN BEHAVIOR
3, 3/0**

Cultural, communicative, sociological, and psychological functions of dress as related to human behavior. Includes cultural universalities and diversities of dress, the interpretation of the communicative language of clothing, psychological clothing needs of the life cycle, clothing needs of the disabled, and contemporary issues related to dress.

**FTT 348
HISTORY OF COSTUME
3, 3/0**

The development of Western dress from the earliest periods of history to the present. Emphasis on societal influences that drove fashion style changes. Consideration of the impact of other cultures on style changes and modern dress.

**FTT 350
FASHION MERCHANDISING
APPLICATIONS
3, 3/0**

Prerequisites: FTT 150 and FTT 250. Manual and computer spreadsheet calculation of mathematical formulas and forms as used by typical fashion retailers. The identification of pricing and inventory control problems unique to apparel merchandising. Investigation of solutions to problems in fashion buying and merchandising.

**FTT 358
APPAREL/TEXTILE FORECASTING
AND PROMOTION
3, 3/0**

Prerequisites: FTT 107 or FTT 108. Analysis of current trends in apparel and textiles to forecast future trends, study of designers and their work. Methods of apparel promotion used at both the wholesale and retail levels, such as visual merchandising, press kits, and storyboards.

**FTT 410
ADVANCED APPAREL
PRODUCTION
3, 3/0**

Prerequisite: FTT 310. Principles and practices of sourcing raw materials and costing finished garments. Types of production systems. Sequence of construction operations used to produce selected items of apparel.

**FTT 411
CAM: APPAREL
MANUFACTURING
3, 2/2**

Prerequisites: FTT 107 or FTT 108 and FTT 310. Simulated production of industrial apparel patterns for the ready-to-wear market. Emphasis on computer-aided grading, pattern plotting, and marker making.

**FTT 412
CAD: APPAREL AND TEXTILE
DESIGN FOR INDUSTRY
3, 2/2**

Prerequisite: FTT 206. Introduction to computerized fashion/textile design. Emphasis on development of basic understanding and design skills using commercial software. Translation of previously acquired technical and aesthetic design skills into a new media-industrialized computer design. Portfolio development for professional development.

**FTT 413
CAD: WEAVE FOR INDUSTRY
3, 2/2**

Prerequisite: DES 242. Introduction to CAD Weave apparel/home furnishings textile design. Emphasis on research, development, and understanding of a line/collection and target market for wovens. Translation of aesthetic weaving design skills into a new media-industrialized computer design using commercial software. Portfolio development.

**FTT 414
INTRODUCTION TO KNIT
TECHNOLOGY
3, 2/2**

The basic principles of hand and computerized machine knit technology. The relationships of yarn, stitch types and gauge charting, and producing stitch designs by hand and machine.

**FTT 415
KNIT TECHNOLOGY II:
COMMERCIAL SOFTWARE
SYSTEMS
3, 2/2**

Prerequisites: FTT 414. Computerized knit fabrication using commercial software. Includes review of basic knit construction then proceeds to the use of commercial computer technology related to knit design. This program allows knits to be designed and illustrated through multiple computer techniques. The student will design original knit garments and produce computer printouts for inclusion in a student portfolio.

**FTT 425
CLOTHING DESIGN THROUGH
TAILORING
3, 2/2**

Prerequisites: FTT 108 and FTT 109. Selection, design, fitting, and construction techniques pertaining to traditional and contemporary tailoring.

**FTT 449
HISTORY OF TEXTILES
3, 3/0**

Prerequisites: FTT 206 and upper-division status or instructor permission. The beginning of trade and cultural interaction throughout the world from the beginning of history to the middle of the twentieth century. Relationships between technological, agricul-

tural, and cultural developments and the development of textiles. The historic use of fibers, yarns, fabric construction, color application, and finishes in relation to different historic periods and geographical areas of the world. Writing assignments are completed in several projects to fulfill the writing-intensive requirement for the course.

**FTT 450
ISSUES IN APPAREL AND TEXTILE
INDUSTRY
3, 3/0**

Prerequisites: FTT 206, FTT 310, and FTT 336. Global issues currently facing the textile and apparel industry. Differing methods of organization and their inherent structural characteristics, including the national and international scope of the industry, related to textiles, merchandising, and apparel manufacturing companies. Contemporary issues confronting the American textile and apparel industry, including governmental controls, global trade policies, and labor issues.

**FTT 451
SENIOR PROJECT
3, 3/0**

Prerequisites: Upper-division status and instructor permission. Culminating experience by senior-level students after completion of all prerequisites. Projects include the design, production, and marketing of an apparel line, and provide the opportunity to integrate all previous academic experiences.

**FTT 452
FASHION SHOW PRODUCTION
3, 3/0**

Prerequisite: Upper-division status or instructor permission. Planning and production of a fashion-promotion event. Participation in individual and group activities leading to the presentation of a major fashion show.

**FTT 488
INTERNSHIP/FIELD EXPERIENCE
Variable credit**

Prerequisites: Upper-division status, instructor permission, minimum cumulative GPA of 2.75, background in area of interest. Integration of technical knowledge and practical experience in institution, business, or educational organization, or social or governmental agency. Includes supervised field participation, meetings with instructor, and written or other assignments. Maximum of 6 credit hours.

**FTT 495
SPECIAL PROJECT**

**FTT 497
WORKSHOP**

**FTT 499
INDEPENDENT STUDY**

GENERAL SCIENCE

See SCI Science

GEG

GEOGRAPHY

Geography and Planning Department

**GEG 101
WORLD NATURAL
ENVIRONMENTS
3, 3/0; G CS**

Nature of geography; earth-sun relationships; maps and map interpretation; and classification, distribution, and origins of the major elements of the natural environment (weather, climates, soils, natural vegetation, and landforms). Required for geography majors and urban-regional analysis and planning majors.

**GEG 102
CULTURAL ENVIRONMENT
3, 3/0; G CS**

Introduction to cultural geography and the cultural landscape. The distribution of value systems, ethnicity, religion, language, population, and politics as indices of human variety. Evolution of human variety. Evolution of rural and urban socioeconomic patterns. Required for geography majors.

**GEG 120
CAVERN STUDIES
1, 1/0**

The development and unique environment of solution caves. Students will explore caves while on a weekend field trip, studying cave development and the formation of depositional features. Other topics include cave climatology, biology, chemistry, and the application of survey/mapping techniques.

**GEG 199
INTRODUCTION TO COMPUTER
USE IN THE SOCIAL SCIENCES
3, 3/0**

Hands-on introduction to the application of computers to applied social research problems. Includes review of past practices, current uses, and future trends. Students analyze data using computers to develop insight into the use of computers for social improvement.

**GEG 206
GEOGRAPHY OF NEW YORK
STATE
3, 3/0; CS**

Landforms, regions, climates, and natural resources; distribution of population; location and functions of cities; development of transportation; utilization and conservation of soil, mineral, forest, wildlife, and water resources; industrial development.

GEG 300
WORLD REGIONAL GEOGRAPHY
3, 3/0; G CS

National and state geography standards; concept of region; map essentials; physical, cultural, economic, and political geography fundamentals within selected regions.

GEG 303
WORLD CLIMATOLOGY
3, 3/0

Prerequisite: GEG 101. World climate regions; climate classification systems; classification, distribution, and comparative analysis of world climatic regions. Required for geography majors in the physical geography/conservation concentration.

GEG 305
PRINCIPLES OF ECONOMIC GEOGRAPHY
3, 3/0

Prerequisite: ECO 202. Introduction to the theoretical study of economic geography; location theory; theoretical spatial distribution of economic activities, including agriculture, manufacturing, urban land use, services, and transportation. Required for urban-regional analysis and planning majors and geography majors.

GEG 307
CONSERVATION AND ENVIRONMENTAL MANAGEMENT
3, 3/0; G CS

The nature of resources; concepts and philosophy of conservation; strategies for environmental management of the earth's land, water, air, and energy resources; local, regional, and global impacts of resource use.

GEG 309
INTRODUCTION TO URBAN GEOGRAPHY
3, 3/0; D CS

Spatial arrangement of land uses existing within the American city; differences of American cities of function, size, and location; dynamics of change in city structures; central place theory and urban structures. Required for geography majors and the urban-regional planning concentration.

GEG 310
GEOGRAPHY OF TRANSPORTATION
3, 3/0

Prerequisite: GEG 309. Comparative study of the modes of transportation, transportation planning, and the benefits and effects of transportation. Emphasis on application to urban transportation. The importance of accessibility to the development of a modern metropolitan transportation system.

GEG 320
HISTORICAL GEOGRAPHY OF THE UNITED STATES
3, 3/0

Approach and methods of historical geography, exploration and discovery, regional variation of cultural landscapes, origins and dispersals of selected cultural traits.

GEG 330
LAND RESOURCE ANALYSIS AND PLANNING
3, 3/0

Prerequisite: PLN 315. The principles of land resource management with emphasis on land-use patterns, controls, and policy. Attention to urban, suburban, and rural land-use situations. Required for the urban-regional planning concentration.

GEG 340
HISTORICAL-URBAN ANALYSIS OF THE BUFFALO METROPOLITAN AREA
3, 3/0

The metropolitan Buffalo area, the nature of the city, and its growth and problems related to past growth from a historical-geographical viewpoint.

GEG 360
GEOGRAPHY OF ASIA
3, 3/0; V3

Excludes the former Soviet Union. Regional divisions; landform, climate, and natural resources; cultural and economic geography; social and political problems related to the natural environment; industrial development.

GEG 362
GEOGRAPHY OF THE UNITED STATES AND CANADA
3, 3/0

Basic geographic elements of North America including the natural environment, natural resources, economic activities, population, and urbanization.

GEG 363
GEOGRAPHY OF MIDDLE AMERICA
3, 3/0; G CS

Physical, cultural, historical, and regional geography of Mexico, Central America, and the West Indies. Emphasis on human's relationship to the natural environment.

GEG 364
GEOGRAPHY OF EUROPE
3, 3/0; G CS V2

Excludes the former Soviet Union. Physiographic regions, landforms, climate, natural vegetation, soils, and drainage patterns. Major economics and their relationships to the natural environment. Interdependence of regions.

GEG 365
SOIL SCIENCE AND MANAGEMENT
3, 3/0

Prerequisite: GEG 101 or GES 101. Introduction to the study of soils, including physical and chemical properties, weathering and soil formation, productivity and management for agriculture, soil erosion and conservation, engineering properties, soil classification. Includes regular laboratory assignments and fieldwork to enhance understanding of soil properties.

GEG 370
WATER RESOURCE PLANNING
3, 3/0

Introduction to water resource planning in the United States. Emphasis on project management and planning processes used by federal

water resources agencies. Field trip and group project required.

GEG 375
PRINCIPLES OF HYDROLOGY
3, 3/0

Prerequisite: GEG 101. Principles of hydrology and its relationship to water resource management. Emphasis on describing the processes governing surface and groundwater movement. Field trip provides example of the practical application of hydrologic principles.

GEG 382
WEATHER FORECASTING
3, 3/0

Prerequisite: Junior or senior standing and GEG 101 or GES 241. A focus on synoptic and dynamic meteorology, as applied to weather forecasting. Weather conditions will be diagnosed using various case studies. Learn how to develop and to present weather forecasts. Emphasis on practice and interpretation of daily weather and modelled data.

GEG 384
ATMOSPHERIC SCIENCE
3, 3/0

Prerequisite: Junior or senior standing. Study of the earth's atmosphere as a unique place. Emphasis on atmospheric structure and composition, dynamics of motion, moisture and clouds, atmospheric chemistry, regional and local air pollution, aurora displays, and optical phenomena. Includes a study of atmospheres ranging from those of other planets to indoor air.

GEG 386
APPLIED CLIMATOLOGY
3, 3/0

Prerequisite: Junior or senior standing, and GEG 101 or GES 241. Use of climatic information in various aspects of our lives to solve practical problems with environmental, social, and economic implications. The importance of climate on agriculture, human health, severe weather management, litigation, commerce, architecture, and city planning.

GEG 390
QUANTITATIVE METHODS IN GEOGRAPHY AND PLANNING
3, 3/0

Prerequisite: Junior or senior standing, and GEG 199. Introduction to statistical methods with a focus on spatial and time-series data analysis in geography and planning applications. Statistical theory is reinforced through application of commonly used computer software to solve real world problems.

GEG 405
ADVANCED URBAN PLANNING
3, 3/0

Prerequisite: GEG 309. Growth of cities in a national system. Relationships among cities. Regional growth within the national system. Central place theory and urban hierarchies. Role of urban geography in urban planning. The role of planning on a regional scale.

GEG 406
GEOGRAPHY OF RETAILING
3, 3/0

Prerequisite: Junior or senior standing, and ECO 202 or GEG 305. The spatial structure of markets and how geography has a critical role in the location and success of retail activ-

ity. Presents students with the theoretical as well as the practical application of locational analysis for retail businesses. Focus on the use of Geographic Information Systems in the retail location process.

GEG 415
PROSEMINAR
3, 3/0

Investigation, examination, and discussion of topics of current interest in geography. Techniques and analysis of geographic research.

GEG 421
WATERSHED ANALYSIS
3, 3/0

Prerequisite: Junior or senior standing, GEG 101 or GES 101, and at least 6 credits in geography, planning, or earth science. Introduction to the systematic analysis of stream dynamics of watersheds and the impact of humans on these dynamics. Emphasizes the importance of physical, chemical, and biological processes in watershed management. Class discussion and a class project will focus on a practical watershed assessment problem.

GEG 425
COMPUTER MAPPING AND GEOGRAPHIC INFORMATION SYSTEMS
3, 3/0

Prerequisite: GEG 199 or CIS 101. Uses of computer mapping and geographic information systems (GIS) in geography, planning, and related fields. Preparation and presentation of studies for mainframe and personal computer systems. The creation and application of GIS. Project required.

GEG 426
ARCVIEW APPLICATIONS
3, 3/0

Prerequisite: GEG 199 or CIS 101. Experience through the intermediate level in the use of the desktop Geographic Information System, ArcView GIS, and its application in a variety of private- and public-industry sectors including retailing, health care, urban and regional planning, and transportation.

GEG 430
SEMINAR IN GEOGRAPHY AND PLANNING APPLICATIONS
3, 3/0

Prerequisite: Senior geography and planning major. Research in geography or planning and presentation of selected research-related topics by department faculty. Required for geography majors and urban-regional analysis and planning majors.

GEG 480
AIR POLLUTION MODELING
3, 3/0

Prerequisite: Junior or senior standing, and GEG 101, GEG 199 or an equivalent course, GEG 384 and GEG 390 or an equivalent course. Receptor, dispersion, and risk assessment modeling techniques to determine the source, fate, and impact of air pollutants. Overview of atmospheric deposition, regional transport, and global circulation models.

GEG 488
INTERNSHIP
Variable credit
Prerequisites: GEG 101 and 6 credit hours of geography or planning coursework at the upper-division level; minimum cumulative GPA of 2.5; background of courses or experience within area of interest; approval of adviser and department chair. Guided, supervised field experiences that complement the academic program.

GEG 495
SPECIAL PROJECT

GEG 499
INDEPENDENT STUDY

GER

GERMAN

See Modern and Classical Languages

GES

GEOSCIENCES

GES 101
INTRODUCTORY GEOLOGY
3, 3/0; CM

Introduction to physical geology; the earth and the processes operating on and within it; the formation of rocks and minerals; volcanoes, earthquakes, mountain building, continental drift, plate tectonics, glaciers, and the ice ages. Concurrent registration in GES 103 is recommended for geology and earth science majors.

GES 102
HISTORICAL GEOLOGY
3, 4/0; CM

Introduction to the history of the earth from its formation 4.5 billion years ago. The role of continental drift, seafloor spreading, and plate tectonics in its development. The evolution of life as shown in the fossil record.

GES 103
INTRODUCTORY GEOLOGY LABORATORY
1, 0/2

Prerequisite or corequisite: GES 101. Identification of rocks and minerals. Map and aerial photograph interpretation.

GES 111
GENERAL OCEANOGRAPHY
3, 3/0; CM

Introduction to the science of the sea, including biological, physical, chemical, geological, and environmental aspects of oceanography.

GES 131
INTRODUCTORY ASTRONOMY
3, 3/0; CM

Non-mathematical survey of the astronomical universe. Survey of the sun, planets, moons, comets, stars, and galaxies. Observation, planetarium, and laboratory sessions supplement lectures.

GES 223
ENVIRONMENTAL EARTH SCIENCE
3, 3/0; CM

The interrelation of humans and renewable resources, earthquake prediction and control, volcanoes, land movements, and human effects on weather and climate.

GES 224
GEOLOGIC HAZARDS
3, 3/0; CM

Catastrophic geologic events, with an emphasis on earthquakes, volcanism, and landslides. Includes causes, physical effects, prediction, and social implications.

GES 241
METEOROLOGY
3, 3/0; CM

Introduction to weather, including prediction, meteorological instruments, atmospheric movements, humidity and precipitation, high- and low-pressure areas, air masses and fronts, heat balance, and climates past and present.

GES 300
SEDIMENTOLOGY
3, 2/2

Prerequisites: GES 101 and GES 103. Introduction to the dynamics of erosion, transport, deposition of sedimentary particles, modern and ancient sedimentary environments.

GES 301
STRATIGRAPHY
3, 3/0

Prerequisites: GES 101, GES 103, and GES 300. Prerequisite or corequisite: GES 102. Basic principles and interpretation of the stratigraphic record, with emphasis on the practical application of stratigraphic data in interpretation of earth history and exploration for fossil fuels and groundwater resources.

GES 302
INVERTEBRATE PALEONTOLOGY
4, 4/0

Prerequisite: GES 101. Prerequisite or corequisite: GES 102. Invertebrate fossils and their stratigraphic distribution.

GES 303
MINERALOGY AND PETROLOGY
4, 3/2

Prerequisites: GES 101 and GES 103; one semester chemistry recommended. Crystals, minerals, and rocks, emphasizing description, identification, and origin.

GES 307
GEOMORPHOLOGY
3, 4/0

Prerequisite: GES 101 or GEG 101. The structural controls and processes that affect the development of the surface of the earth. Emphasis on selected geologic environments.

GES 308
STRUCTURAL GEOLOGY
4, 3/2

Prerequisites: GES 101 and GES 103. Folds, faults, and other structural features in sedimentary and metamorphic terrains. Introduction to rock mechanics, regional tectonics.

GES 310
GREAT LAKES ENVIRONMENTAL ISSUES
3, 3/0

Prerequisite: Upper-division status or instructor permission. Introduction to environmental problems and their causes in the Great Lakes region. Environmental history of the Great Lakes. Case studies of current environmental problems and ongoing restoration efforts.

GES 314
GEOLOGICAL OCEANOGRAPHY
3, 3/0

Prerequisite: GES 111 or equivalent. The sediments, structure, and history of the ocean basins.

GES 315
MARINE ENVIRONMENTS
3, 3/0; G

Prerequisite: GES 111 or equivalent. Survey of coastal and deep-sea environments, with focus on the interaction of physical, chemical, biological, and geological processes operating in each. Emphasis on coastal environmental issues, including shoreline erosion and sea-level rise, coastal development, and marine pollution.

GES 331
MODERN SOLAR SYSTEM ASTRONOMY
3, 3/0

Prerequisite: GES 131 or equivalent. The moon and planets, their appearance, atmospheres, and surfaces. Planetary magnetic fields, asteroids, meteoroids, comets. Theories of the origin of the planetary system, the possibility of extraterrestrial life. Emphasis on recent problems in our understanding of the solar system.

GES 332
STELLAR AND GALACTIC ASTRONOMY
3, 3/0

Prerequisite: GES 131 or equivalent. How astronomers have determined the properties, energy, masses, and composition of stars, stellar evolution, the structure of the galaxy, and the movement of stars in the galaxy.

GES 335
METHODS OF OBSERVATIONAL ASTRONOMY
3, 4/0

Prerequisite: GES 131 or equivalent. Locating celestial objects in the night sky. Use of astronomical telescopes to locate, observe, and photograph stars, nebulae, and galaxies. Use of observing aids.

GES 339
ASTRONOMY AND COSMOLOGY
3, 3/0

Prerequisite: GES 131 or equivalent. Cosmology, the primeval fireball, quasars, pulsars, black holes, origin of the elements.

GES 350
ENVIRONMENTAL GEOCHEMISTRY
3, 3/0

Prerequisites: GES 101 and upper-division status. Chemical nature of the earth, emphasizing chemistry associated with the polluted environment.

GES 401
IGNEOUS AND METAMORPHIC PETROLOGY
4, 3/2

Prerequisite: GES 303 or instructor permission. Description, origin, and classification of igneous and metamorphic rocks.

GES 403
GLACIAL GEOLOGY
3, 4/0

Prerequisite: GES 307. Glacial processes, landforms, and landscapes, with emphasis on New York State. Develops a model for the sequence of glacial events and the causes of climate change. Field trips.

GES 404
FIELD GEOLOGY
3, 5/0

Prerequisite: GES 101. Application of geological principles and techniques in the interpretation of earth features in the field.

GES 405
GEOLOGY OF NORTH AMERICA
3, 3/0

Prerequisites: GES 101 and GES 102. Major physical provinces of the United States and adjacent areas; their geologic history, structure, and topographic development.

GES 409
FLUVIAL GEOMORPHOLOGY
3, 4/0

Prerequisite: GES 307. The variables that influence the behavior of water flowing on the surface of the earth. The effects of flowing water on the landscape. Emphasis on field and lab work.

GES 431
PLANETARIUM SEMINAR
3, 2/2

Prerequisite: Two semesters of astronomy. The celestial sphere; operating, maintaining, and administering the planetarium; audiovisual aids in the planetarium; planetarium programming; using the planetarium to teach. Includes supervised teaching experience.

GES 452
HYDROGEOLOGY
3, 3/0

Prerequisites: GES 101 or GEG 101 and at least one 300-level GES course. Fundamentals of the occurrence, movement, and management of our largest resource of readily available fresh water. Includes groundwater protection and remediation of already contaminated supplies to increase environmental awareness.

GES 460
APPLIED ENVIRONMENTAL METHODS
3, 3/0

Prerequisites: GES 101 and upper-division status. Applied study of contaminants in the environment. Emphasis on environmental law and regulations, hazardous chemicals, and remediation approaches used by environmental professionals.

GES 488
INTERNSHIP
1-15, 0/2-30

Prerequisite: Senior standing as department major, and 2.5 GPA overall. Requires department application and approval. Practical work on an individual basis with a participating organization.

GES 495
SPECIAL PROJECT

Prerequisite: Approval of a faculty sponsor. Environment-, energy-, geology-, or astronomy-related areas.

GES 498
HONORS RESEARCH

Prerequisite: Acceptance in geology or earth science honors program. Includes completion of an honor's thesis and seminar. May be repeated for a maximum of 6 credit hours.

GES 499
INDEPENDENT STUDY

Prerequisite: Approval of a faculty sponsor. Environment-, energy-, geology-, or astronomy-related areas.

GRK

GREEK

See Modern and Classical Languages

HEW

HEALTH AND WELLNESS

Health and Wellness Department

HEW 100
SPECIAL PROJECT

Limited for certain movement, exercise, and sport experiences. Completion of form and approval of department chair required. Forms available in the Health and Wellness Office.

HEW 156
BASIC SCUBA DIVING
1, 2/0

Prerequisite: Swimming ability adequate to pass intermediate class. Self-Contained Underwater Breathing Apparatus (SCUBA) class designed to present underwater knowledge and skills required to scuba dive safely. Basic certification by NAUI optional. Mask, fins, snorkel, weight belt, and scuba gear rental fee required.

HEW 157
ASSISTANT SCUBA INSTRUCTOR
1, 2/0

Prerequisite: Instructor permission. Participants achieve acceptable competency levels in scuba water work and classroom teaching. Successful completion leads to certification as a NAUI assistant scuba instructor. Registration fee required.

HEW 200
FITNESS FOR LIVING
2, 2/0

Lecture and discussion sessions, laboratory experiences, and specific movement experiences presenting the "how, what, and why" of physical activity and exercise.

HEW 204
PERSONAL HEALTH
3, 3/0; CS

The many problems and advances in medicine and public health as they affect the health status of the individual, family, school, and community.

HEW 225
INTRODUCTION TO DISEASE PREVENTION
3, 3/0

Introduction to the general principles of disease. Etiology, signs, symptoms, treatment, and management of diseases that affect individual organs in the various body systems.

HEW 250
INTRODUCTION TO HUMAN MOVEMENT
3, 3/0; CS

Critical orientation to the discipline of physical education. Philosophical and historical perspectives. Psychological, sociological, physiological foundations.

HEW 302
EXERCISE PRINCIPLES
3, 3/0

Prerequisite: BIO 308. Exercise and its effects on the human body. Practical knowledge of the principles of fitness testing and exercise prescription and application of knowledge to improve fitness and athletic performance in healthy human populations.

HEW 303
PLANNING, MANAGEMENT, AND EVALUATION OF HEALTH/WELLNESS FACILITIES
3, 3/0

Prerequisite: Upper-division status. Recent trends in construction, evaluation, and maintenance of health-related facilities, such as gymnasias, swimming pools, outdoor play areas, weight-training rooms, testing labs, etc. Includes criteria for selection, staff supervision, equipment purchase and maintenance, and legal aspects.

HEW 305
COMMUNITY HEALTH/WELLNESS
3, 3/0

Prerequisites: Upper-division status; HEW 204 or instructor permission. Community health as it relates to world concerns, U.S. interests, and local community concerns. The interrelatedness of health care to various societal issues.

HEW 307
EXERCISE, FITNESS, AND NUTRITION
3, 3/0

Prerequisite: HEW 204. Basic concepts of nutrition and exercise training to improving fitness and athletic performance. The relationship of exercise and nutrition to the etiology and treatment of eating disorders and obesity.

HEW 308
WOMEN'S HEALTH ISSUES
3, 3/0

Prerequisite: Upper-division status. Gender differences in health outcomes, health-care practices, and health behavior, with primary emphasis on women. Historical and current perspectives on women's health issues.

HEW 310
HEALTH STANDARDS AND EMERGENCY CARE
3, 3/0

Prerequisite: BIO 100 or equivalent and HEW 204. Promotes health and safety standards and provides skills in advanced emergency care. Competencies in various areas of emergency medicine include bandaging, splinting, victim examination, bleeding/shock emergencies, and emergency childbirth. Includes competencies and proficiency in teaching OSHA safety standards for infectious agents. National Safety Council certification or equivalent awarded upon successful completion.

HEW 311
GAMES FOR SCHOOL AND PLAYGROUND
3, 3/0

Participation in, and analysis and recording of, games, skill activities, and sports lead-ups for "play" situations in home, school, and community settings.

HEW 312
METHODS AND MATERIALS IN HEALTH AND WELLNESS
3, 3/0

Prerequisite: HEW 204. Materials and instructional methodology necessary to create, select, and deliver health and wellness programs.

HEW 320
PSYCHOACTIVE DRUGS AND HEALTH
3, 3/0

Prerequisite: Sophomore status. Widespread effects of drug abuse, its relationship to health and disease, and the implication and application for education and theory. May be challenged; apply to the Health and Wellness Department by the date announced each semester and follow the assigned reading and knowledge test procedure as scheduled.

HEW 345
WELLNESS, FITNESS, AND AGING
3, 3/0

Prerequisite: Upper-division status. Acquaints students of gerontology with the implications of exercise and physical fitness for the quality of life of older citizens. Covers the aging process and its relationship to physiological factors associated with exercise and fitness. Differences in capacities for exercise. Principles for guiding the selection, programming, and supervision of activities.

HEW 401
ASSESSMENT AND EVALUATION IN HEALTH WELLNESS
3, 3/0

Prerequisite: HEW 302. Various aspects of fitness, assessment, and evaluation. Includes cardiovascular fitness, flexibility, muscular strength, and endurance. Assessment and evaluation techniques in muscular imbalance related to posture. Proper nutritional guide-

lines. Identification and coping techniques for stress.

HEW 411
CRITICAL ISSUES IN HEALTH AND WELLNESS
3, 3/0

Prerequisites: HEW 401 and senior status. Study of one's interaction with his or her many environments and the implications for health behaviors. Emphasis on current facts and attitudes important in confronting critical health issues.

HEW 412
HEALTH/WELLNESS PROGRAMS
3, 3/0

Prerequisites: HEW 302 and senior status. Provides an opportunity to use health/wellness concepts. Covers general principles used in the development of health-promotion programs. Specific procedures involved in a fitness profile analysis. Guidelines for implementing physical fitness, nutrition, and weight-control programs. Procedures for stress-management and smoking-cessation programs. Students use principles presented in class during practical health-planning experiences.

HEW 425
ALCOHOL PROBLEMS
3, 3/0

Prerequisite: Upper-division status. A seminar designed for students as prospective citizens, teachers, supervisors, and voluntary government personnel concerned with individual and community health problems. Emphasis on understanding the widespread effects of alcohol, its relationship to health and disease, and implications for health and therapy.

HEW 488
INTERNSHIP
Variable credit
Prerequisites: Upper-division status and instructor permission. Additional prerequisites apply to selected areas of health/wellness. Check with the Health and Wellness Department. The integration of theoretical knowledge with practical field experience in related areas of health and wellness.

HEW 495
SPECIAL PROJECT

HEW 497
WORKSHOP

HEW 499
INDEPENDENT STUDY

HIS

HISTORY

History and Social Studies Education Department

HIS 106
HISTORY OF AMERICAN LIFE I
3, 3/0; CS V1

Exploration and colonization: the meeting of cultures; colonial America; shaping an identity; contest for the continent; prologue to independence; independence and the new nation; framing a constitution; religious, ethnic, and cultural diversity in the new nation;

Jeffersonian Republicanism; nationalism and economic expansion; the emergence of social strains; Jacksonian democracy; religion and reform; expansion and sectional crisis; American life and culture in the mid-nineteenth century; a decade of crisis; the Civil War; aftermath of war.

HIS 107
HISTORY OF AMERICAN LIFE II
3, 3/0; CS V1

The new South; reunion, readjustment, and constitutional freedoms; the West; the economic revolution; the urban society; politics in the Gilded Age; America's emergence as a world power; the Progressive Era; World War I and its aftermath; the 1920s; the New Deal; from isolationism to globalism; World War II; postwar adjustments; the Kennedy and Johnson years; resurgent Republicanism.

HIS 110
HISTORY AND IDEAS
3, 3/0

Topics and problems in history developed in a historical frame of reference with course attention devoted to methods and techniques of historical analysis, articulating, and writing critiques. Class discussion and interaction.

HIS 115
FOUNDATIONS OF WESTERN CIVILIZATION
3, 3/0; CS V2

Major contributions of the Greek, Roman, and medieval civilizations to the creation of Western heritage in philosophy, art, literature, science, political structure, economy, and law.

