ACG 2021 Principles of Financial Accounting (3) BA ACC
Study of basic accounting principles including the recording and reporting of financial activity. The preparation and interpretation of financial statements.

ACG 2071 Principles of Managerial Accounting (3) BA ACC
PR: ACG 2071 with a grade of "C" or better. A study of the accountant’s role in assisting management in the planning and controlling of business activities.

ACG 3074 Managerial Accounting for Non-Business Majors (3) BA ACC
Does not count towards major or CPA requirements. Not available for credit for Business majors. The study of the uses of accounting data internally by managers in planning and controlling the affairs of the organization.

ACG 3103 Intermediate Financial Accounting I (3) BA ACC
PR: ACG 2071. Theory and methodology underlying financial reporting, including the FASB’s conceptual framework, the accounting process, financial statements, accounting changes, present value applications, and current assets.

ACG 3113 Intermediate Financial Accounting II (3) BA ACC
PR: ACG 3103 and ACG 3341 with a grade of "C" or better (not C-). Continuation of ACG 3103. Topics covered include property, plant and equipment, intangibles, current liabilities, long-term debt, stockholders’ equity, and research and development of the Western world, with a focus on the Americas and the political and economic roles they have played in the Americas.

ACG 3341 Cost Accounting and Control I (3) BA ACC
PR: ACG 2071. Deals with cost accounting systems for different entities, cost behavior patterns, cost-volume-profit analysis, relevant information for decision making, and budgets and standard costs for planning and control.

ACG 3401 Accounting Information Systems (3) BA ACC
PR: ACG 3103 and ACG 3341 with a grade of "C" or better (not C-). This course provides students with a basic understanding of well-controlled information systems in a variety of technological environments with enhanced emphasis on cost management, performance measurements, analysis of current cost accounting systems and accounting in today’s environment (giving consideration to the influences of the international environment).

ACG 4123 Intermediate Financial Accounting III (3) BA ACC
PR: ACG 3113 with a grade of "C" or better (not C-). The theory and practice underlying revenue recognition, income tax allocation, leases, post-retirement benefits, error analysis, statement of cash flows, full disclosure, and other current accounting topics.

ACG 4351 Cost Accounting and Control II (3) BA ACC
PR: ACG 3103 and ACG 3341 with a grade of "C" or better (not C-). Application of the material covered in ACG 3341 with specific emphasis on cost allocations, performance measurements, analysis of current cost accounting systems and accounting in today’s environment (giving consideration to the influences of the international environment).

ACG 4631 Auditing I (3) BA ACC
PR: ACG 3113 and ACG 3401. This course provides a sound conceptual foundation of basic auditing process from the perspective of the public accounting profession. Professional standards, legal responsibilities, and the utilization of technology are addressed.

ACG 4642 Auditing II (3) BA ACC
PR: ACG 4632 with a grade of "C" or better (not C-). Further development of material covered in ACG 4632, with special emphasis on additional reporting topics and audit techniques not previously addressed.

ACG 4901 Independent Study (1-3) BA ACC
PR: Consent of Director. S/U only. Specialized independent study determined by the students’ needs and interests.

ACG 4911 Independent Research (1-4) BA ACC
PR: Consent of Director. Individual study contract with instructor and director required. The research project will be mutually determined by the student and instructor.

ACG 4931 Selected Topics in Accounting (1-4) BA ACC
The course content will depend on student demand and instructor interest.

ACG 5205 Advanced Financial Accounting (3) BA ACC
PR: ACG 4123 Accounting for business combinations, preparation of consolidated financial statements, home office/branch relationships, foreign operations and transactions, partnerships.

ACG 5501 Governmental/Not-For-Profit Accounting (3) BA ACC

ACG 5675 Internal and Operational Auditing (3) BA ACC
PR: ACG 3113 and ACG 3401. CR: ACG 4632. The objective of Internal and Operational Auditing is to provide students with an opportunity to learn about the theory and practice of internal and operational auditing and to apply relevant audit principles and techniques to selected audit problems.

ADE 4384 Working With the Adult Learner (3) ED EDV
An investigation of the needs of the adult learner. Identification of principles of adult learning, psychological, physiological, and social characteristics of adult learners, and corresponding implications are explored.

ADV 3000 Introduction to Advertising (3) AS COM
PR: ADV 3000 and ECO 1000. Study of advertising theory and practice, and the use of advertising in mass media with attention to social, political, economic, and legal aspects.

ADV 3001 Advertising Copywriting (3) AS COM
PR: ADV 3000 and ECO 1000. Study of advertising theory and practice, and the use of advertising in mass media with attention to social, political, economic, and legal aspects.

ADV 3103 Radio-Television Advertising (3) AS COM
PR: ADV 3000. An intensive study and analysis of radio and television for advertising purposes, including copywriting, script and storyboard preparation, time buying and selling techniques, audience research methods, and basic production concepts.

ADV 3200 Advertising Design (3) AS COM
PR: ADV 3000 (for advertising sequence majors) or VIC 3001 (for other Mass Comm majors). Application of graphic design principles to various areas of advertising. Combining visual and verbal elements effectively.

ADV 3300 Advertising Media Strategy (3) AS COM
PR: ADV 3000 and ECO 1000. Problems, techniques, strategy of media research, planning, budgeting and effective utilization in advertising.

ADV 3501 Advertising Research (3) AS COM
PR: ADV 3000. Overview of scientific research methods as used in advertising. Emphasis on the acquisition, analysis, and evaluation of primary and secondary data, and the principles of survey and experimental research.

ADV 3700 Retail Advertising Planning and Execution (3) AS COM
PR: ADV 3000 and ADV 3341. A study of retail advertising, including management decisions, processes, procedures, media planning, production techniques, and problems affecting the development of advertising to fulfill retail objectives.

ADV 4600 Advertising Management (3) AS COM
PR: ADV 3000, ADV 3001, ADV 3300. Application of analytical planning concepts to advertising planning and decision-making. Case study method used to explore advertising and promotional programs; media and creative strategies; consumer, retail, industrial, and public service applications.

ADV 4800 Advertising Campaigns (3) AS COM
PR: ADV 3001, ADV 3300, ADV 3501, ECO 1000, and MAR 3023. Advanced advertising course requiring planning and production of complete advertising campaigns, including research, production methods, budgeting, and media schedules.

ADV 4940 Advertising Practicum (1) AS COM
PR: CL. For advertising sequence majors. S/U only. Practical experience outside the classroom where the student works for academic credit under the supervision of a professional practitioner. Periodic written and oral reports to the faculty member coordinating the study.

AFA 2000 Introduction to the Black Experience [In Africa and Its Diaspora] 6A AF (3) AS AFA
Fundamental perspectives on the nature and significance of the Black Experience in Africa and black communities in the Americas.

AFA 4150 Africa and the United States 6A SS HP AF (3) AS INT
An examination of the historical and current political, economic, and cultural relations between the United States and Africa.

AFA 4313 Black English 6A SS AF (3) AS AFA
PR: Junior or Senior standing. This course focuses on linguistic patterns among African Americans in the U.S., South and Central America, and the Caribbean. It examines language in relation to issues of domination, social stratification, economics and political empowerment.

AFA 4331 Social Institutions and the African American Community 6A AS AF (3) AS AFA
A study of social institutions as they relate to the African American community, with emphasis on social systems operating within and on the African American community.

AFA 4333 The African Diaspora: Blacks in the Construction of the Americas MW (3) AS AFA
PR: Junior or Senior standing. This course will examine the historical and geographical distribution of Africans in the diaspora and the political and economic roles they have played in the development of the Western world, with a focus on America.
course takes an interdisciplinary approach. The course is not restricted to students and is not repeatable.

AFA 4335 Black Women in America (3) AS AFA
An interdisciplinary survey of the contemporary experiences of black women in America, including the African roots, myths, and realities surrounding that experience.

AFA 4350 African American Community Research (3) AS AFA
This interactive, field experience course introduces students to active and applied research methodologies and the uses of this research in urban communities.

AFA 4500 Slavery in the Americas and the Caribbean (3) AS AFA
This course examines the institution of enslavement in North, South, and Central America, and the Caribbean. It takes an interdisciplinary approach in exploring the social, political, and economic underpinnings of slavery.

AFA 4585 Middle Passage (3) AS AFA
The Middle Passage focuses on the trafficking of African peoples from Africa to destinations in the Americas and Europe. Emphasis is placed on the capture, detention, and transport of Africans, and their response to the experience.

AFA 4990 Directed Readings (1-3) AS AFA
PR: CI. Independent readings in a particular area of African and African American Studies, selected by student and instructor.

AFA 4931 Selected Topics in African Studies (3) AS AFA
Topics offered are selected to reflect student needs and faculty interests. In-depth study in such areas as the Black Student and the American Educational Process; the Black Experience in the Americas; European Expansion in Africa to 19th century; Contemporary Economic Problems in Africa.

AFA 5935 Issues in African Studies (1-4) AS AFA
Variable topics course focusing on the history, culture, and lived experiences of Africans, African American, and/or other peoples of African descent worldwide. Rpt. Up to 12 hours as topics vary.

AFH 3100 African History to 1850 (3) AS HTY
An outline survey of pre-colonial African history including a pre-historic introduction to the use of primary sources (such as archaeology, oral tradition, cultural anthropology, comparative linguistics, documents) in reconstructing the African past.

AFH 3200 African History since 1850 (3) AS HTY
Survey of the Colonial and post-colonial history of Africa. Emphasis on the impact of European and other alien influences on the continent, emergence of independent African states, and post-independence problems of nation building and economic development.

AFA 4914 The Air Force Today: Organization And Doctrine (3) AS AFA
Introduction to the Air Force in the contemporary world through a study of its structure and mission.

AFA 4912 The Air Force Today: Structure And Roles (3) AS AFA
A study of the strategic offensive and defensive forces, general purpose forces, and aerospace support forces that make up the Air Force, as well as the roles and capabilities they provide.

AFR 2000 Enhanced Physical Fitness Training (0) US AFR
Required of all students in AFR 2000-, 3000-, and 4000-level classes. It meets twice per week for 1 and 1/2 hours. Concentrates on motivational physical fitness, healthy lifestyle and cadet esprit.

AFA 2001 Air Force ROTC Leadership Laboratory (0) US AFR
Leadership Laboratory is required for each of the Aerospace Studies courses. It meets one hour and 45 minutes per week. Instruction is conducted within the framework of an organized cadet corps with a progression of experiences designed to develop each student’s leadership potential. Leadership Laboratory involves a study of Air Force customs and courtesies; drill and ceremonies; career opportunities in the Air Force; and the life and work of an Air Force junior officer. Students develop their leadership potential in a practical laboratory, which typically includes field trips to Air Force installations.

AFR 2130 The Evolution of USAF Aerospace Power Part I (1) US AFR
CR: AFR 2000, AFR 2001. A study of air power from balloons and dirigibles through the jet age. Emphasis is on the employment of air power in WWII and WWIII and how it affected the evolution of air power concepts and doctrine.

AFR 2140 The Evolution of USAF Aerospace Power Part II (1) US AFR
AMH 3170 The Civil War and Reconstruction (4) AS HTY
An examination of political, social, and economic climate of the 1850’s that led to the American Civil War. The course does focus upon the war itself in its military, diplomatic, and political consequences through the end of the Reconstruction (1877).

AMH 3201 The United States, 1877-1914 (4) AS HTY
A study of America from the end of Reconstruction to World War I. Focusing on political, social, and international developments, the course covers industrialization, immigration, unions, reform, feminism, race relations and imperialism.

AMH 3231 The United States, 1914-1945 (4) AS HTY
The United States from World War I to the end of World War II. Covering political, social and international developments, the course examines the lives of Americans, including minorities and women, during war, prosperity, and the Great Depression.

AMH 3270 The United States since 1945 (4) AS HTY
A study of America’s role in the Cold War, in Vietnam, and in the post-Cold War era. Also examines domestic developments, such as the consumer culture, protest movements, and abuses of political power.

AMH 3403 The South since 1865 (4) AS HTY
Southern history since the surrender at Appomattox. Topics covered include Reconstruction, the Populist revolt, race relations, disenfranchisement and disfranchisement, Southern women, and the Civil Rights Movement.

AMH 3421 Early Florida (4) AS HTY
A history of colonial Florida under the Spanish and English. Florida as an area of discovery, colonization, and the emerging conflict of Florida within the regional setting.

AMH 3423 Modern Florida (4) AS HTY
An historical survey of Florida from the territorial period to the modern era. An examination of the social, political, and economic changes occurring in Florida between 1921 and the 1980s.

AMH 3500 American Labor History (4) AS HTY
A study of American workers from the colonial period to the present. Examines the changing nature of work, its effects on workers (including minorities and women), and their responses as expressed in strikes, unions, and political action.

AMH 3510 U.S. Diplomatic History to 1898 (4) AS HTY
The development of American Foreign Relations in the Agricultural era.

AMH 3511 U.S. Diplomatic History in the 20th Century (4) AS HTY
A history of American Foreign Relations in the Industrial era.

AMH 3530 Immigration History (4) AS HTY
A study of the composition and character of the “American” people with an emphasis on the period from 1840s to the 1920s. Examines old world backgrounds of immigrants and their responses to the new world’s social, economic and political conditions.

AMH 3540 United States Military History (4) AS HTY
A study of American military history and the policies and practices from colonial days to the present. Attention is given both to tactics and strategy in the unfolding formulation and development of American armed might.

AMH 3545 War and American Empire (4) AS HTY
The U.S. evolved in 200 years from 13 colonies to the number one power in the world. To achieve this goal we utilized war to achieve empire. This course will examine the link between American War and empire from the Revolution through Vietnam.

AMH 3561 American Women I (4) AS HTY
A study of women in the evolution of American society from European origins to 1877. Women’s roles in the family, economy, politics, war, and reform movements will be examined.

AMH 3562 American Women II (4) AS HTY
A study of women in the evolution of American society from 1877 to the present. Women’s roles in the family, economy, politics, war, and reform movements will be examined.

AMH 3571 African American History to 1865 (3) AS AFA
A survey of African American history, with an emphasis on North America to 1865. Topics include pre-colonial Africa, transatlantic slave trade, slavery, and the Civil War.

AMH 3572 African American History since 1865 (3) AS AFA
A survey of African American history, with an emphasis on North America, from 1865 to the present. Topics include Reconstruction, World War I, World War II, and the Civil Rights Movement.

AMH 4601 Early American History and Archaeology (6) AS HTY
This course is a five week long summer practicum in early American historical archaeology. The class brings together historical research, material culture studies, and historical archaeology methods within a professional historical archaeology setting.

AML 3031 American Literature From the Beginnings to 1860 (3) AS ENG
A study of representative works from the period of early settlement through American Romanticism, with emphasis on such writers as Cooper, Irving, Bryant, Hawthorne, Emerson, Melville, Thoreau, and Poe, among others.

AML 3092 American Literature From 1860 to 1912 (3) AS ENG
A study of representative works of selected American Realists and early Naturalists, among them Whitman, Dickinson, Twain, James, Howells, Crane, Dreiser, Wharton, Robinson, Dunbar, and Johnson.

AML 3051 American Literature From 1912-1945 (3) AS ENG
A study of poetry, drama, and fiction by such writers as Pound, Stein, Fitzgerald, Hemingway, Faulkner, Porter, Toomer, Cummings, Williams, Anderson, Steinbeck, Wright, West, Stevens, Henry Miller, and others.

AML 3413 Historical Perspectives in Early American Literature (3) AS ENG
Examines American literature from the Colonial Period to the Civil War as a manifestation of geographical, political, social, and intellectual forces. Will not be counted toward the English major.

AML 3604 African American Literature 6A (3) AS ENG
A study of African American literature from the nineteenth century to the present, including the works of such writers as W.E.B. DuBois, John Toomer, Langston Hughes, Richard Wright, Ralph Ellison, LeRoi Jones, and Nikki Giovanni.

AML 4111 Nineteenth-Century American Novel (3) AS ENG
A study of the American novel from its beginnings through 1900, including such novelists as Cooper, Hawthorne, Melville, James, Twain, Crane, and Dreiser, among others.

AML 4121 Twentieth-Century American Novel (3) AS ENG
A study of major trends and influences in American prose fiction from 1900 to the present, including works by such writers as Hemingway, London, Wharton, Fitzgerald, Faulkner, West, Mailer, Bellow, Ellison, Donleavy, Updike, Vonnegut, and others.

AML 4261 Literature of the South (3) AS ENG
A study of the major writers of the Southern Renaissance, including writers such as Faulkner, Wolfe, Caldwell, Hellman, McCullers, O’Connor, Warren, Styron, Tate, Davidson, and Dickey.

AML 4300 Selected American Authors (3) AS ENG
The study of two or three related major authors in American literature. The course may include such writers as Melville and Hawthorne, Hemingway and Faulkner, James and Twain, Pound and Eliot, Stevens and Lowell, etc. Specific topics will vary. May be taken twice for credit with different topics.

AML 4303 Zora Neale Hurston: Major Works 6A (3) AS AFA
PR: Junior or Senior standing. The course focuses on the life, works, and times of Zora Neale Hurston as a major Harlem Renaissance figure and a renown Florida writer.

AML 4524 Black Women Writers 6A (3) AS AFA
Black women writers focuses on the literature of women of Africa and the African Diaspora. It examines the social, historical, artistic, political, economic, and spiritual lives of African American women in context of a global community.

AMS 2030 Introduction to American Studies SS HP (3) AS AMS
An overview of American Studies, the interdisciplinary study of American culture. Analysis of the arts and literature, including music; social issues; popular culture; material culture; cultural diversity; and social change. These approaches will be applied to a specific cultural era.

AMS 2201 Colonial American Culture HP (3) AS AMS
An examination of cultural patterns in America as they developed between 1600 and 1780 with an emphasis on the texture of everyday life.

AMS 2212 Nineteenth-Century American Culture HP (3) AS AMS
An examination of cultural patterns in America from 1800 to 1900 with an emphasis on the texture of everyday life.

AMS 2232 Twentieth-Century American Culture HP (3) AS AMS
An examination of cultural patterns in America from 1900 to 1990 with an emphasis on the texture of everyday life.

AMS 2363 Issues in American Civilization (1-4) AS AMS
An examination of selected topics such as natural environment and resources, the quality of life, and American society, popular music, American communities, vigilant tradition, jazz music, role of the family, American success myth, youth in America. Topic varies.
AMS 3001 American Culture 1880-1915 6A HP (4) AS AMS Integration of major aspects of American life between the 1880s and World War I.

AMS 3210 Regions of America HP (4) AS AMS The pattern of American culture as revealed through an examination of selected writings and other pertinent materials dealing with selected American regions. Topic varies.

AMS 3230 America During the 20s and 30s (3-4) AS AMS Selected interdisciplinary materials are used to examine the relationships between regionalism, nationalism, imperialism, and the history of the twenties and thirties. Emphasis is placed on the measure of cultural nationalism attained by the United States during this period.

AMS 3260 American Culture, 1830-1860 6A HP (4) AS AMS Examines the patterns of American culture in the years leading up to the Civil War. Topics include religion and social reform, race relations, and the impact of industrialization.

AMS 3302 Architecture and the American Environment (3) AS AMS By means of slides, lectures and discussion, this course examines 350 years of American architectural history. Architectural styles, aesthetics and the relation between a building and its environment are stressed.

AMS 3370 Southern Women: Myth and Reality 6A HP (3) AS AMS This course will identify the myths surrounding Southern Women, dispel their sources and purposes, and contrast them with history.

AMS 3601 Material Culture and American Society SS HP (3) AS AMS By means of slides, lectures and student projects, examines connections between artifacts and American cultural attitudes from 17th century to present. Topics include: architecture, furniture, gravestones, toys, and the material subcultures of women, African-Americans and communal societies.

AMS 3700 Racism in American Society SS HP (3) AS AMS An introduction into the causes and effects of racism in American history, literature, art, the movies, and folklore. Related concepts of ethnocentrism and class conflict will also be studied.

AMS 3930 Selected Topics in American Studies (1-4) AS AMS Offerings include Cultural Darwinism in America, America Through Foreign Eyes, and The Female Hero in American Culture.

AMS 4152 Film in American Culture (3) AS AMS Surveys the contributions to American culture of major films, studios, directors, stars, theaters, and controversies from the perspectives of genres and styles, critical methodologies and theories. Variable topics such as: series on a region, director, performer, subject, or period of time.

AMS 4504 Major Ideas in American Myth (3) AS AMS Investigates the role of one or more influential ideas in American culture, for example: individualism, identity, community, dissent, reform, utopianism, democracy. Emphasizes the critical analysis of a variety of myths, texts, topics, movements.

AMS 4910 Individual Research (1-4) AS AMS The content of the course will be governed by student demand and instructor interest. Instructor approval required prior to registration.

AMS 4930 Selected Topics in American Studies (1-4) AS AMS PR: Senior in American Studies or CI. Offerings include the social implications of American painting, Technology in Twentieth Century America, American Environmental Problems, Popular Culture in America, American Military Experience, and Labor in America.

AMS 4935 Senior Seminar in American Studies (4) AS AMS PR: Senior in American Studies or CI. A directed independent study of research in a specific area.

AMS 4940 Internship in American Studies (1-2) AS AMS A structured, out-of-class learning experience designed to provide first-hand, practical training in careers related to American Studies. Restricted to American Studies majors. Repeatable up to 4 credit hours.

ANG 5395 Visual Anthropology (3) AS ANT PR: Graduate standing. This course will examine the major dimensions of visual anthropology with an emphasis on the visual means of presenting anthropology to the discipline and general public. The course will focus on visual documentation and study of visual images.

ANG 5486 Quantitative Methods in Anthropology (3) AS ANT PR: Graduate Standing. This course is an introduction to quantitative methods for the anthropologist covering both classical statistical approaches and exploratory data analysis, using computers with statistical software.

ANG 5910 Directed Reading (1-4) AS ANT PR-DPR. S/U. Individual guidance in concentrated reading on a selected topic in Anthropology. Contract required prior to registration.

ANG 5910 Individual Research (2-4) AS ANT PR: DPR. Contract required prior to registration. S/U. Individual guidance in selected research project.

ANG 5937 Seminar in Anthropology (2-4) AS ANT PR: Senior or GS. Topics to be chosen by students and instructor.

ANT 2000 Introduction to Anthropology SS AF (4) AS ANT The cross-cultural study of the human species in biological and social perspective. Surveys the four major branches of anthropology: physical anthropology (human biology), archaeology (the analysis of the prehistoric and historic remains of human cultures), anthropological linguistics (the analysis of language in its cultural context), and cultural anthropology (the cross-cultural study of peoples living in the world today, be they in tribal, peasant, or urban societies).