HIS 116
EUROPE SINCE 1500
3, 3/0; CS V2

Growing concern of man and his relation to his world. Development of nationalism. The concepts of freedom and democracy. Increasing attention to the spirit of inquiry. Scientific development and technology and their impact on society. The formulation of fascism, communism, socialism, and the concern for political ideology.

HIS 117
TWENTIETH-CENTURY EUROPE
3, 3/0; CS V2

Political, social, cultural, and intellectual history of twentieth-century Europe. Factors contributing to World War I. The Versailles settlement. The Russian Revolution and the rise of communism. Collapse of collective security and the rise of fascism and national socialism. Western democracies between the wars. The road to World War II. Restoration of the Atlantic Community. The challenge of the nuclear age.

HIS 155
WORLD WAR II, 1939–1945
3, 3/0; G

Delineates the factors that led to the outbreak of the war. The conduct of the war from its continental phase through its spread to global dimensions. Campaigns, theaters of operations, as well as the processes of decision making by Allied and Axis Powers constitute the substance of the course.

HIS 189
TOPIC COURSE
1, 1/0

HIS 204
GLOBAL HISTORY OF THE TWENTIETH CENTURY
3, 3/0; G CS

The history of the twentieth century, emphasizing the interrelationship of events and interaction of movements and ideas within a global context.

HIS 206
A HISTORY OF POLAND
3, 3/0

Major Polish historical and cultural achievements through the ages. The growth and development of the nation and state. Scientific, cultural, and religious forces in Polish life.

HIS 208
HISTORY OF ENGLAND SINCE 1485
3, 3/0

Rise and transition of representative, parliamentary government. Commercial and industrial development. Social, intellectual, and economic trends manifested through literature, art, the press, and other social agencies. Transition from empire to commonwealth of nations. Impact abroad of such concepts as mercantilism, laissez-faire, classical economics, and collectivism.

HIS 210
HISTORY OF MODERN ASIA
3, 3/0; G CS V3

China, Japan, and Southeast Asia in modern times. Rise of nationalism, internal social and political conflict, response to Western powers. Impact of ideology and totalitarianism. Industry and technology. Problems of international wars.

HIS 211
HISTORY OF MODERN AFRICA SINCE 1919
3, 3/0; G CS

Partition of Africa by European nations. Impact of colonial regimes. African resistance movements. Drive toward independence. Problems of economic and social change. Cultural and intellectual currents in modern Africa.

HIS 220
CLASSICAL GREECE AND ROME
3, 3/0

The development of Greece, the western Hellenistic world, and the Roman Empire with emphasis on cities, economic development, technology, social change, and ideas.

HIS 230
WORLD CIVILIZATIONS TO 1600
3, 3/0

Origins, cultural achievements, and interrelationships of various civilizations before 1600. The birth of human civilization, the emergence of major religious and philosophical traditions, state and society in the ancient world, the consolidation and interaction of world civilizations, the civilizations of Africa and the Americas, East Asian culture and civilization, the great Islamic civilizations, the origins and development of European civilization.

HIS 301
COUNTER CULTURES/UTOPIAS
3, 3/0

The idea of utopian societies; utopian communities; leaders and followers; relation of idealism to economic, social, political, and religious conditions. The phenomenon of modern commune development in the United States. Young people and counterculture.

HIS 302
HISTORY OF WOMEN IN AMERICA
3, 3/0; D

The impact of women on American development from colonial time to the present. Effects of history on the roles and status of women. Changes in women's role in the family, economic contributions, legal status, struggle for equal rights. Women and demographic changes. Developing perceptions of women about society. Political growth and women. Society's regard for women in a historical context and the differences and/or similarities between women from various ethnic, racial, religious, and socioeconomic groups.

HIS 303
THE CITY IN AMERICAN HISTORY
3, 3/0

Historical background, colonial period, formation of a new nation, towns in westward expansion, industrialization, political machines, municipal reform, the city in American thought, twentieth-century developments, the contemporary scene.

HIS 304
EUROPE FROM NAPOLEON TO THE FIRST WORLD WAR
3, 3/0

Major influences in nineteenth-century Europe; nationalism, imperialism, Industrial Revolution, democracy, and socialism; causes of World War I.

HIS 306
HISTORY OF AFRICA TO 1919
3, 3/0; G

Indigenous developments and early empires of Africa. The impact of Islam. Western contact and the slave trade. The development of European colonialism. The partition of Africa and colonial administrative policies of the European powers. The waning of European power as a result of World War I.

HIS 307
HISTORY OF INDIA
3, 3/0

Prerequisite: Upper-division status. The history of India from ancient times to the present. Topics include the early Indus civilizations; religion and society in the Aryan age; the birth of Buddhism; Ashoka and the Mauryan Empire; classical Hinduism; Gupta civilization; the impact of Islam; the Mughal Empire; the era of British colonialism; the emergence of modern nationalism; independent India, Pakistan, and Bangladesh.

HIS 308
HISTORY OF EARLY CANADA
3, 3/0

The early history of Canada, from before the commencement of European exploration to the end of World War I. Topics include cultural and religious heritage of Canada's native

peoples, histories of New France and British North America, the fight for responsible government, Canadian confederation, the challenges facing the new nation, and Canada in World War I.

HIS 309
AMERICAN LEADERS
3, 3/0

Selected leaders in critical periods or areas of American civilization, such as Benjamin Franklin and revolutionary America; John Marshall and federal power; Booker T. Washington and W. E. B. DuBois, contrasting black leaders; Lincoln Steffens and the muck-rakers; Henry Ford and mass production.

HIS 310
HISTORY OF EAST ASIA: THE TRADITIONAL ERA
3, 3/0

Prerequisite: Upper-division status. China, Korea, and Japan before the coming of the West. Traditional cultures, geography, political and religious institutions. Impact of Western ideas and colonialism.

HIS 311
AMERICAN IMMIGRATION AND EMIGRATION
3, 3/0

American immigration policies from colonial times to the present. The people who came and left the United States. The process of assimilation. Problems of immigration and emigration.

HIS 312
HISTORY OF ITALY
3, 3/0

Classical and medieval foundation. Renaissance Italy. Prelude to unification. Italian nationalism, liberalism, and socialism. Italy under fascism. The Italian Republic, accomplishments and problems.

HIS 313/PSC 345
POLITICS AND HISTORY OF THE MIDDLE EAST
3, 3/0; CS V3

Prerequisite: Upper-division status. Political culture and geographic settings. Historical development since the French invasion of Egypt. The disintegration of the Ottoman Empire and the rise of Western colonialism. Nationalist movements, independence, and turmoil. Post-World War II political evolution. Diversity and problems. Emphasis on the region's key industries.

HIS 314
MODERN LATIN AMERICA
3, 3/0; G CS

Movements for independence; early political apprenticeship; age of dictators; nationalism and national development; Hispanic-American interrelations; growth of inter-American system; Latin America in world politics; revolution of rising expectations, guerrilla movements, turmoil in Central America; contemporary problems.

HIS 316
HISTORY OF MODERN CANADA
3, 3/0

The history of Canada since Confederation in 1867. Topics include Canadian political and social history in the modern age, Canada's foreign policy since Confederation, Canada-

U.S. relations, Quebec nationalism, twentieth-century Canadian cities, multiculturalism in modern Canada.

**HIS 317
HISTORY OF RUSSIA TO 1917
3, 3/0**

Social, political, and economic history of Russia from the Varangians state to the October 1917 Revolution. Effects of geographic locations. The Mongol conquest. Retarded reorientation toward the West in the eighteenth and nineteenth centuries. Participation in world politics. Expansion in Europe and in the East. Participation in World War I.

**HIS 318
HISTORY OF THE FORMER
SOVIET UNION
3, 3/0**

Economic and historical forces behind the Communist Revolution of 1917. The governmental system and its political, social, and economic theories. The evolving economic system. Soviet foreign policy; impact of the Revolution, and World War II. The church, educational systems, and other cultural developments.

**HIS 319
COLONIAL HISTORY OF THE
AMERICAN PEOPLE
3, 3/0**

Establishment and development of English, Spanish, French, Dutch, and Swedish colonies in North America. American Revolutionary period. Colonial influence on early culture and institutions of the United States. Subsequent contributions to the American heritage.

**HIS 320
MODERN HISTORY OF JAPAN
AND KOREA
3, 3/0; G**

Prerequisite: Upper-division status. History of Japan and Korea in the twentieth century. The rise of Japan as a modern nation. The rise and fall of the Japanese Empire. Japan under new democracy. Korea under Japanese control. The liberation and division of Korea. The problem of reunification of Korea.

**HIS 321
HISTORY OF MEDIEVAL EUROPE
3, 3/0**

Transition from Graeco-Roman to medieval civilization; Islam, Charlemagne, and feudal Europe; crusades; cultural, economic, and political revival of the twelfth-century medieval church and papacy; medieval intellectual synthesis; rise of monarchies, decline of papacy; decline of medieval civilization.

**HIS 322
AFRICAN AMERICAN HISTORY
3, 3/0; D CS**

Heritage of black Americans. African Americans' existence under slavery; their role in influencing historical events; activity in the Civil War period; freed men during reconstruction; migrations to the north and adjustment to urban life. African American leaders, institutions, ideas, and their impact on modern America.

**HIS 324
AMERICAN PRESIDENTS
3, 3/0**

Biographical approach to the study of the presidency from Washington to the current era. Background and evolution of the office, and the roles of the best and worst presidents in shaping its powers.

**HIS 325
U.S. BUSINESS HISTORY
3, 3/0**

History of U.S. business and its societal and cultural contexts. Businesses within mercantilism; merchants and craftsmen in the early republic; business and governmental action in the North and South; industrialization; rise of corporations and antitrust; business, government, and science; managerial style; advertising; the multinational; Rust Belt and Sun Belt; high-tech society.

**HIS 326
HISTORY OF THE GREAT LAKES
REGION
3, 3/0**

The history of the Great Lakes. Introduction to the variety of natural, social, and political factors that have shaped the region. Lectures, presentations, and applied research.

**HIS 330
U.S. ENVIRONMENTAL HISTORY
3, 3/0**

The impact of Americans on their natural environment. The influence of the natural and the developing social environment on Americans in the past. Aborigines and the earliest settlers. Establishment of patterns and institutions. Preservationists vs. conservationists, 1860–1940. The modern environmental movement, 1940–present.

**HIS 331
AMERICAN WESTWARD
EXPANSION
3, 3/0**

The gradual westward migration of Americans; their patterns of migration and settlement; the natural environment and peoples encountered; and the influence of the frontier on the development of American institutions, thought, and the American personality.

**HIS 332
TECHNOLOGY AND U.S.
HISTORY
3, 3/0**

Interaction of U.S. society with technology in the past, concentrating on the last 200 years. Background of Western technology; the agricultural revolution; industrial technology; technology and culture, labor, the home, medicine, government; postindustrial technology.

**HIS 334
MODERN IRELAND SINCE 1800
3, 3/0**

Prerequisite: Upper-division status or instructor permission. Major factors that shaped Irish history in the nineteenth and twentieth centuries: the impact of the union with Britain; the struggle for Catholic emancipation; the Great Famine and its aftermath; revolutionary movements like Young Ireland, the Fenians, and Sinn Féin; cultural revival and religion in Victorian Ireland. Also the question of home rule and independence, the growth of the free state and the establishment

of the Northern Ireland state, Ireland in World War II, and the emergence of contemporary Ireland in the context of the European economic community.

**HIS 335
HISTORY OF MEXICO
3, 3/0**

Prerequisite: Upper-division status. Pre-Columbian Indian cultures, Spanish conquest of Mexico, Spanish colonial administration in the Viceroyalty of New Spain, the Enlightenment and Mexican independence, Early National period, the Mexican Revolution of 1910, Mexico today.

**HIS 336
HISTORY OF EARLY MODERN
IRELAND
3, 3/0**

A focus on the political, economic, and social histories of Ireland in the Early Modern period, circa 1485–1800. An overview of the development of the Irish state, its constituent communities, and relations with England and the British mainland up to the union of 1800. Emphasis is placed on what it meant to “be Irish” in the Early Modern period, and how varying definitions of “Irishness” have affected Ireland’s cultural and political history. Reading primary sources and leading and participating in discussions are emphasized.

**HIS 338
MODERN HISTORY OF CHINA
3, 3/0**

Prerequisite: Upper-division status. The history of China from the rise of the last imperial dynasty (Qing) in the mid-seventeenth century to the present. Topics include the fall of the Ming dynasty and the Manchu conquest of China, the Chinese state and society under the Qing dynasty, the development of relations between China and the West, the decline of the Qing imperial order, the emergence of modern nationalism and the rise of the Chinese Communist Party, Japanese imperialism and World War II, and the establishment of the People’s Republic of China.

**HIS 340
HISTORY OF THE BUFFALO
NIAGARA REGION
3, 3/0**

Prerequisite: Upper-division status. The nature of the city, its growth, the dynamics of urban development, the enduring impact of its historical past in relation to its geographical presence. A case study of Buffalo.

**HIS 341
AFRICAN AMERICANS AND CIVIL
RIGHTS
3, 3/0; D**

History of the landmark court decisions, laws, and governmental policies regarding the civil rights of African Americans. The course examines some of the historic relationships among race, racism, law, and public policy in America. Focus on resistance, protest, and the quest for equality in America.

**HIS 342
ENGLISH LEGAL HISTORY
3, 3/0**

Origins of English law to 1066, growth of medieval common law, common law and its rivals in sixteenth and seventeenth centuries, consolidation and reform of law and courts,

relation of law and equity, criminal and civil jurisdiction and procedure, the legal profession, changing legal concepts and the modern state.

**HIS 343
INTRODUCTION TO AMERICAN
LEGAL HISTORY
3, 3/0**

Origins of ideas of law; English background of American law; colonial legal history; Puritanism, law and social goals, revolution; criminal and civil jurisdiction and procedure; nineteenth-century codification movements; the legal profession; social changes and the law.

**HIS 344
EMERGENCE OF INDUSTRIAL
AMERICA: 1877–1919
3, 3/0**

Prerequisite: Upper-division status. Conservative reaction to reconstruction, decline of the presidency, the triumph of capitalism and industry, populist protest, the end of westward movement, socialization of immigrants, progressive impulse and leadership, rural vs. urban conflict, the United States and the race for empire, and the role of America in World War I.

**HIS 345
HISTORY OF THE UNITED STATES
SINCE 1941
3, 3/0**

Political, diplomatic, social, and cultural history of contemporary America; World War II and the advent of the nuclear age; the Cold War and the policy of containment; the Korean War, McCarthyism, and domestic reform; the New Frontier and the Great Society; civil rights, civil disobedience, and the greening of America; war and peace in Southeast Asia; Watergate and the travail of liberalism.

**HIS 350
LEFT AND RIGHT IN EUROPEAN
HISTORY
3, 3/0**

Prerequisite: Upper-division status. The evolution of Marxist, anarchist, state socialist, and right radical ideologies in European thought and politics.

**HIS 351
MODERN FRANCE
3, 3/0**

Selected problems in French political, social, economic, and diplomatic history emphasizing historiography and interpretation of such periods as the restored monarch, the revolution of 1848, the Second Empire, the Third Republic, and its successors.

**HIS 354
HISTORY OF THE CARIBBEAN
3, 3/0**

Spanish colonization of the Caribbean, pirates and the foreign threat, race relations and the development of colonial society, Cuba rebels against Spain, the Spanish-American War, Cuba and the United States, Castro’s revolution, Puerto Rico under U.S. rule, the rise of Puerto Rican nationalism, Puerto Rico today.

**HIS 356
WORLD WAR I
3, 3/0**

The causes, conduct, and implications of the First World War. Through a thematic and narrative treatment, students will study the war and its implications for global society in the twentieth century.

**HIS 357
WORLD WAR II
3, 3/0**

The issues that led to the outbreak of the Second World War and its global dimensions. Campaigns, theaters of operations, as well as the process of decision making by Allied and Axis Powers. Also, the social dimensions of the war: experiences on the home fronts, the Holocaust, and the impact of the war on the modern world.

**HIS 360
GERMANY AND HITLER
3, 3/0**

Political, cultural, and social developments since the Reformation; Prussian kings and German emperors; nationalism and unification; Hitler's Austria; World War I; the challenge of democracy, the Nazi dictatorship; World War II; Germany after Hitler.

**HIS 363/SST 363/SSE 363
AMERICAN IDENTITY IN
TRANSITION: DIVERSITY AND
PLURALISM IN THE UNITED
STATES
3, 3/0; D**

Prerequisite: Upper-division status. The diverse, pluralistic makeup of American society. The roots of pluralism and what it means for the daily experience of living in America. Themes of diversity are explored through history and literature. Focuses on the activities of four major underrepresented groups in their struggle for liberation: African Americans, Native Americans, Latinos, and Asians. Encourages a multicultural view of America.

**HIS 365
AMERICAN LABOR HISTORY
3, 3/0**

Readings and bibliography on the role of workers in American life. Slaves, indentured servants, wage-earners, and craftsmen. The rise of organized labor from colonial times. The history of the Knights of Labor, the American Federation of Labor, the Congress of Industrial Organizations, and independent unions, with related issues of immigration, radicalism and political action, and contemporary labor problems.

**HIS 366
MIEVEAL AND EARLY MODERN
BRITAIN
3, 3/0**

Prerequisite: Junior status. The development of English and Scottish political identities prior to union, and the eventual formation of the British state in 1707. Also, considerations of the roles of the church, family life, social structure, culture, economics, immigration, and war as facets of these formative periods.

**HIS 367
MODERN BRITAIN
3, 3/0**

Prerequisite: Junior status. The modern history of the British Isles, from the Act of Union

of 1707 to the end of the twentieth century. Also, considerations of the roles of the church, family life, social structure, culture, economics, immigration, industrialism, imperialism, and war as facets of these formative periods.

**HIS 370
AMERICAN DIPLOMATIC
HISTORY TO 1898
3, 3/0**

Independence from Britain and alliance with France; the Constitution and the formation of foreign policies; neutral rights and war with Britain; rise of manifest destiny, commercial and territorial expansion, diplomacy of slavery and the Civil War; diplomacy and isolationism in the post-Civil War period.

**HIS 371
AMERICAN DIPLOMATIC
HISTORY SINCE 1898
3, 3/0**

War with Spain and the rise to world power; inter-American and Far Eastern relations; diplomacy of World War I; retreat to isolationism; road to World War II; global war and its aftermath; leadership in the United Nations and the Cold War; inter-American and Far Eastern affairs.

**HIS 372
AMERICAN FOREIGN POLICY IN
THE FAR EAST
3, 3/0**

Prerequisite: Sophomore, junior, or senior status. Dawn of America's Asiatic interests, early relations with China, opening of Japan, missionary activity and influence, war with Spain, America becomes a Pacific power, World War I and the rise of Chinese nationalism, American gunboat diplomacy, interwar naval conferences, Manchurian Incident, American-Japanese problems, road to war, Pearl Harbor and war in the Pacific, search for Pacific security, conflict in Korea, war and peace in Vietnam.

**HIS 373
VIETNAM AND THE VIETNAM
WAR
3, 3/0**

Prerequisite: Upper-division status. Introduction to the major issues associated with the history of Vietnam and modern Vietnam's wars with France and the United States. Topics include the origins and historical development of Vietnamese society and culture, French colonialism and the emergence of modern Vietnamese nationalism, Vietnamese communism under Ho Chi Minh, the Franco-Vietnam War, the American war in Vietnam, and postwar reunification and consolidation under the Vietnamese Communist Party.

**HIS 375
HISTORY OF BYZANTINE EUROPE
3, 3/0**

The history of the Byzantine Empire. Its influence on intellectual and cultural progress in Western Europe and among the Eastern and Balkan Slavs with special emphasis on internal, social, economic, political, and cultural developments.

**HIS 380
INTRODUCTION TO THE
MUSEUM
3, 3/0**

History, theory, and practices of the historical agency or museum. Extensive reading, illustrated lectures, and exercises in museum and historical-agency problems. Field trips to area museums and agencies.

**HIS 381
THE ROLE OF THE HISTORY
MUSEUM
3, 3/0**

Theory and practice of historical investigation and publication. Uses and procedures of research in historical museums and agencies. Evaluation of source materials. Preparation of historical essays and exhibits.

**HIS 385
AZTEC AND MAYA HISTORY
3, 3/0**

Prerequisite: Upper-division status. The history of the Aztec and Maya empires in Mexico and Central America before and during the Spanish conquest. The political, economic, and religious motivations for empire building among indigenous cultures. Topics include the construction of rulership, Aztec and Maya historiography, systems of trade and tribute, imperial expansion, war and sacrifice, and encounter with the Spanish.

**HIS 386
HISTORY OF THE INCA EMPIRE
3, 3/0**

The last great empire of the ancient Americans to fall under Spanish dominance, the Inca of Peru. The political, social, and economic functions of the Inca State. The foundations of the empire in earlier civilizations of the Andes. Topics include the Inca system of governance, strategies for expansion and consolidation of empire, the importance of record keeping and the counting device known as *quipu*, the function of textiles and their production, the role of ancestors and myths in state formation and function. Also, new perspectives on the Spanish conquest.

**HIS 389
TOPIC COURSE
3, 3/0**

**HIS 399
JUNIOR SEMINAR IN
HISTORIOGRAPHY
3, 3/0**

Prerequisite: History and social studies education major or instructor permission. Introduction to historiography is intended to acquaint history and social studies education majors and others with great works of historical literature in the Western and other traditions. Introduction to the development of historical writing from ancient times to the present. Students are encouraged to assess sources that have been used to record the past and to examine the various methodologies employed by historians in studying the past.

**HIS 400
SENIOR SEMINAR IN HISTORY
3, 3/0**

Prerequisite: History and social studies education major, senior status, HIS 399 for history majors. Readings, discussion, and research on selected problems in history,

resulting in a substantial research paper. Fulfills seminar requirement for history majors and secondary social studies majors.

**HIS 401
TWENTIETH-CENTURY
EUROPEAN DIPLOMACY
3, 3/0**

Topics include causes and diplomatic problems of World Wars I and II, the Paris Peace Conference and interwar diplomacy, peacemaking in the Cold War era, the European movement, Gaullism and its consequences.

**HIS 404
THE SOUTH SECTIONALISM,
AND THE CIVIL WAR
3, 3/0**

Prerequisite: Upper-division status. The structure of the American south, sectional development and states rights, slavery, the development of antislavery agitation and reform, the rise of Lincoln and the division of political parties, Civil War and the military, constitutional and diplomatic crises, economic and social impact of the war, reconstruction of the Union.

**HIS 405
THE RENAISSANCE AND
REFORMATION
3, 3/0**

Prerequisite: Upper-division status. Impact of the Renaissance and Reformation on intellectual, artistic, economic, and political development of Europe. Social and religious problems. Humanism, secularism, classicism, individualism in Italy and Northern Europe. Protestant reform and reformers. Catholic Reformation.

**HIS 406
THE FRENCH REVOLUTION AND
NAPOLEON
3, 3/0**

Prerequisite: Upper-division status. Political, social, economic, and intellectual fabric of the Old Regime; the Revolution; dictatorship of Napoleon and spread of revolutionary ideas; rise of modern nationalism.

**HIS 407/SSE 407/SST 407
THE TEACHING OF HISTORY
3, 3/0**

Prerequisite: Upper-division status. The curriculum and practice of teaching history, the historical perspective on the role of history in the social studies, and the political uses of the teaching discipline. Provides a research foundation as to how historical meaning is constructed as a base for instructional practice. Serves as a link between material presented in various content and pedagogical courses in the program.

**HIS 408
HISTORY OF AMERICAN
THOUGHT
3, 3/0**

Prerequisite: Upper-division status. Sources of major bodies of thought and ideas in American history; their impact upon American culture. The role ideas have played in producing a distinctive culture.

HIS 412
HISTORY OF EAST CENTRAL
EUROPE
3, 3/0

Prerequisite: Upper-division status. Social, political, and economic history of the Baltic States, Western Slavdom, and the Balkan peninsula. Struggle of Eastern and Western civilizations. Competition of the great powers for the domination of this area and the role of these peoples as Russian satellites.

HIS 415
HISTORY AND GOVERNMENT
OF NEW YORK STATE
3, 3/0

Prerequisite: Upper-division status. Aboriginal background, development of the colony, establishment of the state, rise of political parties, past and present structure and problems of New York State government, economic and social growth in the current time.

HIS 419
CURATORSHIP
3, 3/0

Principles and techniques of collection and care of museum collection: the library, collections, audiovisual materials, archives, iconography, and historic sites. Development of professional expertise in curatorship.

HIS 420
ADMINISTRATION OF THE
HISTORICAL AGENCY OR ART
MUSEUM
3, 3/0

Principles and practice of administration of museums. Problems of organization, collection, exhibition, public services, finance, special public relations, and trustee relations. Experience in the area of interpretation.

HIS 422
TUDOR AND STUART ENGLAND
3, 3/0

Prerequisite: Upper-division status. Henry VII and the new dynasty, religion and politics under the early Tudors, the age of Elizabeth I, the Stuarts and the Puritan revolt, restoration and revolution, limiting the monarchy and establishing the empire.

HIS 425
MUSEUM PRESERVATION AND
PRACTICE
3, 3/0

Prerequisite: Upper-division status. Acquaints students who are non-conservation specialists with conservation principles of museum collections. Focuses on environmental, handling, and procedural issues. Lecture, demonstrations, and practical work. Visits to local institutions to examine exhibition and storage facilities.

HIS 430
UNITED STATES—THE NEW
NATION
3, 3/0

Prerequisite: Upper-division status. The United States following the American Revolution through Andrew Jackson's administration. Federal authority, political parties, industrial and sectional economic development during a period of territorial, social, and diplomatic transformation. The formative and foundational structure of American society during the periods of Washington, Jefferson, and Jackson.

HIS 450
MUSEUM INTERNSHIP
6, 15/0

Prerequisites: Upper-division status and instructor permission. For students interested in gaining practical experience in museum work. Assignment to a particular museum is based on a student's major-related disciplines. Students in areas such as history, anthropology, art history, education, and the natural sciences are eligible.

HIS 468
READINGS IN AFRICAN
AMERICAN HISTORY
3, 3/0; D

Prerequisite: Upper-division status. The major historical writings on selected periods and topics in African American history. Readings, discussions, and writing book reviews and biographical essays.

HIS 469
BLACK PROTEST AND
LEADERSHIP IN THE UNITED
STATES IN THE TWENTIETH
CENTURY
3, 3/0; D

Prerequisite: Upper-division status. The black protest movements and leaders in twentieth-century America.

HIS 488
INTERNSHIP
Variable credit

Prerequisites: Sophomore, junior, or senior status; background of courses or experience within the area of interest; 6 credit hours of lower-division major courses; 6 credit hours of history and social studies education coursework at the upper-division level; minimum cumulative GPA of 2.5 (overall and in major coursework); approval of student adviser and department chair. Internships provide students with guided, supervised field experiences that complement the academic program.

HIS 495
SPECIAL PROJECT

HIS 498
HONORS RESEARCH
Prerequisite: Completion of 12 credit hours in the history honors program. An advanced research course for students in the history honors sequence.

HIS 499
INDEPENDENT STUDY

HON

HONORS

Center for Interdisciplinary Studies

HON 100
ALL COLLEGE HONORS
SEMINAR
3, 3/0

Prerequisite: Acceptance into the All College Honors Program. Introductory course. Introduces students to faculty from across the disciplines. Includes discussion of specific fields of study and their contributions to the

betterment of humankind. Promotes student appreciation, critical examination, and application of interrelated concepts and values as defined by works of literature, art, music, scientific endeavor, technology, historical research, pedagogy, and political theory.

HON 101
HUMANITIES SEMINAR
3, 3/0; CH

Prerequisite: Acceptance into the All College Honors Program. Humanities core. Part of an integrated sequence of core courses. Focuses on great ideas and works of various cultures.

HON 102
NATURAL SCIENCE SEMINAR
3, 3/0; CM

Prerequisite: Acceptance into the All College Honors Program. Natural science core. Part of an integrated sequence of core courses. Focuses on the role of science in contemporary society. Students enrolled in this course may not receive credit for SCI 100.

HON 103
ARTS SEMINAR
3, 3/0; CA

Prerequisite: Admission to the All College Honors Program. Arts core. Part of an integrated sequence of core courses. Focuses on great ideas and significant works in the arts.

HON 301
VALUES AND ETHICS IN THE
PROFESSIONS
3, 3/0; CT

Prerequisite: Acceptance into the All College Honors Program. Seminar. Theories of value development, value dilemmas. Implications of legal aspects of the ethical practice of human service, educational, and health care professions from a personal and professional viewpoint.

HON 302
SOCIAL SCIENCE SEMINAR
3, 3/0; CS

Prerequisite: Acceptance into the All College Honors Program. Social science core. Part of an integrated sequence of core courses. Focuses on central ideas, epistemology, and issues and significant works in and among the social sciences.

HON 400
ALL COLLEGE HONORS
COLLOQUIUM
3, 3/0

Prerequisite: Acceptance into the All College Honors Program. Culminating activity. Students complete original works of scholarship and creativity and present their work in a colloquium forum to allow for the maximum exchange of ideas. Course provides closure to the objectives of the All College Honors Program.

HPR

HEALTH AND PHYSICAL RECREATION

Coaching and Physical Education Office

HPR 100
SPECIAL PROJECT

Limited for certain movement, exercise, and sport experiences. Completion of form and approval of program coordinator required. Forms available in the Coaching and Physical Education Office.

HPR 106
BOWLING

HPR 114
JOGGING

HPR 160
AEROBIC MOVEMENT

HPR 180
PHYSICAL FITNESS FOR WOMEN

HPR 198
STRENGTH FITNESS

HPR 201
TECHNIQUES AND THEORIES OF
COACHING SPECIALTY SPORTS
3, 3/0

Lecture and discussion analysis of athletic coaching. Supervised independent study of the requirements for coaching an approved specialty sport.

HPR 202
TECHNIQUES AND THEORIES OF
COACHING SOCCER
3, 3/0

Analysis of soccer with emphasis on history, present status, rules, techniques, and theories.

HPR 203
TECHNIQUES AND THEORIES OF
COACHING FOOTBALL
3, 3/0

Analysis of football with emphasis on history, present status, rules, techniques, and theories.

HPR 205
TECHNIQUES AND THEORIES OF
COACHING TRACK AND FIELD
3, 3/0

Analysis of track and field with emphasis on history, present status, rules, techniques, and theories.

HPR 207
TECHNIQUES AND THEORIES OF
COACHING BASEBALL/SOFTBALL
3, 3/0

Analysis of baseball with emphasis on history, present status, rules, techniques, and theories.

HPR 208
TECHNIQUES AND THEORIES OF
COACHING SWIMMING
3, 3/0

Analysis of swimming with emphasis on history, present status, rules, techniques, and theories.