ANT 2410 Cultural Anthropology SS AF (3) AS ANT Discussion of major methods of and orientations to the cross-cultural study of the world’s peoples. Representative case studies are used to demonstrate variations in human adaptations and to encourage an appreciation of diverse values and lifestyles.

ANT 2511 Biological Anthropology NS (3) AS ANT Non-human primates, the fossil record and the biology of races are studied on an understanding the human animal as a product of biosocial phenomena. Anatomy, genetics, culture and evolution are emphasized.

ANT 3005 The Anthropological Perspective AF (3) AS ANT PR: non-anthropology majors only. May not be counted for credit toward an anthropology major. Presents the basic concepts of anthropology as they are relevant to contemporary life. Aims at enabling the student to understand the anthropologist’s cross-cultural view of the human species as adapting through biosocial means to life on this planet.

ANT 3101 Archaeology SS (3) AS ANT The cross-cultural study of humankind from its beginnings up to and including the historic period through the recovery, description, and analysis of the remains of past cultures and societies.

ANT 3610 Anthropological Linguistics SS (3) AS ANT The comparative study of language in its cultural context, especially emphasizing the role of language in the cultural interpretation of physical and social reality.

ANT 4034 Theories of Culture (3) AS ANT PR: Senior standing with major in anthropology. The major concepts that form the anthropological view of humanity are viewed in historical perspective. Basic ideas of the western philosophical tradition are analyzed from the Greeks to the 19th century when they became incorporated into the new discipline of anthropology. 20th century anthropological developments on these themes are considered.

ANT 4142 Old World Archaeology (3) AS ANT PR: ANT 3101 or DPR. The archaeology of Europe, Asia and Africa, from the earliest humans through the emergence of state-level societies in many parts of the Old World. The course will focus on comparative aspects of economic, social, political, and religious organization in the prehistoric Near East, Egypt, China, the Aegean, Europe and Africa.

ANT 4143 European Archaeology (3) AS ANT PR: ANT 3101 or DPR. The archaeology of Europe, from the first Palaeolithic inhabitants to the fall of Roman civilization. The course will focus on ancient material culture while emphasizing social and economic questions such as the emergence of modern humans, the adoption of agriculture, the development of complex societies, and the rise of civilization.

ANT 4147 Environmental Archaeology (3) AS ANT PR: ANT 3101 or DPR. This course examines environmental constraints on ancient human societies, and how human activities have impacted the environment in the last several thousand years. Presentation of the methods used to reconstruct prehistoric environments will be followed by case studies from Florida, Central and South America, Easter Island, the Mediterranean world, South Africa, and North America.

ANT 4149 Fantastic Archaeology MW (3) AS ANT PR: Junior standing or above. Mysteries including the Lost Continent of Atlantis, Ancient Astronauts, Piltdown Man, Psychic Archaeology, Noah’s Ark, and the Shroud of Turin will be examined, while emphasizing skills in critical thinking that have much wider practical applications.

ANT 4153 North American Archaeology (3) AS ANT PR: ANT 3101 or DPR. An examination of the evidence regarding the human settlement of North America from its beginnings
through the development of aboriginal culture to the period of European contact and conquest. Emphasis on comparative study of material culture at selected sites from all time periods. No field work is involved.

ANT 4158 Florida Archaeology (3) AS ANT
PR: ANT 3101 or DPR. Culture history and culture process over 10,000 years of the first people in Florida (Paleo-Indians) through the elaborate Weeden Island and Safety Harbor burial and temple mound cultures to the Spanish entrada and concomitantly of European contact with a view of temporal and spatial relationships within the entire eastern U.S. and elsewhere. May be part of a summer (or other semester) field school, combined with Field Methods in Archaeology and Laboratory Methods in Archaeology.

ANT 4163 Mesoamerican Archaeology (3) AS ANT
PR: ANT 3101 or DPR. Describes and analyzes the sequence of cultural development in prehistoric South America. Cultures such as the Inca, Chavin, Mochica, Wari, Chimú are included. Emphasis on the environmental setting and the relationship between cultural ecology and the growth of civilization.

ANT 4165 South American Archaeology (3) AS ANT
PR: ANT 3101 or DPR. A survey and analysis of archaeology focused on the historic period. Laboratory sections provide hands-on experience with data recovered from historic sites in addition to classwork.

ANT 4180 Laboratory Methods in Archaeology (2-4) AS ANT
PR: ANT 3101. Data and materials recovered from archaeological surveys and excavation are processed in the laboratory; includes artifact cleaning, cataloguing, identification, and analysis; soil flotation; reconstruction and conservation of artifacts, mapmaking, etc. May be offered as part of a summer (or other semester) field session. May be combined with Florida Archaeology and Field Methods in Archaeology.

ANT 4181 Museum Methods (4) AS ANT
PR: ANT 3101 and DPR. Design, preparation and installation of exhibits in the Department of Anthropology Teaching Exhibit Gallery. Emphasis on theory, research, design, and construction. Discussion of museum-related issues such as administration and curation.

ANT 4183C Archaeological Science (4) AS ANT
PR: ANT 3101 or DPR. This course focuses on the application of scientific methods of analysis to archaeological materials including bone, stone, pottery, and metal. Methods include absolute dating, remote sensing, elemental and isotope analysis. Laboratory sections provide hands-on experience with a variety of archaeological materials and analytical methods.

ANT 4231 Folklore 6A (3) AS ANT
PR: ANT 2410 or DPR. Focuses on cross-cultural methods and techniques regarding the collection, classification, and analysis of such materials as myths, jokes, games, and items of material culture. African (or African-derived), Oceanic and Native American societies are surveyed.

ANT 4241 Magic and Religion 6A MW (3) AS ANT
PR: ANT 2410 or DPR. The cross-cultural study of the social and cultural aspects of religion. Religious activities in traditional and modern societies will be discussed. Ritual behavior, religious practitioners and symbols of belief will be considered in light of their impact on the social, political or economic aspects of peoples' lives.

ANT 4285 Oral History (3) AS ANT
PR: ANT 2410 or DPR. A survey of the history, methods, and current applications of oral history through the anthropological study of culture, but with reference to allied disciplines. Students will become familiar with oral history through intensive analysis of selected case studies as well as guest lectures.

ANT 4302 Gender in Cross-Cultural Perspective MW (3) AS ANT
PR: ANT 2410 or DPR. Focuses on various theories, models and beliefs about male-female behaviors and interactions in human cultures throughout history and in various societies in the world today.

ANT 4312 North American Indians (3) AS ANT
PR: ANT 2410 or DPR. An examination of the evidence for the origin and antiquity of human beings in North America and of patterns of regional development until the period of contact with European colonizers. Emphasis on the variation of the ecological adaptation, social, political and religious systems, enclosure and worldview, folklore and visual art.

ANT 4316 Ethnic Diversity in the United States MW (3) AS ANT
PR: ANT 2410 or DPR. Special concerns include ethnic diversity in American society, historical and contemporary diversity in values, experiences, and lifestyles, and an examination of policies and problems affecting ethnic groups in the United States.

ANT 4318 Central America (3) AS ANT
PR: ANT 2410. Restricted to Anthropology majors. LACS certificate students, juniors and seniors only. Focuses on the history, contemporary values and interpersonal relationships, and patterns of rural and urban life in Mesoamerica, Guatemala and Mexico are emphasized.

ANT 4340 The Caribbean 6A MW (3) AS ANT
PR: ANT 2410 or DPR. Restricted to junior and senior CAS majors. Main themes include the depopulation of the aboriginal populations and the resettlement of the area via slavery, indenture, and migration; contemporary ethnic heterogeneity; economic problems of Third World microstates; development of a modern social and political consciousness. Religions, music, dance, and the literature of the contemporary Caribbean will also be surveyed.

ANT 4350 Visual Anthropology (3) AS ANT
PR: ANT 2410 and DPR. The use of photographic techniques for the crosscultural recording and analysis of human activities. The study of ethnographic photography as both art and science, and the production of an anthropological study that expresses the geographic and environmental view and explains the uses of visual techniques and the evidence they provide to the social scientist.

ANT 4401 Exploring Cross-Cultural Diversity MW (3) AS ANT
PR: ANT 2410, DPR. Open to Anthropology majors only. This course will introduce students to anthropological perspectives which are useful in understanding the implications of cultural diversity related to changing demographic patterns within our country as well as to increasing globalization.

ANT 4432 The Individual and Culture 6A MW (3) AS ANT
PR: ANT 2410 or DPR. The relationship between the individual and society is studied cross-culturally. Main themes include child-rearing practices, psychosomatic illness and curing. Discussion of theories and models of personality development with special reference to their applicability to the emerging field of cross-cultural mental health planning.

ANT 4442 Urban Life and Culture (3) AS ANT
PR: ANT 2410 or DPR. The cross-cultural study of urbanization, urbanism and human problems associated with metropolitan environments. Emphasis on the ethnography of city life and its relationship to the practical applications of urban research.

ANT 4462 Health, Illness, and Culture (3) AS ANT
PR: ANT 2410 or DPR. The study of health and human behavior in cross-cultural perspective. Main themes include the impact of disease on the development of human culture; comparative studies of curing practices; medical systems in their relationship to ideology. Emphasis on understanding the role of medicine, and the behavior of both practitioners and patients in modern societies.

ANT 4495 Methods in Cultural Research (3) AS ANT
PR: DPR. Restricted to juniors and seniors. The stages in the development and execution of ethnographic research are discussed and practiced. Literature search, hypothesis formation, selection of data collection techniques, elicitation of information, data analysis, and report presentation are stressed. Research design models from the course literature are studied and supervised research in the local community is designed and carried out.

ANT 4520C Forensic Anthropology (4) AS ANT
This course is designed to familiarize students with forensic anthropology and its laboratory techniques. Students will learn human skeletal biology for personal identification and cause of death. This course is restricted to majors and is not repeatable.

ANT 4586 Prehistoric Human Evolution NS (3) AS ANT
PR: ANT 2511 or DPR. A survey of the fossil record from the early primates through the ascent of Homo sapiens sapiens, focusing on the human lineage. Biocultural patterns and cultures of the past are also covered.

ANT 4587 Human Variation (3) AS ANT
PR: ANT 2511 or DPR. An overview of evolution and biological variations of human races. Anatomical, morphological, and physiological patterns are surveyed geographically. Cultural influences on racial biology are explored.
ANT 4901 Directed Reading (1-4) AS ANT

ANT 4905 Individual Research (2-4) AS ANT
PR: DPR. S/U only. Individual guidance in a selected research project. Contract required prior to registration.

ANT 4930 Special Topics in Anthropology (3) AS ANT
PR: DPR. Topics to be chosen by students and instructor permitting newly developing subsidiary special interests to be explored.

ANT 4932 Honors Seminar (4) AS ANT
PR: Admission to the honors program in anthropology and DPR. Seminar designed to provide the honors student with an opportunity to present, discuss and defend his/her own research and to explore in-depth topics in several areas of anthropology.

ANT 4935 Rethinking Anthropology 6A (3) AS ANT
PR: Senior standing with major in anthropology. Through discussion of readings and student papers, students rethink and reevaluate anthropology as a discipline and the integration of its branches and specialty fields. Students develop and articulate their current images of anthropology.

ANT 5206 Honors Thesis (3) AS ANT
PR: Admission to the honors program, completion of the honors seminar and DPR. S/U only. The student under the supervision of a faculty member will formalize, conduct, analyze, and report in writing in anthropology.

ARA 1120 Modern Arabic I (4) AS WLE
CR: ARA 1120L. An intensive study of basic skills: pronunciation, listening comprehension, speaking and some composition.

ARA 1120L Modern Arabic I Laboratory (1) AS WLE
CR: ARA 1120. S/U only. A laboratory designed to offer additional practice using various instructional technologies and media. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously.

ARA 1121 Modern Arabic II (4) AS WLE
PR: ARA 1120 or its equivalent. CR: ARA 1120L. A continuation of ARA 1120. More sophisticated oral/aural skills are attained. Basic reading skills are acquired.

ARA 1121L Modern Arabic II Laboratory (1) AS WLE
CR: ARA 1121. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. S/U only. A laboratory designed to offer additional practice using various instructional technologies and media.

ARA 2220 Modern Arabic III (4) AS WLE
PR: ARA 1121 or the equivalent. For language students who intend to attain basic proficiency.

ARA 2221 Modern Arabic IV (4) AS WLE
PR: ARA 2220 or the equivalent. Continuation of ARA 2220. Practice of writing, speaking and listening skills for language students who intend to attain basic proficiency.

ARA 4905 Directed Study (1-5) AS WLE
Departmental approval required. S/U only. Permits study options in Arabic not available in regularly scheduled curriculum at departmental discretion.

ARA 4930 Selected Topics (1-5) AS WLE
Departmental approval required. Course permits classes in Arabic not available in the regularly scheduled curriculum at departmental discretion.

ARC 2131 Introduction to Architectural Design and Graphics FA (4) AR ARC
An introduction to fundamental “critical thinking” and graphic communication skills in architecture.

ARC 2211 Introduction to Architecture HP FA (3) AR ARC
Overview of the built environment from prehistory through the Middle Ages. Buildings and cities in their geographical, topographical, political, aesthetic, social, technological and economic context.

ARC 2701 Archaeological History I HP FA (3) AR ARC
Overview of the built environment from prehistory through the Third World, and the ethics of applied research and intervention.

ARC 2702 Archaeological History II HP FA (3) AR ARC
Overview of the built environment from the Middle Ages to the present. Buildings and cities in their geographical, topographical, political, aesthetic, social, technological and economic context.

ARC 4784 The City 6A MW (3) AR ARC
This course examines the history of the city, as both idea and reality, with a particular focus on Western cities, and the 20th century. The course is open to undergraduates and students in the Graduate Architecture Program.

ARC 4931 Selected Topics in Architecture and Community Design (2-4) AR ARC
Variable topics will be offered for pre-professional studies for students in the Liberal Studies Major/ALA Degree Program and for electives for other undergraduates.

ARC 5175 Computer Technology (3) AR ARC
PR: CC. Introduction to the application of computer technology in current architectural practice. The exploration of available software, programs, and computer services for word processing, information handling, specification writing, feasibility analysis, cost estimating, economic performance and life cycle cost analysis, project management (network programming and analysis), computer graphics, computer aided design and drafting.

ARC 5216 The Building Arts (3) AR ARC
PR: CC. Introduction to the man-made environment. The study and profession of architecture. The various facets of the process of shaping the built environment as it manifests itself in the different roles and specialization of the experts involved the process, and in the various academic courses that prepare the architect for practice.

ARC 5256 Design Theory (3) AR ARC
PR: DPR. Survey of major schools of thought in design theory, methods of design and problem-solving, and design research. The nature of the design activity and its recurring difficulties. The nature and different types of problems. Traditional approaches to problem-solving and design in architecture; recent systematic as well as intuitive approaches to problem-solving based on developments in other fields. Scientific method; the systems approach and design.

ARC 5361 Core Design I (9) AR ARC
PR: CC. First of two semester Design Fundamentals/Design Graphics sequence focusing on design abstractions and analysis of the factors influencing conceptual design. Emphasis is placed on ordering principles, pattern recognition and utilization, and figure-ground relationships. Development of craftsmanship, drawing as a means to design, and perceptual acuity are stressed.

ARC 5362 Core Design II (9) AR ARC
PR: ARC 5361, CC. Second of a two semester Design Fundamentals/Design Graphics sequence focusing on synthesis of design concepts and application of ordering principles in architectural design. Emphasis is placed on developing an understanding and awareness of architectural elements and compositions. Students examine the work of significant architects as a base for design exploration. Graphic documentation, diagramming, and model studies are stressed.

ARC 5363 Core Design III (6) AR ARC
PR: ARC 5362, ARC 5467. ARC 5587. ARC 5731. CO: ARC 5669. Study of the various phases of the building delivery and design process, and of different approaches to ordering that process in a systematic fashion. The student will use one such systematic approach in the investigation and development of design solutions for a project of moderate scale and complexity. Studies of built form ordering principles, mass/void relationships, scale and proportion, color, texture, contextual relationships, meaning/imagery, and building technology (awareness of structural organization, services networks, construction processes
and materials). Aspects of human behavior as design determinants.

ARC 5364 Advanced Design A (6) AR ARC
PR: ARC 5363. CP: ARC 5588, ARC 5467. Application of orderly design processes to building projects of moderate complexity and scale. Continued investigation of the relationship between human behavior and the environment. Analysis and integration of site relationships into the development of design solutions. Legal aspects of zoning, building codes, and regulations regarding accessibility, fire escape, etc.

ARC 5365 Advanced Design B (6) AR ARC
PR: ARC 5363. CP: ARC 5588, ARC 5467. Investigation of the interaction between user requirements, environmental determinants, site and urban context conditions, technological factors, and design intentions in the development of design solutions for projects of medium scale and complexity. The analysis, design, and coordination of the various resulting systems, including structural, circulation, service networks, space zoning and use, environmental control systems at the interface between interior and exterior of a building. Representation of these relationships and systems in diagrams and models, and their manifestation in design and construction details.

ARC 5366 Advanced Design C (6) AR ARC
PR: ARC 5363. CP: ARC 5588, ARC 5467. Design of multi-purpose buildings of medium to large scale and complexity. Issues of community and neighborhood design as they relate to the design of buildings. Restoration and adaptive re-use of existing historic buildings. Focus on thinking through as well as documenting the complete building system and processes.

ARC 5470 Materials and Methods of Construction (4) AR ARC
PR: ARC 5470, CC. Overview of properties of primary materials and construction systems which comprise building structure and enclosure. Emphasis on interface and connection of elements and assemblies, relative to climate, assembly processes, costs, codes, and craftsmanship. Lab sessions include field trips to manufacturing facilities, construction sites, and preparation of drawings and models of assemblies.

ARC 5470 Introduction to Technology (3) AR ARC
Introduction to architectural technology, including structures, materials and methods of construction, and environmental controls. Overview of building systems and components and their integration into architectural design projects.

ARC 5587 Structures I (3) AR ARC
PR: Calculus, Physics, and ARC 5470, CC. Review of static and mechanical principles of materials. Analysis and evaluation for appropriate selection of structural systems and elements. Analysis and design of timber and steel structures, based on moment, shear, and deflection. Fundamentals of wind and seismic design as they apply to wood and steel construction. Truss analysis, beam and column design, and code considerations.

ARC 5588 Structures II (3) AR ARC

ARC 5689 Environmental Technology (4) AR ARC
PR: Physics, ARC 5470, CC. Comprehensive review of mechanical, electrical, and plumbing systems for buildings. Energy utilization, heating and cooling, water delivery and waste removal, fire protection, illumination, transportation systems, and acoustics. Lab exercises include computer simulations, illumination studies, thermal performance studies.

ARC 5731 Architectural History I (3) AR ARC
Overview of the built environment from prehistory through the Middle Ages. Buildings and cities in their geographical, topographical, political, aesthetic, social, technological, and economic context. Varieties of methodological approaches to the analysis of historical architecture. The focus will be on the built environment of Europe and the Mediterranean basin.

ARC 5732 Architectural History II (3) AR ARC
Overview of the built environment from the Renaissance to the present. Buildings and cities in their geographical, topographical, political, aesthetic, social, technological, and economic context. Study of various methodological approaches to the analysis of historical architecture, and development of student’s own approach. Emphasis will be on the built environment of Europe and America.

ARC 5789 Modern Architecture History (3) AR ARC
PR: CC, CI. Exploration of the philosophic, economic, aesthetic, social, historical and moral imperatives used by modern architects and historians in their attempt to design the appropriate physical environment for a new social order. The course will investigate the writings and works of the proponents of the modern style of architecture and study the “New Architecture” as defined by those who broke tradition and expressed the new era using modern construction materials and techniques.

ARC 5793 History Abroad (3) AR ARC
PR: CC. Summer study abroad. Location and description varies from year to year.

ARC 5794 Florida Architectural History (3) AR ARC
An examination of the environmental, sociological, technological, political, economic, cultural, and other factors that influenced the discovery, growth, and urbanization of Florida as manifested by its architecture.

ARC 5920 Architectural Design Studio Abroad (5) AR ARC
PR: CC. Summer study abroad. Location and description varies from year to year.

ARC 5931 Special Studies in Architecture (1-5) AR ARC
PR: CC. Variable titles offered on topics of special interest.

ARE 3044 Experiential Basis of Artistic Mind (3) VP ART
Designed to awaken the language of image and metaphor, with emphasis on the internal and expressive aspects of art as well as their application in the schools and the community.

ARE 3354 Art Teaching Strategies I (3) VP ART
PR: ARE 3044. A combination of theory, philosophy and practice in both public and private learning centers to provide the student with a variety of teaching concepts and media exploration in art education and to further enable the student to understand stages of young people, three to eighteen years.

ARE 3361 Art Teaching Strategies II (3) VP ART
Art and the intellectual, creative, emotional, and aesthetic growth of children.

ARE 4341 Art Teaching Strategies II (3) VP ART
Visual art and learning process will be explored through graphic arts, cinematography and video systems. Teaching strategies and media criticism for application at elementary and secondary levels.

ARE 4443 Crafts Workshop in Art Education (3) VP ART
PR: ARE 3044. The study and practice of processes and media involved with the exploration and expression of cultural traditions and individual ideas through crafts.

ARE 4642 Community Arts (3) VP ART
PR: ARE 3044. Explores the arts as infrastructure through identification, exploration and experimentation of with unique community spaces, populations and new environments for and learning in the arts.

ARE 4909 Directed Study: Art Education (1-3) VP ART
PR: Senior standing. Directed study contract required. Designed to extend teaching competencies of art education.

ARE 4936 Senior Seminar in Art Education (2) VP ART

ARE 4940 Internship: Art Education (1-12) VP ART
PR: Senior standing. CR: ARE 4936. S/U only. One full semester of internship in a public or private school. In special programs where the internship experience is distributed over two or more semesters, students will be registered for credit which accumulates from 9 to 12 semester hours.

ARH 2050 History of Visual Arts I HP FA (3) VP ART
PR: DPR. A survey of World Art to AD 1300. Students are introduced to problems of analyzing and interpreting the art of various cultures without making the Western perspective a privileged one. Open to non-majors.

ARH 2051 History of Visual Arts II HP FA (3) VP ART
PR: DPR. A survey of World Art since 1300. Students are introduced to problems of analyzing and interpreting the art of various cultures without making the Western perspective a privileged one. Open to non-majors.