HPR 209
TECHNIQUES AND THEORIES OF
COACHING BASKETBALL
3, 3/0

Analysis of basketball with emphasis on history, present status, rules, techniques, and theories.

HPR 300
ATHLETICS IN EDUCATION
3, 3/0; CS

Prerequisite: Sophomore status. Philosophy and principles of athletics in education.

Required to meet minimal state standards for coaching certification or to meet the requirements of the coaching minor.

HPR 301 FUNDAMENTALS OF KINESIOLOGY 3, 3/0

Prerequisite: *Sophomore status.* Study of selected anatomical, physiological, and mechanical principles of movement and their application to human motion.

HPR 306 ORGANIZATION AND ADMINISTRATION OF INTRAMURAL SPORTS 3, 3/0

Prerequisite: *Sophomore status.* Critical analysis of the organization and administration of intramural and recreational sports programs.

HPR 319 SOCIOLOGY OF SPORT 3, 3/0; D

Sport and related social phenomena of social status, norms, goals, values, and organizational network.

HPR 335 PREVENTION AND CARE OF ATHLETIC INJURIES 3, 3/0

Prerequisite: *HPR 301 or instructor permission.* The relationships among conditioning, performance, and injury prevention. Includes techniques and programs of body conditioning for specific sports, and the possible treatment of athletic injuries. A required course for students choosing either to meet minimal standards for coaching certification or to meet the requirements of the coaching minor.

HPR 488 INTERNSHIP Variable credit

Prerequisites: *Upper-division status and instructor permission.* The integration of theoretical knowledge with practical field experience in coaching interscholastic sports.

HPR 495 SPECIAL PROJECT

HPR 499 INDEPENDENT STUDY

HTR

HOSPITALITY AND TOURISM

Hospitality and Tourism Department

HTR 100 MULTICULTURAL FOODS 3, 2/2; D

Cultural overview of the foods and food habits of selected groups. Common foods, meal patterns, special-occasion foods, and the role of food in society. The impact of the groups on the American lifestyle.

HTR 110 INTRODUCTION TO HOSPITALITY AND TOURISM 3, 3/0; CT

Overview of the hospitality-tourism industry: hotels, resorts, tourism and travel, convention management, casinos and gaming, food service (commercial and noncommercial), and culinary arts. Emerging trends in the industry and available career opportunities.

HTR 200 SANITATION AND SAFETY IN FOOD SERVICE 3, 3/0

Causes of and conditions leading to foodborne illnesses. Evaluation of potential hazards of food service operations and measures to control them. Students take the sanitation certificate examination, offered by the Educational Foundation of the National Restaurant Association, at the end of this course.

HTR 300 FOOD AND BEVERAGE MANAGEMENT 4, 1/6

Prerequisite: *HTR 100.* Students work in commercial, noncommercial, and/or community food service facilities. Students are required to apply various food production, purchasing, and sanitation principles while participating in labs. Emphasis on preparing highest-quality products and providing highest-quality service.

HTR 305 ADVANCED FOOD 3, 2/2

Prerequisite: *HTR 100.* Application of the principles of nutrition, quality food preparation, management, and consumer economics to family food purchase, preparation, and service.

HTR 320 ALCOHOL MANAGEMENT ISSUES 2, 2/0

The legal responsibilities of alcoholic beverage service to the general public. Operational techniques for hiring and training. Necessary skills for the conscientious service of alcohol through formal organizational policies.

HTR 340W INDUSTRY EXPERIENCE 3, 0/9

Prerequisites: *HTR 110, successful completion of English composition/basic communication competency requirement, minimum GPA of 2.0 in major coursework.* Integration of technical knowledge and industry experience in hospitality-tourism operations. Includes supervised field experience, meeting with instructor, and structured written assignments. May be taken for a maximum of 6 credit hours.

HTR 348 TOURISM AND WORLD TRAVEL 3, 3/0

Overview of world tourism and travel and the impact of tourism on world trade, geopolitical understandings, and cultural exchange. Introduction to career opportunities in the industry.

HTR 350 COMPUTER APPLICATIONS FOR HOSPITALITY 3, 1/2

Prerequisites: *Hospitality administration major, upper-division status.* Hands-on experience with the latest versions of software packages used in the hospitality industry for tasks such as inventory management, employee scheduling, and menu planning. Some consideration of DOS (disk operating system); Case-study analysis.

HTR 361W PRINCIPLES OF MANAGEMENT IN FOOD SERVICE 3, 3/0

Application of management principles in food service systems.

HTR 363 QUANTITY FOOD PRODUCTION 3, 1/4

Prerequisite: *HTR 100.* Application of food-preparation principles to quantity production, menu planning, use and care of institutional equipment, standardized recipes, costs, and service to the public.

HTR 364 DINING ROOM SERVICE 3, 2/2

Prerequisites: *HTR 100 and HTR 300.* Techniques used in dining room activities. Planning, preparation, coordination, and evaluation of selected dining functions.

HTR 365 MENU PLANNING 3, 3/0

Prerequisite: *HTR 100.* Principles of menu planning. Role of menu in the relationship to a food-service operation's success.

HTR 368 HOTEL OPERATIONS 3, 3/0

Prerequisite: *HTR 110.* Organization, function, and management of the rooms and divisions of hotels, resorts, and other lodging facilities; security; facilities management. Emphasis on front-office management.

HTR 370 COST CONTROLS IN HOSPITALITY 3, 3/0

Prerequisite: *Successful completion of mathematics basic skills competency requirement.* Relevant accounting and financial concepts and procedures. Interrelationships between costs and their impact on gross margins and net incomes. Strategies to control fixed and variable costs.

HTR 380 TRAINING FOR HOSPITALITY 3, 3/0

Prerequisite: *HTR 110.* Training principles for the design, implementation, and evaluation of programs for the hospitality industry. Application of theoretical concepts to hospitality-related situations.

HTR 389 TOPIC COURSE 3, 0/0

HTR 390 STRATEGIC MARKETING IN HOSPITALITY 3, 3/0

Prerequisite: *HTR 110.* Application of marketing principles to the hospitality industry. Emphasis on planning for and promoting new and established organizations.

HTR 400 CATERING MANAGEMENT 3, 1/4

Prerequisite: *HTR 100.* Provides students with an understanding of catering principles as well as management experiences through the execution of specially booked functions. Opportunities to apprentice in planning, organizing, supervising, preparing, and serving food and beverage for planned catered events.

HTR 408 CONVENTION AND MEETING MANAGEMENT 3, 3/0

Prerequisite: *HTR 110.* Introduction to the meeting, convention, and exposition industry. The basic framework for planning a meeting, convention, or exposition.

HTR 418 TOURISM MANAGEMENT 3, 3/0

Prerequisite: *HTR 110.* Tourism as a world export industry and its importance to the economy; tourist behavior, motivation, and decision making; the interrelationship of recreation and tourism; the system used to deliver tourism services; and the products and services of the tourism industry.

HTR 420 FRANCHISING AND ENTREPRENEURSHIP IN THE HOSPITALITY INDUSTRY 3, 3/0

Prerequisite: *HTR 110.* Understanding franchising and its role in the hospitality industry; differences between entrepreneurship and franchising; selecting a franchise. Various franchise systems are analyzed for marketing effectiveness and financial performance.

HTR 430 MANAGEMENT AND MARKETING OF SERVICES 3, 3/0

Prerequisite: *HTR 110.* Understanding the service process and its role in the hospitality industry. Various service systems are analyzed for marketing effectiveness and financial performance. Emphasis on understanding service gaps and developing strategies for long-term survival.

HTR 455 ADVANCED HUMAN RESOURCE MANAGEMENT IN HOSPITALITY 3, 3/0

Prerequisites: *HTR 110 and HTR 380.* Strategies used by hospitality manager to create a more effective work environment. Application of advanced human resource concepts useful in problem solving and decision making needed in a diverse and competitive hospitality industry.

HTR 460
CONCEPTS IN STRATEGIC
MANAGEMENT

3, 3/0

Prerequisites: HTR 370 and HTR 390.

Concepts of strategic planning process, strategy implementation, and strategic control in the hospitality industry. The importance of environment scanning in strategic management. Case studies from the hospitality industry.

HTR 470
LEGAL ISSUES IN HOSPITALITY

3, 3/0

Prerequisites: HTR 110, HTR 380, and HTR 390. Overview of local, state, and federal laws and regulations that promote policies for effective hospitality organizations. Case-study analysis.

HTR 475
RESEARCH METHODS IN
HOSPITALITY

3, 3/0

Prerequisites: Upper-division status, successful completion of English composition/basic communication competency requirement, knowledge of word processing and statistics recommended. Introduction to the research process, including the opportunity to develop a research question including testable hypotheses. Students may work with topics of their interest.

HTR 480
ADVANCED HOSPITALITY
ADMINISTRATION

4, 1/6

Prerequisites: HTR 300 and senior status. Culminating experience in hospitality administration in a food-service setting requiring students to apply various theories and concepts learned in previous courses. Students develop marketing, strategic, and financial plans for a specific restaurant.

HTR 485
SEMINAR IN HOSPITALITY

1, 1/0

Prerequisite: Senior status. Investigation of contemporary issues relevant to the hospitality industry. Students research and present topics of their choice.

HTR 495
SPECIAL PROJECT

HTR 499
INDEPENDENT STUDY

HUM

HUMANITIES

Center for Interdisciplinary Studies

HUM 100
INTRODUCTION TO
HUMANITIES

3, 3/0; CH

Introduction to some central topics in the humanities. Humans' attempts to give meaning to their lives through literary, philosophical, and creative expression.

HUM 300
HUMANISTIC PERSPECTIVES

3, 3/0

Prerequisites: HUM 100 and upper-division status. Chronology of major art, literature, philosophy, music, and religious movements of the world. The interaction of these disciplines during various eras. Junior-level course; required for humanities majors.

HUM 320
THE TRADITION OF ROMANTIC
LOVE IN WESTERN LITERATURE:
1000–PRESENT

3, 3/0; CH

The depiction of romantic love in western European and American literature from the Middle Ages to the present. The social realities that, during the centuries, have caused romantic love to remain central to occidental literature.

HUM/COM 321
RHETORICAL CRITICISM

3, 3/0; CH

Prerequisite: Upper-division status or instructor permission. Analysis of persuasive messages, designed to teach students to recognize and respond analytically to influential strategies used by public persuaders. Focus on political speeches, commercial advertising, protest music, and other forms of purposeful communication.

HUM 327/COM 327
GREAT WRITING AND
REPORTING OF AMERICAN
JOURNALISM

3, 3/0; CH

Prerequisite: Upper-division status or instructor permission. Excellence in reporting and writing. Great journalistic writings and why they endure fame.

HUM 328
FANTASY AND MAGIC REALISM
IN LITERATURE

3, 3/0

Prerequisite: One course in the humanities or upper-division status. Fantastic and magically realistic literature through the ages. The ways in which such works mirror and/or symbolically transform historical reality.

HUM 337/GER 337
MODERN GERMAN LITERATURE
IN TRANSLATION

3, 3/0; CH

Literary trends, ideas, and techniques of modern German literature as manifested in selected works of major German literary figures.

HUM 339
FRIENDSHIP

3, 3/0

Prerequisites: Fulfillment of freshman writing requirement and upper-division status or one course in philosophy. Conceptions of friendship, its value to the friends and to others, its moral justification, and the legitimacy of preferring friends to others.

HUM 490
SENIOR SEMINAR

3, 3/0

Prerequisites: HUM 100, HUM 300, and upper-division status. Research methodologies and examples of research in the humanities. Students may choose to research and

develop their own articulated areas of engagement in the humanities by taking HUM 495 concurrently with this culminating-experience course. Senior-level course; required for humanities majors.

HUM 488
INTERNSHIP

Variable credit

Prerequisites: Upper-division status; instructor and program coordinator permission. Guided and supervised field experiences (experiential learning). Supervised on-site activities for qualified students with training sessions, seminars, and reports.

HUM 495
SPECIAL PROJECT

HUM 499
INDEPENDENT STUDY

INS

INDIVIDUALIZED STUDIES

Center for Interdisciplinary Studies

INS 100
ADULTS AND LEARNING

1, 1/0

Issues central to adults returning to college: the nature of participation in adult learning, adult-learning theory, and the vital role adult education plays in a rapidly changing technological and global society. Primarily for first-time or returning adult students.

INS 300W
ASSESSMENT OF EXPERIENTIAL
LEARNING

3, 3/0

Prerequisite: Instructor permission, matriculated students only. Designed for students who consider previous learning experiences as college-level creditable. Analysis of experiences that may qualify for college credit and preparation of a portfolio to inventory college-level learning gained outside of college. Not for second-semester seniors.

ITA

ITALIAN

See Modern and Classical Languages

LAT

LATIN

See Modern and Classical Languages

LIB

LIBRARY RESEARCH

E. H. Butler Library

LIB 100
INTRODUCTION TO LIBRARY
RESEARCH AND METHODS

1, 1/0

Provides a basic understanding of the library to maximize efficiency and effectiveness of research. Research tools and research strategy methods, including the online library catalog, audiovisual and microform resources, and electronic information sources including periodical indexes, abstracting services, and full-text databases. Open to all students. Recommended for freshmen and sophomores.

LIB 300
ADVANCED LIBRARY RESEARCH
METHODS

3, 3/0

Advanced library research strategies, along with critical thinking and evaluation skills. Emphasizes selecting and using appropriate print and electronic sources to conduct specialized research. Recommended for students with upper-division status, those planning to pursue graduate studies, and those desiring to become information literate.

LIB 499
INDEPENDENT STUDY

Prerequisites: LIB 100 and LIB 300 or instructor permission.

MAT

MATHEMATICS

Mathematics Department

MAT 103
INTRODUCTION TO
CONTEMPORARY MATHEMATICS

3, 3/0; CM Z

Prerequisite: Three years of Regents high school mathematics or equivalent.

Contemporary mathematics, the methods used, applications, and the wide variety of problems that arise in a rapidly changing society that can be solved using contemporary mathematical techniques.

MAT 107
CASINO GAMBLING

3, 3/0; CM

Prerequisite: Three years of Regents high school mathematics or equivalent. The phenomenon of chance and the theory of probability that governs it, through a critical examination of casino gambling games, including roulette, craps, and blackjack.

MAT 110
INTERMEDIATE COLLEGE
ALGEBRA AND TRIGONOMETRY

3, 3/0; CM

Prerequisite: Three years of Regents high school mathematics or equivalent. Concepts and skills in intermediate algebra and right-triangle trigonometry. Includes equations,

inequalities, polynomials, exponents, radicals, logarithms, systems of equations, functions, and trigonometry of the right triangle.

**MAT 121
ELEMENTARY MATHEMATICS
FROM AN ADVANCED
STANDPOINT I**
3, 3/0

Prerequisite: Three years of Regents high school mathematics or equivalent. Problem solving, elementary set theory, whole numbers, introductory probability, beginning geometry, number theory, using computers.

**MAT 122
ELEMENTARY MATHEMATICS
FROM AN ADVANCED
STANDPOINT II**
3, 3/0; Z

Prerequisite: MAT 121. Real numbers, logic, relations, and functions, probability and statistics, geometry, Logo.

**MAT 124
PRE-CALCULUS MATHEMATICS**
3, 3/0

Prerequisite: Four years of Regents high school mathematics. Pre-calculus course in algebra and trigonometry designed primarily for those who have had eleventh-year high school mathematics. Includes numbers, inequalities, functions graphing, polynomials, rational functions, circular functions, trigonometric identities, induction, and sequences. No credit issued to students who have completed a college-level calculus course.

**MAT 126
CALCULUS**
3, 3/0; CM Z

Prerequisite: MAT 110 or four years of Regents high school mathematics. Functions, limits, continuity, techniques for differentiations, applications, summations, antiderivatives, definite integrals, fundamental theorem of calculus, techniques of integration, applications. Credit issued for either MAT 126 or MAT 161 (or equivalents), but not both.

**MAT 127
CALCULUS OF SEVERAL
VARIABLES**
3, 3/0; CM

Prerequisite: MAT 126. The calculus of several variables with emphasis on applications to the physical and social sciences. Vectors; conic sections, surface in three space, functions of several variables and their graphs; partial derivatives; lines and planes in three-space; tangent planes and normal lines and their applications; the differential and its applications; the directional derivative and its applications; introduction to differential equations and application. Credit issued for either MAT 127 or MAT 162 (or equivalents), but not both.

**MAT 161
CALCULUS I**
3, 3/0; CM Z

Prerequisite: MAT 124 or four years of Regents high school mathematics.
Corequisite: MAT 163. Functions, limits, continuity, differentiation of algebraic functions, applications of the derivative, and differentiation. Credit issued for either MAT 126 or MAT 161 (or equivalents), but not both.

**MAT 162
CALCULUS II**
3, 3/0; CM

Prerequisite: MAT 161. *Corequisite:* MAT 164. The definite integral, the techniques of integration, logarithmic and exponential functions; applications studied through algorithmic techniques and/or computer usage. Credit issued for either MAT 127 or MAT 162 (or equivalents), but not both.

**MAT 163
USING TECHNOLOGY TO
EXPLORE CALCULUS I**
1, 1/0

Prerequisite or corequisite: MAT 161 or equivalent. Exploration of MAT 161 using a programmable graphing utility.

**MAT 164
USING TECHNOLOGY TO
EXPLORE CALCULUS II**
1, 1/0

Prerequisite or corequisite: MAT 162 or equivalent. Exploration of MAT 162 using programmable graphing utilities and Computer Algebra Systems.

**MAT 183
PROBLEM SOLVING IN
MATHEMATICS**
3, 3/0

Prerequisite: Four years of Regents high school mathematics. Introduction to the basic techniques of problem solving; creative problem solving; the methods of Polya, Wickelgren, and others; applications to algebra, geometry, analysis, and recreational mathematics. Emphasis on process rather than content.

**MAT 202
INTRODUCTION TO LINEAR
ALGEBRA**
3, 3/0

Prerequisite: One course in calculus. Vectors and vector spaces; linear dependence, basis and dimension; matrices and determinants; linear systems; linear transformations; eigen-vectors; and invariant subspaces.

**MAT 263
CALCULUS III**
3, 3/0

Prerequisite: MAT 162. *Corequisite:* MAT 264. Vectors, partial differentiation, multiple integrals, and infinite series. Applications studied through algorithmic techniques and/or computer usage.

**MAT 264
USING TECHNOLOGY TO
EXPLORE CALCULUS III**
1, 1/0

Prerequisite: MAT 164. *Prerequisite or corequisite:* MAT 263. Exploration of MAT 263 using a programmable graphing utility and Computer Algebra Systems.

**MAT 270
DISCRETE MATHEMATICS I**
3, 3/0; Z

Prerequisite: One course in calculus. Introduction to the noncontinuous side of mathematics; proof, logic, sets, relations, functions, and counting methods.

**MAT 301
FUNDAMENTALS OF ABSTRACT
ALGEBRA**
3, 3/0; Z

Prerequisite: MAT 202 and MAT 270. Fundamental concepts of abstract algebra: sets, mappings, binary operations, relations; algebraic structures of groups, rings, fields, and applications.

**MAT 302
ABSTRACT ALGEBRA II**
3, 3/0

Prerequisite: MAT 301. Quotient fields of integral domains, polynomials, rings; Euclidean domains, ideals, and factorization; finite fields, extension fields, splitting fields. Applications to geometric constructions and solvability chosen from contemporary areas of coding theory, block designs, etc.

**MAT 304
GAMES AND LINEAR
PROGRAMMING**
3, 3/0; CM

Prerequisite: Three years of Regents high school mathematics. Elementary techniques for finding optimal choices among game strategies and in linear programming problems using the fundamental minimax theorem and the simplex method. Applications in such areas as business, industry, economics, social sciences, and behavioral sciences. Not open to mathematics majors.

**MAT 306
PROBLEM SOLVING WITH
COMPUTERS**
3, 3/0; CM

Prerequisite: Three years of Regents high school mathematics. Introduction to the mathematical uses of computers in today's society. Background; typical uses; writing programs to solve problems in number theory, geometry, finance, and algebra; mathematical games; sorting. Not applicable toward mathematics major requirements.

**MAT 309
DISCRETE MATHEMATICS II**
3, 3/0

Prerequisite: MAT 270. Automata, modules, group codes, linear machines, polynomial rings, cyclic codes, minimum polynomials, context-free grammars, tree automata, polish notation, pushdown automata.

**MAT 311
INTRODUCTORY PROBABILITY
AND STATISTICS**
3, 3/0; CM Z

Prerequisite: Three years of Regents high school mathematics. Descriptive statistics; probability and random variables; binomial, normal, and t distributions; estimation and tests of hypotheses concerning means, proportions, and differences between means and proportions. Not applicable toward mathematics major requirements.

**MAT 315
DIFFERENTIAL EQUATIONS**
3, 3/0

Prerequisite: MAT 263 or instructor permission. Preliminary ideas on order, degree, and solutions; formation of differential equations; differential equations of first-order linear equations with constant coefficients; special high-order equations; simultaneous equa-

tions; linear equations of the second order, series solutions.

**MAT 316
INTERMEDIATE DIFFERENTIAL
EQUATIONS**
3, 3/0

Prerequisite: MAT 315. Laplace transform, inverse Laplace transform and applications, partial differential equations, Fourier series, boundary value problems, transform methods application.

**MAT 322
MODERN GEOMETRY**
3, 3/0

Prerequisite: MAT 270. Euclidean constructions, theorems of Menelaus and Ceva, cross-ratio, harmonic points, orthogonal circles, isometrics and similarities in the plane, introduction of projective geometry.

**MAT 325
PROBABILITY AND STATISTICS**
3, 3/0; CM

Prerequisites: MAT 162, MAT 163, MAT 164, MAT 270, and 0721 major; or instructor permission. Probability (graphic representations, descriptions of probabilistic events, combinatorics and combinatorial probability), discrete and continuous probability distributions, descriptive statistics, estimation and tests of hypotheses concerning means, proportions, variance and standard deviation and differences between means and proportions, Chi-Square tests for goodness of fit and independence, F-distribution and Analysis of Variance, correlation and regression, non-parametric statistics.

**MAT 351
ELEMENTARY THEORY OF
NUMBERS**
3, 3/0

Prerequisite: Four years of Regents high school mathematics. Divisibility; Euclid's algorithm; numbers; prime factorization theorem; Euler's phi-function; Diophantine analysis; congruence; theorems of Fermat, Euler, and Wilson.

**MAT 370
APPLIED NETWORKS**
3, 3/0

Prerequisites: MAT 202 and MAT 270. Introduction to network and graph theoretic concepts. Properties with application in computational mathematics, social science, decision making, and physical science.

**MAT 381
PROBABILITY**
3, 3/0

Prerequisites: MAT 270 and (MAT 127 or MAT 162). Probability models, discrete and continuous random variables and their distributions or densities, multivariate distributions, mathematical expectation, and special distributions and densities.

**MAT 382
TOPICS IN MATHEMATICAL
STATISTICS**
3, 3/0

Prerequisites: MAT 263 and MAT 381. Sampling distributions, the central-limit theorem, point and interval estimation, tests of hypotheses.

MAT 401
INTRODUCTION TO COMPUTABILITY
3, 3/0

Prerequisites: MAT 270 and (MAT 301 or MAT 351). Introduction to topics in finite automata and Turing machines, including universal Turing machines and abstract computability.

MAT 404
APPLICATIONS OF LINEAR ALGEBRA
3, 3/3

Prerequisites: MAT 202, MAT 263, and MAT 264. Eigenvalue problems, diagonalizing matrices, linear programming, simplex method, applications to areas such as business, industry, economics, social sciences, and behavioral sciences.

MAT 411
COMPLEX VARIABLES
3, 3/0

Prerequisite: MAT 263. Complex numbers, analytic functions, elementary functions, contour integration, integral theorems, Taylor series, Laurent series, uniform convergence, calculus of residues, mappings and applications.

MAT 417
INTRODUCTION TO REAL ANALYSIS I
3, 3/0

Prerequisite: MAT 263. Elementary real analysis, including properties and axioms of the real number system, relations and functions, sequences, continuity, differentiation, infinite series, power series, and Riemann integral.

MAT 418
INTRODUCTION TO REAL ANALYSIS II
3, 3/0

Prerequisite: MAT 417 or equivalent. Continuation of MAT 417 with topics chosen from: Riemann-Stieltjes integration, improper integrals, infinite series, series of functions, partial differentiation, Jacobians, implicit function, multiple integrals, and Fubini's Theorem.

MAT 431
MATHEMATICAL LOGIC
3, 3/0

Prerequisite: Mathematics major. Validity, deductibility, and completeness in propositional and predicate logics; first-order formal theories and informal theories in the context of set theory.

MAT 461
NUMERICAL ANALYSIS
3, 3/0

Prerequisites: MAT 202, MAT 263, and MAT 264. Numerical solutions (and error analysis) to linear and nonlinear equations, interpolation, curve fitting, function approximation, numerical differentiation and integration, differential equations.

MAT 471
INTRODUCTION TO TOPOLOGY
3, 3/0

Prerequisites: MAT 270 and (MAT 301 or MAT 417). Introduction to topology: sets and functions, metric spaces, topological spaces, connectedness, compactness, and separation.

MAT 490
SEMINAR
3, 3/0

Prerequisite: Senior mathematics major or instructor permission. Investigation of topics of current interest to mathematicians, such as group theory, game theory, differential geometry, measure theory, sampling theory, etc. Emphasis on oral presentations and discussions.

MAT 495
SPECIAL PROJECT

MAT 499
INDEPENDENT STUDY

MED

MATHEMATICS EDUCATION

Mathematics Department

MED 200
FIELD EXPERIENCE IN SECONDARY EDUCATION MATHEMATICS
3, 3/0

Classroom and field experience designed to help students contemplating careers in secondary mathematics education make better-informed decisions. Provides important background for students' roles as citizens and as parents. Required for secondary education mathematics majors.

MED 307
USES OF TECHNOLOGY IN THE TEACHING OF MATHEMATICS
3, 3/0

Prerequisites: One introductory computer course or equivalent computer experience and upper-division status. Introduction to equipment and software available for use in the mathematics classroom through problem solving and exploration. Effective use of software and equipment, developing classroom lessons, and preparation for adoption of future developments. Students produce and evaluate projects for use in the mathematics classroom.

MED 308
METHODS IN THE TEACHING OF SECONDARY SCHOOL MATHEMATICS
3, 3/0

Prerequisites: For 0721, 30 credit hours of MAT courses with minimum GPA of 2.5, nine credit hours of professional courses with minimum GPA of 2.5, instructor permission. For 0222, minimum GPA of 2.5 in all mathematics coursework, EDF 202 and EDF 302 with minimum grades of C, minimum of 75 credit hours earned. Introduction to the theory and practice of classroom teaching for the prospective secondary mathematics teacher. Experiences in classroom discipline, planning for instructor, curricular issues, evaluation and testing, and special learning techniques. Includes lectures, peer presentation, construction and critique of lesson plans, use of media, and research of teaching strategies.

MED 309
TEACHING MATHEMATICS IN THE MIDDLE SCHOOL
3, 3/0

Prerequisite: EDF 302 or EDF 303. Preparation to teach mathematics in grades 5–9. Includes techniques and models used to teach mathematics at the middle-school level in the context of current research on how children learn mathematics.

MED 383
LEARNING AND TEACHING PROBLEM SOLVING
3, 3/0; Z

Prerequisites: Two semesters of calculus, MAT 270, and upper-division status. Experiences in mathematical problem solving, learning through problem solving, consideration of diverse perspectives and problem-solving approaches, strategies for teaching the use of a problem-based approach, the historical and current roles of problem solving in secondary mathematics.

MED 406
STUDENT TEACHING OF MATHEMATICS IN THE LOWER MIDDLE GRADES
6, 0/6

Prerequisites: Completion of MED 200, MED 307, MED 309, MED 383W, EDF 303, all required mathematics courses, and 6 credit hours upper-division mathematics courses; minimum GPA of 2.5 in all mathematics and education coursework; senior status. Lower middle school laboratory experiences, goals of lower middle school education, psychological influences, teaching models, assessment techniques, classroom management, total involvement in lower middle school activities, practicum.

MED 407
STUDENT TEACHING OF MATHEMATICS IN JUNIOR HIGH/MIDDLE SCHOOL
6, 0/6

Prerequisites: For 0721 and 0222, completion of MED 308W with a minimum grade of C, minimum GPA of 2.5 in all mathematics major coursework, completion of all professional coursework with a minimum GPA of 2.5, instructor permission. Early secondary school classroom laboratory experiences, goals of early secondary mathematics education, psychological influences, teaching models, testing and evaluation techniques, total involvement in early secondary school activities, practicum.

MED 408
STUDENT TEACHING OF MATHEMATICS IN SENIOR HIGH SCHOOL
6, 0/6

Prerequisites: For 0721, completion of MED 308W with a minimum grade of C, minimum GPA of 2.5 in mathematics major coursework, completion of all professional coursework with a minimum GPA of 2.5, instructor permission. Secondary school classroom laboratory experiences, goals of secondary mathematics education, psychological influences, teaching models, testing and evaluation techniques of instruction, total involvement in secondary school activities, practicum.

MED 499
INDEPENDENT STUDY

MODERN AND CLASSICAL LANGUAGES

CHI

Chinese

CHI 101
BEGINNING CHINESE I
3, 3/0; CH F

Fundamentals of Mandarin Chinese with an emphasis on the spoken and written language.

CHI 102
BEGINNING CHINESE II
3, 3/0; CH F

Prerequisite: CHI 101 or equivalent. Continuation of CHI 101.

CHI 201
INTERMEDIATE CHINESE I
3, 3/0; F

Prerequisite: CHI 102 or equivalent. Further development of Mandarin Chinese with an emphasis on reading and writing.

CHI 202
INTERMEDIATE CHINESE II
3, 3/0; F

Prerequisite: CHI 201 or equivalent. Continuation of CHI 201.

FLE

Foreign Language Education

FLE 200
FIELD EXPERIENCE IN FOREIGN LANGUAGE EDUCATION
3, 0/0

Prerequisites: Sophomore status; completion of 302 in language of specialization; minimum GPA of 2.5 in language of specialization or GOOD on MLA scale; proficiency in English (FS1-3); consent of modern and classical languages education coordinator. Ninety hours in a middle, junior high, or senior high school in observation and participation of various types. Conducted by school and college staff.

FLE 316
TEACHING READING IN THE SECOND LANGUAGE IN MIDDLE SCHOOLS
3, 3/0

Prerequisites: FRE 301 or SPA 301 or equivalent and one course in French or Spanish literature. Strategies and techniques for teaching reading in the second-language classroom. Students read in the language they are going to teach. Required for all students entering foreign language education programs.

FLE 405
METHODS AND MATERIALS FOR TEACHING FOREIGN LANGUAGES IN THE SECONDARY SCHOOLS
3, 3/0

Prerequisites: EDF 303, EDF 403, and consent of modern and classical languages education coordinator. *Prerequisite or corequisite:* FLE 200. Introduction to the elements of a foreign language curriculum: selecting, organizing, and presenting material; designing classroom activities; evaluating student progress; teacher-pupil relationships. Students in modern and classical languages teacher certification programs should take this course immediately before FLE 407–FLE 408.

FLE 406
TECHNIQUES FOR TEACHING AND EVALUATING FOREIGN LANGUAGES IN MIDDLE AND SECONDARY SCHOOLS
3, 0/0

Prerequisites: EDF 303, EDF 403, and consent of modern and classical languages education coordinator. *Prerequisite or corequisite:* FLE 200. Development of skills in teaching and testing foreign languages, with special emphasis on applying a communicative syllabus to middle and secondary school language programs.

FLE 407
STUDENT TEACHING OF FOREIGN LANGUAGES IN THE MIDDLE/JUNIOR HIGH SCHOOL
6, 0/0

Prerequisites: Minimum GPA of 2.5 for all requirements in language of specialization and in professional education. Minimum grade of C in FLE 405 and FLE 406, consent of modern and classical languages education coordinator. Teaching under supervision in a middle school or junior high school five days a week, with additional participation in school program. Evaluation by college and school personnel.

FLE 408
STUDENT TEACHING OF FOREIGN LANGUAGES IN THE HIGH SCHOOL
6, 0/0

Prerequisites: Minimum GPA of 2.5 for all requirements in language of specialization and in professional education, minimum grade of C in FLE 405 and FLE 406, consent of modern and classical languages education coordinator. Teaching under supervision in a senior high school five days a week, with additional participation in school program. Evaluation by college and school personnel.

FLE 497
WORKSHOP

FRE
French

FRE 101
BEGINNING FRENCH I
3, 3/0; CH F

Fundamentals of French with an emphasis on the spoken and written language.

FRE 102
BEGINNING FRENCH II
3, 3/0; CH F

Prerequisite: FRE 101. Continuation of FRE 101. Fundamentals of French with an emphasis on the spoken and written language.

FRE 110
ACCELERATED BEGINNING FRENCH
6, 6/0; CH F

Prerequisite: Two or three years of high school French. Covers material normally studied in FRE 101 and FRE 102. Designed for those who have had two or three years of high school French and who feel the need for practice in the basic patterns and structures of French.

FRE 201
INTERMEDIATE FRENCH I
3, 3/0; F

Prerequisite: FRE 102. Further development of basic skills with emphasis on reading and writing.

FRE 202
INTERMEDIATE FRENCH II
3, 3/0; F

Prerequisite: FRE 201. Continuation of FRE 201. Further development of basic skills with emphasis on reading and writing.

FRE 210
ACCELERATED INTERMEDIATE FRENCH
6, 6/0; F

Prerequisite: FRE 102 or FRE 110. Covers material normally studied in FRE 201 and FRE 202. Designed for those who have more than three years of high school French and who feel the need for intensive practice in speaking and writing in the language.

FRE 301
FRENCH CONVERSATION AND COMPOSITION
3, 3/0

Prerequisite: FRE 202. Practice in spoken and written French.

FRE 302
FRENCH CONVERSATION AND COMPOSITION
3, 3/0

Prerequisite: FRE 202. Practice in spoken and written French.

FRE 303
TRANSLATION
3, 3/0

Prerequisites: FRE 301 and FRE 302. Problem words, idiomatic expressions, and contrastive English-French, French-English structures. Intensive work in translation of authentic texts from English to French and French to English.

FRE 305
PHONETICS AND ORTHOGRAPHY
3, 3/0

Prerequisites: FRE 301 and FRE 302. Introduction to French phonetics and applied linguistics.

FRE 306
THE CIVILIZATION OF FRANCE
3, 3/0

Prerequisite: FRE 301 or FRE 302. French

civilization and its economic, social, and cultural aspects based on a review of the history of France.

FRE 307
SURVEY OF FRENCH LITERATURE
3, 3/0

Prerequisite: FRE 301 or FRE 302. The Middle Ages through the Renaissance.

FRE 308
SURVEY OF FRENCH LITERATURE
3, 3/0

Prerequisite: FRE 301 or FRE 302. Classicism and the Enlightenment.

FRE 309
SURVEY OF NINETEENTH- AND TWENTIETH-CENTURY FRENCH LITERATURE
3, 3/0

Prerequisite: FRE 301 or FRE 302. Introduction to representative works from a variety of genres from romanticism to contemporary writing.

FRE 331
FRENCH LITERATURE IN TRANSLATION
3, 3/0; CH

Selected masterpieces of contemporary French literature in translation. Knowledge of French not required. French majors and minors must obtain approval of department chair and course instructor.

FRE 341
FRANCOPHONE LITERATURE IN TRANSLATION
3, 3/0; G V3

Aspects of the Francophone world (French-speaking Europe, North America, Africa, and the Caribbean). Emphasis on historical, political, economic, and social changes resulting from colonial, neocolonial, and anticolonial periods. French majors and minors must obtain approval of department chair and course instructor.

FRE 411
STUDIES IN FRENCH POETRY
3, 3/0

Prerequisite: FRE 307, FRE 308, or FRE 309. French and Francophone poetry selected from major literary periods. May be limited to one historical period. May be repeated once where content varies.

FRE 412
STUDIES IN THE FRENCH NOVEL
3, 3/0

Prerequisite: FRE 307, FRE 308, or FRE 309. French and Francophone novels from the Middle Ages to the present. Includes historical introduction to the novel as social phenomenon and introduction to the formal development of the French and Francophone novel. May be limited to one historical period. May be repeated once where content varies.

FRE 413
STUDIES IN FRENCH THEATER
3, 3/0

Prerequisites: FRE 307, FRE 308, and FRE 309. One or several of the major periods of French and Francophone theater. Includes historical introduction, discussion of French-language theater as a literary form, and detailed analyses of representative authors and works. May be limited to one historical period.

May be repeated once where content varies.

FRE 415
ADVANCED GRAMMAR AND COMPOSITION
3, 3/0

Prerequisites: FRE 301 and FRE 302. Advanced topics of French grammar with work in French composition.

FRE 416
ADVANCED CONVERSATION AND COMPOSITION
3, 3/0

Prerequisites: FRE 301 and FRE 302. Advanced conversation dealing with contemporary French civilization and institutions. Recommended for secondary education majors.

FRE 417
BUSINESS FRENCH
3, 3/0

Prerequisites: FRE 301 and FRE 302. Study of the French business world to develop competency in French commercial language. Practice in translating and writing business communiqués.

FRE 495
SPECIAL PROJECT

FRE 496
SEMINAR I
3, 3/0

Prerequisite: Instructor permission. Topic chosen by instructor.

FRE 497
SEMINAR II
3, 3/0

Prerequisite: Instructor permission. Topic chosen by instructor.

GER

German

GER 101
BEGINNING GERMAN I
3, 3/0; CH F

Fundamentals of German with emphasis on the spoken and written language.

GER 102
BEGINNING GERMAN II
3, 3/0; CH F

Prerequisite: GER 101. Continuation of GER 101.

GER 201
INTERMEDIATE GERMAN I
3, 3/0; F

Prerequisite: GER 102. Further development of basic skills with emphasis on reading and writing.

GER 202
INTERMEDIATE GERMAN II
3, 3/0; F

Prerequisite: GER 201. Continuation of GER 201.

GER 301
GERMAN CONVERSATION AND COMPOSITION I
3, 3/0

Prerequisite: GER 202. Practice in written and spoken German with emphasis on the spoken language.

GER 302
GERMAN CONVERSATION AND COMPOSITION II
3, 3/0

Prerequisite: GER 202. Practice in spoken and written German with emphasis on the written language.

GER 303
THE GERMAN NOVELLA
3, 3/0

Prerequisite: GER 202. The romantic, realistic, and contemporary short prose form, the novella.

GER 304
THE GERMAN DRAMA
3, 3/0

Prerequisite: GER 202. Chief literary trends and major authors of German drama from 1750 to 1870.

GER 306
GERMAN CIVILIZATION
3, 3/0

Prerequisite: GER 202. The growth of German civilization. Emphasis on artistic and intellectual contributions to the Western world.

GER 307
HISTORY OF GERMAN LITERATURE I
3, 3/0

Prerequisite: GER 202. Major authors from the Middle Ages to the eighteenth century.

GER 308
HISTORY OF GERMAN LITERATURE II
3, 3/0

Prerequisite: GER 202. Major authors of the classical period and the nineteenth and twentieth centuries.

GER 337
MODERN GERMAN LITERATURE IN TRANSLATION
3, 3/0; CH

Prerequisite: One literature course or instructor permission. Literary trends, ideas, and techniques of modern German literature as manifested in selected works of major German literary figures. German minors must obtain approval of department chair and course instructor.

GER 338
GERMAN FILM AND RELATED LITERATURE IN TRANSLATION
3, 3/0

The main artistic phases of the German cinema and their relationship with literature (primarily drama and narrative) from the Weimar period to contemporary times. Films are subtitled; instruction is in English. German minors must obtain approval of department chair and course instructor.

GER 339
MODERN GERMAN CULTURE
3, 3/0

Modern German-speaking cultures from 1871 to the present. Emphasis on the Weimar period, the Third Reich, the Postwar, and recent developments. Readings and instruction are in English. German minors must obtain approval of department chair and course instructor.

GER 401
TWENTIETH-CENTURY GERMAN LITERATURE
0, 3/0

Prerequisite: GER 202. Chief literary trends and major authors of German literature in the twentieth century.

GER 450
DIRECTED READINGS I
3, 3/0

Prerequisite: Instructor permission. Variable.

GER 451
DIRECTED READINGS II
3, 3/0

Prerequisite: Instructor permission. Variable.

GER 495
SPECIAL PROJECT

GER 497
WORKSHOP

GRK

Greek

GRK 101
BEGINNING NEW TESTAMENT GREEK I
3, 3/0; CH F

Fundamentals of Koine Greek with emphasis upon reading.

GRK 102
BEGINNING NEW TESTAMENT GREEK II
3, 3/0; CH F

Prerequisite: GRK 101. Continuation of GRK 101.

GRK 201
INTERMEDIATE NEW TESTAMENT GREEK (KOINE) I
3, 3/0; F

Prerequisite: GRK 102. Further development of reading and writing ability, with continued emphasis on the comprehension on the written language.

GRK 202
INTERMEDIATE NEW TESTAMENT GREEK (KOINE) II
3, 3/0; F

Prerequisite: GRK 201. Continuation of GRK 201.

ITA

Italian

ITA 101
BEGINNING ITALIAN I
3, 3/0; CH F

Fundamentals of Italian with emphasis on listening and speaking.

ITA 102
BEGINNING ITALIAN II
3, 3/0; CH F

Prerequisite: ITA 101. Continuation of ITA 101.

ITA 201
INTERMEDIATE ITALIAN I
3, 3/0; F

Prerequisite: ITA 102. Further development of

basic skills with emphasis on reading and writing.

ITA 202
INTERMEDIATE ITALIAN II
3, 3/0; F

Prerequisite: ITA 201. Continuation of ITA 201.

ITA 301
ITALIAN CONVERSATION AND COMPOSITION
3, 3/0

Prerequisite: ITA 202. Practice in written and spoken Italian.

ITA 302
ITALIAN CONVERSATION AND COMPOSITION
3, 3/0

Prerequisite: ITA 202. Practice in written and spoken Italian.

ITA 306
CONTEMPORARY ITALIAN CIVILIZATION
3, 3/0

Prerequisite: If offered in English, none; if offered in Italian, ITA 202 or equivalent. Cultural, intellectual, and social developments in Italy, past and present. Offered in English or Italian, as noted in the master schedule. When in English, this course may not be applied to the Italian minor.

ITA 307
SURVEY OF ITALIAN LITERATURE
3, 3/0

Prerequisite: ITA 202. Readings and discussions of major works from the origins through the cinquecento.

ITA 308
SURVEY OF ITALIAN LITERATURE
3, 3/0

Prerequisite: ITA 202. Readings and discussions of major works from the seicento to the ottocento.

ITA 336
CONTEMPORARY ITALIAN LITERATURE IN TRANSLATION
3, 3/0; CH

Major writers and cultural movements since Italian unification. Italian minors must obtain approval of department chair and course instructor.

ITA 401
DANTE'S DIVINA COMMEDIA
3, 3/0

Prerequisite: One upper-division Italian course or instructor permission. Selected cantos as an introduction to Dante's work and times.

ITA 406
NINETEENTH-CENTURY ITALIAN LITERATURE
3, 3/0

Prerequisite: One upper-division Italian course or instructor permission. Readings and discussions of representative works of poetry and novels.

ITA 410
MODERN ITALIAN LITERATURE
3, 3/0

Prerequisite: One upper-division Italian

course or instructor permission. Readings and discussions of representative novels and short stories of the twentieth century.

ITA 450
DIRECTED READINGS I
3, 3/0

Prerequisite: Instructor permission. Variable topics.

ITA 451
DIRECTED READINGS II
3, 3/0

Prerequisite: Instructor permission. Variable topics.

LAT

Latin

LAT 101
BEGINNING LATIN I
3, 3/0; CH F

Fundamentals of Latin with emphasis upon reading.

LAT 102
BEGINNING LATIN II
3, 3/0; CH F

Prerequisite: LAT 101. Continuation of LAT 101.

LAT 201
INTERMEDIATE LATIN I
3, 3/0; F

Prerequisite: LAT 102. Further development of reading and writing, with continued emphasis on comprehension of the written language.

LAT 202
INTERMEDIATE LATIN II
3, 3/0; F

Prerequisite: LAT 201. Continuation of LAT 201.

MCL

Modern and Classical Languages

MCL 337
GREEK AND ROMAN MYTHOLOGY
3, 3/0; CH

Prerequisite: One college-level literature course or instructor permission. Stories of the gods, goddesses, and heroes of Greece and Rome as presented in Greek and Roman literature. Emphasis upon determining possible origins and meanings of the myths studied.

MCL 338
INTRODUCTION TO CLASSICAL GREEK DRAMA
3, 3/0

Prerequisite: One literature course or instructor permission. Origin of European drama as a distinct literary form.

Characteristics of Greek tragedy, the ancient theater and theatrical conventions. Careful reading and discussion of at least one play from each of Aeschylus, Sophocles and Euripides, with emphasis on the problems posed in relation to the intellectual, social, political, and cultural patterns of the time.

MCL 346
WOMEN IN FOREIGN LITERATURE
3, 3/0

Prerequisite: One literature course or instructor permission. French women writers from the Middle Ages to the present. Emphasis on George Sand, Simone de Beauvoir, and Marguerite Duras. Analysis of women writers from Spain, Latin America, and the United States. Portrayals of German-speaking women from the medieval epic writings to the post-nification era. In English.

MCL 488
INTERNSHIP
Variable credit

MCL 495
SPECIAL PROJECT

Prerequisite: Instructor permission.

MCL 499
INDEPENDENT STUDY

Prerequisite: Instructor permission.

SPA

Spanish

SPA 101
BEGINNING SPANISH I
3, 3/0; CH F

Fundamentals of Spanish with emphasis on the spoken and written language.

SPA 102
BEGINNING SPANISH II
3, 3/0; CH F

Prerequisite: SPA 101. Continuation of SPA 101.

SPA 201
INTERMEDIATE SPANISH I
3, 3/0; F

Prerequisite: SPA 102. Further development of basic skills with emphasis on reading and writing.

SPA 202
INTERMEDIATE SPANISH II
3, 3/0; F

Prerequisite: SPA 201. Continuation of SPA 201.

SPA 301
SPANISH CONVERSATION AND COMPOSITION
3, 3/0

Prerequisite: SPA 202. Practice in spoken and written Spanish with emphasis on the written language.

SPA 302
SPANISH CONVERSATION AND COMPOSITION
3, 3/0

Prerequisite: SPA 202. Practice in spoken and written Spanish with emphasis on the spoken language.

SPA 303
INTRODUCTION TO SPANISH LITERATURE
3, 3/0

Prerequisite: SPA 202. Basic concepts of literary theory and their application to masterpieces of prose and poetry.

SPA 305
SPANISH PHONETICS
3, 3/0

Prerequisites: SPA 301 and SPA 302. The speech sounds of Spanish. Comprehension and pronunciation difficulties caused by differences in the sound systems of English and Spanish. Exercises aimed at improvement of pronunciation and intonation.

SPA 306
THE CIVILIZATION OF SPAIN
3, 3/0

Prerequisite: SPA 301 or SPA 302. Culture of the Spanish people. Focus on their achievements, customs, and way of life as affected by geographic, historical, political, and economic factors.

SPA 307
SURVEY OF SPANISH LITERATURE
3, 3/0

Prerequisite: SPA 301 or SPA 302. The Middle Ages through the golden age.

SPA 308
SURVEY OF SPANISH LITERATURE
3, 3/0

Prerequisite: SPA 301, SPA 302, or instructor permission. The eighteenth century to the present.

SPA 309
THE CIVILIZATION OF LATIN AMERICA
3, 3/0; G

Prerequisite: SPA 301, SPA 302, or instructor permission. Culture of the Latin American people. Focus on their achievements, customs, and way of life as affected by geographic, historical, political, and economic factors.

SPA 310
SURVEY OF SPANISH AMERICAN LITERATURE
3, 3/0

Prerequisite: SPA 301 or SPA 302. The colonial period through romanticism.

SPA 311
SURVEY OF SPANISH AMERICAN LITERATURE
3, 3/0

Prerequisite: SPA 301 or SPA 302. Realism to the present.

SPA 317
BUSINESS SPANISH
3, 3/0

Prerequisite: SPA 301, SPA 302, or equivalent. Introduction to Spanish commercial language. Extensive practice in translating and composing Spanish business communications.

SPA 402
SPANISH DRAMA OF THE GOLDEN AGE
3, 3/0

Prerequisite: SPA 307. Prelopietas and the works of Lope de Vega, Tirso de Molina, Juan Ruiz, de Alarcón, and others.

SPA 404
CERVANTES
3, 3/0

Prerequisite: SPA 307. Reading and analysis of Don Quixote or the Novelas Exemplares.

SPA 405
OLD SPANISH
3, 3/0

Prerequisite: SPA 305. Development of Spanish from the Middle Ages to the fifteenth century, including the earliest documents in Spanish. Lectures, readings, and reports.

SPA 406
NINETEENTH-CENTURY SPANISH LITERATURE
3, 3/0

Prerequisite: SPA 308. Representative works of the period.

SPA 408
TWENTIETH-CENTURY SPANISH LITERATURE
3, 3/0

Prerequisite: SPA 308. Appreciation, analysis, and criticism of major trends in the development of Spanish poetry and theater of the twentieth century.

SPA 409
TWENTIETH-CENTURY SPANISH LITERATURE
3, 3/0

Prerequisite: SPA 308. The novel, short story, and essay.

SPA 411
SPANISH AMERICAN LITERATURE OF THE NINETEENTH AND TWENTIETH CENTURIES: NOVEL, SHORT STORY, AND ESSAY
3, 3/0

Prerequisite: SPA 310 or SPA 311. Major trends in these genres in the context of the cultural diversity of the hemisphere.

SPA 412
SPANISH AMERICAN LITERATURE: THE TWENTIETH CENTURY
3, 3/0

Prerequisite: SPA 310 or SPA 311. Theater and poetry.

SPA 415
ADVANCED GRAMMAR AND COMPOSITION
3, 3/0

Prerequisites: SPA 301 and SPA 302. Elements of stylistics and selected grammar topics. Special attention given to common errors of English speakers.

SPA 495
SPECIAL PROJECT

SPA 496
SEMINAR I
3, 3/0

Prerequisite: Instructor permission. Topic chosen by instructor.

SPA 497
SEMINAR II
3, 3/0

Prerequisite: Instructor permission. Topic chosen by instructor.

SPA 499
INDEPENDENT STUDY

SWA

Swahili

SWA 101
BEGINNING SWAHILI I
3, 3/0; CH F

Fundamentals of Swahili with emphasis on the spoken and written language.

SWA 102
BEGINNING SWAHILI II
3, 3/0; CH F

Prerequisite: SWA/AAS 101. Continuation of SWA/AAS 101.

SWA 201
INTERMEDIATE SWAHILI I
3, 3/0; F

Prerequisite: SWA/AAS 102. Further development of basic skills, with emphasis on reading and writing.

SWA 202
INTERMEDIATE SWAHILI II
3, 3/0; F

Prerequisite: SWA/AAS 201. Continuation of AAS/SWA 201.

MUS

MUSIC

Performing Arts Department

MUS 112
APPLIED MUSIC
1, 0/.5

Prerequisites: Previous performance with the instrument; audition required.

Individual lessons for voice or instrument. Private lesson fee possible.

MUS 113
BRASS TECHNIQUES
1, 1/1

Prerequisite: Instructor permission.

Preprofessional training in performing and teaching methodologies for trumpet, horn, trombone, baritone, and tuba.

MUS 114
PERCUSSION TECHNIQUES
1, 1/1

Prerequisite: Instructor permission.

Preprofessional training in performing and teaching methodologies for percussion instruments.

MUS 115
STRING TECHNIQUES
1, 1/1

Prerequisite: Instructor permission.

Preprofessional training in performing and teaching methodologies for violin, viola, violoncello, and contrabass.

MUS 116
WOODWIND TECHNIQUES
1, 1/1

Prerequisite: Instructor permission.

Preprofessional training in performing and teaching methodologies for flute, clarinet, oboe, bassoon, and saxophone.

**MUS 150, MUS 250, MUS 350,
MUS 450
DIRECTED STUDY SEMINAR:
COMPOSITION
3, 3/0**

Prerequisite: Instructor and department chair permission. Supervised projects in areas of music study not addressed by current offerings, such as composition and theory, sound recording, computer music, or computer music editing. All students report to a common seminar.

**MUS 161, MUS 162, MUS 163,
MUS 164
APPLIED MUSIC II
1, 0/1**

Prerequisite: *Audition*. Class instruction in instrument or voice, I–IV. Private lesson fee possible. Courses must be taken in sequence.

**MUS 171–MUS 172,
MUS 173–174
MUS 271–MUS 272,
MUS 273–274
MUS 371–MUS 372,
MUS 373–374
MUS 471–MUS 472,
MUS 473–474
APPLIED MUSIC
1-2, 0/.5-1**

Prerequisite: *Audition*. Individual lessons for voice or instrument. Required for music majors. Private lesson fee possible.

**MUS 204
DRAMATIC MUSIC
3, 3/0; CA**

Class instruction and listening experience in the principal literature of opera.

**MUS 206
JAZZ AND ROCK FOUNDATIONS
3, 3/0; D CA**

The roots of blues, jazz, and rock music in America. Historical developments that helped formulate today's jazz and rock movements from 1920 to the 1990s.

**MUS 208
SURVEY OF WORLD MUSIC
CULTURES
3, 3/0; G CA**

The major art music cultures of Asia, the Middle East, Indonesia, and the West. Lectures and listening assignments.

**MUS 210
MUSIC THEORY FOR NON-
MAJORS
3, 3/0; CA**

Music notation, aural and written. Scales, intervals, triads, seventh chords, rhythms, simple and compound meters, triplets, elementary recitation, dictation, analysis, composition, and computer applications.

**MUS 217
EXPERIENCES IN MUSIC FOR
BEGINNERS
3, 3/0; CA**

Experimentation with making music, learning to play some simple instruments, guidance in listening to art music, and learning to read and understand music.

**MUS 218
SIGHT SINGING AND EAR
TRAINING I
1, 0/3**

Corequisite: *music majors and minors: MUS 230*. Laboratory course for those with basic music-reading skills. A diagnostic test is given at the beginning of the semester. Required for music majors and minors. Elective for others.

**MUS 219
SIGHT SINGING AND EAR
TRAINING II
1, 0/3**

Prerequisites: *MUS 218 and MUS 230*. Corequisite: *MUS 231*. Continuation and development of the melodic and rhythmic skills acquired in MUS 218. Required for music majors.

**MUS 230
MUSIC THEORY I
3, 3/0**

Prerequisite: *Basic music-reading skills*. Corequisite: *MUS 218*. Fundamentals of music including notation, scales, modes, tonality, key signatures, intervals, basic chords, basic harmony, voice leading, melodic structures, and the general stylistic features of the various epochs of Western music.

**MUS 231
MUSIC THEORY II
3, 3/0**

Prerequisites: *MUS 230 and MUS 218*. Corequisite: *MUS 219*. Continuation of the fundamentals of music, with emphasis on harmony, voice leading, and simple formal structures within the contexts of the various historical periods of Western music. Required for music majors.

**MUS 301
SURVEY OF MUSIC HISTORY
3, 3/0; CA**

Prerequisite: *Upper-division status*. Listening to music from the Middle Ages through the present. Introduction to music forms, styles, and composers; historical, cultural, and social backgrounds. Parallel developments in other arts.

**MUS 302
MUSIC HISTORY: ANTIQUITY
THROUGH BAROQUE
3, 3/0**

Prerequisite: *One theory course or instructor permission*. Emphasis on Medieval, Renaissance, and Baroque styles.

**MUS 303
MUSIC HISTORY: CLASSIC AND
ROMANTIC
3, 3/0**

Prerequisite: *One theory course or instructor permission*. The eighteenth- and nineteenth-century opera, oratorio, solo song, chamber music, symphony, and other forms.

**MUS 304
MUSIC HISTORY: TWENTIETH
CENTURY
3, 3/0**

Prerequisite: *One theory course or instructor permission*. Sources and development of the idioms, style, and new sound media of music in the twentieth century.

**MUS 305
MODERN JAZZ
3, 3/0; D**

Prerequisite: *MUS 206*. History and development of modern jazz from 1941 to the present.

**MUS 306
URBAN BLUES AND ROCK
3, 3/0; D**

Prerequisite: *MUS 206*. Sources and development of the idioms, style, and sound media of this music.

**MUS 307
OPERA AND DRAMATIC MUSIC
3, 3/0; CA**

Prerequisite: *One music course or upper-division status*. Introduction to opera and vocal dramatic music, including organizing principles and historical developments. Representative works from various musical periods. May require concert attendance.

**MUS 308
CHAMBER MUSIC
3, 3/0; CA**

Prerequisite: *One music course or upper-division status*. Appreciation course focusing on music for small instrumental and vocal groups or soloists from the Middle Ages to the present. May require concert attendance.

**MUS 310
WOMEN IN MUSIC
3, 3/0**

Prerequisite: *Upper-division status or instructor permission*. The evolving roles of women in Western art music and popular music, including discussion of prominent female musicians from ancient times to the present.

**MUS 313
ENSEMBLE I
1, 0/2**

Prerequisite: *Audition*. Training and supervised performance in the literature for small music ensembles related to a student's musical interest. Percussion, guitar, saxophone, and various chamber instrumental or vocal ensembles are offered. May be repeated.

**MUS 314
CONCERT BAND
1, 0/3; CA**

Prerequisite: *Some prior performance experience on a wind or percussion instrument used in standard band instrumentation*. Rehearsals and performances include historical and contemporary wind and percussion literature from around the world as well as transcriptions and arrangements of masterpieces from the Renaissance to the present. Open enrollment. Placement determined by audition during first week of class. May be repeated.

**MUS 318
SIGHT SINGING
AND EAR TRAINING III
1, 0/3**

Prerequisites: *MUS 219 and MUS 231*. Corequisite: *MUS 330*. Continuation and development of the melodic, rhythmic, and application skills acquired in MUS 219. Introduction to harmonic dictation. For advanced music students. Required for music majors.

**MUS 319
SIGHT SINGING
AND EAR TRAINING IV
1, 0/3**

Prerequisites: *MUS 330 and MUS 318*. Corequisite: *MUS 331*. Continuation and development of the harmonic, melodic, rhythmic, and application skills acquired in MUS 318. For advanced music students. Required for music majors.

**MUS 321
ARRANGING VOCAL,
INSTRUMENTAL, POPULAR, AND
JAZZ
3, 3/0**

Prerequisite: *Instructor permission*. Class instruction and supervised training in arranging music for dance, stage, and popular song, with study of representative examples of the literature. Traditional arranging methods are stressed.

**MUS 322
CONDUCTING
3, 3/0**

Prerequisite: *Upper-level music major or equivalent, or instructor permission*. Use of baton. Reading and observation. Concert attendance.

**MUS 326
JAZZ ENSEMBLE
1, 0/2**

Prerequisite: *Audition*. Training and supervised performance in jazz and dance band combination. May be repeated.

**MUS 329
SYMPHONIC MUSIC
3, 3/0; CA**

Prerequisite: *One music course or upper-division status*. Understanding and appreciation of masterpieces written for the symphony orchestra by classic, romantic, and contemporary period composers. Elements of historical developments and formal structures are stressed. Students are required to become familiar with portions of the standard repertoire. May require concert attendance.

**MUS 330
MUSIC THEORY III
3, 3/0**

Prerequisite: *MUS 231*. Corequisite: *MUS 318*. Compositional techniques of Western art music of the late seventeenth, eighteenth, and nineteenth centuries. Required for music majors.

**MUS 331
MUSIC THEORY IV
3, 3/0**

Prerequisites: *MUS 318 and MUS 330*. Corequisite: *MUS 319*. Compositional techniques of Western art music of the twentieth century. Required for music majors.

**MUS 333
CHORAL CONDUCTING
1, 0/3**

Prerequisites: *MUS 219 and MUS 161, MUS 112, or MUS 172*. Corequisite: *MUS 335 or MUS 313*. Fundamentals of rehearsing, developing, and conducting choirs for students with choral and vocal background. May require observation of off-site choral ensemble rehearsals and performances. Required for music education majors.

MUS 335
BUFFALO STATE COLLEGE
SINGERS

1, 0/2; CA

Rehearsal and performance of representative choral music from a diverse repertoire including classical, pop, gospel, spirituals, jazz, folk, and show music. Presentation of the fundamentals of choral singing. May be repeated.

MUS 340
ETHNOMUSICOLOGY I
3, 3/0; G

Prerequisites: MUS 230 and MUS 218 or ANT 101. Lectures, readings, and recordings introducing principal musical traditions of selected non-Western cultures, such as African, Indic, and Sinitic. Consideration of the African American tradition, including jazz and rock. Includes individual projects of music or cultural analysis. Required for music majors.

MUS 495
SPECIAL PROJECT

MUS 499
INDEPENDENT STUDY

NFS

NUTRITION AND FOOD SCIENCE

Dietetics and Nutrition Department

NFS 101
INTRODUCTION TO FOOD COMPOSITION AND PREPARATION
3, 2/2

Introduction to the study of food with emphasis on the scientific principles involved in the identification and conservation of nutrients. Required for dietetics majors.