ARH 3940 Internship: Art Education (1-12) VP ART
PR: ARE 4936. S/U only. One full semester of internship in a public or private school. In special programs where the internship experience is distributed over two or more semesters, students will be registered for credit which accumulates from 9 to 12 semester hours.

ARH 4070 History of Visual Arts I HP FA (3) VP ART
PR: DPR. A survey of World Art to AD 1300. Students are introduced to problems of analyzing and interpreting the art of various cultures without making the Western perspective a privileged one. Open to non-majors.

ARH 4071 History of Visual Arts II HP FA (3) VP ART
PR: DPR. A survey of World Art since 1300. Students are introduced to problems of analyzing and interpreting the art of various cultures without making the Western perspective a privileged one. Open to non-majors.

ARH 5001 Introduction To Art HP FA (4) VP ART
An expanded introductory treatment of basic concepts. For non-art majors.

ARH 5475 Contemporary Issues in Art HP FA MW (4) VP ART
PR: DPR. Focuses upon the productions, themes and processes of artists working in the present time. This course will investigate the relationship of materials and media used by contemporary artists to the subject and content of artists' productions/products as well as the evolution of the art form.

ARH 4115 Ancient Egyptian and Near Eastern Art (4) VP ART
PR: ARH 2050 recommended but not required. A study of the art and cultures of ancient Egypt and the Near East, from the prehistoric period through the conquests of Alexander the Great.
ARH 4130 Greek Art (4) VP ART
PR: ARH 2050 or EUH 2011 recommended but not required. A comprehensive study of ancient Greek sculpture, painting, architecture, and other artistic media from the Bronze Age through the Hellenistic period.

ARH 4141 Roman Art (4) VP ART
PR: ARH 2050 or EUH 2011 recommended but not required. A comprehensive study of ancient Roman sculpture, painting, architecture, and other artistic media from the founding of Rome through the reign of Constantine.

ARH 4170 Greek and Roman Art (4) VP ART
A comprehensive study of Aegean, Mycenaean, Etruscan, Greek and Roman painting, sculpture, and architecture.

ARH 4200 Medieval Art (4) VP ART
PR: DPR. A comprehensive study of early Christian, Byzantine and Medieval painting, sculpture, architecture and manuscript illumination.

ARH 4301 Renaissance Art (4) VP ART
PR: DPR. A comprehensive study of Renaissance and Mannernist painting, sculpture and architecture in Italy and Northern Europe.

ARH 4318 Venetian Art (4) VP ART
PR: DPR. Major monuments of Venetian art are examined to elucidate the importance of Venice as the crossroads of cultural exchange between Islam, Byzantium, and the West, and the importance of Venetian art to the history of art and art criticism.

ARH 4338 Baroque and Rococo Art (4) VP ART
PR: DPR. A comprehensive study of the painting, sculpture and architecture in France, Italy, Spain and the Netherlands in the seventeenth and early eighteenth centuries.

ARH 4430 Nineteenth Century Art (4) VP ART
PR: ARH 2051. A comprehensive study of nineteenth century painting, sculpture and architecture in America and Europe. Gender/multicultural issues and methodologies in 19th century art are emphasized.

ARH 4450 Twentieth Century Art (4) VP ART
PR: ARH 2051. A comprehensive study of painting, sculpture and architecture from Cézanne to the present in Europe and the United States. Required of all art majors.

ARH 4455 Modern Political Iconography MW (4) VP ART
PR: DPR. The course explores art in which political themes are considered to be the source and determinant of aesthetic decisions. The dominant iconographic theme is the iconography of revolution, rebellion, and other forms of political struggle in 20th Century art and film.

ARH 4520 African Art (4) VP ART
PR: DPR. A combination of survey, comparative study and in-depth analysis of African sculpture, mainly from West and Central Africa. Emphasis on diversity of forms and contexts, functions, politicalism and meanings.

ARH 4530 Asian Art (4) VP ART
PR: Departmental Approval. An introduction to concepts of the arts of China, Japan and other Far Eastern countries.

ARH 4557 Buddhist Art (4) VP ART
PR: DPR. This course examines one important aspect of Asian artistic production. Buddhist Art begins in India and travels via the Himalayas and Southeast Asia to East Asia, touching on artistic expression of major principles and practices, changes in art as the religion comes in contact with pre-existing cultures, and modern artistic practice.

ARH 4557 Chinese Art (4) VP ART
PR: DPR. Chinese Art proceeds chronologically, from the Neolithic era up to the contemporary art world. The course considers cultural, linguistic, technical, philosophic, political and religious influences on the art works produced by this ancient society.

ARH 4710 History of Photography 6A (4) VP ART
PR: ARH 2051. Comprehensive overview of the history of photography from its inception to the present day with an emphasis on the relationship of photography to the visual arts and popular culture.

ARH 4721C History of Printmaking 6A (3) VP ART
The history of Western printmaking from the Middle Ages to contemporary times, with an emphasis on artmaking technology and research. This course allows students to study the cultural, perspectives and theoretical/critical analytical capabilities. The course is open to majors and non-majors. It is not repeatable for credit.

ARH 4724 History of Graphic Design 6A (4) VP ART
This course surveys the design profession and the graphic design discipline. Students will explore graphic styles from the turn of the century to contemporary works, highlighting the innovations of influential designers throughout history.

ARH 4744 Selected Topics In The History of Film (4) VP ART
This course offers a comprehensive study of a selected period, development, or school in the history of film as art.

ARH 4800 Critical Studies In Art History 6A (4) VP ART
PR: Two advanced Art Histories. Specialized intensive studies in art history. Specific subject matter varies. To be announced at each course offering.

ARH 4890 Paris Art History (4) VP ART
PR: Minimum 8 hours of art history at the undergraduate level or equivalent. This course will explore issues central to the history and criticism of art through the rich visual culture of Paris. Themes will include art and national identity, orientalism, the avant-garde and the role of the museum in the evolution of modern art.

ARH 4930 Art History: Selected Topics (2-4) VP ART
Lecture/discussion course designed to offer areas of expertise to visiting scholars or specific interests of resident faculty.

ARH 4937 Seminar In The History Of Art History (4) VP ART
PR: Four courses in Art History at the 4000 level, DPR. An examination of the origins of Art History as a discipline and changing nature of Art History from Vasari to the present.

ARH 5451 Cultural and Intellectual History of Modern Art (4) VP ART
PR: CI. A course in which theories of modern artists and of critics and historians of Modernism are treated as a part of general cultural and intellectual history.

ARH 5797 Gallery and Museum Internship (2-6) VP ART
Students are eligible after completing one semester in the program. S/U only. Registration by contract only. By working in both regional and national museums, students will become familiar with various museological operations. Internships vary owing to the work at hand in particular museums, but possible areas of work include registration, installation, conservation, writing of grants, or museum education.

ARH 5813 Methods of Art History (4) VP ART
Must be taken during the student’s first two semesters in the M.A. program. This course introduces students to various methods which art historians have used to analyze the form and content of individual works of art, and to various modes of historical explanation.

ARH 5833 The Atelier, Its Management and History (3) VP ART
This class will consider the history of printmaking and other forms of collaborative art production through the prism of the atelier and its management.

ARH 5836 Collection and Exhibition Management (3) VP ART
PR: Art Advisor’s Approval. This class will introduce students to the basic principles of collections care and management and to the intellectual and practical tasks of preparing an exhibition. Students will engage in comprehensive curatorial experience in a museum setting with the professional responsibilities of the curator.

ARH 5839 Problems in Museums and Galleries (3) VP ART
PR: Art Advisor’s Approval. This class is designed as both an academic and theoretical course to introduce students to the museum profession and develop critical thinking skills required to solve problems in the rapidly changing world of museums. Students will develop managerial and administrative skills as they meet with and discuss the job descriptions of curators, educators, collection managers, museum administrators, fundraisers, and board members.

ART 2201C Concepts and Practices I FA (3-4) VP ART
An introduction to basic visual art studio concepts. Topics include the nature of art, the visual language of its form, modes of presentation, and visual art theory. Studio problems supplemented by lecture and discussion. Emphasis on images of implied time and space.

ART 2203C Concepts and Practices II FA (3-4) VP ART
PR: ART 2201C (for majors only). A pre-requisite for non-majors. This course will synthesize and expand on the ground covered in critical methods, with an emphasis on the personal in images, and How to construct visually by research. 3 phases: 1 - personal in images, We - images of cultural ideas, and They - images produced through collaboration.

ART 2301C Beginning Drawing (3) VP ART
PR: Majors Only. Projects exploring the methods, media, and concepts of drawing.

ART 2400C Beginning Printmaking (3) VP ART
PR: Majors Only. This course is designed as an introduction to the medium of printmaking. It concentrates on the technical
ART 2500C Beginning Painting (3) VP ART
PR: Majors Only. Projects in painting with emphasis on the exploration of methods and media and the development of advanced critical and technical skills in the discipline. Repeatable up to 15 hours.

ART 2701C Beginning Sculpture (3) VP ART
PR: Majors Only. Projects in sculpture with emphasis on contemporary theory and issues, the development of individual concepts and the exploration of materials, tools and processes.

ART 2750C Beginning Ceramics (3) VP ART
PR: Majors Only. An introduction to the use of ceramic materials as a means of self expression and critical exploration.

ART 2930 Selected Topics in Art (2-4) VP ART
PR: ART2203C, ARH 2050, ARH 2051. An extension of the skills and concepts students encountered in the introductory level graphic design course. Applying critical and technical skills in printmaking with particular emphasis on conceptual topics. The course is intended for majors. Repeatable up to 15 hours.

ART 3310C Intermediate Drawing (3) VP ART
PR: ART 2301C. Permit required. Majors Only. An extension of the skills and concepts introduced in Beginning Drawing with an emphasis on individual experimentation and the development of advanced critical and technical skills in the discipline. Repeatable up to 15 hours.

ART 3401C Intermediate Printmaking (3) VP ART
PR: ART 2201C, ART 2203C, ART 2301C, ART 2400C, ART 3310C, ARH 2050, ARH 2051. This course concentrates on developing intermediate skills in printmaking with particular emphasis on conceptual topics. The course is intended for majors. Repeatable up to 15 hours.

ART 3612C Beginning Electronic Media (3) VP ART
PR: Majors Only. An introductory exploration of the issues and practices involved in the creation of computer art. The course focuses on an interdisciplinary approach to electronic media.

ART 3613C Intermediate Electronic Media (3) VP ART
PR: ART 2203C, ART 2301C, ART 3310C, ART 3612C, ARH 2050, ARH 2051. An intermediate exploration of the issues and practices involved in the creation of experimental computer art. The course focuses on an interdisciplinary approach to electronic media while developing individual creative growth. Repeatable up to 15 hours.

ART 3635 Selected Topics in Electronic Media (3) VP ART

ART 3704C Intermediate Sculpture (3) VP ART
PR: ART 2201C, ART 2203C, ART 2301C, ART 2701C, ART 3310C, ARH 2050, ARH 2051. This course expands upon the principles and processes introduced in Beginning Sculpture, developing a higher level of technical competence and critical discourse in the field. Repeatable up to 15 hours.

ART 3712C Multiples, Molds, and Bronzecasting (3) VP ART
PR: ART 2701C and ART 3704C. Majors Only. Continued studies and projects in sculpture with an emphasis on the nature of multiples exploration of advanced mold making and bronzecasting. This course may not be repeated for credit. The conceptual implications of the multiple will be taught through reading, lecture, discussion and demonstration.

ART 3725C Selected Topics in Ceramics (3) VP ART
PR: ART2203C, ARH 2050, ARH 2051, ART 2301C, ART 3310C, ART 2701C, ART 3704C. Majors Only. Selected Topics in Ceramics is an intermediate course providing focused exploration of content specific to the discipline. It furthers the development of skills and critical discourse in the field. Repeatable up to 15 hours.

ART 3761C Intermediate Ceramics (3) VP ART

ART 3843C Site, Installation, and Performance (3) VP ART
PR: ART 2701C and ART 3704C. Majors Only. Continued projects in drawing. Disciplined study; concentration in a specific printmaking medium (intaglio, relief, lithography or screen printing) and develop a cohesive series of images. The course may not be repeated for credit.

ART 3935 Studio Techniques: Selected Projects (2) VP ART
PR: DPR. Concentration in specialized technological data and process.

ART 3939 The Real World (3) VP ART
Restricted to studio majors. Offers studio students the opportunity to analyze their experiences as art majors and explore options available to visual artists upon completion of their degree.

ART 4320C Advanced Drawing (3) VP ART
PR: 9 hours of Intermediate courses in the discipline and a 3.25 major GPA or DPR. Majors Only. Continued projects in drawing. Repeatable.

ART 4402C Advanced Printmaking (3) VP ART
PR: 9 hours of Intermediate courses in the discipline and a 3.25 major GPA or DPR. Majors Only. Continued projects in drawing. Repeatable.

ART 4520C Advanced Painting (3) VP ART
PR: 9 hours of Intermediate courses in the discipline and a 3.25 major GPA or DPR. Majors Only. Continued projects in painting. Repeatable.

ART 4614C Advanced Electronic Media (3) VP ART
PR: 8 hours of Intermediate courses in the discipline and a 3.25 major GPA or DPR. Majors Only. Advanced exploration of issues and practices involved in the creation of experimental computer art. The course continues as interdisciplinary approach to electronic media with a focus on individual and group projects. Repeatable.

ART 4616 Computer Animation (4) VP ART
Exploration of issues and practices involved in the creation of computer animation and the development of creative growth.

ART 4634C Visual Design for the Internet (3) VP ART
Restricted to majors. This upper level course builds upon the concepts students encountered in the introductory level graphic design course. The course will focus on the development of tools and techniques used by computer artists and designers as they develop creative solutions to the visual content and the site layout of the internet.
Modern states and the factors that facilitated this process. This course examines the origins and development of the major Southeast Asian cultures over the past two millennia, focusing on the transformation of small communities into modern states and the factors that facilitated this process.

This course examines the origins and development of the major Southeast Asian cultures over the past two millennia, focusing on the transformation of small communities into modern states and the factors that facilitated this process. The artwork itself. The course is restricted to majors, and is repeatable.

It is by contract and may involve internship and/or foreign travel. The course is restricted to majors. Not repeatable.

The creation of a coherent body of advanced level artwork that is supported by a written document describing processes working procedures, research, context and content of the artwork itself. The course is restricted to majors, and is required of all B.F.A. candidates.

AST 3652 Navigation (3) AS AST
PR: CI. Course content will depend upon the interest of the faculty member and student demand.

AST 5506 Introduction to Celestial Mechanics (3) AS AST
PR: MAC 2313 or MAC 2283 and some knowledge of differential equations, or CI. The two-body problem, introduction to Hamiltonian systems and canonical variables, equilibrium solutions and stability, elements of perturbation theory.

AST 5932 Selected Topics in Astronomy (1-5) AS AST
PR: Senior or advanced junior standing or CI. Intensive coverage of special topics to suit needs of advanced students.

BCH 3023L Basic Biochemistry Laboratory (2) AS CHM
PR: BCH 3023. Practical work in determination and characterization of important biomolecules.

BCH 3023L Introduction to Biochemistry (3) AS CHM
PR: CHM 2200 or CHM 2211 and BSC 2010. Introduction to the chemistry and intermediary metabolism of biologically important substances.

BCH 4034 Advanced Biochemistry (3) AS CHM
PR: BCH 3023. An advanced undergraduate course emphasizing such topics as metabolic regulation, DNA and RNA structure and function, receptors, channels, antibodies, and contraction.

Area study courses are multi-disciplinary in nature and deal with one or more countries of a region. Each course combines some measure of political, economic, historical, religious, geographic, anthropological, and sociological analysis in dealing with salient features and current problems.

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BCH 5045 Biochemistry Core Course (3) AS CHM
PR: Either CHM 2211, CHM 2211L, and CHM 3400 or CHM 4410 or graduate standing. A one-semester survey course in biochemistry for graduate students in chemistry, biology, and other appropriate fields and for particularly well-qualified undergraduates.

BCH 5105 Biochemistry Laboratory Rotations (1-3) AS CHM
A course in which first year graduate students rotate through selected professor's laboratories to learn techniques, become familiar with ongoing research in the Department and facilitate the selection of a mentor.

BME 4406 Engineering of Biological Systems (3) EN ECH
PR: CHM 2210 (majors) or Consent of Instructor (non-majors). This course is designed to convey the basics of biological systems and the roles that engineers play in industrial biology to engineering students (primarily) and to students that are majoring in other sciences. Not repeatable for credit. For majors and non-majors.

BME 5006 Theory and Design of Bioprocesses (3) EN ECH
PR: Senior standing in engineering or CI. Open to majors and non-majors with CI. Introduction to biotechnology, including applied microbiology, enzyme technology, biomass production, bioreactor design, and transport processes in biosystems.

BME 5040 Pharmaceutical Engineering (2) EN ECH
PR: Senior or graduate standing in engineering or CI. Introduction to pharmaceutical engineering, including dosage forms (tablets, capsules, powders, liquids, topical forms, and aerosols), excipients, regulatory issues, clinical studies, and good manufacturing practices.

BME 5748 Selected Topics in Biomedical Engineering (1-3) EN ECH
Selected topics in biomedical engineering, including biomechanical engineering, biomedical materials, biodynamics of circulation, separation processes in biomedical systems, and artificial organ systems.

BME 5910 Directed Research in Bioengineering (1-3) EN ECH
PR: CI. Directed research in an area of biomedical engineering. Open to non-engineering students with CI. Selected topics in biomedical engineering, including biomedical engineering, biomedical materials, biodynamics of circulation, separation processes in biomedical systems, and artificial organ systems. May be taken by non-engineering students with CI. Repeatable as subjects vary.

BMS 4402 Principles of Human Pharmacology NS (3) ME MSG
Not available on S/U basis. Pharmacokinetics (absorption, distribution, metabolism, excretion), and side effects/toxicity of drugs. Designed to provide basic understanding of mechanism of drug action resulting from pharmacokinetic processes.

BMS 5005 Professions of Medicine: Foundations of Doctoring (1-19) ME MSG
This three-week course placed at the beginning of the medical school curriculum will introduce the students to principles that will be used throughout the entire medical school education and beyond. Basic scientists and clinicians present information in an integrated approach. Topical areas include: use of information resources (library/computer), the medical article, intro to evidence based medicine, effective study techniques, intro to the physical exam, understanding of mechanism of drug action resulting from pharmacokinetic processes.

BOT 3373C Vascular Plants: Form and Function (4) AS BIO

BOT 3585 Medical Botany (3) AS BIO
CR: BSC 2010, BSC 2010L, BSC 2011, BSC 2011L, MAC 1105 or higher-level MAC course or STA 2023. CP: PCB 3023 or PCB 3043 or PCB 3063 or PCB 3712. Study of agents that are produced by plants and that are toxic or psychotomically active in human beings or are used as remedies. Lecture only.

BOT 4152C Field Botany (3) AS BIO
PR: BOT 3373C. Identification and classification of native and naturalized flowering plants of Florida including historical, climatic and biotic aspects of plant communities. Conducted largely in the field.

BOT 4223C Plant Anatomy (3) AS BIO
PR: BOT 3373C and CHM 2210 from MAC 1105 or higher-level MAC course or STA 2023. CP: PCB 3023 or PCB 3043 or PCB 3063 or PCB 3712 & CHM 2211. Comparative studies of tissue and organ systems of fossil and present-day vascular plants. Functional and phylogenetic aspects stressed. Lec.-lab.

BOT 4424C Mycology (3) AS BIO
PR: BOT 3373C or MCB 3020C and CHM 2210 and MAC 1105 or higher-level MAC course or STA 2023. CP: PCB 3023 or PCB 3043 or PCB 3063 or PCB 3712 and CHM 2211. A survey of the fungi with emphasis on their taxonomy, morphology, physiology and economic importance. Lec.-lab.

BOT 4503 Plant Physiology (3) AS BIO
PR: BOT 3373C and CHM 2210 and MAC 1105 or higher-level MAC course or STA 2023. CP: PCB 3023 or PCB 3043 or PCB 3063 or PCB 3712 & CHM 2211. Fundamental activities of plants; absorption, translocation, transpiration, metabolism, growth and related phenomena. Lecture only.

BOT 4503P Plant Physiology Laboratory (1) AS BIO
CP: BOT 4503. Laboratory portion of Plant Physiology.

BOT 4810C Economic Botany (3) AS BIO
PR: BOT 3373C. Study of the uses of plants by man for food, chemicals, fibers, and medicinal purposes. An introduction to the industrial and engineering biotechnology.

BSC 1010 Biology I - Cellular Processes NS (3) AS BIO
PR: Either CHM 2211, CHM 2211L, and CHM 3400 or CHM 4410 or graduate standing. A one-semester survey course in biochemistry for graduate students in chemistry, biology, and other appropriate fields and for particularly well-qualified undergraduates.

BSC 2010L Biology I Cellular Processes Laboratory (1) AS BIO
CR: BSC 2010L. Lec.-lab. An introduction to the basic biology of aging. Emphasis will be placed on understanding basic principles of biology relevant to the aging process which begins at birth. May be taken by majors for free elective credit.

BSC 2025 Food: Personal and Global Perspectives NS (3) AS BIO
May be taken by biology majors for free elective credit. The application of basic biological principles to human nutritional problems; to learn how various cultures achieve adequate nutrition.
BSC 2035 Save The Planet: Environmental Sciences (3) AS BIO
Credit will be given for BSC 2030 or BSC 2050, but not both. An introduction to environmental sciences using mass communications and independent study. Emphasis will be placed on understanding basic principles of ecology relevant to problems and topics of the earth’s environment. May be taken by majors for free elective credit.

BSC 2035 Sex and Today’s World (NS) (3) AS BIO
The application of basic biological principles to female and male sexual behavior and reproduction; current social problems are treated from a biological perspective. May be taken by majors for free elective credit.

BSC 2050 Environment NS (3) AS BIO
Credit will be given for BSC 2030 or BSC 2050, but not both. The application of basic scientific principles to global environmental problems; how human activities impact the environment. May be taken by majors for free elective credit.

BSC 2085 Anatomy and Physiology I for Nursing and other Healthcare Professionals (3) NU NUR
CR: BSC 2085L. Introduction to the normal structure, function and selected pathological conditions for physiologic systems. Focus on understanding how the body functions in preparing for careers in nursing or health-related professions.

BSC 2085L Anatomy and Physiology Lab I for Nursing and other Healthcare Professionals (1) NU NUR
CR: BSC 2085. Laboratory exercises and virtual dissections linked to the basic content of Anatomy & Physiology I for Health Professionals.