NFS 105
FOOD AND PEOPLE: INTERACTIONS AND ISSUES
3, 3/0; G CT

The relationship of people and food, including the basis for eating behavior and patterns, eating disorders and faddism, potential hazards associated with foods, dietary goals and guidelines for countries of the world, and issues relating to world nutrition problems, especially hunger.

NFS 301
FOOD SCIENCE
4, 3/2

Prerequisites: CHE 321 and NFS 101. Characterization, analysis, and identification of the components of food. The effect of processing on food. The interrelationship of various aspects of food science to nutrition. Required for dietetics majors.

NFS 334
CONTEMPORARY NUTRITION
3, 3/0; CT

Explanation of nutrition. The functions, requirements, food sources, and results of deficiency and excess for each nutrient. Topics of current interest, such as weight control. Food fads and government nutrition policies. Not open to dietetics majors.

NFS 337
HUMAN NUTRITION
3, 3/0

Prerequisites or corequisite: BIO 308 and BIO 309, and CHE 321. Nutrients required by humans for normal physiological function. Emphasis on nutrient requirements, sources, digestion, absorption, metabolism, storage, and functions. Required for dietetics majors.

NFS 338
NUTRITION AND THE LIFE CYCLE
3, 3/0

Prerequisite: NFS 337. Nutritional needs and concerns of various physiological ages of humans. Application of nutrition principles to pregnancy, lactation, infancy, the preschool and school-age years, adolescence, adulthood, and later maturity. Nutrition services and programs. Required for dietetics majors.

NFS 361
PRINCIPLES OF MANAGEMENT IN FOOD SERVICE
3, 3/0

Application of management principles in food service systems. Required for dietetics majors.

NFS 389
TOPIC COURSE
3, 0/0

NFS 410
NUTRITION EDUCATION: CONCEPT AND APPLICATION
3, 3/0

Prerequisite: NFS 335 or NFS 338. Methods and issues related to the development of nutrition education programs. Emphasis on instructional strategies. Students prepare nutrition projects aimed at population groups of their choice. Required for didactic program only.

NFS 440
APPLIED NUTRITION, PART I
4, 3/2

Prerequisites: NFS 337 and CHE 322. First part of a three-course sequence examining the interrelationship of physiology, biochemistry, and nutrition as it relates to nutritional practice. The role of nutrients at the cellular level with emphasis on intermediary metabolism of carbohydrate, protein, and lipid. Laboratory sessions on nutritional assessment including anthropometric, clinical, biochemical, and dietary, with application to nutritional practice. Role of nutrition in selected conditions or disorders/diseases with emphasis on rationale of nutrition. Required for dietetics majors.

NFS 442
APPLIED NUTRITION PART II
4, 3/2

Prerequisite: NFS 440. *Corequisite:* NFS 446. Second part of a three-course sequence examining the interrelationship of physiology, biochemistry, and nutrition as it relates to nutritional practice. Emphasis on the role of nutrition in treating and preventing diseases/disorders: diabetes mellitus, hypoglycemia, cardiovascular, and pancreatic. Required for coordinated program.

NFS 443
APPLIED NUTRITION, PART III
4, 3/2

Prerequisite: NFS 442. *Corequisite:* NFS 447. Third part of a three-course sequence

examining the interrelationship of physiology, biochemistry, and nutrition as it relates to nutritional practice. Emphasis on the role of nutrition in treating and preventing diseases/disorders: malnutrition, stress states, nutritional support, renal, cancer, liver, biliary, obstructive pulmonary disease, HIV/AIDS, and gastrointestinal. Required for coordinated program.

NFS 445
NUTRITIONAL CARE A
3, 0/9

Prerequisite: NFS 337. *Corequisite:* NFS 440. First in a series of nutritional care courses promoting professional development for dietetic practice. Emphasis on basic skills for a professional role and application of normal nutrition knowledge. Interviewing skills, use of dietary tools and techniques, planning and teaching nutrition education classes are fostered through observation and practice. Clinical experiences with well individuals throughout the life span provide opportunities for learning and self-evaluation. Clinical dress code required. Required for coordinated program only.

NFS 446
NUTRITIONAL CARE B
4, 0/12

Prerequisite: NFS 445. *Corequisite:* NFS 442. Students are assigned patients in acute-care settings to correlate with Applied Nutrition II theory. Students assess nutritional status, define nutritional needs, plan for nutritional care, and implement care on a beginning level after establishing criteria for evaluation of care for selected patients. Clinical dress code required. Required for coordinated program only.

NFS 447
NUTRITIONAL CARE C
5, 0/15

Prerequisite: NFS 446. *Corequisite:* NFS 443. Students refine and apply knowledge and skills in providing nutritional care for individuals (adults and children) with acute and chronic nutritional problems or diseases. Clinical dress code required. Required for coordinated program only.

NFS 448
NUTRITIONAL CARE D
5, 0/10

Prerequisites: NFS 443 and NFS 447. Students learn to establish priorities among required activities to provide care for patients in an assigned hospital unit. Emphasis on students' abilities to provide nutritional care to groups of patients. Students integrate pertinent information about individual patients with theoretical knowledge to develop appropriate nutritional-care plans. Students make appropriate use of available resources. By course completion, students are able to provide appropriate levels of nutritional care to patients independently and in concert with existing nutritional-care systems. Clinical dress code required. Required for coordinated program only.

NFS 449
NUTRITIONAL CARE E (NUTRITIONAL CARE OF LONG-TERM PATIENT)
2, 1/2

Prerequisites: NFS 443 and NFS 447. Long-term care as a health delivery system.

Students participate in providing nutritional care to chronically ill patients in a long-term care facility. Clinical dress code required. Required for coordinated program only.

NFS 450
SENIOR PRACTICUM IN DIETETICS
4, 0/0

Prerequisites: NFS 447 and permission of clinical faculty. Supervised planning, implementation, and evaluation of professional practice goals in a selected area of dietetic practice such as acute care, long-term care, nutrition education, or community-service programs. Ability to function under minimal supervision required. Clinical dress code required. Required for coordinated program only.

NFS 451
SPECIALTY PRACTICE
1, 0/3

Prerequisites: NFS 443 and NFS 447. Participation in dietetic practice for a selected area. Clinical dress code required. Required for coordinated program only.

NFS 452
DIETARY MODIFICATION IN DISEASE, PART I
4, 4/0

Prerequisites: CHE 322 and NFS 440. First of a two-part course sequence that examines the physiological basis for diet modification in disease/disorder states. Emphasis on normal metabolism of nutrients, deviation from normal metabolism in disease, and nutrition support and dietary modifications required in disease/disorder states. Required for didactic program only.

NFS 453
DIETARY MODIFICATION IN DISEASE, PART II
4, 4/0

Prerequisite: NFS 452. Second of a two-part course sequence that examines the physiological basis for diet modification in disease/disorder states. Emphasis on normal metabolism of nutrients, deviation from normal metabolism in disease, and nutrition support and dietary modifications required in disease/disorder states. Required for didactic program only.

NFS 462
MANAGEMENT OF FOOD SERVICE OPERATIONS
4, 4/0

Prerequisite: NFS 361. Food service systems and related subsystems. In-depth analysis of the procurement process, menu development, food production and delivery, quality standards, and financial management. Required for dietetics majors.

NFS 468
PRINCIPLES OF QUALITY IMPROVEMENT
2, 2/0

Prerequisite: NFS 462. Quality improvement concepts, originating in the business sector and founded on the work of W. E. Deming, applied to the management of a nutritional care service department, emphasizing both clinical and food production management. Required for didactic program only.

NFS 471
EXPERIENCES IN HEALTH CARE
FOOD SERVICE SYSTEMS
3, 3/0

Prerequisite: NFS 462. Application of knowledge and principles of food systems management in a health care facility. Emphasis on functions of a food service system, human resource management, quality assurance program, and cost analysis activities. Clinical dress code required. Required for coordinated program only.

NFS 496
SPECIAL PROJECT

NFS 499
INDEPENDENT STUDY

PAR

PERFORMING ARTS

Performing Arts Department

PAR 100
THE LIVELY ARTS
3, 3/0; CA

Introduction to the performing arts through lectures, readings, and live and recorded performances. Requires extensive concert attendance.

PAR 200
PERFORMANCE LABORATORY
1, 0/3; CA

Prerequisite: Instructor permission.

Laboratory experience in the performing arts chosen through faculty consultation, dependent upon interests and experiences of the student. May be repeated up to three times for credit.

PAR 325
THE BUSINESS OF PERFORMING
ARTS
3, 3/0

Comprehensive overview of the numerous aspects of business relating to the performing arts of drama, dance, and music.

PAR 350
THE AMERICAN MUSICAL
3, 3/0

Historical study of the American musical focusing on the interrelationship between the disciplines of music, theater, and dance.

PAR 495
SPECIAL PROJECT

PAR 499
INDEPENDENT STUDY

PERFORMING ARTS

Also see:
DAN Dance
MUS Music
THA Theater Arts

PHI

PHILOSOPHY

Philosophy and Religious Studies Department

PHI 101
INTRODUCTION TO
PHILOSOPHY
3, 3/0; CH

Introduction to the literature and problems of philosophy.

PHI 102
INTRODUCTION TO MORAL
AND SOCIAL PHILOSOPHY
3, 3/0; CH

Various views of how we ought to live and how society should be organized, considered in the context of discussions about the "good" life and the "good" society. Explores such questions as, Does virtue lead to happiness? and Under what conditions can punishment be justified?

PHI 103
INTRODUCTION TO LOGIC
3, 3/0; CH

Introduction to practical reasoning and argument relevant to everyday life. Includes uses of language, informal fallacies, elementary deductive arguments, and the nature of scientific thinking.

PHI 106
CRITICAL THINKING
3, 3/0 CH

Informal types of reasoning, including fallacies, reasoning by analogy, causal reasoning, statistical reasoning, and deductive reasoning. Focus on analysis and evaluation of everyday reading, such as newspaper articles and letters to the editor.

PHI 202
THE PHILOSOPHY OF HUMAN
NATURE
3, 3/0

Examination of the question, What is human nature? Exploration of several competing conceptions. Development of analytical skills for examining various views. Examination of the implications for human existence.

PHI 204
PHILOSOPHY OF RELIGION
3, 3/0; CH

Critical analysis of the philosophical assumptions that support religious belief. Focus on problems arising from philosophical assumptions such as the existence of God, omnipotence, omniscience, foreknowledge, and the existence of evil.

PHI 207
PHILOSOPHY IN LITERATURE
3, 3/0; CH

The relationship of philosophy to literature through a consideration of the nature of language, the methods of language analysis, the relation of knowledge to fiction, and the function of myth and metaphor in presenting philosophical ideas. A number of works of literature are read and analyzed for philosophical content.

PHI 210
EXISTENTIALISM
3, 3/0

The problem of the meaning and value of life considered in a context of various philosophical and literary works of religious and nonreligious existentialists, including Kierkegaard, Nietzsche, Heidegger, and Sartre.

PHI 300
PROBLEMS OF PHILOSOPHY
3, 3/0

Selected problems in epistemology, metaphysics, ethics, and certain movements in contemporary philosophy.

PHI 301
WEALTH AND JUSTICE
3, 3/0; CH

Prerequisites: Fulfillment of English composition/basic communication requirement and upper-division status or one course in philosophy. Moral presuppositions and justifications of forms of government and economic systems. Interrelations between government and economics.

PHI 302
PHILOSOPHY OF ART AND
BEAUTY
3, 3/0

Prerequisites: Fulfillment of English composition/basic communication requirement and upper-division status or one course in philosophy. The basic concepts presupposed in any critical examination of the arts, including painting, literature, and music.

PHI 304
PHILOSOPHY OF LAW
3, 3/0

Prerequisites: Fulfillment of English composition/basic communication requirement and upper-division status or one course in philosophy. The nature and justification of legal institutions. Emphasis on the problem of legal punishment and on the legal enforcement of morality.

PHI 305
ANALYTIC PHILOSOPHY I:
PHILOSOPHY OF LANGUAGE
3, 3/0

Prerequisites: Fulfillment of English composition/basic communication requirement and upper-division status or one course in philosophy. Recent works by analytical philosophers in the foundations of language. Covers such topics as meaning, reference, and necessity.

PHI 307
BEGINNING SYMBOLIC LOGIC
3, 3/0; CH

Prerequisites: Fulfillment of English composition/basic communication requirement and upper-division status or one course in philosophy. First-order logic as a system for understanding argumentation in ordinary language. Covers the structure and use of truth-functional logic and quantification theory, including identity.

PHI 308
PHILOSOPHY OF LOVE AND SEX
3, 3/0

Prerequisites: Fulfillment of English composition/basic communication requirement

and upper-division status or one course in philosophy. Classic and contemporary philosophical theories of the nature, value, and purpose of human love and sexuality. Includes such thinkers as Plato, Aquinas, Ortega, Sartre, and Kierkegaard. The nature and validity of value judgments implicit in the concepts of "supervision," "good sex," and "true love," as well as problems encountered in finding clear definitions for such terms. Considers certain moral arguments found in such areas as abortion and marital intercourse.

PHI 309
KNOWLEDGE AND TRUTH
3, 3/0

Prerequisites: Fulfillment of English composition/basic communication requirement and upper-division status or one philosophy course. The nature, variety, and requirements of knowledge. May include the natures of belief and perception; knowledge of necessary truths of mathematics; why perception and memory, but not wishful thinking, are good sources of evidence; and how, if at all, can we know what another person thinks or believes.

PHI 310
THE HISTORY OF ETHICS
3, 3/0; CH V2

Prerequisites: Fulfillment of English composition/basic communication requirement and upper-division status or one course in philosophy. Historical study of the writings of great Western philosophers as they examine ethical questions about self-interest, freedom, duty, and happiness in regard to the moral life. Includes Plato, Aristotle, Kant, Mill, and Hume.

PHI 312
ANALYTIC PHILOSOPHY II:
PHILOSOPHY OF MIND
3, 3/0

Prerequisites: Fulfillment of English composition/basic communication requirement and upper-division status or one course in philosophy. Recent work by analytic philosophers in the philosophy of mind. Questions considered may include, What validates an inference from bodily states to mental ones, or vice versa? What are the criteria for personal identity? and, Are we machines that think?

PHI 314
CONTEMPORARY ETHICAL
THEORY
3, 3/0

Prerequisites: Fulfillment of English composition/basic communication requirement and upper-division status or one course in philosophy. Historical and analytical study of important developments in twentieth-century ethical theory. Includes naturalism, noncognitivism, prescriptivism, rationalism, and the ideas of Rawls, Nozick, Gauthier, and Gewirth.

PHI 316
FREEDOM AND THE SELF
3, 3/0

Prerequisites: Fulfillment of English composition/basic communication requirement and upper-division status or one course in philosophy. Examination of two general metaphysical problems: the nature of people and personal identity over time, and the nature and possibility of free will.

PHI 317
**THE HISTORY OF PHILOSOPHY I:
THE GREEKS**
3, 3/0; CH

Prerequisites: Fulfillment of English composition/basic communication requirement and upper-division status or one course in philosophy. Readings in selected original texts of the leading philosophers of ancient Greece, specifically Heraclitus, Parmenides, Plato, Socrates, and Aristotle. Focus on the original visionary contribution of each thinker to the intellectual development of Western thought.

PHI 318
**THE HISTORY OF PHILOSOPHY II:
THE SEVENTEENTH AND
EIGHTEENTH CENTURIES**
3, 3/0

Prerequisites: Fulfillment of English composition/basic communication requirement and upper-division status or one course in philosophy. Readings in selected original texts from Hobbes, Locke, Berkeley, Hume, Descartes, and Kant. Focus on the original visionary contribution of each thinker to the intellectual development of Western thought. Emphasis on learning to read a philosophical work.

PHI 323
MORAL ISSUES
3, 3/0; CH

Prerequisites: Fulfillment of English composition/basic communication requirement and upper-division status or one course in philosophy. Contemporary moral issues and theories provide a foundation for examining specific moral problems. Includes moral issues related to genetic engineering, war and peace, discrimination, and censorship.

PHI 324
ZEN BUDDHISM
3, 3/0

Prerequisites: Fulfillment of English composition/basic communication requirement and upper-division status or one course in philosophy. Zen as a paradoxical method by which suffering of existence is transformed into everyday enlightenment. Includes contemporary practices of Zen and its historical origins in Buddha's "complete and unexcelled" enlightenment and in Lao-tzu's living in harmony with the Tao.

PHI 328
BUSINESS AND ETHICS
3, 3/0

Prerequisites: Fulfillment of English composition/basic communication requirement and upper-division status or one course in philosophy. Moral problems of business professionals, including advertising, ecology, pollution, pricing of goods and services, and bribery. Moral theories provide a theoretical foundation for examining specific moral problems.

PHI/HUM 339
FRIENDSHIP
3, 3/0

Prerequisites: Fulfillment of English composition/basic communication requirement and upper-division status or one course in philosophy. Conceptions of friendship, its value to the friends and to others, its moral justification, and the legitimacy of preferring friends to others.

PHI 401
**PROBLEM IN PHILOSOPHY
SEMINAR**
3, 3/0

Prerequisite: Upper-division status or one course in philosophy. Intensive analysis of selected topics in philosophy.

PHI 402
**SEMINAR IN HISTORY OF
PHILOSOPHY**
3, 3/0

Prerequisites: Fulfillment of English composition/basic communication requirement, PHI 317, and PHI 318. Figures and periods in the history of Western and Eastern philosophy.

PHI 495
SPECIAL PROJECT

PHI 498
HONORS RESEARCH

PHI 499
INDEPENDENT STUDY

PHY

PHYSICS

Physics Department

PHY 100
**PHYSICS FOR NON-SCIENCE
MAJORS**
3, 3/0; CM

Non-mathematical consideration of historical world views in physics and their relevance to society. May not be substituted for PHY 107, PHY 108, PHY 111, or PHY 112. Not open to majors.

PHY 103
UNDERSTANDING SOUND
3, 3/0; CM

Non-mathematical consideration of sound and noise. Discussion of musical sounds, noise pollution, fidelity of sound reproduction, and other topics related to the quality of the audible environment. Designed for non-science majors. May not be substituted for PHY 107, PHY 108, PHY 111, PHY 112. Not open to majors.

PHY 107
GENERAL PHYSICS I
3, 2/2; CM

Algebra-based study of mechanics, heat, wave motion, and sound. Laboratory experiences based on lecture material. Not open to majors.

PHY 108
GENERAL PHYSICS II
3, 2/2; CM

Prerequisite: PHY 107. Algebra-based study of light, electricity, and magnetism; circuits and optics. Laboratory experiences based on lecture material. Not open to majors.

PHY 111
UNIVERSITY PHYSICS I
4, 3/2; CM

Prerequisites: MAT 161, MAT 126, or equivalent. Calculus-based treatment for science majors of particle mechanics, dynamics, rotational motion, and equilibrium concepts, with

an introduction to gravitation and oscillation. Includes laboratory. Required for majors.

PHY 112
UNIVERSITY PHYSICS II
4, 3/2; CM

Prerequisite: PHY 111 or equivalent. Continuation of PHY 111. Calculus-based introduction to heat, electricity, magnetism, and optics. Includes laboratory. Required for majors.

PHY 213
UNIVERSITY PHYSICS III
3, 3/0

Prerequisites: PHY 111 and PHY 112 or equivalent, calculus. Continuation of PHY 111 and PHY 112. Calculus-based introduction to physical optics, kinetic theory, classical wave motion, and interference phenomena. Introduction to special relativity. Required for physics majors.

PHY 305
MODERN PHYSICS I
3, 3/0

Prerequisites: PHY 111, PHY 112, PHY 213, and MAT 263 or equivalent. Principles of relativity; concepts of waves, particles, atomic structure; introduction to quantum theory. Required for physics majors.

PHY 306
MODERN PHYSICS II
3, 3/0

Prerequisite: PHY 305. Molecular structure, solid state, and nuclear physics.

PHY 308
OPTICS
3, 3/0

Prerequisites: PHY 111 and PHY 112 or equivalent; calculus. Fundamentals of geometrical and physical optics; the nature and propagation of light; Fraunhofer and Fresnel diffraction, polarization; single, double slit and grating diffraction, lasers, and holography.

PHY 310
**COMPUTATIONAL PHYSICS
LABORATORY**
2, 0/4

Prerequisites: PHY 111 and PHY 112. Corequisite: PHY 213. Introduction to basic computational techniques using physics material from intermediate-level courses. Required for physics majors.

PHY 315
HEAT AND THERMODYNAMICS
3, 3/0

Prerequisites: PHY 111 and PHY 112 or equivalent, calculus. First, second laws; entropy; chemical potential; enthalpy; free energy; Gibbs function; Maxwell relations; phase transitions; and statistical mechanics of classical and quantum distributions.

PHY 320
**INTRODUCTION TO
THEORETICAL PHYSICS**
4, 4/0

Prerequisites: PHY 111, PHY 112, and MAT 263. Introduction to advanced mathematical applications: partial differential equations, complex numbers, special functions, boundary value problems, orthogonal functions and expansions, matrices, and integral transform techniques. Required for physics majors.

PHY 323
STATICS
3, 3/0

Prerequisites: PHY 111 and PHY 112. Application of mechanics to the study of static equilibrium of rigid and elastic bodies. Includes composition and resolution of forces; moments and couples; equivalent force systems, free-body diagrams; equilibrium of particles and rigid bodies; forces in trusses and beams; friction forces; first and second moments of area; moments and product of inertia; methods of virtual work and total potential energy.

PHY 324
ELECTRIC CIRCUIT ANALYSIS
3, 2/2

Prerequisites: PHY 213 and MAT 263. Calculus-based treatment of DC and AC circuits with introduction to commonly used analysis methods. Includes laboratory.

PHY 325
ELECTRONICS
3, 0/6

Prerequisites: PHY 320 and upper-division status. Principles of filters and resonant circuits, semiconductor devices, and integrated circuit chips. Analog and digital lab work included.

PHY 410
**ADVANCED PHYSICS
LABORATORY**
3, 0/6

Prerequisite: PHY 305 or equivalent. Selected advanced experiments chosen from the areas of mechanics, thermal physics, sound, optics, electricity and magnetism, and modern physics.

PHY 412
PHYSICS SEMINAR
1, 1/0

Prerequisites: 15 credit hours in physics and MAT 162 or equivalent. Readings, reports, and discussion of current job opportunities and/or problems and research in physics. May be repeated up to three times.

PHY 425
CLASSICAL MECHANICS
4, 4/0

Prerequisite: PHY 320 or equivalent. Vectorial particle mechanics in one, two, and three dimensions; rigid body motions in three dimensions; motion in central force fields; moving reference frames; forced harmonic oscillators; and introduction to mechanics in Lagrangian and Hamiltonian formulation.

PHY 435
**INTRODUCTION TO QUANTUM
PHYSICS**
3, 3/0

Prerequisites: PHY 305, PHY 320, or equivalent. Postulates of quantum mechanics with selected examples. Includes uncertainty principle, operator formalisms, Heisenberg and Schrodinger representations, angular momentum, and spin.

PHY 440
ELECTRICITY AND MAGNETISM I
3, 3/0

Prerequisites: PHY 320, MAT 263, or equivalent. Coulomb forces, electric fields and potentials, Laplace equation, boundary value

problems and dielectrics, multipole distributions, magnetic induction, introduction to Maxwell's equations.

PHY 441
ELECTRICITY AND MAGNETISM II
3, 3/0

Prerequisite: PHY 440. Continuation of PHY 440. Vector potentials, Faraday's law, magnetism, electromagnetic wave propagation, and radiation.

PHY 445
NUCLEAR PHYSICS
3, 3/0

Prerequisites: PHY 305, PHY 320, or equivalent. Nucleons and nuclei, radioactivity, detectors, the interaction of nuclear radiation with matter, nuclear reactions, nuclear models and gamma emission, introduction to high-energy physics.

PHY 448
INTRODUCTION TO SOLID STATE PHYSICS
3, 3/0

Prerequisite: PHY 320 or equivalent. Theory of the structure of solids: unit cell, lattice dynamics and phonons, specific heats, band theory, superconductivity, electron dynamics, and statistics.

PHY 450
SUPERVISED PHYSICS LABORATORY TEACHING
Variable credit.

Prerequisites: Physics major; upper-division status; minimum cumulative GPA of 3.0, 3.25 in major coursework; approval of physics faculty based on academic performance, maturity, and potential. Supervised in-classroom introduction to college laboratory teaching techniques and procedures for selected upper-division physics majors.

PHY 495
SPECIAL PROJECT

Prerequisite: Approval of a faculty sponsor. Physics and physics-related areas.

PHY 499
INDEPENDENT STUDY

Prerequisite: Approval of a faculty sponsor. Physics and physics-related areas.

PLN

PLANNING

Geography and Planning Department

PLN 315
PRINCIPLES OF URBAN AND REGIONAL PLANNING
3, 3/0

Introduction to community planning, historical survey, origin and growth of city-planning movement. Role of various levels of government in community planning. Factors currently involved in community planning theory and practice. Required for urban-regional analysis and planning majors.

PLN 325
MAP AND AIR-PHOTO INTERPRETATION
3, 3/0

Prerequisite: GEG 101. Fundamental elements of maps, air photographs, and satellite images and the methodology of interpreting them. Lecture topics and laboratory work include spatial data sources, data presentation, globe and map grids, and the use of maps, air photos, satellite images, and global positioning system (GPS) to identify, present, and study spatial phenomena.

PLN 340
FUNDAMENTALS OF ZONING
3, 3/0

Prerequisite: PLN 315. Zoning as a method to implement comprehensive land use plans. Includes process for adopting and amending zoning ordinances, legislative and legal constraints, and general content of a zoning ordinance. Operation of zoning board appeals will be emphasized in class exercise and fieldwork.

PLN 341
HOUSING AND REAL ESTATE
3, 3/0

Prerequisite: PLN 315. Housing elements relevant to the professional practice of planning, including the considerations of consumers in selecting communities, neighborhoods and sites, the description, conveyance, and marketable rights associated with real property, forms of home ownership, less conventional housing choices, as well as government policy affecting housing. Students will independently investigate the local housing stock, both from the perspective of potential purchaser and historic preservationist, through separate assignments.

PLN 360
ENVIRONMENTAL IMPACT ASSESSMENT
3, 3/0

Prerequisites: Upper-division status and minimum of 9 credit hours in geography, planning, earth science, biology, or related environmental discipline. Introduction to the legislation and technical procedures involved with the development of Environmental Impact Statements (EIS) and Environmental Assessments (EA). Emphasizes practical experience in conducting an EA and writing an EIS. Field trip.

PLN 401
COMPREHENSIVE PLANNING STRATEGIES
3, 3/0

Prerequisite: Junior or senior standing and PLN 315. The overarching role of comprehensive planning as it influences future patterns of municipal land use in both the natural and built environments. Techniques for identifying primary issues, as well as reaching consensus on goals and objectives for future physical development patterns within a community. The process of preparing a master plan will be detailed, and students will recognize basic comprehensive plan content and procedures for adoption.

PLN 415
SEMINAR IN PLANNING
3, 3/0

Investigation, discussion, and research of topics of current interest in planning or econom-

ic development. Techniques and methods of analysis used in planning process. Topics vary each semester.

PLN 420
HEALTH PLANNING
3, 3/0

Prerequisite: Junior and senior standing and at least 9 credits in planning, sociology, health and wellness, political science or psychology. The concepts, regulatory and policy issues, and the organization or health and related social services planning. Provides comprehensive review of methods commonly used in the practice of health-systems planning. Planning for the allocation of resources and the delivery of health and related social services at the local, regional, and state levels.

PLN 422
STRATEGIC PLANNING FOR PUBLIC SECTOR ORGANIZATIONS
3, 3/0

Prerequisite: Junior or senior standing and at least 9 credits in planning, sociology, health and wellness, political science, or psychology. Introduces students to the concepts and methods of strategic planning for public- and nonprofit-sector organizations. The strategic planning process to develop an institutional strategic plan: developing planning goals and objectives, environmental scanning, analysis of market trends, and estimating consumer and client demand for services.

PLN 430
SEMINAR IN GEOGRAPHY AND PLANNING APPLICATIONS
3, 3/0

Prerequisite: Senior geography and planning major. Research in geography or planning and presentation of selected research-related topics by department faculty. Required for geography majors and urban-regional analysis and planning majors.

PLN 488
INTERNSHIP
Variable credit

Prerequisite: PLN 315, minimum cumulative GPA of 2.5, background of courses or experience within area of interest, approval of adviser and department chair. Guided, supervised field experiences that complement the academic program.

PLN 495
SPECIAL PROJECT

PLN 499
INDEPENDENT STUDY

PSC

POLITICAL SCIENCE

Political Science Department

PSC 101
INTRODUCTION TO GOVERNMENT AND POLITICS
3, 3/0; CS

The nature and scope of political science. Ideological foundations of politics.

Comparative study of the governments of constitutional, totalitarian, and developing systems. The dynamics of politics and functions of political institutions.

PSC 102
INTRODUCTION TO AMERICAN GOVERNMENT
3, 3/0; CS

The Constitution and its principles. Functions and roles of the federal executive, legislative, and judicial branches. Citizen participation. Problems of individual liberty and governmental authority. Problems of national security, economic regulation, and social welfare.

PSC 103
GREAT POLITICAL ISSUES
3, 3/0; CS

Great political issues such as ideology, freedom, equality, political obligation, civil disobedience, law, and morality.

PSC 210
THE AMERICAN PRESIDENCY
3, 3/0

The contemporary presidency, constitutional roles, political powers and the factor of personality, the executive and other political and social institutions, problems and prospects for the presidency.

PSC 215
URBAN GOVERNMENT
3, 3/0; CS

Introduction to the political economy of urban areas in United States. Focus on explanation of current urban public policies through study of such topics as public vs. private political power, bureaucracy, citizen organization.

PSC 218
AFRICAN AMERICAN POLITICAL CULTURE
3, 3/0; D CS

Political beliefs, attitudes, and practices that pertain to African American politics in the cultural context. Focus on the causality and linkage inherent on the reciprocal relationship between African Americans and the American political system.

PSC 220
THE DEVELOPMENT OF AMERICAN CONSTITUTIONAL LAW
3, 3/0

Foundations of American constitutionalism; judicial review and its use through history; the Supreme Court's interaction with Congress, the president, and states; evolving concepts of federalism; development of civil rights and liberties policies.

PSC 225
WOMEN IN AMERICAN POLITICS
3, 3/0; D CS

Influences of female participation in the American political system, the political behavior of American women, the implications of these influences and behaviors.

PSC 230
INTERNATIONAL RELATIONS
3, 3/0; G CS

Elements of national power, religion, and global balance of power and collective security systems. Instruments of international politics:

diplomacy, propaganda, and war. Forces of nationalism.

PSC 240
EUROPEAN POLITICAL SYSTEMS
3, 3/0; CS

The structure and dynamics of politics in major European countries with emphasis on political behavior and political processes. Includes issues of economic and political integration.

PSC 300
POLITICAL ANALYSIS
3, 3/0

The design, execution, and interpretation of research in the fields of political science; emergence and development of the discipline; common assumptions and controversies. Required of all political science majors.

PSC 301
POLITICAL STATISTICS
3, 3/0

Prerequisites: PSC 300 and upper-division status. An advanced investigation of quantitative political science research methods. Focuses on the application of statistics to test empirical hypotheses about the political world. Students become proficient in accepted quantitative techniques and statistical inference. Topics include sampling, testing hypotheses about one-sample and two-sample cases, measures of association, and tests of statistical significance.

PSC 306
POLITICS OF ENERGY
3, 3/0

The energy situation in both the United States and the international community from political viewpoints; U.S. energy policy, process, and strategies within their economic, physical, and political settings; conflict and cooperation among nations over the rational use of energy resources.

PSC 309
POLITICS OF INTERNATIONAL BUSINESS
3, 3/0; G

The international economy of business: trade, monetary, and technology policies of countries. Transfer of capital and human resources. International organizations of economic policies.

PSC 310
AMERICAN POLITICAL PARTIES
3, 3/0

The American two-party system; suffrage rules and the electoral process; shifting patterns of organization, nomination, and finance; the role of party in government; and parties in the future of American politics.

PSC 311
INTEREST GROUPS
3, 3/0

Introduction to the democratic political process, methods and operations of various interest groups, roles of citizens groups.

PSC 312
LEGISLATIVE PROCESS
3, 3/0

State and national legislatures with emphasis on the determinants of legislative decision making, the committee system, and the policy outputs of the legislative branch.

PSC 315
STATE AND LOCAL GOVERNMENT POLITICS
3, 3/0

Functions of state and local governments; constitutional and governmental structures; inter-governmental relations; decision making, effects of metropolitanization; contemporary issues and problems; future trends and prospects.

PSC 316
URBAN ETHNIC POLITICS
3, 3/0; D

The political life of ethnic groups in urban areas of the United States. Includes both white immigrant and "third world" groups including Irish, Italian, Polish, African American, and Native American. Emphasis on contemporary patterns of organization, leadership, strategy, and participation, and on relations among ethnic groups, and between ethnic groups, and local and national government.

PSC 319
LESBIAN AND GAY CITIZENSHIP POLITICS IN THE UNITED STATES
3, 3/0; D

Prerequisites: PSC 102 and upper-division status. Cross-cultural, longitudinal perspective of U.S. lesbian/gay liberation movements and interest-based organizations and their intersection with civil rights and women's liberation movements and organizations. Legal theory, human rights, and constitutional issues surrounding lesbian/gay rights. Emergence of cultural coherence and ethics in lesbian/gay urban communities and their reflection in bureaucratic politics. Includes prejudice-reduction workshop.

PSC 320
U.S. CIVIL LIBERTIES
3, 3/0

Legal principles influencing the origin and development of our criminal laws and the way these principles have evolved by court interpretation to accommodate social change and attitudes. Focus on the Bill of Rights and due process clause of the United States Constitution. Alternative to PSC 420.

PSC 325
POLITICS OF WELFARE
3, 3/0

America's mixed system of capitalism and socialism. Major welfare programs including social security, veterans benefits, tax expenditures, food stamps, subsidized education, and military retirement. The costs and benefits of America's welfare system.

PSC 326
POLITICS AND MEDIA
3, 3/0

The relationship between the mass media and contemporary American politics. The impact of the media on voting behavior, the role of the media in the presidential and congressional elections.

PSC 327
PRACTICAL POLITICS
3, 3/0

Classroom and extra-classroom experience and interaction with political practitioners. Participation in quasi-political organizing, campaigns and elections, and day-to-day operations of government and politics.

PSC 330
AMERICAN FOREIGN POLICY
3, 3/0

Basic ideas that shape American foreign policy, isolationism, domestic and international pressures, cold war, peaceful coexistence and détente, major problems.

PSC 333
AFRICAN INTERNATIONAL RELATIONS
3, 3/0

African international politics vis-a-vis international relations theory, models, and concepts; power; multipolarity; bipolarity; pan-Africanism; North-South debate; approaches to international politics; and state and international organizations as international actors.

PSC 335
INTERNATIONAL RELATIONS OF THE MIDDLE EAST
3, 3/0; G

Patterns of interaction within the Middle East and with other states. Problems of security and peace in the region. Ideology, nationalism, and economic interests as factors influencing the behavior of the states.

PSC 340
POLITICS OF DEVELOPING COUNTRIES
3, 3/0; G CS V3

Major problems of developing countries, political process and its relation to societal transformation, the role of the army and bureaucracy in political development, problems of nation-building and democracy in developing countries.

PSC 345/HIS 313
POLITICS AND HISTORY OF THE MIDDLE EAST
3, 3/0; CS V3

Geographic, cultural, and political settings; historical development since the nineteenth century; the disintegration of the Ottoman Empire and Western colonialism; nationalism, independence, and turmoil; Arab-Israeli question; oil, its impact and problems; great power and inter-area politics.

PSC 350
INTRODUCTION TO LEGAL THOUGHT
3, 3/0

Prerequisites: PSC 102 and upper-division status. Main concepts, theories, and issues of legal thought from the perspective of political science. Includes political theories on the nature of law, concepts and independent variables in political legal theory, boundaries to political choice, and issues of social and political justice.

PSC 351
HISTORY OF POLITICAL THEORY I
3, 3/0

Main problems of political theory examined through the writings of major political thinkers from Plato to Aquinas.

PSC 352
HISTORY OF POLITICAL THEORY II
3, 3/0

Main problems of political theory examined through the writings of major political thinkers from Machiavelli to Marx.

PSC 355
AMERICAN POLITICAL THOUGHT
3, 3/0

American political thought from colonial to contemporary time. Emphasis on the development of persistent political values and beliefs, how interpretations and applications of these values and beliefs have changed through different periods, and the roots of contemporary American political culture and ideology.

PSC 360
PUBLIC ADMINISTRATION
3, 3/0

Introduction to public administration: analysis of government administration in its social, economic, and political settings; the role of public administration in formulating public policy; organization and management in public services; personnel and financial management.

PSC 364
AMERICAN PUBLIC POLICY
3, 3/0

Governmental policy with emphasis on the sources of policy, the policy-making process in national political institutions, and the social impact of policy choices.

PSC 368
COMPARATIVE PUBLIC ADMINISTRATION
3, 3/0; G CS

Introduction to cross-cultural, cross-national, or cross-institutional study of public administration institutions and practices. Emphasis on the administrative systems of European countries and the processes of administrative change in developing countries. Includes the evolution of bureaucracy.

PSC 370
CANADIAN PUBLIC ADMINISTRATION
3, 3/0

Canadian public administration institutions and processes and the development of public policy. Emphasis on the federal level; secondary attention to provincial and local administration and policy. Explores similarities and differences with other administrative systems, especially the United States.

PSC 375
RACE, SEX, AND POLITICS OF MYTH AND STORY
3, 3/0; D

Prerequisites: Upper-division status and successful completion of English basic skills competency requirement. The institutional and human force of story in race/sex/politics; legitimizing myths of the U.S. political system; limits to the achievement of consensus in group values and politics; standpoints of race/sex/political privilege and disadvantage; difficulties posed the regime by the refusal of consent; and the transformation and assumption by citizens of self-government.

PSC 389
TOPICS IN POLITICAL SCIENCE
3, 3/0
In-depth study of current issues of substantial political significance, such as: public personnel administration, defense policy, computers and political science, and environmental policy.

PSC 410
POLITICAL BEHAVIOR AND PUBLIC OPINION
3, 3/0
Conditions of democratic political behavior, opinion formulation in democratic systems, voting behavior and party affiliation in the United States, mass political behavior and governmental institutions, mass political behavior in selected western European societies.

PSC 415
URBAN PUBLIC POLICY
3, 3/0
Prerequisite: Upper-division status. Urban problems and government policy responses to them. Policy areas, including economic development, poverty, and crime. Considers roles of all levels of government. Develops skills in policy analysis.

PSC 420
CONTEMPORARY CONSTITUTIONAL ISSUES
3, 3/0
Recent developments in American constitutional law; comparison of the Warren, Burger, and Rehnquist courts; First Amendment liberties and rights; the rights of the accused and criminal due process; equal protection and black Americans; reapportionment and representation; the president and national security.

PSC 450
CONTEMPORARY POLITICAL THOUGHT
3, 3/0
Central problems of political philosophy (such as equality, freedom, justice, and political obligation) as discussed by contemporary philosophers.

PSC 460
PUBLIC POLICY AND HIV-AIDS
3, 3/0
Prerequisites: PSC 102 and upper-division status. Outcomes of interaction among bureaucratic agencies, upper-level decision makers, and interest representation. Examination of the stigma characterizing the status of people living with HIV-AIDS.

PSC 470
SENIOR SEMINAR
3, 3/0
Prerequisite: Senior status. Selected topics in political science examined and analyzed in depth.

PSC 488
INTERNSHIP
Variable credit
Prerequisites: Minimum cumulative GPA of 2.0; upper-division status. Field experiences that supplement departmental academic offerings. Geared to students' interests. Approval by faculty intern supervisor and department chair necessary.

PSC 495
SPECIAL PROJECT
PSC 497
WASHINGTON SEMESTER
16, 0/0
State University of New York's Washington semester program. Classwork, seminars, and internship work. Selection based on college-wide competition. Contact Political Science Department chair for information and application forms.

PSC 499
INDEPENDENT STUDY

PSY

PSYCHOLOGY Psychology Department

PSY 101
INTRODUCTION TO PSYCHOLOGY
3, 3/0; CS
Introduction to the scientific study of psychology. Includes research methodology; genetic, biological, cultural, and environmental influences on behavior; perception, learning; memory; intelligence; maturation; motivation; emotion; stress and coping; personality; social processes and psychopathology. Required for psychology majors.

PSY 205
INDEPENDENT READING
1, 1/0
Prerequisites: PSY 101 and instructor permission. Supervised readings on a specific topic in psychology chosen mutually by the student and faculty supervisor at the time of registration.

PSY 304
LEARNING: THEORY AND RESEARCH
3, 2/2; CS
Prerequisite: PSY 101. Theories of learning and the scientific investigation of the learning process. Includes the psychological correlates of learning, memory and attention, empirical laws and principles and their derivation from research on humans and animals, and theoretical explanations of the learning process.

PSY 306
STATISTICS IN PSYCHOLOGICAL RESEARCH
3, 2/2
Prerequisites: PSY 101 and successful completion of mathematics basic skills competency requirement. Intensive study of the major descriptive and inferential statistics used in psychological research. Includes graphic and tabular presentation of data, measures of central tendency and dispersion, probability theory, t-tests, analysis of variance, chi-square, correlation techniques, and experimental design. Required for psychology majors.

PSY 308
SENSATION AND PERCEPTION
3, 3/0; CS
Prerequisite: PSY 101. Major facets of perceptual functioning, from sensory processes to complex perceptual integrative processes. Emphasis on basic concepts such as physiological correlates of perception, empirical laws and principles, and theoretical explanation of perceptual processes and their determinants.

PSY 310
BEHAVIOR MODIFICATION
3, 3/0
Prerequisite: PSY 101. Major learning principles as applied in behavior-modification techniques; premises, ethics, and assessment of behavioral methods. Includes reinforcement, extinction, punishment, modeling, and cognitive change as methods of changing human behavior.

PSY 311
PERSONALITY: THEORY AND RESEARCH
3, 3/0; CS
Prerequisite: PSY 101. Theoretical problems, methods, and empirical findings related to the development of an adequate theory of personality development and function. Includes problems of theory construction, major theoretical approaches, personality determinants, and personality assessment. Empirical research is discussed and evaluated.

PSY 321
COMPARATIVE ANIMAL BEHAVIOR
3, 3/0
Prerequisite: PSY 101. The study of animal behavior from a psychological perspective. Emphasis on current theoretical models. Includes evolution and adaptive functions of sexuality, predator-prey interactions, evolution of social organization, territoriality, dominance, aggression, learning, and instinct.

PSY 325
SOCIAL BEHAVIOR
3, 3/0; CS
Prerequisite: PSY 101. Theoretical and empirical examination of the role of social factors on an individual's behavior. Includes attitude formation and change, affiliation, attribution process, interpersonal attraction, small-group dynamics, aggression, conformity, leadership, and competition.

PSY 327
ADULT DEVELOPMENT AND AGING I
3, 3/0
Prerequisite: PSY 101. Introduction to human development and change throughout early, middle, and late adulthood. Current psychological theory and empirical evidence on patterns of aging, problems of aging, and benefits of aging. Includes social, psychological, and biological determinants of adult development; cognitive change; personality change; family relations; life satisfaction; and the stigma of old age.

PSY 340
COGNITIVE PSYCHOLOGY
3, 3/0; CS
Prerequisite: PSY 101. Introduction to research and theoretical issues in cognitive psychology. Includes history of memory and thought, acquisition of information, attention, short-term and long-term memory, pattern recognition, speech perception, space perception, and higher-order mental processes.

PSY 355
LIFESPAN DEVELOPMENTAL PSYCHOLOGY
3, 3/0; CS
Prerequisite: PSY 101. Psychological, biological, and social factors that affect psychological development throughout the lifespan. Includes physical development, language acquisition, cognitive development, social development, personal development, morality and changing life tasks. Focus on genetic, cultural, and experiential determinants of development.

PSY 356
CHILD DEVELOPMENT
3, 3/0
Prerequisite: PSY 101. Psychological, social, and biological factors that affect development from conception through preadolescence. Detailed and comprehensive exposure to research findings and theories in child development. Includes physical development, language acquisition, cognitive development, social and emotional development, and moral development. Emphasis on mechanisms of developmental change such as genetic, cultural, historical, and experiential influences on child development.

PSY 357
ADOLESCENT AND YOUNG ADULT DEVELOPMENT
3, 3/0
Prerequisite: PSY 101. Introduction to current theoretical and empirical understandings of the transitions from early adolescence to young adulthood. Multidisciplinary approach; biological, psychological, and social factors are emphasized. Topics covered include biological, cognitive, interpersonal, self-concept, family, academic, and career transitions as well as psychosocial problems encountered.

PSY 365
PSYCHOLOGY IN THE WORKPLACE
3, 3/0
Prerequisite: PSY 101. Theory and research in industrial/organizational psychology emphasizing personnel selection, classification, placement, training, and development. Includes work motivation, job satisfaction, factors that influence productivity, leadership, and organizational theory.

PSY 367
ORGANIZATIONAL BEHAVIOR
3, 3/0; CS
Prerequisites: PSY 101 and 42 credit hours. Organizational behavior from a psychological perspective. Emphasis on theories of and methods in organizational behavior and research. Includes behavioral research in organizational settings, motivation, leadership, group dynamics, communication, and organization analysis and development.

**PSY 370
ENVIRONMENTAL
PSYCHOLOGY I**
3, 3/0

Prerequisite: PSY 101. Introduction to environmental psychology. The role of physical environment on behavior. Theories of physical environment-behavior relations, research methods, territoriality, privacy, crowding, environmental perception and attitudes, pollution and behavior, buildings and behavior.

**PSY 376
HEALTH PSYCHOLOGY**
3, 3/0

Prerequisite: PSY 101. Introduction to theory and empirical research in the psychology of stress, coping, and health. Health psychology, major physiological systems, components of stress, relationship of stress to health, physical and psychological consequences of stress, social support systems, coping with life crises, relaxation techniques, psychological intervention and treatment, and the holistic health model.

**PSY 381
PSYCHOLOGY OF CULTURE**
3, 3/0; G

Prerequisites: PSY 101 and 42 credit hours. Similarities and differences in behavior cross-culturally; the dimensions along which individuals vary between cultures; the issues involved in conducting cross-cultural research; differences and similarities between cultures in the areas of the self and personality; conformity, obedience, and aggression; attachment and child-rearing; abnormal psychology and culture-bound syndromes; and interpersonal and group relations.

**PSY 382
PSYCHOLOGY OF THE
CONSUMER**
3, 3/0

Prerequisites: PSY 101 and 42 credit hours. Introduction to the psychology of consumer behavior. Emphasis on psychological theory and measurement techniques as tools for understanding consumer behavior. Includes relevant material from learning, perception, attitude formation, personality, and motivation literature as it describes consumer decision making.

**PSY 383
THE PSYCHOLOGY OF HUMAN
SEXUAL BEHAVIOR**
3, 3/0

Prerequisites: PSY 101 and 42 credit hours. Psychosexual aspects of human sexuality. Includes historical views of human sexuality; sex research; physiology of sex; gender identity; puberty; early learning of sexuality; heterosexuality, homosexuality, and bisexuality; ways of sex; sexual minorities; social and legal issues of sex; portrayal and handling of sex in the media; sexual difficulties; eroticism; social-psychological attitudes toward sex; and future trends of sexuality.

**PSY 384
PSYCHOLOGY OF AGGRESSION
AND VIOLENCE**
3, 3/0

Prerequisites: PSY 101 and 42 credit hours; PSY 311 and/or PSY 355 recommended. Reasons for aggression, biological vs. environmental causes of aggression, definitions and

scientific study of aggression, and methods to control aggression.

**PSY 385
PSYCHOLOGY OF PERSONAL
ADJUSTMENT**
3, 3/0

Prerequisites: PSY 101 and 42 credit hours. Theory, research, and practical application of personal growth and adjustment throughout the lifespan. Includes theories of adjustment; characteristics of the healthy personality; sex roles and gender differences; interpersonal relationships; adjustments to school, work, and retirement; understanding and managing stress; human sexuality; and strategies for coping and adjustment.

**PSY 387
PSYCHOLOGY OF GENDER
DIFFERENCES**
3, 3/0; D

Prerequisites: PSY 101 and 42 credit hours. Empirical and theoretical issues of the psychology of gender issues; differences in female and male behavior in terms of such social factors as conformity to societal pressures, sex-role stereotyping, and gender-specific socialization patterns; biological influences on gender differences; development of sex differences; gender-role development; sex differences in cognition; personality, achievement, and leadership.

**PSY 388
PSYCHOLOGY OF DEATH AND
DYING**
3, 3/0

Prerequisites: PSY 101 and 42 credit hours. Objective coverage of the relevant issues pertaining to death and dying. Includes the stages of dying, counseling the dying person, attitudes of and reactions to death, psychological needs served by funeral and burial rituals, suicide, grief, bereavement, the child and death, effect of death on survivors, euthanasia, and medical and legal definitions of death.

**PSY 404
THEORIES OF LEARNING**
3, 3/0

Prerequisites: PSY 101 and PSY 304. Major theoretical interpretations of learning, including the history and development of learning theories; cognitive versus stimulus-response explanations; and recent mathematical, neurophysiological, and information-processing models.

**PSY 411
ABNORMAL PSYCHOLOGY**
3, 3/0

Prerequisites: PSY 101 and PSY 311. Dimensions, theories, and empirical findings in psychopathology. Includes the concept of abnormality, problems and schemes of classification, theories of neurosis and psychosis, etiology, and classification and treatment for selected disorders.

**PSY 412
COMMUNITY PSYCHOLOGY**
3, 3/0

Prerequisites: PSY 101 and 6 credit hours of psychology; PSY 411 recommended. Theoretical and empirical literature regarding community mental health. Includes historical perspectives on the community mental health movement, assessment of psychological dysfunction, levels of evaluating institutional

change, consultation, and program evaluation.

**PSY 415
THE COMPETENT INFANT**
3, 3/0

Prerequisite: PSY 355. The psychological world of the normal human infant. Primary empirical research and theoretical problems relating to the field of infant development. Includes biological processes of development, prenatal development, birth, characteristics of the neonate, speech and language, cognition and learning, interactions and socialization, sex differences in behavior, and theoretical models of early development.

**PSY 416
ABNORMAL CHILD
PSYCHOLOGY**
3, 3/0

Prerequisites: PSY 101, PSY 355, and 3 credit hours of psychology; PSY 411 recommended. Significant issues and problems related to child psychopathology. Includes the taxonomy of childhood behavior disorders, role of the family, assessment of psychopathology in children, mental retardation, aggressive behavior, poverty and psychopathology, learning disorders, neurosis and psychosis in children, developmental disorders, and therapeutic approaches.

**PSY 417
THE ATYPICAL INFANT**
3, 3/0

Prerequisites: PSY 101 and PSY 355. The psychological effects of developmental delay in infants. Screening, assessment, and intervention of high-risk infants. Includes definition of at-risk and high-risk infants, biological traumas and defects, prenatal traumas, birth and perinatal traumas, psychological crises in infancy, psychological assessment of developmental delay in newborns and infants, early intervention for high-risk infants and their families, psychological issues of parenting the high-risk infant.

**PSY 421
PHYSIOLOGICAL PSYCHOLOGY**
3, 2/2

Prerequisites: PSY 101 and 12 credit hours of psychology and/or biology. The brain and nervous, endocrine, and immune systems and their relationship to animal and human behavior. Includes psychosurgery, physiological basis of language, intelligence, emotion, motivation, learning, sexuality, abnormal behavior, perception, and motor behavior.

**PSY 427
ADULT DEVELOPMENT AND
AGING II**
3, 3/0

Prerequisites: PSY 101 and PSY 327. Complex psychological issues pertaining to late-life development and adjustment. Includes theoretical and applied issues, research methodologies, empirical data in relation to cognitive processes, personality, self-conceptions, social contexts, clinical assessment and intervention, and cultural influences on the behavior of older adults.

**PSY 430
PSYCHOLINGUISTICS:
LANGUAGE STRUCTURES AND
PROCESSES**
3, 3/0

Prerequisites: PSY 101 and 6 credit hours of psychology; PSY 340 recommended. Theoretical and empirical literature regarding human language processes. Includes animal vs. human communication, speech production, speech perception, language acquisition, grammar, sentence production and comprehension, and the relationship between language and cognition. Integrates language processes into the general framework of cognitive psychology.

**PSY 432
HUMAN MOTIVATION AND
EMOTION**
3, 3/0

Prerequisites: PSY 101, PSY 304, and 3 credit hours of psychology. Motivation and the fundamental, empirical, and logical basis for its postulation and use in psychological explanations of animal and human behavior. Emphasis on what determines motives and how motivational processes interact with other psychological processes.

**PSY 440
ADDICTIVE BEHAVIORS**
3, 3/0

Prerequisites: PSY 101 and PSY 311; PSY 411 recommended. Etiology, prevention, and treatment of addictive behaviors, emphasizing biological, psychological, and social factors. Includes dependence on alcohol, nicotine, and other drugs, as well as gambling, eating disorders, and compulsive sexual behavior.

**PSY 441
INTRODUCTION TO
NEUROPSYCHOLOGY**
3, 3/0

Prerequisites: PSY 101 and 6 credit hours of psychology. The relationships between human brain function and behavior. Functional anatomy of the brain. Experimental and clinical techniques employed by neuropsychologists to uncover brain-behavior relationships. How observation of individuals with abnormal or injured brains can provide understanding of normal human behavior.

**PSY 445
HISTORY AND SYSTEMS OF
PSYCHOLOGY**
3, 3/0

Prerequisites: PSY 101 and 6 credit hours of psychology. History of the emergence of modern psychology from pre-Socratic thought to the present. Emphasis on systematic examination of psychology's historical roots as expressed in contemporary theories and models. Required for psychology majors.

**PSY 450
EXPERIMENTAL PSYCHOLOGY I:
INTRODUCTION TO
EXPERIMENTAL PSYCHOLOGY**
3, 2/2

Prerequisites: PSY 101, PSY 306, and 3 credit hours of psychology. Introduction to laboratory investigation in the behavioral sciences. Includes higher-order correlational and parametric statistics, various approaches to research, and the interpretation and communication of research findings. Includes labora-

tory experiences to illustrate course content. Requires minimum of five laboratory exercises and reports. Required for psychology majors.

PSY 453
EXPERIMENTAL PSYCHOLOGY II: METHODS IN SOCIAL PSYCHOLOGY
3, 2/2

Prerequisite: PSY 450; PSY 325 recommended. Continuation of PSY 450. Focus on research methods used in social psychology. Includes artifacts in social psychological research, the rights of subjects, the responsibilities of experimenters, and the problem of generalizing results to the "real" world. Requires minimum of four research exercises and reports, including the formulation of at least one original experimental design.

PSY 454
EXPERIMENTAL PSYCHOLOGY II: METHODS IN PHYSIOLOGICAL AND COMPARATIVE PSYCHOLOGY
3, 2/2

Prerequisite: PSY 450; PSY 321 or PSY 421 recommended. Continuation of PSY 450. Focus on research methods used in comparative and physiological psychology. Includes principles of behavioral observation, quantification of behavior, methods employed in the investigation of the nervous system, surgical and histological techniques, and the application of physiological methods to the understanding of behavior. Requires minimum of four research exercises and reports, including the formulation of at least one original experimental design.

PSY 455
EXPERIMENTAL PSYCHOLOGY II: METHODS IN COGNITION
3, 2/2

Prerequisite: PSY 450; PSY 340 recommended. Continuation of PSY 450. Focus on research methods used in studying cognitive processes. Includes short- and long-term memory, language, concept formation, and attention and thinking. Requires minimum of four research exercises and reports, including the formulation of at least one original experimental design.

PSY 456
EXPERIMENTAL PSYCHOLOGY II: METHODS IN SENSATION AND PERCEPTION
3, 2/2

Prerequisite: PSY 450; PSY 308 recommended. Continuation of PSY 450. Focus on research methods used in sensation and perception. Includes classical psychophysical methods and recent advances in methodology. Emphasis on visual modality. Requires minimum of four research exercises and reports, including the formulation of at least one original design.

PSY 457
EXPERIMENTAL PSYCHOLOGY II: METHODS IN CLINICAL PSYCHOLOGY
3, 2/2

Prerequisite: PSY 450; PSY 411 recommended. Continuation of PSY 450. Focus on methods and analysis of data used in clinical research. Includes history of clinical psychology, ethical issues, special problems in clinical

measurement and research, statistical procedures, the use of tests, case study and group designs, analogues, social interaction measures, and genetics. Requires minimum of four research exercises and reports, including the formulation of at least one original experimental design.

PSY 458
EXPERIMENTAL PSYCHOLOGY II: METHODS IN DEVELOPMENTAL PSYCHOLOGY
3, 2/2

Prerequisite: PSY 450; PSY 355 recommended. Continuation of PSY 450. Focus on research methods used in studying developmental psychology. Includes methods used in studying lifespan development in the areas of perception, learning, personality, cognition, and attention. Requires minimum of four research exercises and reports, including the formulation of at least one original experimental design.

PSY 466
PERSONNEL PSYCHOLOGY
3, 3/0

Prerequisites: PSY 101 and PSY 365 or PSY 367. Problems, tools, and strategies involved in applying psychological principles to personnel selection, placement, training, and assessment in organizations. Includes the roles of personnel psychologists, job analysis, developing performance criteria for jobs, performance appraisal, interviewing, the uses of employment testing, predicting job success, training programs, and social and ethical issues in personnel psychology.

PSY 470
ENVIRONMENTAL PSYCHOLOGY II
3, 3/0

Prerequisites: PSY 101, PSY 370 and instructor permission. Advanced-level continuation of PSY 370. Includes theory building in physical-environmental behavior relations, innovative and unobtrusive measures, individual human needs in the physical environment, and basic processes and their relationship to the physical environment.

PSY 472
SEMINAR ON PSYCHOLOGY
3, 3/0

Prerequisites: PSY 101, PSY 306, PSY 450, and 6 credit hours of psychology. Topic areas for each course vary and are announced prior to student enrollment. Coursework involves the study of basic theoretical principles and empirical laws of different psychology content areas. Students make individual presentations on relevant topics. Required for psychology majors.

PSY 480
PSYCHOTHERAPY: THEORY, RESEARCH, AND PROCEDURES
3, 3/0

Prerequisites: PSY 101, PSY 311, and 3 credit hours of psychology; PSY 411 recommended. The contribution of psychology to the practice of psychotherapy. Includes theory, research, and clinical applications; the scientist-practitioner model; major theories of psychotherapy; the social impact of therapy; research support for major therapy systems; and ethical issues.

PSY 481
PSYCHOLOGICAL TESTS AND MEASUREMENTS
3, 2/2

Prerequisites: PSY 101, PSY 306, and 3 credit hours of psychology. Issues and problems surrounding psychological testing. Includes test reliability, validity, construction, administration, norms, and interpretation; commonly used intelligence, personality, neuropsychological, and personnel-assessment techniques. Provides limited practicum experiences.

PSY 488
INTERNSHIP
Variable credit

Prerequisite: Approval of the faculty supervisor. Supervised field experience in a variety of settings to supplement classroom instruction.

PSY 495
SPECIAL PROJECT
Variable credit

Prerequisite: Approval of the faculty supervisor. Research conducted under the supervision of a faculty member.

PSY 496
HONORS THESIS I
3, 0/3

Prerequisites: PSY 450, 72 credit hours, and instructor permission. Honors psychology students initiate research that is formally presented in thesis form. Students present formal research proposals (oral and written) to supervisors and honors thesis committee. Includes extensive library research. Required for students in the departmental honors program.

PSY 498
HONORS THESIS II
3, 0/3

Prerequisites: PSY 496 with a minimum grade of B and instructor permission. Honors psychology students conduct research proposed in PSY 496 and submit a formal thesis in written form. Students also orally defend their work before the faculty supervisor, thesis committee, and interested faculty members. Required for students in the departmental honors program.

PSY 499
INDEPENDENT STUDY
Variable credit

Prerequisite: Approval of faculty adviser.

REL

RELIGIOUS STUDIES

Philosophy and Religious Studies Department

REL 104
INTRODUCTION TO RELIGIOUS STUDIES
3, 0/0; CH

Introduction to the rational study of religion, including religious practices and philosophies and concepts basic to religious experience.

REL 105
INTRODUCTION TO CHRISTIAN THOUGHT
3, 3/0

Core doctrines of Christianity including the life and teachings of Jesus, and the writings and practices of the early church. The contributions of Christian thinkers and their effects on the lives of their adherents.

REL 121
INTRODUCTION TO JEWISH THOUGHT
3, 3/0

Basic Judaism, the major divisions in Jewish thought and practice, the Torah and the problem of practice, the epistemological basis of Jewish sectarianism, God and the problem of knowledge, the "good" life, Israel and the Nations, and Jewish practices.

REL 205
INTRODUCTION TO THE OLD TESTAMENT
3, 3/0

The Old Testament, the backgrounds and cultures from which it grew, and the philosophies and literature it contains.

REL 303
WOMEN AND RELIGION
3, 3/0; G

Global study of women and religion with special attention to women's contributions to religious thought and practice. Emphasis on women's spirituality and its effects in the developed and developing world.