BSC 2086 Anatomy and Physiology II for Nursing and other Healthcare Professionals NS (3) NU NUR
PR: BSC 2085 and BSC 2085L. CR: BSC 2086L. Introduction of normal structure, function and selected pathological conditions for physiologic systems. Focus on understanding how the body functions in preparing for careers in nursing or health-related professions.

BSC 2086L Anatomy and Physiology Lab II for Nursing and other Healthcare Professionals (1) NU NUR
PR: BSC 2085 and BSC 2085L. CR: BSC 2086. Laboratory exercises and virtual dissections linked to the basic content of Anatomy & Physiology II for Health Professionals.

BSC 2093C Human Anatomy and Physiology I (4) AS BIO
PR: BSC 2010, BSC 2010L, BSC 2011, BSC 2011L and CHM 2045. May be taken by majors for free elective credit only. Basic biochemistry, cell structure and function, tissues, anatomical terminology, anatomy and physiology of the integumentary, skeletal, muscular and nervous systems. Lecture and Laboratory.

BSC 2094C Human Anatomy and Physiology II (4) AS BIO
PR: BSC 2010, BSC 2010L, BSC 2011, BSC 2011L, BSC 2093C, and CHM 2045. May be taken by majors for free elective credit only. Anatomy and physiology of the autonomic nervous, endocrine, circulatory, lymphatic, immune, respiratory, digestive, excretory, and reproductive systems. Lecture and Laboratory.

BSC 2932 Selected Topics in Biology (1-4) AS BIO
The course content will depend on student demand and instructor’s interest.

BSC 2933 Honors Seminar II: Philosophy and Ethics of Science (3) AS BIO
PR: BSC 2011, BSC 2011L, BSC 2932, & CHM 2045 & CI. Enrollment is limited to Department of Biology Honors Students. Introduction to the nature of science. Historical perspectives, modes of reasoning, science vs. pseudoscience, science as an intellectual process, ethics, and research dilemmas.

BSC 2934 Honors Seminar III: Scientific Approaches (3) AS BIO
PR: BSC 2933. CI. Enrollment is limited to Department of Biology Honors Students. The course will begin to familiarize students with the process of conducting scientific research.

BSC 2938 Honors Seminar I (1) AS BIO
PR: BSC 2010, BSC 2010L & CHM 2045. CR: BSC 2011, BSC 2011L. Enrollment is limited to Department of Biology Honors students. Course is designed to introduce Honors students to various research fields and current research in the Department. Faculty members present research seminars and discuss their work.

BSC 3312 Marine Biology (3) AS BIO
PR: BSC 2010, BSC 2010L, BSC 2011, BSC 2011L & CHM 2045, CHM 2046 & MAC 1105 or higher-level MAC course or STA 2023. CP: PCB 3023 or PCB 3043 or PCB 3063 or PCB 3712. A survey of the marine environment, the types of organisms found inhabiting a variety of marine habitats, and the adaptations of the organisms to those habitats. Emphasis is placed on shallow water Florida environments. Lecture only.

BSC 4057 Environmental Issues MW (3) AS BIO
Not for major’s credit. Study of biological, economic, ethical, legal, political and social issues relating to current environmental problems.

BSC 4313C Advanced Marine Biology (4) AS BIO
PR: BSC 3312C A detailed analysis of marine environment in the Tampa Bay or surrounding area. Field and laboratory work will provide direct experience with the system.

BSC 4905 Independent Study (1-3) AS BIO
PR: CI. S/U only. May be taken by majors for free elective credit. Specialized independent study determined by the student’s needs and interests. The written contract required by the Department of Biology specifies the regulations governing independent study.

BSC 4932 Honors Seminar IV (1) AS BIO
PR: BSC 2934 and BSC 4910 or MCB 4910; CI. CP: CHM 2211. The course serves as a formal introduction to the presentation of scientific research. It is taken in the semester prior to completion of a student’s own research project and the writing of the Biology Honors Thesis.

BSC 4933 Selected Topics In Biology (1-4) AS BIO
PR: CI. The course content will depend on student demand and instructor’s interest.

BSC 4937 Seminar in Marine Biology (2) AS BIO
PR: BSC 3312C and CHM 2210 and MAC 1105 or higher-level MAC course or STA 2023. CP: PCB 3023 or PCB 3043 or PCB 3063 or PCB 3712 and CHM 2211. S/U only. Junior standing and 3.0 GPA required. Individual investigation with faculty supervision. Written contract by Department is necessary prior to registration.

BSC 4970 Biology Honors Thesis (1-3) AS BIO
PR: BSC 2934 and either BSC 4931 or BSC 4932. Enrollment is limited to Biology Department Honors students. S/U only. A thesis based on independent research carried out by the student.

BSC 5931 Selected Topics in Biology (1-4) AS BIO
PR: CI.

BTE 4401 Special Teaching Methods: Business Education (4) ED EDV
PR: Successful completion of BE competencies. Methods, techniques, and materials for skill development.

BTE 4909 Directed Study: Business Education (1-3) ED EDV
PR: Senior standing. To extend competency in teaching field.

BTE 4936 Senior Seminar in Business and Office Education (2) ED EDV
PR: Senior standing; CR: BTE 4940. Synthesis of teacher candidate’s courses in complete college program.

BTE 4940 Internship: Business Education (1-12) ED EDV
CR: BTE 4936. S/U only. One full semester of internship in a public or private school. In special programs where the intern experience is distributed over two or more semesters, students will be registered for credit which accumulates from 9 to 12 semester hours.

BTE 4948 Field-Based Seminar in Business Education (3) ED EDV
S/U only. Supervised field experience and orientation to broad field business education. Specifically designed to be preparatory experiences, ethics, and testing internship.

BTE 5711 Curriculum Construction: Business Education (3) ED EDV
Curriculum scope, the process of planning and organizing instructional programs with emphasis on task analysis and process evaluation.

BUL 3320 Law and Business I (3) BA GBA
This course covers the nature of legal and societal institutions and major aspects of public, private, UCC and related business law.

BUL 3321 Law and Business II (3) BA GBA
PR: BUL 3320. Legal problems in marketing of goods, nature of property, sales of personal property, securing of credit granted, nature and use of negotiable instruments.

BUL 5332 Law and the Accountant (3) BA GBA
PR: BUL 3320 or CI. A comprehensive study of commercial law as it affects the practice of accounting.
crime, and will examine criminal career data. Examples include organized crime, consensual crimes, female crime, political crimes, violent crimes, economic/white collar offense, and syndicated crime. The course will concentrate on major patterns of explanation of crime. PR: Junior standing, CCJ 3024 or CJE 4114 or CJE 4100 or CI. This course is designed to provide an in-depth examination of both the practical and theoretical aspects of the administration of criminal justice agencies. The major focus will be on law enforcement and criminal justice administration.

CCJ 4604 Abnormal Behavior and Criminology (3) AS CJP
PR: Junior standing, CCJ 3610 or CI. A systematic introduction to the relationship between mental illness and criminality, with focus on psychiatric labeling of deviant behavior and its implications for the handling of the criminal offender.

CCJ 4700 Statistical Research Methods in Criminal Justice II (3) AS CJP
PR: Junior standing, CCJ 3024 or CCJ 3610 or CI. Beginning with the scientific method, the tools commonly used to analyze criminal justice data will be emphasized. Recommended for students who intend to continue their education beyond the B.A. Required of students attending the MA program in CCJ at USF.

CCJ 4900 Directed Readings (1-3) AS CJP
PR: Junior standing, CCJ 3024, CCJ 3610, CCJ 3621, CI. S/U only. (a) Students wishing to enroll must make arrangements with the semester faculty and receive permission to take the course. (b) A minimum of four 4 CCJ courses must have been completed satisfactorily prior to enrollment. (c) First consideration will be given to Criminology majors. (d) Individual faculty members may add additional requirements at their discretion. No more than six hours of CCJ 4900, CCJ 4910 or any combination of the two will be accepted toward the minimum number of hours required for the major. This course is specifically designed to enable advanced students the opportunity to do in-depth independent work in the area of criminal justice. Each student will be under the close supervision of a faculty member of the program.

CCJ 4910 Directed Research (1-3) AS CJP
PR: Junior standing, CCJ 3024, CCJ 3610, CCJ 3621, CI. S/U only. (a) Students wishing to enroll must make arrangements with a faculty member during the semester prior to actually taking the course. (b) A minimum of four 4 CCJ courses must have been completed satisfactorily prior to enrollment. (c) First consideration will be given to Criminology majors. (d) Individual faculty members may add additional requirements at their discretion. No more than six hours of CCJ 4900, CCJ 4910 or any combination of the two will be accepted toward the minimum number of hours required for the major. This course is designed to provide students with a research experience in which they will work closely with faculty members in the development and implementation of research projects in the area of criminal justice.

CCJ 4930 Critical Issues in Policing (3) AS CJP
PR: Junior standing, CCJ 3024 or CJE 4114 or CI. Focuses on some of the most critical issues in law enforcement today including: understanding and controlling police use of deadly force; police deviance; police prejudice and discrimination; violence-prone police officers; substance abuse by police officers; and administrative review of alleged police brutality.

CCJ 4933 Selected Topics in Criminology (3) AS CJP
PR: Junior standing, CCJ 3024, CCJ 3621, CCJ 3610 or CI. Lecture course. Topic varies and is designed to address a wide variety of issues in criminology and criminal justice. Open to non-majors with CI.

CCJ 4934 Seminar in Criminology 6A MW (3) AS CJP
PR: Junior standing, CCJ 3024, CCJ 3621, CCJ 3610 and CI. These variable topic seminars are used for the in-depth study of the theoretical aspects of the administration of the criminal justice system. The honors level course will be restricted to students who have completed the major and are in their senior year. Open to non-majors with CI.

CCJ 4940 Internship For Criminal Justice Majors (3) AS CJP
PR: Junior standing, CCJ 3024, CCJ 3610, CCJ 3621, CI. Required for the criminal justice major. Supervised internship in criminal justice agency. Students will work up to 20 hours per week during a fall or spring term, fifteen hours per week in summer, within the host agencies in addition to any
written work or reading assignments. See requirements for the B.A. degree in Criminology for the number of hours required.

CDA 3101 Computer Organization for Information Technology (3) US EIT
PR: Any Physics course or CI. Elements of the computer are discussed in terms of the physical and conceptual design of memory, processors, busses and I/O elements. Organization of the system is cast in a meta-language that captures the logical and physical nature of the computer.

CDA 3103 Computer Organization (3) EN ESB
PR: PHY 2049 or PHY 2054 and DPR. Introduction to computer hardware, logic elements and Boolean algebra, computer arithmetic, the central processing unit, assembly language programming, input/output, and memory.

CDA 3201 Computer Logic and Design (3) EN ESB
PR: CDA 3103, COP 3514; CR: CDA 3201L and Degree Program Admission. CS&E and EE majors. Others by special permission. Advanced coverage of Boolean Algebra, introduction to minimization of combinational logic circuits, analysis and synthesis of sequential circuits, testing of logic circuits and programmable logic devices.

CDA 3201L Computer Logic Design Lab (1) EN ESB
CR: CDA 3201.

CDA 4100 Computer Organization and Architecture (3) EN ESB
PR: EEL 4705. Elements of computer systems; processors, memories and switches. Register transfer representation of a computer, ALUs and their implementation. The control unit. Memory and I/O. Hardware support of operation system functions.

CDA 4203 Computer System Design (3) EN ESB
PR: CDA 3201, CDA 3201L. Design Methods, Top-Down design, Building Blocks, Instruction and addressing models, minicomputer design, interfacing.

CDA 4203L Computer System Design Lab (1) EN ESB
CR: CDA 4203. This lab introduces the student to the concept of system design. Several projects are given including building timing circuits, memory-based and communication circuits, and microcomputer-based design.

CDA 4205 Computer Architecture (3) EN ESB
PR: CDA 3201, CDA 3201L. Principles of the design of computer systems, processors, memories, and switches. Consideration of the register transfer representation of a computer, ALU’s and their implementation, control units, memory and I/O, and the hardware support of operation systems.

CDA 4213 CMOS-VLSI Design (3) EN ESB
PR: CDA 3201, CDA 3201L. Covers analysis and design of CMOS processing technology, CMOS logic and circuit design, layout timing and delay, and power and thermal issues. CMOS transistor theory. VLSI system design, case studies and rapid prototyping.

CDA 4253 Field Programmable Gate Array System Design and Analysis (3) EN ESB
PR: CDA 3201, CDA 3201L. Covers analysis and design of digital systems using VHDL simulation. Provides experience with field programmable logic gates and gate arrays. Introduces the requirements for field programmable systems; testing of circuitry, and analysis of system design.

CEG 4020 Software Engineering (3) EN ESB
PR: EEL 4851C. An overview of software engineering techniques for producing high quality software. Student will participate in a software development team.

CEG 4031 Software Engineering Concepts for Information Technology (3) US EIT
PR: EEL 4854 or CI. Concepts associated with production of high quality software. Computer systems using software engineering concepts and practices are covered. Introduction to test driven development, students are required to participate in software development team project.

CEN 4721 User Interface Design (3) EN ESB
PR: EEL 4851C. An examination of factors influencing the usability of a computer system. Topics include input and output devices, graphic and multi-media interfaces, formats for interaction/communication between computer and user, and the evaluation of usability.

CES 3102 Structures I (3) EN EGX
PR: EGN 3331. Analysis of simple structural systems, both determinate and indeterminate. Moment area theorems; influence lines; introduction to steel design.

CES 4141 Finite Element Analysis I (3) EN EGX

CES 4561 Computer Aided Structural Design (3) EN EGX
PR: CES 4141. Computer aided structural analysis and design using existing finite element program, static dynamic loading.

CES 4605 Concepts of Steel Design (3) EN EGX
PR: CES 3102. Introduction to steel design and AISI Manual of Steel Construction: Design of tension members; compression members; beams; beam columns; and bolted, welded, and riveted connections.

CES 4702 Concepts of Concrete Design (3) EN EGX
PR: CES 3102. Introduction to concrete design and the ACI Building Code Requirements for reinforced concrete: Design of flexural reinforcement in beams and slabs, design of shear reinforcement, design of concrete columns.

CES 4720 Capstone Structural/Materials Design (3) EN EGX
PR: EGN 3365, CES 4605, CES 4702. A Capstone Materials design experience for seniors in Civil and Environmental Engineering. This course will provide students with a focused design experience aimed to design for durability and reliability.

CES 4740 Capstone Structural/Geotechnical/ Material Design (3) EN EGX

CES 4742 Concepts of Structural Design (3) EN EGX
PR: CES 3102. Introduction to concrete design and the ACI Building Code Requirements for reinforced concrete: Design of flexural reinforcement in beams and slabs, design of shear reinforcement, design of concrete columns, and design of steel beams.

CES 4820 RC Timber and Masonry Design (3) EN EGX
PR: CES 3102, CES 4702. Fundamentals of timber design including beams, columns, connections and formwork. Introduction to masonry design including design of beams, walls, columns, and pilasters.
CES 5105C Advanced Mechanics of Materials I (3) EN EGX
PR: EGN 3331, MAP 2302 Analytical study of the mechanical behavior of deformable solids. Basic concepts, stress and strain transformations, special topics in beams, theory of elasticity, criteria of failure, beams on elastic foundation.

CES 5209 Structural Dynamics (3) EN EGX
PR: CES 3102, EGN 3321. Behavior of structural components and systems when subjected to periodic dynamic loads.

CES 5715C Prestressed Concrete (3) EN EGX
PR: CI, majors only. Fundamentals of prestressing; calculation of losses; stress analysis and design of simple beams for flexure and shear. Examples of pressures applications.

CGN 3021L Civil Engineering Laboratory (2) EN EGX
PR: CES 3102, EGN 3333, EGN 3365. A laboratory experience in departmental facilities including the subject areas of materials, fluids, environmental engineering, and computer assisted data acquisition.

CGN 411 Professional and Ethical Issues in Engineering MW (3)
EN EGX
The professional and ethical responsibility of engineers. The legal and ethical responsibilities of engineers in the preparation of contracts and specifications. The ethics of engineer-client agreements.

CGN 4851 Concrete Construction Materials (3) EN EGX
PR: EGN 3365. Classifications and production of cements. Design and testing of concrete mixtures to produce desired properties.

CGN 4905 Independent Study (1-5) EN EGX
PR: CC. S/U only. Specialized independent study determined by the student's needs and interests.

CGN 4911 Research in Civil Engineering and Environmental Engineering (1-4) EN EGX
PR: CC.

CGN 4914 Senior Project (2-5) EN EGX
PR: CI. Problem-solving experience and training for seniors in research and/or design projects. Written final reports are required.

CGN 4933 Special Topics in Civil and Environmental Engineering (1-5) EN EGX
PR: CI. New technical topics of interest to civil engineering students.

CGN 5933 Special Topics in Civil Engineering and Mechanics (1-5) EN EGX
PR: CI. New technical topics of interest to civil engineering students.

CGS 2060 SC Introduction to Computers and Programming in Basic 6A (3) EN ESB
No credit for Engineering Majors. An overview of computer systems and their role in society. Survey of the evolution of computer software and hardware technology with emphasis on current applications. Introduction to programming using the BASIC language.

CGS 2062 Computers And Society (3) EN ESB
No credit for Engineering Majors. An overview of computer techniques of non-engineering majors only. This computer literacy course covers the fundamentals of hardware, software, and programming languages, presents a broad overview of data processing concepts, problems and applications for students with little or no computing background.

CGS 2100 Computers In Business (3) BA QMB
A study of the use and impact of computers in all areas of business organizations. Course includes hands-on experience and the use of software packages for business analysis.

CGS 3303 IT Concepts (3) US EIT
PR: Any PHY course. A lecture and problem solving course which deals with subjects related to computers and information technology. A broad range of conceptual and practical topics in IT are covered.

CGS 3823 IT Web Design (3) US EIT
PR: COP 2510 or equivalent. An overview of how the Internet and the WWW evolved, and how Electronic Commerce is supported by web pages. The student will do exercises relative to HTML and how browsers show that code. The student will also learn to use web page development packages.

CGS 3845 Electronic Commerce (3) US EIT
PR: COP 2510 or equivalent. An overview of how E-Commerce evolved, what EC is; how it is being conducted and managed; its major opportunities, issues, and risks. Discussions include: The Internet, intranets, firewalls, etc. Exercises will use various Web and software packages.

CGS 4813 Disaster Recovery and Business Continuity Planning (3) US EIT
PR: Electives may be taken at any time after completion of the first semester. When organizations are interrupted by disasters, accidents, or natural events, a loss of money, data, and/or productivity occurs. The extent to which the loss affects the organization's health depends on its ability to deal with these disruptions.

CGS 5765 Introduction to Unix and C (3) EN ESB

CHI 1120 Modern Chinese I (4) AS WLE
CR: CHI 1120L. Mandarin. An intensive study of basic skills: pronunciation, listening, comprehension, speaking, and some composition.

CHI 1120L Modern Chinese I Laboratory (1) AS WLE
CR: CHI 1120. S/U only. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. A laboratory designed to offer additional practice using various instructional technologies and media.

CHI 1121 Modern Chinese II (4) AS WLE
CR: CHI 1121L. Mandarin. PR: CHI 1120 or equivalent. A continuation of CHI 1120. More sophisticated oral/aural skills are attained. Basic reading skills are acquired.

CHI 1121L Modern Chinese II Laboratory (1) AS WLE
CR: CHI 1121. S/U only. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. A laboratory designed to offer additional practice using various instructional technologies and media.

CHI 2220 Modern Chinese III (4) AS WLE
PR: CHI 1121 or equivalent. For language students who intend to attain basic proficiency.

CHI 2221 Modern Chinese IV (4) AS WLE
PR: CHI 2220 or the equivalent. Continuation of CHI 2220. Practice of writing, speaking and listening skills for language students who intend to attain basic proficiency.

CHI 4905 Directed Study (1-5) AS WLE
Departmental approval required. S/U only. Permits study options in Modern Chinese not available in the regularly scheduled curriculum at departmental discretion.

CHM 2023 Chemistry for Today NS (4) AS CHM
PR: High school chemistry and mathematics including algebra are recommended. No credit for science majors. An introduction to the principles and applications of modern chemistry including the properties of matter, structural view of matter and reactions, quantitative relations in chemical reactions, technological aspects and societal impact.

CHM 2032 Introduction to General, Organic and Biochemistry I (4) AS CHM
No credit for science majors. Fundamental concepts of general, organic, and biological chemistry.

CHM 2045 General Chemistry I NS (3) AS CHM
PR: One year of high school chemistry and two years of high school mathematics. Algebra. No credit for science majors. EGN 3365. A laboratory experience in departmental facilities including the subject areas of materials, fluids, environmental engineering, and computer assisted data acquisition.

CHM 2045L General Chemistry I Laboratory (1) AS CHM
CP: CHM 2045. Laboratory portion of General Chemistry I. Introduction to laboratory techniques; study of properties of elements and compounds; synthesis and analysis of natural and commercial materials.

CHM 2046 General Chemistry II NS (3) AS CHM
PR: CHM 2045 or CHM 2045L or equivalent. Continuation of General Chemistry I.

CHM 2046L General Chemistry II Laboratory (1) AS CHM
PR: CHM 2045L. Laboratory portion of General Chemistry II. Continuation of chemistry laboratory.

CHM 2047 Organic Chemistry (4) AS CHM

CHM 2210 Organic Chemistry I (3) AS CHM
PR: CHM 2046. CHM 2046L. Fundamental principles of organic chemistry. Lecture.

CHM 2210L Organic Chemistry Laboratory I (2) AS CHM
CP: CHM 2200 or CHM 2210. Laboratory portion of Organic Chemistry I. Introduction of organic laboratory principles and techniques.
# USF Course Descriptions

**CHM 2111 Organic Chemistry II (3) AS CHM**
- **PR:** CHM 2210 or equivalent. Continuation of organic chemistry. Lec.

**CHM 2211L Organic Chemistry Laboratory II (2) AS CHM**
- **PR:** CHM 2210L. CR: CHM 2211. Continuation of organic chemistry laboratory.

**CHM 2932 Selected Topics in Chemistry (3) AS CHM**
- Topics of interest to students relating to chemistry and other sciences.

**CHM 3120C Elementary Analytical Chemistry (4) AS CHM**
- **PR:** CHM 2046, CHM 2046L. Fundamentals of gravimetric, volumetric, spectrophotometric analysis. Lec.-lab.

**CHM 3400 Elementary Physical Chemistry I (3) AS CHM**
- **PR:** CHM 2046, CHM 2046L. MAC 2281 or MAC 2311, PHY 2054, PHY 2054L. Introduction to thermodynamics. Properties of solutions with emphasis on biological applications.

**CHM 3610 Intermediate Inorganic Chemistry (3) AS CHM**
- **PR:** CHM 2046, CHM 2046L. Fundamental principles of inorganic chemistry including atomic structure, bonding theories and structural consequences, transition metal chemistry and illustrative laboratory work. Lec.-lab.

**CHM 3610L Intermediate Inorganic Chemistry Laboratory (1) AS CHM**
- **PR:** Two semesters of general chemistry lecture and lab. CR: CHM 3610. Illustrative laboratory work concerning the fundamental principles of inorganic chemistry including structure, bonding, transition metal chemistry, structural consequences and spectroscopic methods.

**CHM 4060 Use of the Chemical Literature (1) AS CHM**
- Discussions and assignments using abstracts, bibliographies, indices, encyclopedias, journals, patent files, electronic databases, and other information sources to obtain chemical and technical material and including written and oral presentations.归类信息和机会也将讨论。

**CHM 4070 Historical Perspectives in Chemistry 6A MW (3) AS CHM**
- **PR:** One year of college chemistry; or senior standing and CI. A study in depth of the historical and philosophical aspects of outstanding chemical discoveries and theories. Lec.-dis.

**CHM 4130C Methods of Chemical Investigation I (4) AS CHM**
- **PR:** CHM 3120C, CHM 2211, CHM 2211L, CHM 4068, CHM 4410. Theory and applications of instrumental methods in chemical research, chemical synthesis and analysis; electrochemical and calorimetric techniques, separation methods, spectroscopy, statistical analysis of data, computer data handling, and individual projects.

**CHM 4131C Methods of Chemical Investigation II (4) AS CHM**
- **PR:** CHM 4130C. Continuation of CHM 4130C.

**CHM 4180 Biomolecules I (3) AS CHM**
- **PR:** CHM 2211. Nature, structure, elucidation, synthesis and (in selected cases) organic chemical mechanisms of biochemical involvement of the major classes of organic compounds found in living systems. Lec.

**CHM 4410 Physical Chemistry I (4) AS CHM**
- **PR:** CHM 2046, MAC 2242 or MAC 2282 or MAC 2312, and PHY 2054 or PHY 2049. Thermodynamics, the state of matter and solutions are presented. The course includes a recitation.

**CHM 4410L Physical Chemistry Laboratory (1) AS CHM**
- **PR:** CHM 4410. A physical chemistry laboratory with emphasis on modern techniques and instruments. Lab.

**CHM 4411 Physical Chemistry II (4) AS CHM**
- **PR:** CHM 2046, MAC 2242 or MAC 2282 or MAC 2312, and PHY 2054 or PHY 2049. Introduction to quantum mechanics and molecular spectroscopy. Chemical Kinetics and statistical mechanics are also presented.

**CHM 4412 Physical Chemistry III (3) AS CHM**
- **PR:** CHM 4410. Electrochemistry, kinetic theory of gases, chemical kinetics, surface and nuclear chemistry. Lec.

**CHM 4413 Biological Chemistry (3) AS CHM**
- **PR:** CHM 2046, MAC 2242 or MAC 2282 or MAC 2312, and PHY 2054 or PHY 2049. This course will cover spectroscopy, bonding and kinetics with emphasis placed on biological molecules and biochemical reactions.

**CHM 4611 Advanced Inorganic Chemistry (3) AS CHM**
- **PR:** CHM 3610C and CHM 4410 or CI. An advanced descriptive and theoretical treatment of inorganic compounds. Lec.

**CHM 4905 Independent Study (1-3) AS CHM**
- **PR:** CI. S/U only. Specialized independent study determined by the student’s needs and interests. The written contract required by the College of Arts and Sciences specifies the regulations governing independent study.

**CHM 4932 Selected Topics in Chemistry (1-3) AS CHM**
- **PR:** CI. The course content will depend on the interest of faculty members and student demand.

**CHM 4970 Undergraduate Research (1-3) AS CHM**
- **S/U only.**

**CHM 5225 Intermediate Organic Chemistry I (3) AS CHM**
- **PR:** CHM 2211, CHM 2211L, or equivalent or CI or GS. This course will extend organic chemistry beyond the undergraduate level and will emphasize concepts of stereochemistry and reaction mechanisms.

**CHM 5226 Intermediate Organic Chemistry II (3) AS CHM**
- **PR:** CHM 5225 or CI. An introduction to synthetic organic chemistry for graduate students and advanced undergraduates. Lec. Semester II.

**CHM 5425 Applications in Physical Chemistry (3) AS CHM**
- **PR:** CHM 4412 and CHM 4410 or CI or GS. Applications of chemical theory to chemical systems.

**CHM 5452 Polymer Chemistry (3) AS CHM**
- **PR:** Either CHM 2211, CHM 2211L, and CHM 3400 or CHM 4410 or graduate standing. Fundamentals of polymer synthesis, structure, properties, and characterization.

**CHS 3400 Fundamentals of Clinical Chemistry (3) AS CHM**
- **PR:** BCH 3023. Theoretical and practical aspects of the analysis of various body fluids, with emphasis on the medical significance. Lec.

**CIS 3360 Principles of Information Security (3) US EIT**
- **PR:** Admission to BSAS Concentration. Board review of Information Security and related elements. Includes terminology, history of the discipline, overview of information security program management. Suitable for IS, criminal justice, political science, accounting information systems students

**CIS 3362 Cryptography and Information Security (3) US EIT**
- **PR:** CIS 3360 or permission of instructor. This course examines classical cryptography, entropy, stream and block ciphers, public key versus symmetric cryptography, one-way and trap-door functions, plus other specific tools and techniques in popular operating systems. Students will acquire knowledge and skills to perform audit assessments and implement enterprise-wide operating system security.

**CIS 4250 Ethical Issues And Professional Conduct 6A MW (3) EN ESB**
- **PR:** Senior standing in the Department of Computer Science and Engineering. An introduction to ethical issues arising in the computer sciences, through written analysis and oral presentations of technical situations which involve ethical conflicts.

**CIS 4253 IT Ethics 6A MW (3) US EIT**
- **PR:** Computer skills. This course will cover issues that arise from the world of online communication and its impact on our daily lives through education, processes, and information. Class discussions cover various technologies and issues that are shaping our society.

**CIS 4361 Information Technology Security Management (3) US EIT**
- **PR:** Junior standing or above. An overview of information security management techniques and concerns is presented. Topics include: Access control systems, telecommunications and network security, security management practices, application and systems development security, cryptography, disaster recovery planning, legal and ethical issues, and physical security.

**CIS 4412 Information Technology Resource Management (3) US EIT**
- **PR:** Junior standing or above. An overview of the information resource management function, with emphasis on information systems management, is covered. Topics include planning, organizing and controlling user services, managing information...
CIS 4510 I.T. Project Management (3) US EIT
PR: CI. This course covers the general aspects of project management and emphasizes the important, special considerations that apply to information technology projects. Supporting software is used extensively.
CIS 4900 Independent Study In Computer Science (1-5) EN ESB
PR: EEL 4851C or CDA 3201 and CI. Specialized independent study determined by the needs and interests of the student.
CIS 4910 Computer Science Project (2) EN ESB
PR: EEL 4851C. Projects intended to develop individual interests and abilities in computer science, involving either computer hardware or software aspects of a well defined proposal.
CIS 4930 Special Topics in Computer Science (1-4) EN ESB
PR: EEL 4851C or CDA 3201 and CI.
CIS 4935 Senior Project In Information Technology (3-5) US EIT
PR: Senior Standing in Information Technology. Graduates of the IT program must complete a major project dealing with a subdomain of IT. Projects are supervised by a faculty member, or an approved industrial mentor. Projects range from design to programming, to implementations associated with IT.
CJC 4010 American Correctional Systems (3) AS CJP
PR: Junior standing, CJC 3024 or CJC 3610 or CI. Analysis of the different treatment philosophies and techniques currently in use in the field, with special attention to experimental and demonstration programs.
CJC 4166 Alternatives to Incarceration (3) AS CJP
PR: Junior standing, CJC 3024 or CJC 3610 or CI. This course explores a variety of alternatives to imprisoning the offender, including probation, parole, diversion, and other community-based intervention and treatment approaches.
CJC 4310 Correctional Administration (3) AS CJP
PR: Junior standing, CJC 3024 or CI. The course provides students with an introduction to issues in correctional administration in both institutional and community corrections.
CJC 4410 Intervention Techniques and Strategies (3) AS CJP
PR: Junior standing, CJC 3024 or CI. Introduces the student to theories and methods underlying treatment modalities currently in use in correctional settings.
CJE 4010 Juvenile Justice System (3) AS CJP
PR: Junior standing, CJC 3024 or CJC 3610 or CI. Provides coverage of the juvenile and family courts, their clientele, and the complex of human services agencies and facilities that contribute to efforts at juvenile correctional intervention.
CJE 4044 Police and Juvenile Delinquency (3) AS CJP
PR: Junior standing, CJC 3024 or CI. Focuses on the unique aspects of law enforcement interaction with juveniles and their families. Issues which emerge when working with multi-cultural populations will be discussed. Police efforts at early detection, intervention, and diversion, Interaction with status offenders and children in need of assistance will be a topic of concern.
CJE 4114 American Law Enforcement Systems (3) AS CJP
PR: Junior standing, CJC 3024 or CJC 3610 or CI. Provides a comprehensive examination of the American law enforcement system at the federal, state, and local levels and an assessment of career opportunities within the community.
CJE 4144 Private Security Systems (3) AS CJP
PR: Junior standing plus CJE 4114, CJC 3024, CJC 3610, CJC 3621 or CI. Examines some of the principal methods and techniques currently used to reduce or prevent losses due to theft and casualty.
CJJ 4210 Developmental Aspects of Juvenile Delinquency (3) AS CJP
PR: CJC 3610 and CJE 4010 or CI. Provides the student with a developmental/life course perspective of the processes, events, and factors which occur during childhood and adolescence and cause juvenile delinquency. This course focuses on the conditions which are critical in shaping the delinquent’s behavior during their formative years.
CJJ 4211 Juvenile Substance Abuse (3) AS CJP
PR: Junior standing, CJE 4010 or CI. Focuses on youth and drugs. It will cover such topics as the rates and patterns of the use of different drugs by youths with varying sociodemographic characteristics, the context and effects of use of various drugs, the drugs-crime connection, prevention, early intervention and treatment efforts, and drug use policy.
CJJ 4564 Juvenile Correctional Alternatives (3) AS CJP
PR: Junior standing, CJE 4010 or CI. Focuses on juvenile correctional responses from diversion to the use of secure facilities. How the system attempts to handle status offenders and children in need of supervision will be covered. Diversion, detention, probation, and community-based non-secure facilities will be discussed.
CJJ 3110 Substantive Criminal Law (3) AS CJP
PR: Junior standing, CJC 3024, CJC 3610, or CI. Examines the historical basis of the American criminal law system, the substantive elements of the crime, and court procedures.
CJJ 4074 Correctional Law (3) AS CJP
The course provides students with an introduction to legal issues in the area of corrections, with an emphasis on civil and criminal liability for correctional staff and administrators and on convict’s rights.
CJJ 4115 Environmental Law and Crime (3) AS CJP
PR: Junior standing, CJC 3024 or CI. Focuses on the drugs-crime connection, prevention, early intervention and treatment approaches.
CJJ 4410 Criminal Rights and Procedures (3) AS CJP
PR: Junior standing, CJC 3024 or CI. Emphasizes the Constitutional issues and rules that are applied and enforced by the courts while processing criminal cases.
CJJ 4454 Juveniles’ Rights and Procedures (3) AS CJP
PR: CJE 4010 or CI. Emphasizes juvenile rights and procedures for juveniles processed in the juvenile justice system.
CJJ 4100 Criminal Investigation (3) AS CJP
PR: CJC 3024 or CJC 3610 or CI. Covers the major components of criminal investigation, with special attention to the scientific aspects of criminal investigation and the management of major cases.
CLA 2800 Wordpower from Latin and Greek (3) AS WLE
Study of Greek/Latin elements as a means of building English vocabulary. Examines the Greek/Latin-based terminology from various scientific fields, its adoption into English and current usage. Attention given to Greek/Latin stems, prefixes, suffixes.
CLA 3102 Greek Civilization (3) AS WLE
Study of Greek Civilization from its beginning to the Roman period, with emphasis on social customs, political institutions, and daily life.
CLA 3124 Roman Civilization (3) AS WLE
Study of Ancient Roman Civilization with emphasis on social customs, political institutions, and daily life.
CLA 3501 Women in Antiquity 6A LW (3) AS WLE
The life of women in the ancient Greek and Roman world, through lecture, video, and slide presentations. The course is not restricted to majors and cannot be repeated for credit.
CLA 3930 Selected Topics (3) AS WLE
An examination of various aspects of Greek and Roman Culture, literature, history on ancient sources, literary and archaeological. Repeatable as topics vary.
CLA 4930 Selected Topics (1-4) AS WLE
The content depends on student demand and instructor’s interest and may range over the whole field of ancient languages, literatures and civilizations. Offerings on a semi-regular basis include Tongues of the Bible and the Bible as History.
CLP 2001 Psychology of Adjustment SS (3) AS PSY
Genetic, organic, and learned factors involved in the processes of personal adjustment; applications of mental health principles to everyday living.
CLP 4143 Abnormal Psychology (3) AS PSY
PR: PSY 3213 with a grade of C or better or CI. Descriptions, theoretical explanations, research evidence, and treatment of maladaptive behavior.
CLP 4144 Behavior Modification (3) AS PSY
PR: PSY 3213 with a grade of C or better or CI. Introduction to behavior analysis, and application of learning principles, behavioral measurement, research designs, and interventions in treatment of mental disorders.
CLP 4433 Psychological Tests and Measurement (3) AS PSY
PR: PSY 3213 with a grade of C or better or CI. Students may not receive credit for both CLP 4433 and EDF 4430. A consideration of the instruments and personality assessment including their applications, development, and potential abuses.
CLT 3040 Scientific and Medical Terminology (3) AS WLE
A course in the Greek and Latin word elements used in science and technology.
CLT 3101 Greek Literature in Translation 6A MW (3) AS WLE
Reading and discussion of major works in Greek literature. Special emphasis on the Iliad, the dramatists Aeschylus, Sophocles, Euripides and Aristophanes. Some attention is given
Some attention is given to the political background of the works. Reading and discussion of major works in Roman literature are in English. to the social and political background of the works. All readings are in English. Special emphasis is placed on the Aeneid, comedy and satire. Some attention is given to the political background of the works. All readings are in English.

CLT 3370 Classical Mythology HP (3) AS WLE
Study of Greek and Roman myths embodied in classical literature and of their impact on Western civilization. All readings are in English.

COM 2000 Introduction to Communication SS (3) AS SPE
Introduction to the roles, contexts, and issues in contemporary human communication. Required of Communication majors.

COM 3014 Communication, Gender and Identity (3) AS SPE
PR: COM 2000 with C or above or consent of instructor (CI). Examines the communicative origins and implications of gender roles.

COM 3110 Communication For Business and the Professions (3) AS SPE
For non-majors only. Identification of communication situations specific to business and the professions. Analysis of variables related to communication objectives and preparation of oral presentations in the form of informational reports, conference management, persuasive communications, interviews, and public hearing.

COM 3120 Introduction to Communication Theory in Organizations (3) AS SPE
PR: COM 2000 with C or above or consent of instructor (CI). A survey of communication concepts which impact upon organizational effectiveness.

COM 3122 Interview Communication (3) AS SPE
Student must sign up for a one-hour lab if registering for day-time mass lecture class. A study of communication theory relative to interview situations with emphasis on the employment interview, appraisal interview, and persuasive interview. Student must sign up for on a one-hour lab unless registered for night section of 3122.

COM 3122L Interview Communication Lab (0) AS SPE
Students must take this course in conjunction with the mass lecture COM 3122 offered during day. Interview laboratory for practice and individual consultation. Open to majors and non-majors.

COM 4020 Communicating Illness, Grief, and Loss 6A (3) AS SPE
PR: COM 2000 with C or above or consent of instructor (CI). Focus on stories of illness, grief, and loss to make sense of these experiences; to understand the cultural and rhetorical influences on how stories are told; and to explore the context of everyday life, romantic relationship, families, institutions, and culture in which they occur.

COM 4022 Health Communication (3) AS SPE
PR: COM 2000 with C or above or consent of instructor (CI). Application of communication theory and research to the health context including provider-patient communication, health information campaigns, and health beliefs and behavior. Special attention to the value issues in health communication.

COM 4030 Women and Communication 6A WM (3) AS SPE
Examines women's patterns of communication in a variety of contexts. Also offered under Women's Studies.

COM 4124 Communication and Organizational Change (3) AS SPE
PR: COM 2000 with C or above and COM 3120 or consent of instructor (CI). An advanced course covering current issues in organizational transformation (e.g., organizational dialogue, learning organizations, reengineering, work teams), and the role communication processes play in such changes.

COM 4710 Writing Lives 6A (3) AS SPE
PR: Junior/Senior standing or CI. Emphasizes writing stories about our lives and the lives of others as a way to understand, cope with and communicate social experiences.

COM 4942 Communication Intern Seminar (3) AS SPE
PR: Communication major, minimum GPA 3.0, 75 hours completed, 15 hours of core requirements and 9 elective hours completed. Seminar provides students with an opportunity to put into practice concepts and skills acquired in their study of communication. Weekly seminar sessions augment intern experience. Application for seminar must be submitted one semester prior to seminar offering.

COM 5930 Topics in Communication Studies (3) AS SPE
Topical issues in communication.

COP 2120 SC Cobol Programming I (3) EN ESB
Analysis of ANSI Standard COBOL language elements. Development of file structures and commercially oriented applications.

COP 2121 SC Cobol Programming II (3) EN ESB
PR: COP 2120. Advanced applications of ANSI Standard COBOL. Development of subroutines, relative I-O and data base applications as used in a comprehensive data processing environment.

COP 3219 Programming Concepts (3) EN ESB
PR: MAC 2281 or equivalent. An examination of a modern programming language emphasizing programming concepts and design methodology.

COP 3377 JAVA for Experienced Programmers (3) EN ESB
PR: COP 3514 or equivalent. Program design and development using the JAVA programming language. Comparison of program design in a procedural language (C recommended) versus design in the JAVA language. Application development using advanced programming techniques.

COP 3333 Visual Basic for Experienced Programmers (3) EN ESB
PR: COP 3514. Program design and development using the Visual Basic language and application development tools. Application development using advanced programming techniques where visual presentation is a priority element.

COP 4514 Program Design (3) EN ESB
PR: COP 2510 or comparable introductory programming course and DPR. The class extends students' programming knowledge by systematically considering the concepts involved in program design and creation. Students will also build upon their previous programming experience by learning to use the C programming language in a networked environment.

COP 3515 Program Design for Information Technology (3) US EIT
PR: COP 2510 or CI. Concepts associated with the design and implementation of comprehensive information systems are studied, with emphasis on creation of programs to be developed and maintained in a variety of environments from small to large information technology organizations.

COP 4020 Programming Languages (3) EN ESB
PR: EEL 4851C. An introduction to programming languages, survey of language types and design of translators and compilers.

COP 4313 Symbolic Computations in Mathematics 6A (3) AS MTH
PR: MAS 3105 and MAP 2302. Students will write programs to solve problems in various areas of mathematics including calculus and linear algebra with symbolic programming systems such as Maple, Mathematica, or Macsyma.

COP 4600 Operating Systems (3) EN ESB
PR: EEL 4851C. Introduction to systems programming. Design of operating systems. Concurrent processing, synchronization, and storage management policies.

COP 4610 Operating Systems for Information Technology (3) US EIT
PR: EEL 4854 or CI. Introduction to concepts and practices of modern operating systems. Topics include process, parallelism, memory management, resource allocation and file systems. Algorithms are used to understand many of the concepts associated with modern operating systems.

COP 4610L Operating Systems Laboratory for Information Technology (1) US EIT
PR: EEL 4854 or CI. Implementation and evaluation of models discussed in the lecture part of the course. Students implement operating system algorithms in stand-alone mode, and modify real operating system code. Students implement and test algorithms in a lab environment.

COP 4793 Database Systems for Information Technology (3) US EIT
CR: EEL 4854 or CI. Fundamentals of database management systems are presented, covering relational, CODASYL, network, hierarchical, and object-oriented models. Topics include basic design concepts, analysis of efficiency as well as actual implementations of such systems.

COP 4814 Web Services (3) US EIT
PR: CI. The Web services model, based on the Open Standards of SOAP, WSDL, and UDDI, is studied and applied.

COP 4816 XML Applications (3) US EIT
PR: CI. Completion of prerequisites for admission to IT program. The Extensible Markup Language (XML), a technology for exchanging structured information over the Internet, and examines a sampling of its many applications.

COP 4834 Data-Driven Web Sites (3) US EIT
PR: CI. Completion of prerequisites for admission to IT program. Junior standing or above. This course builds on students' knowledge of Web development and databases by adding server-side scripting using the PHP language to interact with the MySQL database system to build transaction processing and report generating systems over the Internet.
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<th>Course Code</th>
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<td>CPO 4835</td>
<td>Web Development Tools (3) US EIT</td>
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<td>COT 4400</td>
<td>Analysis Of Algorithms (3) EN ESB</td>
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<td>Information Technology Seminar (1-3) US EIT</td>
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<td>Automata Theory and Formal Languages (3) EN ESB</td>
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<td>Capstone Water Resources/Environmental Design MW (3) EN EGX</td>
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<td>Selected Topics in Creative Writing (3) AS ENG</td>
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DAA 3614 Music For Dance (2) VP DAN
PR: DAA 3614. CR: DAA 3108. The study of dance-related techniques. Emphasis will be placed on the understanding of music and dance, and on the development of basic principles of composition. Preparation of studies in theme and variations, rhythm, form and vocabulary. May be repeated.

DAN 3686 Junior Performance Project (1) VP DAN
PR: Admission. Open only to university students proficient in dance techniques. Involves rehearsal and performance of works presented by the department. May be repeated.

DAN 4687 Performance (1-2) VP DAN
PR: Admission by audition. Open only to university students proficient in dance techniques and concurrently enrolled in Technique. Involves rehearsal and performance of works presented by the department. May be repeated.

DAA 4694 Senior Choreography Project (1) VP DAN
PR: Dance majors with senior standing. The creation of an original group work and solo within the senior's major concentration—ballet or modern. To be performed and presented with the concurrence of the faculty advisor.

DAA 4920 Dance Studies (1-4) VP DAN
CR: CI and CC. Open to all university students. May be repeated.