REL 306
WRITINGS OF JOHN
3, 3/0

Historical and literary background of Saint John's Gospel, the letters of John, and the Book of Revelation. Emphasis on the content of the gospel, its major theological themes, and its distinctive contributions to Christian thought.

REL 321
WORLD RELIGIONS
3, 3/0; G CH V3

Study of various religions such as Hinduism, Buddhism, Taoism, Shinto, Confucianism, Judaism, Christianity, and Islam, together with Native American, African, Samoan, and Aboriginal Australian religion.

REL 326
NEW TESTAMENT
3, 3/0

Introduction to the New Testament, with emphasis on literary content, the societies from which it emerged, the structures and varieties of its literary contemporaries, and the tools necessary for understanding it.

REL 329
CONTEMPORARY CHRISTIAN THOUGHT
3, 3/0

Prerequisites: Fulfillment of English composition/basic communication requirement and upper-division status or one course in philosophy. Worship, ministry, and theology of various Christian traditions and the context in which they developed, from the sixteenth to the twentieth centuries. Includes contemporary challenges to Christianity.

REL 332
MYSTICISM
3, 3/0

Prerequisites: Fulfillment of English composition/basic communication requirement and upper-division status or one course in philosophy. Introduction to some of the major mystical disciplines of the world, such as Zen, Christian, Jewish, Sufi, European, Far Eastern, African, and Native American mysticism, and their underlying philosophies.

REL 350
HOLOCAUST
3, 3/0

Prerequisites: Fulfillment of English composition/basic communication requirement and upper-division status or one course in philosophy. Examination of the Holocaust (Europe 1933–1945) against the background of Jewish and other religious thought, with special attention to how the Holocaust has affected present religious and philosophical thinking.

REL 488
INTERNSHIP
Variable credit

Prerequisites: Upper-division status; minimum cumulative GPA of 2.5, with at least one-third of philosophy major or religious studies minor coursework completed. Supervised field experience (experiential learning) consisting of supervised on-site activities and an academic component consisting of training sessions, seminars, and reports.

SAF

SAFETY STUDIES

Technology Department

SAF 305
FUNDAMENTALS OF SAFETY
3, 3/0; CT

Fundamentals of accident prevention as applied to areas of living, with consideration of human and environmental factors, legal aspects, and home and fire safety. Required for safety minor. Required to teach high school driver education.

SAF 310
PERSONAL SAFETY AND FIRST AID
3, 3/0

Personal accident-prevention skills and techniques. Basic instruction in emergency medical care. Emphasis on recreational, occupational, industrial, and daily-life routines. Standard first aid and personal safety certificate awarded upon successful completion.

SAF 320
PRODUCT SAFETY
3, 3/0

Product safety, agencies that control the manufacture and distribution of dangerous products, product safety laws and legal liability, product-injury data, evaluative criteria, product testing, determining standards for safety.

SAF 333
OCCUPATIONAL SAFETY
3, 3/0

Hazards in the workplace, with emphasis on various accident-prevention methods and techniques for employees and management. The Occupational Safety and Health Act of 1970. Required for safety minor.

SAF 340
COMMUNITY SAFETY
3, 3/0

Human and environmental factors affecting community safety, accident prevention and control principles, agencies and organizations, safety laws and ordinances, standards and codes, legal liability and insurance, disaster and emergency medical care, safety in places of public assembly, recreational facilities, transportation systems. Required for safety minors.

SAF 360
INDUSTRIAL HYGIENE
3, 3/0

Introduction to industrial hygiene. Includes detection, recognition, evaluation, and control of factors emanating from a workplace that may impair health; cause discomfort, illness, or disease; and/or reduce efficiency of workers and the community.

SAF 431
ORGANIZATION, ADMINISTRATION, AND SUPERVISION OF INDUSTRIAL ACCIDENT PREVENTION PROGRAMS
3, 3/0

Prerequisite: SAF 430 (R). Methods and techniques of efficient industrial accident-prevention programs. Emphasis on corporate responsibility, employee responsibility, and complex psychological relationships that affect the typical program.

SAF 450
MOTOR FLEET SAFETY MANAGEMENT
3, 3/0

Fleet management techniques and their application. Includes scope and functions of the motor fleet safety supervisor; federal, state, and local laws and regulations; selection and maintenance of equipment; customs and public relations.

SAF 499
INDEPENDENT STUDY

SCI

GENERAL SCIENCE

Earth Sciences and Science Education Department

SCI 100
CONTEMPORARY SCIENCE
3, 3/0; CM

Introduction to the role of science in contemporary society. Emphasis on the process of science for solving problems and organizing information to understand science and technology. Contemporary issues and case studies illustrate the methods of science.

SCI 105
PHYSICAL SCIENCE FOR NONSCIENCE STUDENTS
3, 3/0; CM

Activity-centered approach to the physical sciences. Extensive use of materials designed for students interested in a nontechnical analysis of the procedures of science.

SCI 231
POLLUTION, THE ENVIRONMENT, AND SOCIETY
3, 3/0; G CM

Scientific and societal implications of present-day global environmental problems such as ecology, global warming, population, and pesticides. Causes and effects of, and possible solutions to, worldwide environmental problems, with implications from conservation, chemistry, health, and sociology. Option in environmental science minor.

SCI 232
ENERGY, THE ENVIRONMENT, AND SOCIETY
3, 3/0; G CM

Regional and global energy use and issues; environmental, economic, individual, and societal perspectives; major energy alternatives.

SCI 311
PROBLEM SOLVING IN PHYSICAL SCIENCE
3, 3/0

Prerequisite: A college-level course in a science other than biology; junior/senior standing. Inquiry-based course for elementary pre-service candidates. Students will investigate the physical sciences through problem solving, laboratory activities, simulations, and explorations. Option in elementary education science concentration.

SCI 312
PROBLEM SOLVING IN LIFE SCIENCE
3, 3/0

Prerequisites: A college-level course in biology; junior/senior standing. Inquiry-based course for elementary pre-service candidates. Investigation of the life sciences through problem solving, laboratory activities, simulations, and explorations. Option in elementary education science concentration.

SCI 313
PROBLEM SOLVING IN EARTH SCIENCE
3, 3/0

Prerequisites: A college-level course in earth science; junior/senior standing. Inquiry-based course for elementary pre-service candidates. Investigation of the earth sciences through problem solving, laboratory activities, simulations, and explorations. Option in elementary education science concentration.

SCI 323
SCIENCE AS INQUIRY
3, 3/0

The procedures of science as a search for knowledge of natural phenomena; comparison with other methods of inquiry; implications for nonscientists. Option in elementary education science concentration. Required for 5–6 extension.

SCI 335
OUTDOOR SCIENCE EDUCATION
3, 2/2

Prerequisite: One introductory environmental science course. Interdisciplinary approach to outdoor science education; basic concepts of natural history in classroom and field. Includes extended field trip to the college camp. Option in environmental science major.

SCI 340
SCIENTIFIC STUDIES IN ENVIRONMENTAL POLLUTION
3, 3/0

Prerequisites: 9 credit hours of science and 3 credit hours of environmental science or instructor permission. In-depth examination of various types of environmental pollution. A field-based project is used to illustrate data-collection techniques. Option in environmental science minor.

SCI 495
PROJECT

Prerequisite: Approval of a faculty sponsor. Environment, energy, science, society, and science education related areas.

SCI 499
INDEPENDENT STUDY

Prerequisite: Approval of a faculty sponsor. Environment, energy, science, society, and science education related areas.

SED

SCIENCE EDUCATION

Earth Sciences and Science Education Department

SED 200
FIELD EXPERIENCE IN SECONDARY SCIENCE EDUCATION
3, 2/2

Provides classroom and field experience designed to help students make a better informed decision if they are contemplating a career in secondary science education. A 30-hour field component is required for each student enrolled. Required for all secondary science education majors.

SED 310
TEACHING SCIENCE IN A MIDDLE SCHOOL
3, 2/2

Prerequisites: SED 200 or equivalent, enrollment in an elementary or secondary education program, junior standing. Interaction with middle school interdisciplinary teams of teachers and their students, other members of a middle school, college faculty, and invited speakers. These stakeholders will work together to facilitate the learning about diverse learners and their preferred learning styles. Students will develop a management plan and prepare a variety of assessments. They will develop an appreciation for the components of a middle school community including developing interdisciplinary teams, finding and using community resources, and the school as a community. Field experience at the middle school level.

**SED 401
TECHNIQUES FOR TEACHING
LABORATORY ACTIVITIES IN THE
SECONDARY SCIENCE
CLASSROOM
3, 0/6**

Prerequisites: SED 200 (not to be taken concurrently), EXE 372 or concurrently, EDF 303, and the two required courses in each of the cognate sciences (lab based); second course in sequence may be taken concurrently. Science education majors will learn selected laboratory techniques necessary to teach New York Regents secondary science classes. Topics include designing cognate science area lab activities, ordering and maintaining supplies/equipment, storage, safety, preparation of materials, lab set-up, and measurement techniques. Exploration of external influences and pressures in education. A field component of 30 science laboratory contact hours is required for each student enrolled.

**SED 405
METHODS AND MATERIALS IN
TEACHING SECONDARY
SCHOOL SCIENCE
3, 2/2**

Prerequisites: Minimum 2.75 GPA in science major (3.0 in earth sciences); SED 401, EDU 416 (may be concurrent). The components of an effective teaching-learning situation in a science (grades 7–12) classroom. The inter-relationships of secondary science programs. Includes micro-teaching experience and 40 hours of field work.

**SED 407
PRACTICE TEACHING SCIENCE
IN THE MIDDLE SCHOOL
6, 1/30**

Prerequisites: SED 405 (minimum grade of B), minimum cumulative 2.75 grade point average in the student's major field of study (3.0 in the earth sciences), completion of the NYSYCE LAST exam, successful completion of English and mathematics basic skills competency. If referred, satisfactory completion, or exemption from SLA 100, Student Speech Clinic. Teaching under supervision at least five days a week for one quarter in a middle school science classroom; individual and group instruction; planning unit teaching; classroom management and routine classroom procedures; audio-visual aids, computer technology, evaluation and assessment of student progress; participation in total school program. Attend a series of student teaching seminars.

**SED 408
PRACTICE TEACHING SCIENCE
IN THE HIGH SCHOOL
6, 1/30**

Prerequisites: SED 405 (minimum grade of B), minimum cumulative 2.75 grade point average in the student's major field of study (3.0 in earth science), completion of the NYSYCE LAST exam, successful completion of English and mathematics basic skills competency. If referred, satisfactory completion, or exemption from SLA 100, Student Speech Clinic. Teaching under supervision at least five days a week for one quarter in a high school science classroom; individual and group instruction; planning unit teaching; classroom management and routine classroom procedures; audio-visual aids, computer technology,

evaluation and assessment of student progress; participation in total school program. Attend a series of student teaching seminars.

**SED 409
SEMINAR IN SECONDARY
SCIENCE EDUCATION
3, 2/2**

Prerequisites: SED 405 (minimum grade of B). 2.75 GPA (3.0 in earth sciences). Secondary majors SED 407 and SED 408 concurrently. Elementary science extension SED 407 concurrently. Assist student teachers in analysis of their "real" classroom experiences—from management issues to content presentation. Conflicting philosophies in current education. Portfolio development and ongoing development of personal teaching philosophy and practices. Develop interview techniques and make application for NYS teacher certification. To be taken concurrently with SED 407 and SED 408.

**SED 488
INTERNSHIP
1-3, 0/15-45**

Prerequisites: Minimum 2.75 GPA and a background of courses or experience within the the area of interest. Approval of faculty adviser and department chair. Provides guided and supervised field experiences to complement the academic program.

SLP

SPEECH-LANGUAGE PATHOLOGY

Speech-Language Pathology Department

**SLP 100
STUDENT SPEECH CLINIC
Variable credit**

Complete diagnostic evaluation and intervention services for students with speech, language, hearing, fluency, or voice disorders. Accent-reduction services also available. Open to all students. Hours by arrangement.

**SLP 206
LANGUAGE DEVELOPMENT
3, 3/0; CT**

Analysis of language, its development; children's acquisition of language, speech sounds, words, sentence structure, and meaning; factors that influence language development. Not open to speech-language pathology majors except by advisement.

**SLP 210
INTRODUCTION TO SIGN
LANGUAGE
3, 3/0**

Introduction to basic sign language skills suitable for use in elementary classes for students with hearing disabilities. Focus on the development of basic expressive and receptive skills in signed English, including finger spelling (dactylogogy); basic information about the sign language continuum, deafness, and deaf culture. Requires active participation in daily signing in front of large and small groups or providing appropriate constructive feedback. Students are strongly encouraged to practice receptive and expressive signing skills outside of class.

**SLP 220
INTRODUCTION TO
COMMUNICATION DISORDERS
3, 3/0; CT**

Classification and causes of speech, language, and hearing disorders in children and adults; methods of treatment for minor disorders and suggestions for prevention; basic information on normal and abnormal speech, language, and hearing development; videotaped observation of individuals presenting various communication disorders. Not open to speech-language pathology majors except by advisement.

**SLP 300
INTRODUCTION TO SPEECH
PATHOLOGY
3, 3/0**

Prerequisite: Speech-language pathology major. Etiology, characteristics, diagnoses, and intervention implications of the following communication disorders: motor speech, adult language, craniofacial anomalies, fluency, phonology, voice, and cognitive-communicative.

**SLP 302
CLINICAL PHONETICS
3, 3/0**

Production, acoustic analysis, and representation of English (American) speech sounds; application of phonetics to deviations in speech. Required for speech-language pathology majors.

**SLP 303
LANGUAGE ACQUISITION
3, 3/0**

Prerequisite: SLP 302. Children's acquisition of phonology, morphology, syntax, semantics, and pragmatics; structure, function of language of normal children at different levels of development; comparison and contrast of theories of language acquisition. Required for speech-language pathology majors. Must be taken with appropriate section of SLP 429.

**SLP 304
ANATOMY AND PHYSIOLOGY
OF SPEECH AND HEARING
MECHANISMS
3, 3/0**

Anatomy and physiology of normal speech and hearing mechanisms; possible deviations; embryonic development; neurology associated with production and reception of oral language. Required for speech-language pathology majors.

**SLP 312
SPEECH ACOUSTICS AND
PERCEPTION
3, 3/0**

Prerequisites: SLP 302 and SLP 304. Scientific principles of the physiology, acoustics, and perception of normal speech production as a basis for subsequent understanding of disordered speech. Includes basic concepts of sound, motor, and acoustic theories of speech production; speech perception; instrumentation used to measure speech processes; and application to speech pathology. Required for speech-language pathology majors. Must be taken with appropriate section of SLP 429.

**SLP 411
LANGUAGE DIAGNOSIS AND
REMEDIATION
3, 3/0**

Prerequisite: SLP 303. Introduction to childhood language disorders, including the demographics and characteristics features of language disorders.

**SLP 414
AUDIOLOGY
3, 3/0**

Hearing and hearing disorders for speech-language pathologists; anatomy and physiology of the ear; pathologies of the auditory mechanism; decibel notation; and pure tone audiometry and tympanometry. Required for speech-language pathology majors. Must be taken with appropriate section of SLP 429.

**SLP 424
ORGANIZATION AND
ADMINISTRATION OF SCHOOL
SPEECH AND LANGUAGE
PROGRAMS
3, 3/0**

Prerequisite: 30 credit hours in communication disorders. Organization of school speech-language programs, including laws and regulations, case selection, caseload, scheduling, records, and facilities. Required for speech-language pathology majors.

**SLP 429
CLINICAL ACTIVITY
1, 0/1**

Observation and participation in laboratory/clinical activities. There are four different sections: three accompany courses (SLP 303, SLP 312, SLP 414), and one is taken by itself. Appropriate section(s) should be selected with advisement. Must be repeated four times.

**SLP 495
SPECIAL PROJECT**

**SLP 497
WORKSHOP**

**SLP 499
INDEPENDENT STUDY**

SOC

SOCIOLOGY

Sociology Department

**SOC 100
INTRODUCTION TO
SOCIOLOGY
3, 3/0; CS**

An introduction to the study of human society, its culture, institutions, processes, and change, including an examination of socialization, relationships between and among individuals and groups in society. A prerequisite for all other undergraduate courses in sociology (except SOC 240, 310, 312, and 320), and is required of all sociology majors. Useful for students planning careers in which they must interact with people of varying social and economic statuses.

SOC 199/GEG 199
INTRODUCTION TO COMPUTER USE IN THE SOCIAL SCIENCES
3, 3/0

Hands-on introduction to the application of computers to applied social research problems including a review of past practices, current uses, and future trends. Computer analysis of data to develop insights into the ways applied sociologists use computers in their work.

SOC 240
ANALYZING SOCIAL PROBLEMS
3, 3/0; D CS

An analysis of several major social problems that will be selected according to faculty and student needs and interests. A variety of approaches, techniques, and theories will be used in an analysis of selected social problems.

SOC 300W
METHODS IN SOCIAL RESEARCH
3, 3/0

Prerequisite: SOC 100. Provides an understanding of the nature of scientific evidence, induction, and deduction. Includes the application of scientific methods to sociological data, the use of statistics and other means of data collection, case histories, narrative and descriptive methods, methods of writing for publication, use of social materials from journals and books as illustrative material.

SOC 301
SOCIAL STATISTICS
4, 4/0

Prerequisite: SOC 100. Statistical methods and reasoning will be used to analyze and clarify sociological information. Topics include operationalizing variables, database management, probability, descriptive statistics, inferential statistics, and data presentation. Software applications, specifically SPSS and SAS, familiarize students with some of the most recent and powerful technology in the field.

SOC 302W
APPLIED SOCIAL RESEARCH
3, 3/0

Prerequisite: SOC 100. Explores the relationship between applied social research and policy/decision making in organizations, agencies, and with individuals. Applied research techniques will be presented and analyzed according to their utility in a variety of settings. The research process will be examined from the vantagepoint of the applied researcher.

SOC 310
SOCIOLOGY OF SEX ROLES
3, 3/0; D CS

Provides a critical examination of the roles women and men play in society with particular emphasis on the problems and changes of role adjustment in contemporary America. Social statuses of women and men will be analyzed historically, comparatively, demographically, theoretically, and biologically with particular attention given to the sociological implications of sex inequality in the economy and political systems as well as in marriage and family relationships.

SOC 312
WOMEN IN SOCIETY
3, 3/0; D CS

Multifaceted analysis of women in society. Women's issues in relation to the social and natural sciences. Critically examine modern societies in light of women's perspectives.

SOC 320
SOCIOLOGY OF THE FAMILY
3, 3/0; CS

Prerequisite: SOC 100. The family as a social institution, its historical development, function and structure, and interaction with other institutions; cross cultural comparisons are made. The current status of the family, diversity in contemporary American families, as well as stability and change in the life course of families.

SOC/AAS 321
THE AFRICAN AMERICAN FAMILY
3, 3/0; D

Prerequisite: SOC 100. The relationship of American social institutions and the African American family. Familial relations within the African American family. This course may be used for sociology or African American studies. Useful for students who will interact with a diverse population in their careers, e.g., education and various service occupations.

SOC 322
SOCIOLOGY OF CHILDHOOD AND YOUTH
3, 3/0

Prerequisite: SOC 100. The social construction of childhood and adolescence. The interactive nature of the socialization process. Children's production of peer culture. Serious consideration is given to global social problems faced by children and youth.

SOC/SSE 323
SOCIOLOGY OF EDUCATION
3, 3/0

Prerequisite: SOC 100. The social organization of education in the U.S. and elsewhere, and schools as social institutions reflecting and influencing society. Roles and behaviors of participants in the educational system as well as educational goals, theories, philosophies, and methods. Educational achievements, historical developments, and future trends.

SOC 324/HPR 319
SOCIOLOGY OF SPORT
3, 3/0

Presents a coherent and integrated application of the sociological perspective to sport. Focuses on the social organization of sports-related activities. The norms, goals, and values of sport using theoretical frameworks and empirical tools of the social sciences.

SOC 330
SOCIAL PSYCHOLOGY
3, 3/0; CS

Prerequisite: SOC 100. Human motivation and the nature of attitudes. Focuses on attitude change and stability. Social phenomena such as interpersonal perception and behavior, role prescriptions and role conflict, prejudice, and conflict resolution.

SOC 331
SOCIOLOGY OF GROUP DYNAMICS
3, 3/0

Prerequisite: SOC 100. The social structure and social dynamics of social groups including such essential features as the division of labor, types of leadership, communication and authority structures, social conflict, and social control mechanisms. The relationship of the individual to the group; comparisons of different types of "natural" groups such as family, peers, work groups; and the use of "experimental" groups to investigate various aspects of group life.

SOC 333
SOCIAL MOVEMENTS
3, 3/0; D

Prerequisite: SOC 100. Social movements, their character, development, dynamics, and consequences. The relationship between discontent at the individual and wider social levels. Selected social movements and sociological theories.

SOC 341
SOCIOLOGY OF HUMAN ECOLOGY
3, 3/0

The interaction of people and the environment and its effect on the quality of living, especially upon such social problems as poverty, crime, physical and mental illness, and various types of pollution.

SOC 350
POWER, CLASS, AND INEQUALITY
3, 3/0; D CS

Prerequisite: SOC 100. Historical and contemporary dimensions of social inequality and power differentials in the United States and globally. Presents contrasting theoretical interpretations of the origins and significance of social inequality including the intersectional relationship between inequality on the basis of gender, race, ethnicity, and class. Current trends and projected transformations in social inequality.

SOC 351
SOCIOLOGY OF RACE AND ETHNICITY
3, 3/0; D CS

Prerequisite: SOC 100. The status of racial and ethnic groups in American and other societies. Focuses on forms, causes, and effects of prejudice, and ethnic conflicts and the changing relationships of these groups to the larger society. Possible solutions to social problems involving issues of race and ethnicity are also explored.

SOC 352
THE AGED IN URBAN SOCIETY
3, 3/0

Prerequisite: SOC 100. How society structures the experience of aging. Major transitions and role changes experienced by the elderly within social institutions such as family, the economy, and religion. Understanding the way these same institutions adapt to an aging population. Includes investigation of a continuum of programs and policies aimed at assisting individuals at varying levels of independence throughout the aging process.

SOC 353
ENVIRONMENT AND SOCIETY
3, 3/0

Prerequisite: SOC 100 or 6 credit hours of sociology. Analyzes the crisis of the environment (at the global, national, and local levels) using empirical and theoretical methods. Specific topics include the "toxics crisis," Central America, work, environmental racism, and others. Designed to interpret societal structures and processes that lead to ecological crises and responses to ecological crises.

SOC 360
SOCIOLOGY OF WORK
3, 3/0; CS

Prerequisite: SOC 100. The social relations surrounding the world of work as the contours of modern urban-industrial society emerge, mature, and begin to decline. Typical forms of work in industry, the functions of work organizations, changing of structures of social class, patterns of labor relations, and the transfer of these forms to non-industrial and government contexts. How these factors influence the interest and meaning workers find in their work. The consequences for social action and social change.

SOC 361
INDUSTRIAL SOCIOLOGY
3, 3/0

Prerequisite: SOC 100. Critiques major theories on group process within the workplace. A variety of issues that affect workers' attitudes, behavior, and productivity: the social organization of the workplace; the impact of technology; the meaningfulness of work; reactions to change; the balance of internal and external factors. The internal dynamics of the workplace within the context of larger issues, such as the capitalist organization of production and the tendency toward globalization.

SOC 362
SOCIOLOGY OF ORGANIZATIONS
3, 3/0; CS

Prerequisite: SOC 100. Characteristics of, and relations among, multi-level organizational structures (formal and informal), behavior within organizations, and the behavior of organizations. The effects of organizational environments and networks within organizations.

SOC 370
THE SOCIOLOGY OF DEVIANT BEHAVIOR
3, 3/0

Prerequisite: SOC 100. Deviant behavior in American society, its nature, theoretical perspectives, and societal reactions. Emphasizes becoming deviant as both an interactive and political process, with special attention paid to the development of deviant identities. Attention will be given to such specific behavior as substance abuse, sexual deviance, crime and delinquency, mental illness, and social protest.

SOC 380
SOCIOLOGY OF CRIME
3, 3/0; CS

Prerequisite: SOC 100. Crime, its nature, variation, and causation. Social responses to crime, methods of crime prevention, punishment, and treatment of offenders. Theoretical

perspectives and controversies are presented in social and historical context.

SOC 382
SOCIOLOGY OF LAW
3, 3/0

Prerequisite: SOC 100. The numerous ways in which law permeates all forms of social behavior. Focuses on the law itself and the social context within which it has been created and exists. Dominant theoretical perspectives and sociological methods used to explain the interrelationships between law and society. Major topics include types and purposes of law, major legal organizations, the lawmaking process, law and social control, law and dispute resolution, law and social change, and the legal profession.

SOC 383
SOCIOLOGY OF PUNISHMENT
AND CORRECTIONS
3, 3/0

Prerequisite: SOC 100. Recent theories and research findings regarding correctional practice. Offender typologies, the nature and forms of treatment, and obstacles to treatment.

SOC 384
THE SOCIOLOGY OF MASS
MURDER
3, 3/0

Prerequisite: SOC 100. Sociological findings and theory concerning various manifestations of murder, e.g., homicide, genocide, serial killing, and simultaneous killing. Sociological profiles of murderers and discussion and analysis of social factors conducive to murder.

SOC 390
JUVENILE DELINQUENCY
3, 3/0

Prerequisite: SOC 100. Juvenile delinquency; description, extent, and sociological theories of explanation. Various methods used to develop data. Institutions and agencies dealing with and/or attempting to prevent delinquency, including courts, law enforcement agencies, social service agencies, and educational institutions.

SOC 391
SOCIOLOGY OF ADDICTION
3, 3/0

Prerequisite: SOC 100. Alcohol and drug abuse as a social problem and a sociological phenomenon. The nature of drug and alcohol abuse, the situations in which this behavior occurs, and the characteristics of users. Legal, medical, and other efforts made to influence addicts.

SOC 392
SOCIOLOGY OF SEXUAL
BEHAVIOR
3, 3/0

Prerequisite: SOC 100. Recent sociological findings concerning sexual behavior as a social process. The nature of various sexual practices, such as homosexuality, sadomasochism, etc. in the light of sociological theory. The sociological literature concerning sexual behavior with special emphasis on the interactionist approach.

SOC 393
SOCIOLOGY OF MENTAL
ILLNESS
3, 3/0

Prerequisite: SOC 100. Sociological perspectives on mental health and illness, including their social histories. Includes evaluation of social factors and processes involved in modern approaches to the causes and treatment of mental illness with special attention to problems of definition and diagnosis. Reviews recent research findings in areas of epidemiology, institutional care and control of the mentally ill, the care of mental patients, and social issues.

SOC 400W
FOUNDATIONS OF
SOCIOLOGICAL THOUGHT
3, 3/0

Prerequisites: SOC 100 and 6 additional credit hours of sociology. The ideas developed by the early founders of sociology including Karl Marx, Max Weber, Emile Durkheim, and their contemporaries.

SOC 408
CONTEMPORARY
SOCIOLOGICAL THEORY
3, 3/0

Prerequisites: SOC 100 and 6 additional credit hours of sociology. The significance and uses of sociological theory. Includes the major current approaches to understanding society and social life such as contemporary Marxism, conflict theory, functionalism, and other social order theories; the interpretive theories such as symbolic interactionism, phenomenological sociology, and ethnomethodology; and theories of rational choice such as behavioral sociology and exchange theory. Newly developing perspectives such as feminist theory and postmodernism.

SOC 415
POPULATION ANALYSIS
3, 3/0

Prerequisite: SOC 100. Applied formal, social, and economic demography. Includes the study of treatment of birth, death, and migration. Methods of population measurement and projection, and sources of demographic data. Hands-on experience in computer analysis of population data using general statistical packages and/or programs customized for use in population analysis.

SOC 420
SOCIOLOGY OF RELIGION
3, 3/0

Prerequisite: SOC 100. Theories in the sociology of religion. Relation and social change; religion in society; church and sect; social class and religion; the role of minister, priest and rabbi.

SOC 430
SOCIOLOGY OF
INTERNATIONAL DEVELOPMENT
AND UNDERDEVELOPMENT
3, 3/0; G

Prerequisites: SOC 100 and upper-division status. Societal development and change on an international level with particular emphasis on the third world. Topics include the major sociological theoretical models, conceptual frameworks and assumptions of development; the emergence and dynamics of the world system; the international division of

labor; the interplay of development with gender, race, and ethnicity; social policy alternatives and strategies of social change and liberation.

SOC 486
PRACTICUM IN APPLIED
SOCIOLOGY
3, 3/0

The use of field research techniques in the classroom. These concepts will then be employed during the completion of 75 hours of field experience working with an agency or organization working in the community.

SOC 488
INTERNSHIP IN SOCIOLOGY
Variable credit

Prerequisite: Permission of faculty intern supervisor. Supervised fieldwork in appropriate agencies where students expand their knowledge of sociology and establish interactive ties in the job market. Academic components of the course include orientation, training sessions, ongoing conferences with faculty/agency supervisor, log/journal of the field experiences, and final report.

SOC 490
SEMINAR IN SOCIOLOGY
3, 3/0

Prerequisites: SOC 100 and SOC 300. Research in selected area(s) of sociology. It is required for B.A. Sociology majors with senior status.

SOC 491
TOPICAL SEMINAR IN
SOCIOLOGY
3, 3/0

Prerequisites: SOC 100, 6 credit hours of sociology in a related field, and instructor permission. In-depth special problems in sociology. Interested students should contact a member of the sociology faculty, who will secure approval from the Sociology Department. The course is then listed in the master schedule with a subtitle indicating the area of special concentration.

SOC 499
INDEPENDENT STUDY

SPA

SPANISH

See Modern and Classical Languages

SSE/SST

SOCIAL STUDIES
EDUCATION

History and Social Studies Education Department

SSE 303
METHODS AND MATERIALS IN
TEACHING MIDDLE SCHOOL
SOCIAL STUDIES
3, 3/0

Prerequisites: 6 credit hours of professional education courses, SST 200, minimum 2.75 GPA, minimum 2.75 GPA in major. Focuses on the problems of the teacher; techniques for teaching; analyzing classroom behavior; self-evaluation; and peer evaluation of teaching practices.

SSE 309
METHODS AND MATERIALS IN
TEACHING HIGH SCHOOL
SOCIAL STUDIES
3, 3/0

Prerequisites: Upper-division status, EDF 303, SST 200, minimum cumulative GPA of 2.75 (overall and in major coursework). The purposes, goals, curricular materials, methodologies, and instructional techniques of social studies education. Emphasis is for the student to develop competency in designing and practicing instructional strategies drawn from methodologies and of the curricular materials of social studies education and the disciplines of history and the social sciences.