DAP 4855 Performance (1-3) VP DAN
CR: CI and CC. Major status. Individual study to extended competency in technique and performance of Dance through participation in special workshops.

DAP 3651 Ethnic/Folk Dance (2) VP DAN
344 USF Course Descriptions

DAA 4920 Internship in Dance Education  (1-12) VP DAN
CR: DAE 4936. S/U only. One full semester of internship in a public or private school. In special programs where the intern experience is distributed over two or more semesters, students will be registered for credit which accumulates from 9 to 12 semester hours.

DAN 2100 Introduction To Dance 6A 6A (3) VP DAN
CR: CI and CC. A study of the art and language of dance through lectures, discussions, concert attendance, and studio practice. Designed to develop awareness and insight of this art form through discussion, observation, and movement experiences.

DAN 2100 Internship Seminar in Dance Education  (2) VP DAN
CR: DAN 3109. May be repeated.

DAA 4615 Choreography II (2) VP DAN
PR: DAA 3615. Preparation of studies in rhythm, dynamics, form and motivation. May be repeated.

DAN 4116 Modern Dance IV (3-4) VP DAN
PR: Admission by auditions. Open to all university students proficient in dance techniques and concurrently enrolled in Technique. Involves rehearsal and performance of works presented by the department. May be repeated.
DAN 4134 Dance History Though the 19th Century 6A LW (3) VP DAN
Designed for majors and non-majors, this course will present a comprehensive view of the evolution of dance as an art form from its origins through the 19th Century. It is designed to develop awareness and insight through lecture, discussion, video, observation and writing.

DAN 4135 20th Century Dance MW (3) VP DAN
Designed for majors and non-majors, this course will trace the development of dance as an art form in the 20th Century. It is designed to develop awareness and insight through lecture, discussion, video, observation and writing. Students will be required to attend at least two dance performances.

DAN 4162 Research in Dance (2) VP DAN
PR: Dance major with Junior standing, and completion of two courses in secondary area. Course will introduce basic research methodologies for conducting research in the dance genre, and will serve the student in preparing for future research based study in the field of dance. Students will conduct library, internet, and field research.

DAN 4181 Dance Senior Seminar (2) VP DAN
PR: Dance major with senior status. A study of career opportunities in performance, teaching, research, design, and choreography. To aid majors in self-appraisal as artists and develop methods to further their potential in the professional world. Discussion, critical evaluation and projects.

DAN 4404 Laban Movement Analysis (3) VP DAN
Specialized study in movement theories, body alignment, and movement patterns focusing on the scientific and analytical basis of movement in dance with consideration for developmental processes, technique, creative expression, and performance.

DAN 4784 Special Study in Movement, Theory, Body Alignment (2) VP DAN
Analysis of scientific basis of movement for the dancer through the study of body alignment and movement theories related to dance technique.

DAN 4906 Directed Study (1-5) VP DAN
PR: CI, CC. Independent studies in the various areas of Dance. Must receive approval prior to registration. May be repeated.

DAN 4930 Select Topics in Dance (1-5) VP DAN
PR: CI and CC. The content of the course will be governed by student and instructor interest. May be repeated by majors.

DEC 4161 Program Management of Distributive and Marketing Education (3) ED EDV
The study of the purposes, processes, organization, planning, directing, coordinating and evaluation of Distributive and Marketing Education Cooperative Programs.

DEC 4941 Supervised Field Experience: Distance Education (1-6) ED EDV
Planned supervised functions in the area of specialization and coordinated with selected schools, government offices, social agencies, businesses and industries on site.

DEP 2004 The Life Cycle (3) AS GEY
An examination of individuals and the physical, personal, psychological, and social changes which occur throughout the life cycle.

DEP 3103 Child Psychology SS (3) AS PSY
Not for major credit. Developmental and psychosocial aspects of childhood, including hereditary, maturational, psychological, and social determinants of child behavior.

DEP 4053 Developmental Psychology (3) AS PSY
PR: PSY 3213 with a grade of C or better or CI. Survey of methods, empirical findings, and theoretical interpretations in the study of human psychological development. May be repeated for a maximum of 6 hours.

DEP 4135 Psychology of Language Development (3) AS PSY
PR: PSY 3213 with a grade of C or better or CI. Available both to majors and non-majors. Surveys the course of and processes underlying normal language development. Present data and theory on phonological, semantic, syntactic, and pragmatic development.

EAB 4715 Supervised Practicum and Field Experience in Applied Behavior Analysis (1-6) AS PSY
PR: PSY 4933 with a grade of B or better. Does not count toward major credit. (S/U only). Field experience in Behavior Analysis in applied settings. Under the supervision, involves the design, implementation and evaluation of behavior analysis methods in applied settings. Includes both field practicum and didactic components. May be repeated for a maximum of 6 hours.

EAP 1850 English for Foreign Students I (3) AS WLE
A special course for students learning English as a second language. Intensive study and drill in American English pronunciation and listening comprehension.

EAP 1851 English for Foreign Students II (3) AS WLE
PR: EAP 1850 or CI. A continuation of EAP 1850. Emphasis on reading and composition.

EAS 4121 Hydro and Aerodynamics (3) EN EGR
PR: EML 3701, MAP 2302. Advanced fluid dynamics, ideal and viscous flows, applications to flow around immersed bodies.

ECH 3023C Material and Energy Balances (4) EN ECH
PR: PHY 2049, MAC 2312 or MAC 2313. Integration of previous knowledge into the definition of reactors and separation processes, through the hierarchical use of material balance, phenomenological and energy balance equations. Representation of processes as arrows in Box Flow Diagrams, BFD. Application of degree of freedom analysis.

ECH 3242L Chemical Engineering Lab I (1) EN ECH
PR: ECH 3023C, ENC 3246, EGN 3443 The theory and application of chemical engineering experimental methods: density, temperature, flow, pressure, viscosity, refractive index, humidity, gaseous and liquid composition, and pH/ION selective electrodes (ISE) analysis.

ECH 3702 Instrument Systems I (3) EN ECH
PR: MAP 2302 or ECH 3433, EGN 3343 and ECH 3023C or CI. Basic concepts of electric circuits and their applications. Resistors, capacitors, inductors, logic operations, junction devices. Programmable Logic Controllers (PLC).

ECH 4123 Chemical Engineering Thermodynamics (3) EN ECH
PR: ECH 3023, ECH 3433, MAP 2302 or ECH 3433. Correlation of thermodynamic properties of real systems and solutions. Description of multicomponent, multiphase systems in equilibrium. Applications to separation processes and reactor design.

ECH 4243L Chemical Engineering Lab II (1) EN ECH
PR: ECH 4265C, ECH 3242L. Chemical Engineering processes laboratory experiments: fluid flow, heat transfer, phase and chemical equilibria, reacting systems, and process control.

ECH 4244L Chemical Engineering Lab III (1) EN ECH
PR: ECH 4415C, ECH 4243L. Chemical Engineering Processes laboratory experiments: fluid flow, heat transfer, reacting systems, and process control. Majors only. Not repeatable for credit.

ECH 4264 Transport Phenomena (4) EN ECH

ECH 4265C Mass Transfer Operations (4) EN ECH
PR: ECH 4845, ECH 4264, ECH 4123. Integration of phase equilibria with the principles of fluid mechanics, heat and mass transfer in the description of separation processes. Selection of the number of stages and limiting operating conditions in cascades — NTU and HTU. Sizing of partial condensers and pressure differentials in columns. Transfer to single particles.

ECH 4323 Process Dynamics and Control (3) EN ECH

ECH 4415C Reaction Engineering (4) EN ECH
PR: CHM 2210, ECH 4265C. Integration of chemical equilibrium and kinetics, heat transfer and fluid mechanics into the hierarchical description of reacting systems. Analysis and selection of operating conditions and contacting models. Sizing. Restricted to department majors.

ECH 4605 Product and Process Systems Engineering (3) EN ECH
ECH 4615 Product and Process Design MW (3) EN ECH PR: ECH 4415C, ECH 4605, CP: ECH 4323C. Synthesis and analysis of economically feasible and environmentally acceptable chemical processing routes; Design of safe chemical production and treatment facilities; Chemical product design; Computer aided design studies and Design Project.


ECH 4905 Independent Study (1-4) EN ECH PR: CI. Specialized independent study determined by the student's needs and interests. Students must have contract with instructor.

ECH 4930 Special Topics in Chemical Engineering I (1-4) EN ECH PR: CI.

ECH 4931 Special Topics in Chemical Engineering II (1-4) EN ECH PR: CI.


ECH 5320 Chemical Process Engineering I (4) EN ECH PR: Bachelors degree in science, math, or engineering. The course presents the principles of mass balances, classical thermodynamic phase equilibria, energy balances, and psychrometrics. The student will learn by doing many case studies. Computer software will be used to obtain solutions to many problems.

ECH 5321 Chemical Process Engineering II (4) EN ECH PR: Bachelors degree in science, math, or engineering. Basic concepts of fluid mechanics, including viscous flows, pipe flow with minor losses, simple fluid machinery, momentum and external flow, steady-state conductive and convective heat transfer. Not available for chemical engineering students.

ECH 5322 Chemical Process Engineering III (4) EN ECH PR: Bachelors degree in science, math, or engineering. Basic concepts of fluid phase equilibrium, chemical equilibrium, separation processes, and chemical reactors. Not available for chemical engineering students.

ECH 5323 Chemical Process Control (4) EN ECH PR: Bachelors degree in science, math, or engineering. Basic concepts of feedback control, process dynamics, process controllers (PID) including tuning, control loop stability, cascade, ratio, selective, override, feedforward, and multivariable control. Not available for chemical engineering students.

ECH 5324 Automatic Process Control II (3) EN ECH PR: ECH 4323C or CI, majors only / 2 hrs lec., 3 hrs. lab/week. The course covers the root locus and frequency response methods to study stability of control loops. The techniques of ratio, cascade, feed forward, selective, override, and multi-variable control techniques are discussed in detail and shown how to utilize to design control systems, z-transforms and discrete controllers including PID, Dahlin and deadline compensation.

ECH 5740 Theory and Design of Bioprocesses (3) EN ECH Introduction to biotechnology, including applied microbiology, enzyme technology, biomass production, bio reactor design, and transport processes in biosystems.

ECH 5747C Selected Topics in Chemical Engineering Biotechnology (1-3) EN ECH PR: Senior or GS standing in engineering or CI. Open to majors and non-majors with CI. Selected topics in engineering in biotechnology, including cell separation technology, immobilized enzymes and cells, food engineering, biohazardous waste, and bioseparations.

ECH 5748 Selected Topics in Biomedical Engineering (1-3) EN ECH Selected topics in biomedical engineering, including biomedical engineering, biomedical materials, biodynamics of circulation, separation processes in biomedical systems, and artificial organ systems.

ECH 5820 Product Development (2) EN ECH PR: Senior or GS in Engineering or CI. Introduction to the development of consumer products, including the history of innovation, creativity development, the product development environment, and a detailed examination of several product areas.

ECH 5930 Special Topics III (1-4) EN ECH PR: CI.

ECH 5931 Special Topics IV (1-4) EN ECH PR: CI.

ECH 1000 Basic Economics SS (3) BA ECN Not available after completing either ECO 2023 or ECO 2013. Survey of economic principles and issues. Scarcity, choice, markets, prices, the monetary system, unemployment, inflation, international trade and finance.

ECO 2023E Economic Principles (Microeconomics) SS (3) BA ECN Introduction to the theory of income determination with emphasis on monetary and fiscal policies. Objectives of full employment, price stability, economic growth and balance of payments stability.

ECO 2033E Economic Principles (Macroeconomics) SS (3) BA ECN Introduction to the theory of price determination. How an economy decides what to produce, how to produce, and how to distribute goods and services.

ECO 2935 Selected Topics In Economics (1-3) BA ECN Not available for credit to upper-level students admitted to the College of Business. Topics selected by department. May be repeated if topics vary.

ECO 3100 Managerial Economics (3) BA ECN PR: ECO 2023. Application of microeconomic theory to problems in business decision making with a special focus on price determination. May not receive credit for both ECO 3100 and 3101.

ECO 3101 Intermediate Price Theory (3) BA ECN PR: ECO 2023. The price system and allocation of scarce resources between competing uses. May not receive credit for both ECO 3101 and 3100.

ECO 3203 Intermediate Macroeconomics (3) BA ECN PR: ECO 2013 and ECO 3100 or ECO 3101 with a grade of "C" or better. Determination of income, employment, prices, and interest rates. Aggregate demand and aggregate supply.


ECO 4105 Advanced Price Theory (3) BA ECN PR: ECO 3100 or ECO 3101 with a grade of "B" or better. An advanced survey of special topics in microeconomics: borrowing and saving, decision making under uncertainty, markets for capital and labor, game theory, production and exchange efficiency, social welfare, and efficiency consequences of market and non-market allocation.

ECO 4201 Advanced Macroeconomic Theory (3) BA ECN PR: ECO 3203 with a grade of "B" or better. An advanced analysis of a particular topic or topics in macroeconomics. Areas of study include monetary and fiscal policy, macroeconomic factors and business cycles. Discussions of how such theories accord with the data are also presented.


ECO 4323 Radical Political Economy MW (3) BA ECN PR: ECO 1000 or ECO 2013 or ECO 2023 or CI. The radical (left) and Marxist schools of thought in economics. Application of radical theory to problems of advanced capitalist and socialist societies.

ECO 4401 Introduction to Mathematical Economics (3) BA ECN PR: ECO 3100 or 3101, and MAC 2241 or MAC 2233 or CI. Mathematical models of optimizing behavior and economic equilibrium.

ECO 4421 Introduction to Econometrics (3) BA ECN PR: ECO 3100 or 3101, and QMB 2201 with a grade of "B" or better or CI. Survey of basic econometric techniques. Regression analysis employed to estimate consumption, investment, demand, cost, and production functions. Examines problems of auto-correlation, heteroscedasticity, multicollinearity, and specification errors.


ECO 4713 International Macroeconomics (3) BA ECN PR: ECO 3100 or ECO 3101 with a grade of "C" or better. Advanced analysis of international macroeconomic relationships.
Foreign exchange market, international monetary system balance of payments. Not repeatable.

ECO 4723 International Trade and Policy (3) BA ECO
PR: ECO 3100 or ECO 3101 with a grade of “C-” or better. Advanced analysis of international trade theory and commercial policy, international economic integration, multinational enterprise.

ECO 4905 Independent Study (1-3) BA ECO
PR: CI. S/U only. Specialized independent study determined by the student’s needs and interests. May be repeated up to 6 hours.

EDE 4914 Independent Research (1-3) BA EDE
PR: CI. Individual study contract with instructor and department chairperson required. The research project will be mutually determined by the student and instructor. May be repeated up to 6 hours.

EDE 4935 Selected Topics in Economics (1-3) BA EDE
Topics to be selected by the instructor or instructors on pertinent economic issues.

ECP 3201 Economics of Women and Work MW (3) BA ECO
PR: ECO 1000 or ECO 2013 and ECO 2023. Survey of research on women, men and work in the labor market and the household. Focuses on the economic status of women. Includes historical perspective, examination of the family as an economic unit, changing work roles, and gender differences in occupation and earnings.

ECP 3613 Labor Economics (3) BA ECO
PR: ECO 3100 or ECO 3101 with a grade of “C-” or better. Determinants of wage and employment levels; occupational, industrial and geographical wage differentials; union and public policy effects on labor markets; the economics of discrimination; industrial and geographical wage differentials; union and public policy effects on labor markets; the economics of discrimination; labor relations.

ECP 3302 Environmental Economics MW (3) BA ECO
PR: ECO 2023. An economic analysis of environmental issues. The economics of resource use and pollution control are examined using the concepts of externalities, cost-benefit analysis, public goods, and property rights.

ECP 3413 Economics of Regulation and Antitrust (3) BA ECO
PR: ECO 2013 and ECO 2023. Economic analysis of the rationales and performance of government regulation and antitrust policy. Examination of antitrust issues such as price fixing, mergers, and monopolization, and issues regulating electric utilities, airlines, trucking, consumer product safety, product quality, and the environment.

ECP 3530 Economics of Health (3) BA ECO
PR: ECO 3100 or ECO 3101 with a grade of “C-” or better. Application of economic methods to health care topics such as demand for medical care, public and private health insurance, physician and hospital supply of medical care, government regulations, and national healthcare systems.

ECP 3531 Economics of the Urban Environment MW (3) BA ECO
PR: ECO 1000 or ECO 2013 or ECO 2023 or CI. Economic analysis of cities and urban social problems. Poverty, discrimination, housing, transportation, pollution, crime, and fiscal considerations.

ECP 4232 Collective Bargaining and Public Policy (3) BA ECO
PR: ECO 2023 or CI. Administration of labor management agreements. Impact of the government role in collective bargaining and labor relations.

ECP 4451 Law and Economics (3) BA ECO
PR: ECO 2013 and ECO 2023. Advanced analysis of the economic impact of tort, criminal, property, and contract law as well as in the formation and adjudication of law.

ECP 4505 Economics of Crime (3) BA ECO

ECS 3013 Economic Development (3) BA ECO

ECS 4003 Comparative Economic Systems MW (3) BA ECO
PR: ECO 1000 or ECO 2013 or ECO 2023 or CI. The major economic systems: traditional, capitalism, democratic socialism, communism and fascism.

ECS 4330 Economics of Latin America AF MW (3) BA ECO
PR: ECO 1000, or BOTH ECO 2013 and ECO 2023. The course examines key aspects of economic reform efforts in Latin America and the Caribbean and the challenges facing the region at the beginning of the 21st century.

EDE 4223 Creative Experiences for the Child (3) ED EDE
PR: Acceptance into College of Education. Provides students with critical understanding of visual arts, music, movement, and drama in K-6 curriculum. Students will develop knowledge and strategies to incorporate creative expression into integrated curriculum. Restricted to majors. Not repeatable.

EDE 4301 Classroom Management, School Safety, Ethics, Law and Elementary Methods (3) ED EDE
PR: Admission to the program in the Department of Childhood Education. This course examines the legal issues affecting classroom/school management, school safety, professional ethics and elementary school methods. The course explores the current knowledge of best practices of a variety of teaching and management strategies and methods deemed appropriate for a diverse elementary classroom setting including ESOL students and other exceptionalities.

EDE 4905 Independent Study: Elementary Education (1-4) ED EDE
S/U only. Specialized independent study determined by the student’s needs and interests.

EDE 4909 Directed Study: Elementary Education (1-4) ED EDE
PR: Senior standing. To extend competency in teaching field.

EDE 4940 Internship: Elementary Education (10-12) ED EDE
PR: EDE 4941 and EDE 4942; CR: EDE 4936. S/U only. Teacher candidate is required to demonstrate professional competencies during one semester of full day internship in a public or private elementary school.

EDE 4941 Childhood Education Internship Level I (3) ED EDE
PR: Admission to the Elementary Education. CR: RED 4310. EDG 4260. Concurrent enrollment in an EDE classroom section. S/U only. Students spend six hours per week in a supervised in-school experience and attend weekly seminar.

EDE 4942 Childhood Education Internship Level II (6) ED EDE
PR: EDE 4941; RED 4360; EDF 4260; LAE 4314, EDE 4301, MAE 4310, SCE 4310, LAE 4414, SSE 4313, EME 2040. S/U only. Students spend 12 hours per week in a supervised internship experience in classroom settings and attend a weekly seminar.

EDE 5005 Introduction to Education and Field Experience (3) ED EDE
Introductionary survey course required for admission into the College of Education. A broad overview of the history, sociology and philosophy of education in the United States focuses on education as a field of study and teaching as a profession. Includes lecture and field experience.

EDE 3122 Learning and the Developing Child (3) ED EDF
PR: General psychology and admission to College of Education. Preadolescent child growth and development, learning theory, and behavioral analysis applied to instruction and to the organization and management of classroom.

EDE 3214 Human Development And Learning (3) ED EDF
PR: General psychology and admission to College of Education. Application of respondent and operant learning principles to classroom learning, teaching models for different instructional goals, analysis of teacher behavior, micro-teaching.

EDE 3228 Human Behavior and Environmental Selection 6A MW (2-3) ED EDF
Learning principles, behavior analysis applied to global environmental and social issues. Requires elementary computer word processing skills.

EDE 3514 History of Education in the United States HP MW (3) ED EDF
PR: Upper-division standing. History of childhood, education, and schooling in the U.S. from early European and African contact to the present.

EDE 3604 Social Foundations of Education MW (3) ED EDF
PR: Upper level standing. Social, economic and political context within which schools function and the values which provide direction for our schools.

EDE 4111 Child Growth and Learning (3) ED EDF
An introduction to child development and learning from an educational and psychological perspective. Emphasis is on the application of relevant constructs as they would reflect developmentally appropriate practices in early childhood learning settings.

EDE 4131 Learning And The Developing Adolescent (3) ED EDF
PR: General psychology and admission to College of Education. Adolescent growth and development, learning theory, and behavioral analysis applied to instruction and to the organization and management of the classroom.

EDE 4431 Measurement and Evaluation (3) ED EDE
PR: Upper level standing. Concepts and skills related to designing and developing classroom tests; evaluating tests, instruction, and student progress; and communicating student achievement. Including application of performance assessment techniques.
and computer applications for measuring and assessing pupil progress.

**EDF 4490 Studies in Research Design (3) ED EDF**
Studies in Research Design introduces students to the logic and dynamics of the research process.

**EDF 4900 Independent Study: Educational Foundations (1-4) ED EDF**
PR: DPR. S/U only. Specialized independent study determined by the student's needs and interests.

**EDF 4909 Directed Study: Educational Foundations (1-3) ED EDF**
PR: Senior Standing. Offered only as a scheduled class. To extend competency in teaching field.

**EDF 5907 Trends in the Social-Political Foundations of Schooling in US (3) ED EDF**
Current debates re: purpose and practice of formal schooling in the U.S. with historical and sociological perspectives. Satisfies social foundations requirements for Fla. Teacher certification and ESL competency in knowledge of intercultural issues in education.

**EDG 2701 Teaching Diverse Populations and Field Experience (3) ED EDC**
Introductory survey course required for admission into the College of Education. Places schools and teaching within the context of the U.S. as a pluralistic society. Topics include: the demographics of diversity; prejudice; elements of culture; American heritage of diversity and its value; and barriers to cultural understanding. Includes lecture and field experience.

**EDG 4320 Introduction to Creative Drama (3) VP EDD**
This course for classroom teachers introduces the theory and practice of creative drama as it is used to teach by elementary, middle school and secondary school teachers. Beginning with a study of dramatic play as it relates to human development, the course includes basic strategies when using pantomime, voice improvisation, theatre games, and role playing and story dramatization.

**EDG 4620 Curriculum and Instruction (3) ED EDC**
An introduction to the field of curriculum and instruction. Emphasis is placed on principles of curriculum development and use of instructional strategies. Students will develop, implement, and evaluate a variety of lesson plans.

**EDG 49**
**Directed Studies (1-4) ED EDC**
PR: Senior standing. Offered only as a scheduled class. Department permit required. To extend competency in teaching field.

**EEC 2000 Introduction to Early Childhood Education (3) ED EDU**
An overview of early childhood education with emphasis on its historical development, current theories, and practices.

**EEC 4008 Literature in Early Childhood Education 6A LW (3) ED EDF**
Jr./Sr. Standing. Emphasis is placed on developing knowledge of literature for younger children (0-8 yrs.) and methodologies and strategies for utilizing literature to teach literacy in content areas of the curriculum.

**EEC 4203 Programs for Young Children (3) ED EDU**
PR: Admission to College of Education. Early Childhood majors only. Develops students' understanding of historical and social foundations of early childhood education, establishing professional beliefs regarding teaching young children, and developing an appropriate learning environment.

**EEC 4211 Integrated Curriculum: Science and Mathematics (3) ED EDU**
PR: Admission to College of Education, EDF 4111. Early Childhood majors only. Develops an understanding of science and mathematical concepts for the appropriate stages of cognitive development of young children. Emphasis will be placed on how science and mathematics are integrated throughout the curriculum and become valued functional tools.

**EEC 4212 Integrated Curriculum: Social Sciences/Humanities & Art (3) ED EDU**
PR: Admission to College of Education, EDF 4111. Early Childhood majors only. Develops an understanding of integrated curriculum experiences in social science, humanities, and arts for kindergarten and primary grades with an emphasis on integrated experiences, and sociological influences such as culture, ethnicity, language and gender impact understandings, values, and learning.

**EEC 4300 Creative Experiences for Young Children (3) ED EDU**
PR: Admission to College of Education, EDF 4111. Early Childhood majors only. Emphasizes theoretical and practical aspects of cognitive development for children ages 3 through 6 with a focus on planning integrated experiences and content in science, mathematics, and social sciences.

**EEC 4303 Creative and Affective Experiences for Young Children (3) ED EDU**
PR: Admission to College of Education. Early Childhood majors only. Develops students' understandings of young children's creative expression through art, music, movement, play and dramatic play. Emphasizes how to plan, implement, and evaluate appropriate learning experiences as well as selection of appropriate instructional materials.

**EEC 4406 Child, Family & Teacher Relations (3) ED EDU**
PR: Admission to College of Education, EDF 4111. Early Childhood majors only. Focuses on developing an understanding of traditional and non-traditional families, structural and lifestyle variations and parenting in diverse cultures and at-risk families. Emphasis will be placed on developing an understanding of the dynamics of a parent involvement plan that includes effective ways to communicate with parents, conference with parents, and plan parent meetings and home visits.

**EEC 4706 Language and Emerging Literacy (3) ED EDU**
PR: Admission to College of Education, EDF 4111. Early Childhood majors only. Provides knowledge of language development and emerging literacy for typical and atypical development in children from birth to third grade, including ESOL children.

**EEC 4905 Independent Study: Early Childhood Education (1-4) ED EDC**
PR: S/U only. Early Childhood majors only. Specialized independent study determined by the student's needs and interests.

**EEC 4909 Directed Study: Early Childhood Education (1-3) ED EDF**
PR: Senior standing. To extend knowledge in teaching field.

**EED 4936 Senior Seminar in Elementary Early Childhood Education (2) ED EDU**

**EED 4940 Internship: Early Childhood (10-12) ED EGU**
CR: EEC 4936. S/U only. Teacher candidate is required to demonstrate professional competencies during one semester of full-day internship in a public or private elementary school.

**EED 4941 Field Experience I (3) ED EDU**
PR: Admission to College of Education. Early Childhood majors only. Field placement with three and four year olds where teacher candidates have opportunities to apply knowledge and skills in authentic situations and become objective observers of young children's development. Weekly seminars are conducted in conjunction with the field experience which provide teacher candidates an opportunity for reflection on their understandings.

**EED 4942 Field Experience II (3) ED EDU**
PR: Admission to College of Education, EDF 4111. Early Childhood majors only. Field placement in kindergarten or primary grade where teacher candidates have opportunities to apply knowledge and skills in authentic situations. Focus on developing deeper understanding of growth and development and relationship to curriculum planning with an emphasis on self-evaluation of knowledge, skills, and dispositions essential for teaching.

**EED 4011 Introduction to Behavior Disorders (3) ED EDU**
PR: XEX 4011, or equivalent or DPR. Survey of emotional, behavioral and social disorders in children and youth. History of the field, definitions, classifications, theoretical approaches, intervention techniques, classroom management, service delivery models, trends and issues.

**EED 4909 Directed Study: Behavior Disorders (1-3) ED EDS**
PR: Senior standing, DPR. To extend knowledge in teaching field.

**EED 4931 Undergraduate Supervised Practicum in Behavior Disorders (1-6) ED EDS**
PR: XEX 4011. S/U only. DPR. Supervised field experience in assessment, classroom management, and clinical teaching with children who have emotional and behavioral disabilities.

**EEL 2161 Electrical Engineering Computer Methods (3) EN EGE**
Use of computers to perform analysis, simulation, and design of Electrical Engineering systems. Use of computer systems, including Internet resources. Use of analytical software. Computer
programming in C++ for the solution of Electrical Engineering problems.

EEL 4100 Network Analysis and Design (3) EN EGE
PR: EGN 3420 with a minimum grade of C and EGN 3374 with a minimum grade of B. A third course in linear circuit analysis and design. Transient and steady-state responses of passive RLC networks to various functions.

EEL 3302 Electronics I (3) EN EGE
PR: EGN 3373 with a minimum grade of B. A course in the physical principles of electronic devices with emphasis on semiconductor electronics. Includes the analysis and design of amplifiers and switching circuits.

EEL 4394 Electronic Materials (3) EN EGE
PR: CHM 2945, PHY 2049. This course provides electrical engineering students with a background in material science and quantum physics as these apply to electrical/electronic material properties.

EEL 4102 Linear Systems Analysis (3) EN EGE
PR: EGN 3420 with a minimum grade of C and EGN 3374 with a minimum grade of B. Provides further study in the analysis of linear networks and systems. Includes time and frequency domain points of view. Laplace, Fourier and superposition integrals.

EEL 4243 Switching Power Supply Design (3) EN EGE
PR: EEL 4301 Provides the basic principles of switching power supply circuits: magnetic circuits, power semiconductors, Buck, Boost, and Flyback configurations, dc to dc converters, dc to ac inverters. Requires the design and construction of a switching power supply.

EEL 4301 Electronics II (3) EN EGE
PR: EEL 3302. Provides further study in electronic circuits. Includes feedback and frequency response techniques in amplifier design.

EEL 4305 Communications Electronics (3) EN EGE
PR: EEL 4301 Provides the basic principles of RF communications circuits including oscillators, mixers, high frequency amplifiers, etc. Requires the design and implementation of a short range communications link including a transmitter and a superheterodyne receiver.

EEL 4351C Semiconductor Devices (3) EN EGE
PR: EEL 3394. An introduction to the fundamentals of semiconductor materials and semiconductor device operation.

EEL 4420 RF & Microwave Circuits II (3) EN EGE
PR: EEL 4316L or CI. This course introduces students to the theory and applications of modern radio frequency and microwave measurements. Topics to be included are network analyzer, spectrum analyzer, noise, power, and non-linear distortion measurements. Modern trends also treated are the use of on-wafer measurements for transistor characterization and the evaluation of complex microwave integrated circuits.

EEL 4421 RF/Microwave Circuits I (3) EN EGE
PR: EEL 3100, EEL 4471. Introduction to passive microwave circuit design. Investigate the characteristics of transmission line used in modern microwave systems, the tools used for analysis, and some common circuit topologies for biasing and matching. Substantial coverage of stability analysis, constant gain methods and noise figure. Part two of a two-part sequence. EE majors only. Not available on an S/U basis.

EEL 4422 RF/Microwave Circuits II (3) EN EGE
PR: EEL 4421. Introduction to active RF/Microwave circuit design. Investigate the characteristics of amplifiers and oscillators used in modern microwave systems, the tools used for analysis, and some common circuit topologies for biasing and matching. Substantial coverage of stability analysis, constant gain methods and noise figure. Part two of a two-part sequence. EE majors only. Not available on an S/U basis.

EEL 4471 Electromagnetics MV (3) EN EGE
PR: MAP 2302 or EGN 3433, PHY 2049, PHY 2049L and EGN 3373 with a minimum grade of B. Electromagnetic field theory, including static and dynamic electromagnetic fields; applications; radiation; material effects (effects of radiation, magnetic fields).

EEL 4512C Introduction to Communication Systems (3) EN EGE
PR: EEL 3100. Provides an introduction to the fundamental principles and techniques of analog and digital communication systems. Theory is put into practice by investigating a variety of applications. Lectures and projects develop understanding of modern communication systems design and analysis.

EEL 4567 Electro-Optics (3) EN EGE
PR: EEL 3394, EEL 3302L, EEL 4471. An introduction to the field of electro-optics, including visible and infra-red sources and detectors, radiometry, optical and electronic components, and fiber optics.

EEL 4657 Linear Control Systems (3) EN EGE
PR: EEL 3100. Introduction to analysis and design of linear feedback control systems. Covers block diagram, flow charts, Bode, Nyquist, and root locus techniques.

EEL 4657L Linear Controls Laboratory (1) EN EGE
PR: EEL 3100 CR: EEL 4657. This laboratory introduces students to the techniques needed for the design and implementation of automatic industrial control systems. Students will learn the basics of the software and hardware used for the design and implementation of control systems.

EEL 4705 Logic Design (3) EN EGE
PR: EGN 3373 with a minimum grade of B for EE students only. Binary number systems; truth functions; Boolean algebra; canonical forms; minimization of combinational logic circuits; synchronous logic circuits in computers.

EEL 4705L Logic Laboratory (1) EN EGE
CR: EEL 4705. Develops designs and demonstrates logic concepts. Schematic capture for design implementation, simulation and design verification.

EEL 4743L Microprocessor Laboratory (1) EN EGE
CR: EEL 4744. Application of microprocessors and microcontrollers for data acquisition, processing, display and real time signal input/output and control.

EEL 4744 Microprocessor Principles and Applications (3) EN EGE

EEL 4748 Microprocessor-Based System Design and Application (3) EN ESB
PR: CDA 3201, CDA 3201L. Study of techniques for design of microprocessor-based systems used in various applications. Includes a project on development of an experimental application system.

EEL 4756 Signal and Image Processing (3) EN ESB
PR: EGN 4450, EEL 4650C. Sampling and quantization of signals and images; frequency-domain representations, transforms; filtering, convolution, and correlation; low-level image analysis algorithms; color images; fast methods and parallelism.

EEL 4781C Distributed Processing and Computer Networks (3) EN ESB
PR: EEL 4851C. Design and analysis of distributed processing systems. Covers communication hardware and software, network operating systems, and reliability enhancement techniques.

EEL 4782 Computer Information Networks for Information Technology (3) US EIT
The course covers concepts of computer networks. Physical and logical structures are presented. Physical media, circuit switching, data flow, high level protocols, and the ISO model are discussed. Bus, ring, star, and wireless topologies are presented.

EEL 4782L Information Networks Laboratory for Information Technology (1) US EIT
CR: COP 4610 or CI. The lab section of this course will allow students to apply hardware and software concepts discussed in the lecture portion of the class. Special isolated networking labs provide both software and hardware tools for student experimentation.

EEL 4851C Data Structures (3) EN ESB
PR: CDA 3103, COP 3514 and Degree Program Admission. Understand and implement fundamentals of concise data structure and organization for program efficiency, clarity and simplification. Implementation of different data types and structures. Understanding of current data structures.

EEL 4852C Data Base Systems (3) EN ESB
PR: EEL 4851C. Fundamentals of data base management systems. CODASYL, network, hierarchical, and relational data base systems are analyzed, and typical applications are presented.

EEL 4854 Data Structures and Algorithms for Information Technology (3) US EIT
PR: COP 3515 or CI. Representing data for manipulation by the computer is studied. Design and analysis of well-known data structures and algorithms to manipulate them, are studied. Program efficiency, clarity and speed are considered in various structures and algorithms.

EEL 4905 Independent Study (1-5) EN EGE
PR: CI. S/U only. Specialized independent study determined by the students’ needs and interests.
EEL 4906 Professional Issues and Engineering Design MW(3) EN EGE
PR: EEL 4301, EEL 4512C, EEL 4567, EEL 4744. An introduction of engineering design with applications specific to practical engineering problems. Included are discussion of real-world engineering issues as related to regulations, safety, ethics and the environment.

EEL 4914 Senior Project Design (3) EN EGE
PR: EEL 4906 and Senior Standing. CI. Students apply the knowledge acquired in the classroom to design a system which meets a predetermined set of specifications. Students work individually or in small groups with a faculty member (project director) in their area of interest. (Majors only.)

EEL 4935 Special Electrical Engineering Topics I (1-4) EN EGE
EEL 4936 Special Electrical Engineering Topics II (1-4) EN EGE
EEL 4937 Special Electrical Engineering Topics III (1-4) EN EGE
EEL 5250 Power System Analysis (3) EN EGE
PR: EGN 3375. Analysis and design technique for AC power systems.

EEL 5344C Digital CMOS/VLSI Design (3) EN EGE
PR: EEL 4705 or GS. Design, layout, simulation, and test of custom digital CMOS/VLSI chips, using a CMOS cell library and state-of-the-art CAD tools. Digital CMOS static and dynamic gates, flip-flops, CMOS array structures commonly used in digital systems. Top down design example of a bit slice processor.

EEL 5356 Integrated Circuit Technology (3) EN EGE
PR: EEL 4351 or GS. Physics and Chemistry of integrated circuit and discrete device fabrication, materials limitations, processing schemes, failure and yield analysis. A laboratory is integral to the course.

EEL 5357 Analog CMOS/VLSI Design (3) EN EGE

EEL 5382 Physical Basis Of Microelectronics (3) EN EGE
PR: EEL 4471 or GS. Quantum mechanics with emphasis on electronic properties in atoms, molecules, and crystals; quantum statistics; energy band theory; crystal structures; defect chemistry; semiconductor properties.

EEL 5462 Antenna Theory (3) EN EGE
PR: EEL 4471 or GS. Antenna theory beginning with fundamental parameter definitions and continuing with mathematical concepts, elemental antennas and arrays.

EEL 5572C Local and Metropolitan Area Networks (3) EN EGE
PR: EEL 4512 or GS. Basics of data communication exchange and digital information over communication media; Basics of LANs/MANs and its components: media topologies, access methods, etc.; LAN/MAN architectures and protocols—IEEE 802.x/LAN Standards; High speed LANs such as FDDI, IEEE 802.6 MAN, etc.; Internetworking; LAN/MAN Design and selections.

EEL 5631 Digital Control Systems (3) EN EGE
PR: EEL 4657 or GS. Sample data and digital control processes.

EEL 5750C Microprocessor Based Digital Signal Processing (3) EN EGE
PR: EEL 4705 or CI. Arithmetic systems, processing structures, efficient algorithms. DSP hardware, TI, NEC and other DSP microprocessors; multiprocessor hardware and software. System development. Application to telecommunications and voice processing.

EEL 5771 Introduction to Computer Graphics I (3) EN ESB
PR: EEL 4851C. An introduction to the evolution of computer graphics including point-plotting, line drawing, two-dimensional transformations and graphics software packages.

EEL 5935 Special Electrical Engineering Topics I (1-3) EN EGE
EEL 5936 Special Electrical Engineering Topics II (1-3) EN EGE
EEL 5937 Special Electrical Engineering Topics III (1-3) EN EGE
EEX 4011 Foundations of Special Education (3) ED EDS
PR: DPR. CR: EEX 4941. Characteristics and needs of children who have learning disabilities, emotional disabilities, hearing impairments, mental retardation, physical handicaps, speech impairments, visual limitations, and who are gifted and talented.

EEX 4054 Perspectives on Learning and Behavioral Differences (3) ED EDS
PR: EEX 4011. The purpose of this course is to introduce students to the historical and theoretical perspectives on educating students with learning and behavioral differences, develop a critical understanding of current practices in service delivery systems, and examine professional issues and trends that impact the future of the field.

EEX 4070 Integrating Exceptional Students in the Regular Classroom (2-3) ED EDS
No credit for department majors. Designed for non-special education majors. Includes basic identification techniques and strategies to promote academic and social integration and instruction of “mainstreamed” exceptional students. Concurrent field experience projects are included.

EEX 4221 Educational Assessment of Exceptional Students (3) ED EDS
PR: EEX 4941, EDF 4430 and EEX 4011. CR: EEX 4941 and EEX 4846. DPR. Introduction to assessment of exceptional students through formal and informal techniques. Emphasis placed on the interpretation of information for educational programming and individualization of instruction.

EEX 4243 Education of Exceptional Adolescents and Adults (3) ED EDS
PR: EEX 4011 or equivalent or DPR. Procedures for implementing educational programs for exceptional adolescents and adults. Topics include service delivery, curriculum, academic remediation, advocacy, utilization of ancillary services, alternative programs and community resources.

EEX 4906 Behavior Management for Special Needs and At-Risk Students (3) ED EDS
PR: EEX 4011. CR: EEX 4941, ELD 4941, or EMR 4941. Techniques to prevent, analyze, and manage challenging and disruptive behavior in the classroom and behavior as well as teaching social skills.

EEX 4942 Narrative Perspectives on Exceptionality: Cultural and Ethical Issues 6A LW (3) ED EDS
DPR. This course is designed to use literature as a way to interpret the lives of individuals with disabilities, their families and those who play an educational role in their lives. The course also addresses cultural and ethnic diversity so as to better analyze the role of ethics and values in decisions made pertaining to individuals with disabilities.

EEX 4846 Clinical Teaching in Special Education (3) ED EDS
PR: EEX 4011, DPR. CR: EEX 4941. Effective teaching principles, instructional management procedures, and specialized teaching techniques for exceptional students.

EEX 4905 Independent Study: Exceptional Student Education (1-3) ED EDS
PR: DPR. S/U only. Specialized independent study determined by the student’s needs and interests.

EEX 4909 Directed Study: Exceptional Student Education (1-3) ED EDS
PR: Senior standing. DPR. To extend competency in teaching field.

EEX 4936 Senior Seminar in Exceptional Student Education (1) ED EDS

EEX 4940 Internship: Exceptional Student Education (1-12) ED EDS
CR: EEX 4936. S/U only. One full semester of internship in an accredited public or private school.

EEX 4941 Practicum in Exceptional Student Education (1-4) ED EDS
CR: Sem I: EEX 4011; Sem II: EEX 4064; Sem III: EEX 4221 and EEX 4846. Designed to provide teacher candidates with carefully planned and supervised clinical experiences with exceptional students populations in a variety of settings. Candidates demonstrate the ability to apply concepts, theories and research. Repeatable up to six credit hours.

EEX 5705 Seminar in Preschool Handicapped (2) ED EDS
Intended to familiarize the education student with the wide range of needs and services of the preschool children with disabilities and their families and how they coordinate with educational services.

EEX 5752 Working With Families: A Pluralistic Perspective (3) ED EDS
PR: Introductory course in special education, GS. The impact of the socio/cultural environment on the education of at-risk children and children with disabilities; family systems theory, principles of multi-cultural education, strategies for working effectively with families of school-age children, diverse cultures and family structures represented in school populations today.

EGL 4941 Undergraduate Supervised Practicum in Gifted Student Education (1-6) ED EDS
Organized, supervised experiences with gifted children. Specific experiences may be either a combination of observation and assistance with gifted children or individualized projects.
EGN 5051 Nature and Needs of the Gifted (3) ED EDS
This survey course examines the characteristics and educational needs of children and youth who are gifted, including those from special populations. Emphasis is on giftedness as defined historically, nationally and locally. The course also explores changing views of intelligence and talent development related to policy and practice in gifted education as well as the processes of identification and programming.

EGI 5325 Theory and Development of Creativity (3) ED EDS
Examination of the concept of creativity, its factors, measurement, and application to education. Opportunities are given to work with children in a laboratory setting and to prepare materials to be used with small groups of children.

EGN 2031 History of Technology HP (3) EN EGB
Covers the evolution of technology and its influence on society from pre-historic man to the modern day. Topics include: seven technological ages of man, methods of producing power, materials, transportation, communication and calculation, and technology and society.

EGN 2080 Light and the Arts: A Quantitative Approach FA (3) EN EGB

EGN 2081 Circuit Mathematics and Physics (2) EN EGB
Remedial work on the mathematical and physical concepts that are necessary for EGN 3373. Differentiation and integration, complex numbers, phasors, vectors, the physical laws for resistors, capacitors, and inductors.

EGN 2082 History of Electrotechnology HP (3) EN EGB
Highlights of the history of electrotechnology and its relation to the development of civilization. The contributions of Volta, Faraday, Morse, Hertz, Marconi, Franklin, etc., in the context of the development of western civilization. The impact of communications, electronics and computers in the twenty-first century.

EGN 2210 Computer Tools for Engineers (3) EN EGB
PR: MAC 2281. Students will be introduced to computer based engineering tools and their application to the solution of engineering problems. The programming language, FORTRAN, will be the most emphasized tool, but coverage will also be given to other engineering/mathematical tools such as equation solving tools and spreadsheets.

EGN 3000 Foundations of Engineering (1) EN EGB
Introduction to the profession of engineering. Exposure to the different disciplines of engineering incorporate examples of tools and techniques used in design and presentation.

EGN 3001 Statics (3) EN EGB

EGN 3321 Dynamics (3) EN EGB
PR: EGN 3311. Dynamics of discrete particles; kinematics and kinetics for rigid bodies. Lec.

EGN 3331 Mechanics of Materials (3) EN EGB
PR: EGN 3311. Stress, strain, Hooke’s Law; torsion, beam, column analysis; combined stresses; inelastic effects, limit design. Lec.

EGN 3331L Mechanics of Materials Laboratory (1) EN EGB

EGN 3343 Thermodynamics I (3) EN EGB

EGN 3353 Basic Fluid Mechanics (3) EN EGB

EGN 3358 Thermodynamics, Fluids, and Heat Transfer (4) EN EGB
PR: PHY 2049. Thermodynamic concepts of energy, entropy, work and heat and thermodynamic cycles. Basic concepts of fluid mechanics, including viscous fluids, pipe flow with minor losses, simple fluid machinery, momentum and external flow. Steady state conductive and convective heat transfer.