SSE 323
SOCIOLOGY OF EDUCATION
3, 3/0

Prerequisite: SOC 100. The social organization of education in the United States and elsewhere. Emphasis on education's role in preserving and changing our culture; the school as a social system; non-school factors that influence educational aspirations and achievement; the role of teachers, student subcultures, and administrative behavior patterns on student performance in school; changing and alternative educational forms; and changing relationships in colleges and universities.

SSE 363/HIS 363/SST 363
AMERICAN IDENTITY IN
TRANSITION: DIVERSITY AND
PLURALISM IN THE UNITED
STATES
3, 3/0; D

Prerequisite: Upper-division status. The diverse, pluralistic makeup of American society. The roots of pluralism and what it means for the daily experience of living in America. Themes of diversity are explored through history and literature. Focuses on the activities of four major underrepresented groups in their struggle for liberation: African Americans, Native Americans, Latinos, and Asians. Encourages a multicultural view of America.

SSE 370
COMPUTER TECHNOLOGY IN
THE SOCIAL STUDIES
CLASSROOM
3, 3/0

Prerequisite: History and social studies education major. Familiarizes students with relevant software and methodology for its use in the social studies classroom. All students have the opportunity to participate on the micro-computer.

**SSE 402
HISTORICAL AND
PHILOSOPHICAL FOUNDATIONS
OF SOCIAL EDUCATION
3, 3/0**

Prerequisite: Upper-division status. The development of the social studies curriculum in relation to the larger social, economic, educational, and political forces operating in American society. Emphasis on enduring philosophical issues as to what is the "good" society, the "good" citizen, and the best curriculum and instructional methods to create them.

**SSE 404
SEMINAR IN ELEMENTARY
SOCIAL STUDIES
3, 3/0**

Prerequisites: EDU 210 and EDU 352. Students learn to more effectively utilize their social science preparation for early secondary and elementary social studies instruction. Students make decisions concerning their tentative positions on the function of the school and society, the purpose of social studies, and the available alternatives to teachers in the areas of methodology, psychology, and curriculum.

**SSE 407/HIS 407/SST 407
THE TEACHING OF HISTORY
3, 3/0**

Prerequisite: Upper-division status. The curriculum and practice of teaching history, the historical role of history in the social studies, the political uses of the teaching discipline. Provides a research foundation as to how historical meaning is constructed as a base for instructional practice. Serves as a link between the material presented in content and pedagogical courses in the program.

**SSE 409
STUDENT TEACHING OF SOCIAL
STUDIES IN THE MIDDLE
SCHOOL
6, 0/0**

Prerequisites: Minimum cumulative GPA of 2.75 (overall and in major coursework), grade of C or higher in SSE 309, successful completion of English composition/basic communication and mathematics competency requirements. If referred, satisfactory completion of or exemption from SLP 100. All other coursework must be completed prior to student teaching. Corequisite: SSE 410. Teaching under supervision five days a week. Individual and group instruction, daily and long-view planning, unit teaching, classroom management and routine procedures, audiovisual aids, community resources record keeping, evaluation procedures, participation in total school program.

**SSE 410
STUDENT TEACHING OF SOCIAL
STUDIES IN SENIOR HIGH
SCHOOL
6, 0/0**

Prerequisites: Minimum cumulative GPA of 2.75 (overall and in major coursework), minimum grade of C in SSE 309, successful completion of English composition/basic communication and mathematics competency requirements. If referred, satisfactory completion of or exemption from SLP 100. All other coursework must be completed prior to student teaching. Corequisite: SSE

409. Teaching under supervision five days a week. Individual and group instruction, daily and long-view planning, unit teaching, classroom management and routine procedures, audiovisual aids, community resources, record keeping, and evaluation procedures, participation in total school program.

**SSE 488
INTERNSHIP
Variable credit**

Prerequisites: Sophomore, junior, or senior status; background of courses or experience within the area of interest; 6 credit hours of lower-division major coursework; 6 credit hours of history and social studies education coursework at the upper-division level; minimum cumulative GPA of 2.5 (overall and in major coursework); approval of student adviser and department chair. Guided, supervised field experiences that complement the academic program.

**SSE 495
SPECIAL PROJECT**

**SSE 499
INDEPENDENT STUDY**

**SST 102
PROBLEM SOLVING IN THE
SOCIAL STUDIES
3, 3/0; CS**

The methods of interdisciplinary problem solving and emphasis on the application to selected contemporary problems.

**SST 199/GEG 199/SOC 199/
ANT 199
INTRODUCTION TO COMPUTER
USE IN THE SOCIAL SCIENCES
3, 3/0**

Prerequisite: CIS 101 or equivalent, or instructor permission. Hands-on introduction to the application of computers to applied social research problems, including a review of past practices, current uses, and future trends. Computer analysis of data to develop insight into the ways social scientists use computers in their work.

**SST 200
INTRODUCTION TO
SECONDARY TEACHING
3, 3/0**

Classroom and field experiences designed to help students make better-informed decisions regarding careers in secondary social studies education. For the general student, provides important background for their roles as citizens and as parents. Required for social studies education majors.

**SST 355
SOCIAL STUDIES SEMINAR IN
CONFLICT RESOLUTION
3, 3/0**

Review of strategies for resolving conflicts. Emphasis on international and interpersonal problems. Coursework is drawn from political science, law, sociology, and social psychology.

**SST 363/SSE 363/HIS 363
AMERICAN IDENTITY IN
TRANSITION: DIVERSITY AND
PLURALISM IN THE UNITED
STATES
3, 3/0; D**

Prerequisite: Upper-division status. The diverse, pluralistic makeup of American society.

The roots of pluralism and what it means for the daily experience of living in America. Themes of diversity are explored through history and literature. Focuses on the activities of four major underrepresented groups in their struggle for liberation: African Americans, Native Americans, Latinos, and Asians. Encourages a multicultural view of America.

**SST 407
THE TEACHING OF HISTORY
3, 3/0**

Prerequisite: Upper-division status. The curriculum and practice of teaching history, the historical role of history in the social studies, and the political uses of the teaching discipline. Provides a research foundation as to how historical meaning is constructed as a base for instructional practice. Serves as a link between material presented in content and pedagogical courses in the program.

**SST 450
INTERDISCIPLINARY FIELD
RESEARCH SEMINAR IN SOCIAL
STUDIES METHODS
3, 3/0**

Prerequisite: 6 credit hours in upper-division social science courses. The nature of interdisciplinary research; the design, fielding, and analysis of social surveys. Particular attention is paid to school settings and attitudes and relationships of the community to policy decisions regarding the format of secondary school social studies curriculum.

**SST 495
SPECIAL PROJECT**

**SST 497
WORKSHOP**

**SST 499
INDEPENDENT STUDY**

SWA

SWAHILI

See Modern and Classical Languages

SWK

SOCIAL WORK

Social Work Department

**SWK 105
INTERPERSONAL RELATIONS
3, 3/0**

The impact of societal, cultural, and professional values on interpersonal relationships. Students increase awareness of their own interpersonal skills and examine ways to overcome barriers to healthy interpersonal relationships.

**SWK 220
INTRODUCTION TO SOCIAL
WORK
3, 3/0; CT**

Introduction to the social welfare institution and to social work. Includes social work

knowledge, skills, sanctions, values, and ethics. Emphasizes generalist practice in social work. Requires 40 hours of volunteer work in addition to coursework. Required for social work majors.

**SWK 307
HUMAN BEHAVIOR AND THE
SOCIAL ENVIRONMENT I
3, 3/0**

Development of the individual in the family from prebirth through adolescence. Emphasis on theories and issues that provide a knowledge base for social work. Required for and restricted to social work majors.

**SWK 308
HUMAN BEHAVIOR AND THE
SOCIAL ENVIRONMENT II
3, 3/3**

Prerequisite: SWK 307. Continuation of SWK 307. Development of the individual in the family from young adulthood through middle and old age. Emphasis on the knowledge base for social work. Required for and restricted to social work majors.

**SWK 310
SEXUALITY IN HUMAN
DEVELOPMENT
3, 3/0**

Examination and analysis of human sexuality as part of human development. Designed for future human services professionals.

**SWK 317
RESEARCH IN SOCIAL WORK
3, 3/0**

Prerequisites: SWK 307 and successful completion of English composition/basic communication and mathematics competency requirements. Application of research methodologies and evaluative techniques to the field of social work. Required for and restricted to social work majors.

**SWK 319
DYNAMICS OF POVERTY
3, 3/0; D CT**

Prerequisite: Upper-division status. Predominant theories, policies, and programs dealing with poverty in America; the historical treatment of the poor; views of poverty; poverty's affects on individuals, families, and communities; class, race, gender, and age; strategies of social change. Requires 20 hours of volunteer work in addition to coursework. Required for social work majors.

**SWK 320
SOCIAL SERVICES
ORGANIZATIONS
3, 3/0**

Prerequisite: SWK 220. Purposes, types, management, staffing, and funding of organizations that deliver social services; roles of the social work professional in such organizations; selected social work fields of practice and services for specialized populations. Required for social work majors.

**SWK 321
THE ELDERLY AND SOCIAL
SERVICES
3, 3/0**

Prerequisite: Upper-division status. Needs of and services for the elderly. Services and programs; policy issues regarding the aging, such as health, housing, and finances. Intervention strategies for working with the elderly.

SWK 335
MENTAL HEALTH AND SOCIAL WORK
3, 3/0

Prerequisite: SWK 307. Theoretical perspectives concerning mental health and mental illness, history of the mental health movement, institutional and community mental health services, roles and functions of social workers and other personnel in the mental health system.

SWK 345
CHILD WELFARE SERVICES
3, 3/0

Prerequisite: Upper-division status. Child welfare as a field of practice in social work; historical and philosophical bases; the impact of culture, ethnicity, and race on practice; current delivery of services; skills needed to practice in the field.

SWK 346
CHILD ABUSE AND NEGLECT
3, 3/0

Prerequisite: Upper-division status. Major issues in child abuse and neglect from a social work viewpoint. The nature of abuse and neglect, the actual incidence, workings of the current child-protection system, intervention and treatment issues, the role of other disciplines and the larger society.

SWK 419
SOCIAL WELFARE POLICY
3, 3/0

Prerequisite: SWK 320. Institutional response of the American welfare state to individual and societal issues, problems. Current social welfare issues, policies, and programs in their historic and philosophic context, with emphasis on critical thinking and policy practice. Required for and restricted to social work majors.

SWK 422
INTERVENTIVE METHODS I
3, 3/0

Prerequisites: SWK 220 and SWK 307, *social work major.* Fundamental skills of social work practice. Emphasis on communication and assessment skills with individuals and families. Required for and restricted to social work majors.

SWK 423
INTERVENTIVE METHODS II
3, 3/0

Prerequisites: SWK 308 and SWK 422, *social work major.* Continuation of SWK 422. Focus on models and strategies of intervention, resistances to change, and termination. Required for and restricted to social work majors.

SWK 424
INTERVENTIVE METHODS III
3, 3/0

Prerequisite: SWK 423, *social work major.* Continuation of SWK 422 and SWK 423. Intervention with groups and communities, models of group work practice and phases of group intervention, major spheres of macro practice and methods to effect change at large-systems level. Required for and restricted to social work majors.

SWK 425
SOCIAL WORK WITH FAMILIES
3, 3/0

Prerequisites: SWK 308 and SWK 422. Focus on family and family intervention. Family theory and practice principles studied through examination of families in specialized problem contexts.

SWK 485
SENIOR SEMINAR
3, 3/0

Intensive analysis of selected topics in social work.

SWK 493
FIELD INSTRUCTION
6, 6/0

Prerequisite: SWK 422, *social work major.* First semester of supervised field experience in a professional social work setting. Concurrent weekly on-campus integrative seminar. Required for and restricted to social work majors.

SWK 494
FIELD INSTRUCTION
6, 6/0

Prerequisite: SWK 493. Second semester of supervised field experience in a professional social work setting. Concurrent weekly on-campus integrative seminar. Required for and restricted to social work majors.

SWK 495
SPECIAL PROJECT

SWK 499
INDEPENDENT STUDY

TEC

Technology Department

TEC 100
RAPID VISUALIZATION
3, 2/3

Basic conceptual and technical skills in technical drawing and illustration. Basic drawing techniques from sketching and rapid visualization to rendering and 3-D computer modeling. Includes lectures, demonstration, and practice. Intended as a technology foundation course and as a pre-mechanical drawing and pre-CAD course.

TEC 101
TECHNICAL DRAWING
3, 2/3

Projection theory; multiview projection; special relationships and visualization of point, lines, planes, and solids; size and shape description through sketching and CAD drafting; industrial applications, standards, and conventions; auxiliary views, revolutions, developments, and intersections. Required for electrical engineering technology (power and machines), industrial technology, mechanical engineering technology, and technology education majors.

TEC 123
PRINCIPLES OF MANUFACTURING
3, 2/3; CT

Operative principles common to the majority of manufacturing industries. Research and development, manufacturing, organization and management, industrial relations, engineering, production, labor, financial control, marketing, quality control. Presentations by leading industrialists. Required for technology education majors.

TEC 150
THE SHAPE OF THINGS
3, 3/0; CT

Mechanics and design; concepts of strength of materials; the influence of shape, size, and material on the strength and rigidity of structures; presentation of the elements of mechanism.

TEC 200
TOTAL QUALITY MANAGEMENT
3, 3/0; G

Prerequisite: Sophomore status. Fundamental concepts of total quality management; managerial commitment; organization mission and structure; quality problem-solving tools; variation, quality costs; vendor-customer relationships; quality evaluation techniques; quality philosophies of Deming, Crosby, and others. Required for industrial technology (quality concentration) majors.

TEC 201
MATERIALS PROCESSING
3, 2/3

Prerequisite: TEC 101. Processes and problems associated with the conversion of materials into useful forms and goods. Laboratory activities exemplify the major processes studied. Required for industrial technology, mechanical engineering technology, and technology education majors.

TEC 253
FUNDAMENTALS OF BOAT BUILDING
3, 0/6

Prerequisite: DES 105. Fundamentals of boat design, lofting, and construction through lectures, demonstrations, and the construction of a small boat.

TEC 260
DEVELOPMENT OF TECHNOLOGY
3, 3/0; CT

The development of technology. Emphasis on prevailing ideas, known physical materials and processes, and pressures of the natural and social surroundings. Consideration of the technological future based on historical development.

TEC 300
CONSTRUCTION SYSTEMS
3, 2/3

Exploration of habitable structures through hands-on laboratory experiences. For technology education majors and those who wish to meet certification requirements of New York for teaching technology education in the state's public schools. Required for technology education majors.

TEC 301
MATERIALS PROCESSING II
3, 2/3

Prerequisite: TEC 201. Continuation of TEC 201. Emphasis on numerical controlled and computerized numerical controlled materials processing. Laboratory activities offer practical experience.

TEC 302
CAD/CAM (COMPUTER AIDED DRAFTING/COMPUTER AIDED MANUFACTURING)
3, 2/3

Prerequisites: TEC 101 and TEC 201. Using computers to facilitate the production processes of designing, drafting, production planning, cost estimating, and materials processing. Using CAD software to create the database for part geometry, material selection, and process requirements. Using CAM software to control machines, directly or indirectly, to produce the product. Required for industrial technology (manufacturing concentration) and technology education majors.

TEC 311
MATERIALS SCIENCE AND TESTING
3, 2/3

The origin of composition of industrial materials including metals and their alloys, woods, fuels, lubricants, cutting fluids, solvents, protective compounds or coatings, inks, adhesives, plastics, and ceramics. Applications of testing procedures for identification and determination of physical and chemical properties suitable for specific industrial uses. Required for industrial technology, mechanical engineering technology, and technology education majors.

TEC 312
MATERIALS MANAGEMENT
3, 2/3

Prerequisite: TEC 201. Production planning and control functions in industry. Techniques and procedures of production planning, scheduling, dispatching, and control. Required for industrial technology, mechanical engineering technology, and technology education majors.

TEC 313
STATISTICAL QUALITY CONTROL
3, 3/0

Fundamentals of probability; sample space, events, probability distributions; binomial, Poisson, and normal distributions; application of probability in quality control; variable and attribute control charts; process capability studies; acceptance sampling; standard tables for sampling plans. Required for industrial technology majors.

TEC 314
ELECTROMECHANICS
3, 2/3

Fundamental laws of electric circuits; DC and AC circuits, application to electric power systems and electronics industry; fundamentals of electrical machinery, introduction to three-phase systems; laboratory experiments with electrical circuits and devices. Required for industrial technology and technology education majors.

**TEC 319
TECHNOLOGY AND VALUES
3, 3/0; CT**

Prerequisite: Upper-division status. Social and ethical impacts of technology; the often conflicting roles of historical and current creators and users of technology; examination of selected current technical-ethical issues of societal importance. Focus on better informed future assessment and control.

**TEC 321
MEASUREMENT SYSTEMS
3, 3/0**

Prerequisite: TEC 313. Theory and application of measurement; tolerancing, variable, and attribute measurement devices; gauge variation, automated measurement input equipment, and gauge control systems. Required for industrial technology (quality concentration) majors.

**TEC 323
QUALITY IMPROVEMENT
THROUGH DESIGN OF
EXPERIMENTS
3, 3/0**

Prerequisite: TEC 313. Various experimental designs applied to a manufacturing environment. One-, two-, and three-factor factorial designs; nested, partially nested, and repeated designs; simple and multiple linear regression techniques presented to enhance quality problem-solving ability. Required for industrial technology (quality concentration) majors.

**TEC 324
QUALITY IN THE SERVICE
SECTOR
3, 3/0**

Prerequisite: TEC 313. Fundamental concepts of service quality. Problem definition, analysis, correction, and follow-up. Case studies of quality methods in the fields of education, health care, government, food service, finance, and utilities. Elective for quality minor.

**TEC 325
DEVELOPMENT OF AMERICAN
INDUSTRIES
3, 3/0**

America's technological society, the relationship of people and machines in the increasingly complex world of work, industry as a basis of culture.

**TEC 326
OCCUPATIONS IN AMERICAN
INDUSTRY
3, 3/0**

Overview and analysis of occupations in the major industries with emphasis on the role of federal, state, and local agencies, their services, and available reference material.

**TEC 327
SURVEY OF INDUSTRIAL
POLLUTION CONTROL
PROBLEMS
3, 3/0; CT**

Overview and analysis of problems pertaining to pollution generation and abatement by industry during procurement, product development, production, distribution, and use.

**TEC 349
COMMUNICATIONS SYSTEMS
3, 2/3**

Review of communication techniques throughout history. Current techniques and modern communications programs and materials. Students experience a broad spectrum of experiences with conversion and transfer of information from one form to another. Required for technology education majors.

**TEC 351
ENERGY SYSTEMS
3, 2/3**

Prerequisites: MAT 124 and PHY 107. Energy and power from sources through conversion systems and mechanisms to the application of power for manufacturing. Required for industrial technology (manufacturing concentration) majors.

**TEC 361
TRANSPORTATION SYSTEMS
3, 2/3**

Energy/transportation systems focusing on the moving of people, materials, and products; types of transportation vehicles, energy and power, controls, careers; the effects of transportation systems on the environment and society. Course meets guidelines of the national and state professional associations regarding the systems approach to the technology education discipline. Required for all technology education majors.

**TEC 400
MARKETING
3, 3/0**

Prerequisite: Upper-division status. Conceptual framework for marketing, the movement of goods and services through channels from source to consumer, product formulation, market research, prudent pricing, distribution channels, and promotion systems. Required for TEC manufacturing option and TED majors.

**TEC 402
ERGONOMICS
3, 3/0**

Prerequisite: Upper-division status. The interaction of people and machines. Development and use of human factors information including sensory, cognitive, and psychomotor processes as they influence the design of displays, controls, and work space. Environment and safety considerations necessary to achieve desired machine outputs. Required for industrial technology and technology education majors.

**TEC 403
SYSTEMS ANALYSIS
3, 3/0**

Prerequisite: Upper-division status. Fundamental concepts and analytical techniques of systems analysis. Trends related to modeling, computer technology, feedback, and information systems. Emphasis on the quantitative methods and their use in decision making in practical situations involving industrial, managerial, and technological settings. Required for industrial technology majors.

**TEC 404
INDUSTRIAL SYSTEMS
APPLICATIONS
3, 2/3**

Prerequisite: Upper-division status. Investigation of management science and communication principles leading to a series of hands-on laboratory projects, case studies, and group problem-solving/decision-making activities. Focus on building positive management communications abilities as applied to the components of contemporary work settings. Students cultivate and personalize leadership behaviors such as team building, coaching, and conflict resolution. Students develop an appreciation of management strategy and implementation methods as applied in supervisory work settings. Required for industrial technology (manufacturing concentration) majors.

**TEC 405
MANUFACTURING
TECHNOLOGY
3, 2/3**

Prerequisites: TEC 312 and final semester senior status. Hands-on experience in the manufacturing cycle of a product from the engineering drawing stage through project and processing planning, prototype manufacture and testing, and experience in setting time standards and taking time studies. Required for industrial technology (manufacturing concentration) majors.

**TEC 465
SAFETY MANAGEMENT
3, 3/0**

Prerequisite: Upper-division status. Development of the industrial safety movement; psychology in accident prevention; appraisal of accident cost factors, severity, and frequency; job safety analysis and corrective measures; plant inspection and preventive maintenance; storage and handling of materials; fire prevention; education and training of employees. Required for industrial technology (manufacturing concentration) majors. Elective for safety minors.

**TEC 488
QUALITY INTERNSHIP
3, 3/0**

Prerequisite: Completion of 12 credit hours in quality minor or all TEC-prefixed courses in industrial technology quality option. Analysis of a quality problem at a local manufacturing/service organization on or off campus. Evaluation is based on a formal written and oral report presented at the end of the semester. Required for industrial technology (quality concentration) majors.

**TEC 495
SPECIAL PROJECT**

**TEC 497
WORKSHOP**

**TEC 499
INDEPENDENT STUDY**

TECHNOLOGY

Also see:
ENT Engineering Technology
FTT Fashion and Textile
Technology
SAF Safety Studies
TED Technology Education

TED

TECHNOLOGY EDUCATION

Technology Department

**TED 360W
TECHNOLOGY EDUCATION
METHODS AND EVALUATION
3, 3/0**

Prerequisites: EDF 303, BUS or CTE 301, and BUS or CTE 302. Basic principles and methods of teaching technology education subjects; strategies used in planning for instruction and evaluating students, course content, and overall program; teaching and evaluating students with special needs; and the preparation of instructional materials.

**TED 450
PROFESSIONAL SEMESTER
6, 0/0**

Prerequisites: EDF 303, BUS or CTE 301, BUS or CTE 302, and TED 360W, EXE 372, EDU 416; minimum cumulative GPA of 2.5. Full-time assignment in a junior and/or senior high school as a student-teaching intern working with a supervising teacher and a college supervisor. Seminars on campus and in public schools to study teaching techniques, organization, management, and other aspects of teaching. Technology education, guided full-time teaching experience including the use of videotape to analyze teaching, participation in school and professional activities. Students must have completed a minimum of 105 credit hours, including all 33 credit hours of approved technology core courses applicable for the technology education certification program. Students must be prepared to accept assignment at any center and may not enroll for any other college courses. Required for technology education and industrial technology education majors.

**TED 451
PROFESSIONAL SEMESTER II
6, 0/0**

Prerequisites: EDF 303, BUS or CTE 301, BUS or CTE 302, and TED 360W, EXE 372, EDU 416; minimum GPA of 2.5 in major coursework. Full-time assignment in a senior high school as a student-teaching intern working with a supervising teacher and a college supervisor. Seminars on campus and in public schools to study teaching techniques, organization, management, and other aspects of teaching. A full-time teaching experience including the use of videotape to analyze instructional performance. Participation in schools and professional activities. Students must have completed a minimum of 105 credit hours, including all 33 credit hours of required technology core courses. Students must be prepared to accept assignment at any facility and may not enroll in any other college courses.

Required for technology education and industrial technology education majors.

**TED 497
WORKSHOP**

THA

THEATER ARTS

Performing Arts Department

**THA 106
INTRODUCTION TO THEATER
ARTS**

3, 3/0; CA

Introduction to all aspects of theater. Includes discussion of professional, educational, and community theater.

**THA 200
VOICE AND DICTION**
3, 3/0; CA

Comprehensive study of the speech mechanism and voice production.

**THA 207
PLAY PRODUCTION**
3, 2/2; CA

Hands-on introduction to all aspects of play production, including theater management, publicity, theatrical design, stage properties, and makeup. Requires participation on at least one preparation or run-crew for performing arts productions.

**THA 216
THEATER FUNDAMENTALS**
3, 3/0

Prerequisite: Theater major or instructor permission. Intensive introduction to the theater and Buffalo State's theater program.

**THA 222
BASIC MOVEMENT FOR ACTORS**
3, 2/2

Prerequisite: THA 106, THA 216, or instructor permission. Student actors gain knowledge and awareness of their bodies to more fully incorporate the physical dimensions of acting into character portrayals. Appropriate for non-majors.

**THA 226
ACTING: THEORY AND
PRACTICE**
3, 2/2

The actor's art; the relationship of theory to practice.

**THA 230
THEATER PRACTICUM I**
1, 0/3

Prerequisite: THA 234 or instructor permission. Laboratory experience in the preparation of costumes, scenery, lighting, or props for departmental theater production.

**THA 231
THEATER PRACTICUM II**
1, 0/3

Prerequisite: THA 230 or instructor permission. Laboratory experience as a run-crew member for a departmental theater production.

**THA 234
TECHNICAL THEATER**
3, 1/4

Continuation of THA 207 with emphasis on the technical elements of costume, scenery, and lighting design. Requires participation on at least one preparation or run-crew for performing arts production.

**THA 316
SCRIPT ANALYSIS**
3, 3/0

Scripts as unique forms of writing for public communication and theatrical production.

**THA 317
HISTORY OF THE THEATER:
ANCIENT TO RENAISSANCE**
3, 3/0; CA V2

The origins and development of the physical theater; dramatic literature in its theatrical context.

**THA 318
HISTORY OF THE THEATER:
RENAISSANCE TO MODERN**
3, 3/0; CA V2

The emergence of the modern theater; dramatic literature in its theatrical context.

**THA 320
ADVANCED VOICE**
3, 3/0

Prerequisite: THA 200. Further application and appreciation of vocal production methods. Emphasis on individualized projects.

**THA 322
ADVANCED MOVEMENT FOR
THE ACTOR**
3, 1/4

Continued exploration and development of the body as organic tool for the actor. Concentration on the physical dynamics of characterization and integration into the total acting experience of voice, body, and mind.

**THA 326
SCENE STUDY**
3, 3/0

Prerequisite: THA 226 or equivalent. Scene analysis and role development with special attention to the interaction of characters in a dramatic scene.

**THA 330
THEATER PRACTICUM III**
1, 0/3

Laboratory experience as a crew leader for a departmental theater production.

**THA 331
THEATER PRACTICUM IV**
1, 0/3

Laboratory experience in the student's area of specialization for a departmental theater production.

**THA 332
PERIOD STYLES FOR THE
THEATER**
3, 3/0; CA

Past period styles of Western culture in architecture, furniture, fashion, and the decorative arts and how they are used for theatrical presentation for stage, film, and other forms of visual communication in the entertainment industry.

**THA 333
SCENE PAINTING**
3, 2/2

Prerequisite: College-level arts course or upper-division status. Basic scene-painting techniques applicable to theater, film, and video production; hands-on exploration; creating full-scale painted scenery from scaled drawings; paint mixing; faux finishes, including marble, wood grain, brick, and stone; and specialty paint finishes.

**THA 335
COSTUME DESIGN FOR THEATER**
3, 2/2

Hands-on introduction to costume construction and design; design theory, script analysis, fabric selection; studio sessions on shop equipment. Requires costume construction for performing arts productions.

**THA 336
LIGHTING TECHNIQUES**
3, 2/2

Introduction to lighting design for theater, dance, studio, and industrial applications. Includes principles of optical systems, stage lighting equipment, color media, electricity, control systems, stage lighting, history, and the McCandless stage lighting system. Assigned practical experience required.

**THA 337
SET DESIGN I**
3, 2/2

Prerequisite: One theater or design course, or upper-division status. Introduction to theatrical set design: basic design components of line, form, mass, composition, balance, color, and texture as they relate to set design. Script analysis, research, color theory, drafting techniques, and mechanical perspective drawing.

**THA 340
PLAYWRITING**
3, 3/0

Prerequisite: THA 106, THA 216, or instructor permission. Development of critical capacities in reference to the student's work and that of his or her classmates. Productive work in playwriting.

**THA 350
DIRECTING**
3, 3/0

Prerequisites: THA 226 and THA 234, or instructor permission. Examination of the theater director's craft and responsibilities through lecture and hands-on projects.

**THA 370
STAGE MAKEUP**
3, 2/2

Prerequisite: THA 226. Principles and techniques of theatrical makeup application and design.

**THA 416
SEMINAR IN THEATER ARTS**
1, 1/0

Prerequisite: 24 credit hours in theater arts. Development of skills including defining professional and personal goals, sharpening of critical capacities, and creating and sharing a portfolio or audition presentation. Designed to help students prepare for the next step out of college.

**THA 418
CREATIVE DRAMATICS**
3, 3/0

History, philosophy, methods, and materials of informal playmaking with children. Observation and participation.

**THA 421
BLACK DRAMA IN AMERICA**
3, 3/0

Thematic and technical development of black American drama.

**THA 426
ADVANCED ACTING**
3, 3/0

Prerequisite: THA 326. Styles, periods, and methods of acting.

**THA 435
ADVANCED COSTUME DESIGN
FOR THEATER**
3, 3/0

Prerequisite: THA 335 or instructor permission. Advanced studies in costume design and rendering techniques. Drawing skills necessary. Design and construction project for performing arts production required.

**THA 437
SET DESIGN II**
3, 2/2

Prerequisites: DES 318/THA 337 or instructor permission. Continuation of DES 318/THA 337. Intensive exploration of advanced set-design techniques. Continued development of set design skills, with concentration on different performance venues, model building techniques, portfolio-quality work, and presentation styles. Advanced scenic considerations with the limits of budget, stage space, and technical support.

**THA 450
DIRECTING II**
3, 2/2

Prerequisite: THA 350. Practical application of directing theory and technique through class scenes and the public performance of a one-act play.

**THA 470
ENSEMBLE THEATER**
3-9, 0/6-18

Prerequisite: Audition. Examination of ensemble theatrical production through preparation and performance of plays.

**THA 488
INTERNSHIP**
Variable credit

Prerequisites: Upper-division status and instructor permission. Supervised field experience in a professional setting for students who have completed extensive academic preparation in the discipline. Fifty hours of field work in theater per credit.

**THA 495
SPECIAL PROJECT**

**THA 499
INDEPENDENT STUDY**