EGN 3365 Materials Engineering I (3) EN EGB
PR: CHM 2046; CR: EGN 3311. Structure and property relationships in engineering materials, i.e., metal, ceramic and polymer systems. Environmental effects are also treated.

EGN 3373 Introduction to Electrical Systems I (3) EN EGB

EGN 3374 Introduction to Electrical Systems II (3) EN EGB
PR: EGN 3373 with a minimum grade of B. CR: MAP 2302. A second course in linear passive circuits (following EGN 3373). An extension of the physical principles and models, AC/DC steady-state, transient analysis and power analysis techniques.

EGN 3375 Electromechanical Systems (3) EN EGB
PR: EGN 3373 with a minimum grade of B. Analysis of electromechanical device performance: transformers, transducers, DC motors and generators, AC motors and alternators.

EGN 3420 Engineering Analysis (3) EN EGB
PR: MAC 2282. Introduction to aspects of matrix algebra and complex algebra which are essential in engineering: simultaneous equations, connection matrices, basic eigenvalue theory, the complex exponential.

EGN 3433 Modeling and Analysis of Engineering Systems (3) EN EGB
PR: MAC 2283, PHY 2049. Dynamic analysis of electrical, mechanical, hydraulic and thermal systems; Laplace transforms; numerical methods; use of computers in dynamic systems; analytical solution to first and second order ODEs. Restricted to majors.

EGN 3443 Engineering Statistics I (3) EN EGB
PR: MAC 2282. An introduction to the basic concepts of statistical analysis with special emphasis on engineering applications.

EGN 3630C Engineering Economy I (3) EN EGB
A study in analyzing the economic limitations imposed on engineering activities using basic models which consider the time value of money.

EGN 3615 Engineering Economics with Social and Global Implications SS (3) EN EGB
PR: EGN 3365. Applications and structure property relationships of commonly used engineering materials. Steel, nonferrous alloys and their welding, heat treatment and processing. Introduction to ceramic and polymeric materials.

EGN 4420 Numerical and Computer Methods in Engineering (3) EN EGB

EGN 4450 Introduction to Linear Systems (2) EN EGB
PR: MAC 2282. Study and application of matrix algebra, differential equations and calculus of finite differences.

EGN 4451 TechnoLabs Society AVG (1-5) EN EGB
Non-technical survey of engineering activities: utilities, nuclear power, genetics weaponry, space, etc. Students conduct individual in-depth study of environmental/ethical problem.

EGN 4995 Independent Study (1-5) EN EGB
PR: CI. Specialized independent study determined by the students’ needs and interests.

EGN 4930 Special Topics in Engineering (1-3) EN EGB
PR: CI. New technical topics of interest to engineering students.

EGN 5421 Engineering Applications for Vector Analysis (3) EN EGB
PR: MAC 2282. Vector methods in electromagnetism and fluid mechanics. Vector operators, line and flux integrals, potential and transport theorems, applications.

EGN 5422 Engineering Applications of Partial Differential Equations (3) EN EGB

EGN 5423 Neural Networks and Mathematics for Communication (3) EN EGB
EGN 5424 Engineering Applications of Complex Analysis (3) EN EGB  Analytic functions, conformal mapping, residue theory, Laurent series, transforms. Applications to various problems in engineering and physics.

EGN 5425 Engineering Applications of Advanced Matrix Computations (3) EN EGB  Survey of theory and software for matrix computations: factorization methods, least squares and pseudoinverses, eigenvector problems. Special matrices and representations for control system and finite element applications.

EGS 1113 Introduction to Design Graphics (3) EN EGB  The student learns how to graphically represent technical designs using sketching, traditional drawing tools, and AutoCAD. The lab features twenty Pentium II computers running AutoCad R14.

EIA 4360 Special Teaching Methods: Technology Education (3) ED EDV  Introduction to programs, facilities and opportunities in teaching Technology Education. Includes historical, current and futuristic implications of technology in society.

EIA 4360 Special Teaching Methods: Technology Education (3) ED EDV  Equips Technology Education instructors with professional competencies for classroom and laboratory settings. Includes the selection of appropriate methods, planning, and delivery of instruction, along with supervision of students in laboratory areas.

EIN 3241 Work Design and Ergonomics I (3) US EIT  Using the fundamentals of the design process, this course demonstrates the critical importance of ergonomic tools and underlying physical human capacities.

EIN 4242 Work Design and Ergonomics II (3) US EIT  PR: EIN 3241. This course applies the concepts of work design and measurements within the ergonomic arena to achieve work design that is ergonomically feasible and effective.

EIN 4312C Work Analysis (3) EN EGS  PR: EGN 3613C or EGN 3615, EGN 3443. Operation analysis and workspace design, work measurement, standard data, ergonomics, and labor costing.

EIN 4313C Human Factors 6A (3) EN EGS  Design of man-machine systems, by taking into consideration both human and machine capabilities and limitations.

EIN 4333 Production Control (3) EN EGS  PR: ESI 4312. Planning and control of production systems. Includes: forecasting and inventory control models, scheduling and sequencing, MRP, CPM/PERT, and resource requirements.

EIN 4352 Engineering Cost Analysis (3) EN EGS  PR: EGN 3615. This is a non-repeatable course restricted to Industrial Engineering majors. It provides students with the principles and techniques for the cost analysis, estimation and evaluation of engineering design in service and manufacturing organizations.

EIN 4364C Facilities Design (3) EN EGS  PR: EIN 4411; CR: ESI 4364; EIN 4323. Design and modification of industrial production and material handling facilities. Basic analysis techniques, use of computer programs, automated warehousing.

EIN 4385 Capstone Design MW (3) EN EGS  PR: EIN 4364; CR: ESI 4523. Course requires students to design an enterprise incorporating tools, techniques and approaches from industrial and management systems engineering. Students work in teams on an open-ended project that may be either a service or manufacturing setting.

EIN 4411 Manufacturing Processes (3) EN EGS  PR: EGS 1113. The study of basic manufacturing processes and precision assembly. CAD/CAM including NC programming.

EIN 4601C Automation and Robotics (3) EN EGS  PR: EIN 4411. Introduction to the practices and concepts of automation as applied to material handling, inventory storage, and material loading systems. Industrial processes and quality control.

EIN 4933 Special Topics in Industrial Engineering (1-6) EN EGS  Special topics related to economic analysis, optimization, human factors, manufacturing and automation aspect of industrial systems. Repeatable up to 5 credit hours.

EIN 5224 Total Quality Management Concepts (3) EN EGS  This course will examine the methodology and procedures that companies use to improve quality and its operational benefits, including management transformation (paradigm shift) that is evolving. Unrestricted. Nonrepeatable for credit.

EIN 5245 Work Physiology and Biomechanics (3) EN EGS  PR: CC, majors only. Human physiological limitations encountered in design, analysis and evaluation of man-machine systems.

EIN 5322 Principles of Engineering Management (3) EN EGS  Introduction to the fundamentals of planning, organizing and leadership as needed by engineers, scientists, and other professionals considering managerial positions.

EIN 5350 Technology and Finance (3) EN EGS  A course for technical managers that focuses on how financial and economic principles are utilized to make technical investments and manage technical enterprises.

EIN 5357 Engineering Value Analysis (3) EN EGS  PR: EIN 5219 or equivalents. Only Statistical models for analyzing engineering alternatives from an economic viewpoint. The use of advanced engineering economy concepts in solving industrial problems.

EIV 4210 Program Management: Industrial-Technical Education (4) ED EDV  Planning, organizing, motivating and controlling of the learning environment in Industrial-Technical Education classroom and laboratories. Program standards for OSHA, program review, record keeping, and budgeting will be examined.

EIV 4360 Special Teaching Methods: Industrial-Technical Education (4) ED EDV  Instructional techniques in industrial-technical education. Vocational Industrial Clubs of America activities may be included.

EIV 5315 Program Management: Diversified Cooperative Training (3) ED EDV  Organization, coordination, and budgeting of adult, cooperative, and special programs.

ELD 4011 Introduction to Specific Learning Disabilities (3) ED EDS  PR: EEX 4011 or DPR. Characteristics, needs and abilities of children with SLD. Emphasis is on theories, issues, trends, and philosophy of problems for such children.

ELD 4905 Independent Study: Specific Learning Disabilities (1-3) ED EDS  PR: DPR. S/U only. Specialized independent study determined by student’s needs and interests.

ELD 4941 Undergraduate Supervised Practicum in SLD (1-6) ED EDS  PR: EEX 4011. S/U only. DPR. Supervised field experiences in assessment, behavior management and clinical teaching with classes for children who have specific learning disabilities.

ELR 3301 Laboratory I (1) EN EGE  PR: EGN 3373 with a minimum grade of B. Basic circuit theory applications; computer-aided design tools, electrical measurement techniques.

ELR 3302 Laboratory II (1) EN EGE  PR: ELR 3301L and EEL 3302. This laboratory is designed to introduce electrical engineering students to the design, building and testing of active electronic networks. Computer Aided Design tools and computer data acquisition strategies are examined in greater detail.

ELR 336L Wireless Circuits & Systems Design Laboratory (2) EN EGE  PR: EEL 4471. An extensive hands-on introduction to wireless radio frequency and microwave circuits and systems, including modern measurements, fabrication and computer-aided design experiences at both component and sub-system levels. Not available on an S/U basis.

EMA 4003 Introduction to Materials Science (3) EN ECH  PR: ECH 4123 or Consent of Instructor. Introduction to the main families of materials and principles behind their design, selection, development, and behavior. Relationship of properties to structure and processing of materials. Not repeatable for credit. Majors and non-majors.

EMA 4324 Corrosion of Engineering Materials I (3) EN EGS  PR: EGN 3365L. Principles of electrochemical corrosion and the representation of corrosion processes by polarization diagrams. Origin and prevention of the localized forms of corrosion and pitting. Repeatable up to 3 credit hours.

EMA 5326 Corrosion Control (3) EN EGS  PR: EGN 3365. Provide understanding of corrosion fundamentals. Introduce design for corrosion detection, protection, and control. Repeatable up to 3 credit hours.

EME 2040 Introduction to Computers in Education (3) ED EDK  Designed as an introduction to computer technology and its role in teaching and learning processes. Topics include educational software, ethical and social issues, hardware, interactive
multimedia, models for integrating technology into instruction, productivity tools and telecommunications.

EME 5403 Microcomputers in Education (3) ED EDK
A survey course designed to introduce practitioners to microcomputer technology and its function in the classroom to augment the teaching and learning process. Objectives include the use and evaluation of educational software, classroom use of computers, instructional computing research, generic applications software (word processors, database managers, etc.), programming, disk operating systems, and microcomputer hardware.

EML 3035 Programming Concepts for Mechanical Engineers (1) EN EGR
PR: MAC 2281, PHY 2048 Solution of engineering and science problems using programming language such as Visual Basic or Maple. Topics include fundamentals of programming, controlling program flow and arrays. Restricted to majors; not repeatable for credit.

EML 3041 Computational Methods (3) EN EGR
PR: MAP 2302, EML 3035. Techniques to solving engineering problems using numerical methods. Topics include roots of equations, matrix algebra, simultaneous linear equations, numerical integration and differentiation, and curve fitting.

EML 3262 Kinematics and Dynamics of Machinery (3) EN EGR
PR: EGN 3321 Kinematics of machines and mechanisms; position, velocity, and acceleration analysis of mechanisms; cams; gear trains; inertia forces in mechanisms; flywheels; balancing of rotating masses.

EML 3303 Mechanical Engineering Lab I (3) EN EGR

EML 3500 Mechanics of Solids (3) EN EGR
PR: EGN 3311. Stress and deformation analysis of machine parts, variable loads, endurance limits, fasteners, bearings, power transmission, code consideration of pressure and vacuum vessels, elements of design.

EML 3701 Fluid Systems (3) EN EGR
PR: EGN 3343, EGN 3321. Principles of fluid flow; piping and duct systems; fluid machinery; metering of compressible and incompressible flow; boundary layer theory; dimensional analysis; introduction to aerodynamics.

EML 4031 Visual Basic for Engineers and Scientists (3) EN EGR
PR: EML 3041. Introduces students to the powerful graphical interface language of Visual Basic. Illustrates the use of the language in engineering and science applications.

EML 406C Thermal Systems and Economics (3) EN EGR
PR: EGN 3343. Power and refrigeration cycles: fuels and combustion; internal combustion engine cycles; co-generation; nuclear energy; methods of economic analysis.

EML 4124 Heat Transfer (3) EN EGR
CR: EML 3701, EML 3041. Conduction, convection and radiant heat transfer; thermal properties of materials; role of fluid flow in convective heat transfer; design and selection of heat exchangers.

EML 4220 Vibrations (3) EN EGR

EML 4230 Introduction to Composite Materials (3) EN EGR
PR: EML 3500 and EML 3041. The course introduces manufacturing types and applications of advanced composites. Students study micromechanical and macromechanical behavior of a lamina and analyze and design a laminated structure made of advanced composite materials.

EML 4246 Tribology (3) EN EGR
PR: EML 4501. Introduction to friction, lubrication and wear. Contact of real surfaces, mechanics of friction, surface failures, boundary lubrication fluid properties, thin film lubrication, thick film lubrication, bearing and lubricant selection.

EML 4302 Mechanical Engineering Laboratory II (3) EN EGR
PR: EML 3303. Continuation of EML 3303 with emphasis on material and energy balances, stress analysis and vibrations. Lecture, lab. Team-Project Time Approach.

EML 4312 Mechanical Controls (3) EN EGR

EML 4325 Mechanical Manufacturing Processes (3) EN EGR
PR: EGN 3365. Description of mechanical material cutting, forming and fabrication methods, as used in modern industrial manufacturing processes.

EML 4395 Motor Selection and Control (3) EN EGR
PR: ENG 3373 Standard electrical voltages; power wiring in industrial plants; NEMA motor designs and their use; techniques for estimating motor starting times and temperature rise; motor selection, starting, and operating safety interlocks; conventional starting and control systems; programmable controllers; electrical code requirements for conductors and protective devices.

EML 4414 Power Plant Engineering (3) EN EGR
PR: EML 4106C. The study of large scale thermo-electric power conversion for utility systems. Combustion of hydrocarbon fuels, furnaces, steam generated auxiliary system design. Topics include control of our emissions, design and performance of combined power facilities.

EML 4417 Propulsion I (3) EN EGR
PR: EML 3701, EML 3500 or CI. Introduction to the design of propulsion systems. Basic analysis of internal combustion, jet and rocket engines. Application to ground and air transportation. Advanced propulsion concepts. Special topics for class discussion.

EML 4421 Internal Combustion Engines (3) EN EGR
This course is for the application of thermodynamics, chemistry, dynamics of machinery, electronics and fluid mechanics. Topics covered are: introduction of engines, fuels and combustion, numerical modeling, ignition, fuel systems, balance of reciprocating mechanisms and emission control of exhaust pollutants.

EML 4501 Machine Design (3) EN EGR
PR: EML 3500. Designed to teach students to apply the principles of engineering mechanics, materials and manufacturing to the design-analysis of machine elements and mechanical systems. Emphasis is given toward good design practice as well as pitfalls that can result in a catastrophic failure.

EML 4551 Capstone Design MIV (3) EN EGR
CR: EML 4501, EML 4124 Comprehensive design or feasibility project requiring application of previously acquired engineering knowledge; use of ANSYS, CAD AND Pro/E.

EML 4552 Senior Mechanical Design (3) EN EGR
PR: CI. Comprehensive design or feasibility study project. In some cases may be a continuation of EML 4551.

EML 4601 Air Conditioning Design (3) EN EGR

EML 4905 Independent Study (1-4) EN EGR
PR: CI. Specialized independent study determined by the student’s needs and interests.

EML 4930 Special Topics in Mechanical Engineering (1-4) EN EGR
PR: CC.

EML 5930 Special Topics III (1-4) EN EGR
PR: CC.

EMR 4011 Mental Retardation and Developmental Disabilities (3) ED EDS
PR: EEX 4011 or equivalent. This course is designed to provide students with a broad introduction to the area of mental retardation and developmental disabilities with particular emphasis on the educational implications. This course is required by the state for certification in mental retardation.

EMR 4230 Educating the Severely/Profoundly Handicapped (3) ED EDS
PR: EMR 3011 or DPR. Emphasis on educational methods and materials for teaching children with severe/profound handicaps. Practicum/field experience linkage.

EMR 4905 Independent Study: Mental Retardation (1-3) ED EDS
SU: May be repeated when subjects vary. DPR. Specialized independent study determined by the student’s needs and interests.

EMR 4909 Directed Study: Mental Retardation (1-3) ED EDS
PR: Senior standing. Offered only as a scheduled class. To extend competency in teaching field.
EMR 4941 Undergraduate Supervised Practicum in Mental Retardation (1-6) ED EDS
PR: EEX 4011. S/U only. DPR. Supervised field experiences in assessment, behavior management, and clinical teaching with children who have mental retardation.
ENC 1101 Composition I 6A EC (3) AS ENG
PR: ENC 1101 and ENC 1102 must be taken in numerical sequence. Instruction and practice in the skills of writing and reading.
ENC 1102 Composition II 6A EC (3) AS ENG
PR: ENC 1101. Instruction and practice in the skills of writing and reading.
ENC 1121 Composition I: Honors 6A EC (3) AS ENG
Reserved for students in University Honors. Honors Section of ENC 1101.
ENC 1122 Composition II: Honors 6A EC (3) AS ENG
PR: ENC 1121. Reserved for students in University Honors. Honors Section of ENC 1102.
ENC 2210 Technical Writing 6A (3) AS ENG
PR: ENC 1101 and ENC 1102 or ENC 1121 and ENC 1122. Effective presentation of technical and semi-technical information.
ENC 3246 Advanced Technical Writing (3) AS ENG
Focuses on writing concerns of engineers. Deals with the content, organization, format, and style of specific types of engineering documents. Provides opportunity to improve oral presentations. Not to be counted toward the English major.
ENC 3250 Professional Writing 6A (3) AS ENG
PR: ENC 1101 and ENC 1102 or ENC 1121 and ENC 1122. Introduction to the techniques and types of professional writing, including correspondence and reports most often found in business, technical, and scientific communities.
ENC 3310 Expository Writing 6A (3) AS ENG
PR: ENC 1101 and ENC 1102 or ENC 1121 and ENC 1122. A course teaching the techniques for writing effective prose, excluding fiction, in which student essays are extensively criticized, edited, and discussed in individual sessions with the instructor.
ENC 4260 Advanced Technical Writing (3) AS ENG
PR: ENC 2210, or ENC 3310, or CI. Advanced Technical Writing is a course designed to develop writing skills of a high order: technical exposition; technical narration, description, and argumentation; graphics; proposals; progress reports; physical research reports; and feasibility reports.
ENC 4311 Advanced Composition (3) AS ENG
PR: ENC 3310 or CI. Instruction and practice in writing effective, lucid, and compelling prose, with special emphasis on style, logical argumentation, and critical thinking.
ENC 4531 Selected Topics in Professional and Technical Writing (3) AS ENG
PR: ENC 3250, ENC 2210, or ENC 3310 or CI. Focus of the course will be determined by student demand and instructor interest. Topics to be covered may include legal writing, the conventions of business writing, writing in the medical fields, and writing for special technical sciences. May be taken twice for credit with different topics.
ENG 4013 Literary Criticism (3) AS ENG
A study of the works of major literary critics from Aristotle to the present, with emphasis on their meaning, their implied world view, and their significance for our own time and literature. Required for Literature majors.
ENG 4060 History of the English Language (3) AS ENG
The evolution of language from Anglo-Saxon through Middle English to Modern English. Development of the English lexicon. Changes in the pronunciation, syntactic, and semantic systems; discussion of the forms which influenced them.
ENG 4906 Individual Research (1-4) AS ENG
PR: CC. Directed study in special projects.
ENG 4907 Directed Reading (3) AS ENG
PR: CC. Readings in special topics.
ENG 4935 Honors Seminar I (3) AS ENG
PR: Admission to English Honors Program. CR: ENG 4936. Variable topics. Students will be expected to participate in class discussion, make formal presentations, and complete a major research project.
ENG 4936 Honors Seminar II (3) AS ENG
PR: Admission to English Honors Program. CR: ENG 4935. Variable topics. Students will be expected to participate in class discussion, make formal presentations, and complete a major research project.
ENG 4970 Honors Thesis (3) AS ENG
PR: ENG 4935, ENG 4936. For students writing English Honors theses.
ENG 3015 British Literature to 1616 (3) AS ENG
A survey of representative prose, poetry, and drama from its beginnings through the Renaissance, including such poems and figures as Beowulf, Chaucer, Malory, More, Hooker, Skeffton, Wyatt, Sidney, Spenser, Shakespeare, Donne, and Jonson.
ENG 3230 British Literature 1616-1780 (3) AS ENG
A survey of 17th Century and Neoclassical Literature, including such figures as Donne, Herbert, Crashaw, Vaughan, Marvell, Milton, Pope, Swift, Johnson, Boswell, and Swift.
ENG 3251 British Literature 1780-1900 (3) AS ENG
The poetry and poetics of the Romantic figures, with attention to the continuing importance of Romantic thinking in contemporary affairs and letters: a survey of representative figures of the Victorian and Edwardian periods, including poetry, prose, and drama.
ENG 3273 British Literature 1900-1945 (3) AS ENG
Survey of poetry, drama, and fiction of such writers as Eliot, Yeats, Thomas, Conrad, Shaw, Joyce, Lawrence, Huxley, Woolf, Forster, Waugh, Owen, Auden, O’Casey, and others.
ENG 3331 Early Shakespeare (3) AS ENG
A study of from five to eight of Shakespeare’s comedies, histories, and early tragedies, ending with Hamlet. Special attention to developing the student’s ability to read and interpret the text.
ENG 3332 Late Shakespeare (3) AS ENG
A study of from five to eight of Shakespeare’s problem plays, major tragedies, and late romances. Special attention to developing the student’s ability to read and interpret the text.
ENG 3334 Shakespeare from an Historical Perspective HP (3) AS ENG
A study of from five to eight of Shakespeare’s comedies, histories, and early tragedies, ending with Hamlet. Special attention to developing the student’s ability to read and interpret the text.
ENG 3341 Melville (3) AS ENG
A study of Melville’s fiction, from Moby-Dick to The Confidence Man. Special attention to the development of the student’s ability to read and interpret the text.
ENG 3342 Shakespeare in Film (3) AS ENG
A study of from five to eight of Shakespeare’s plays, major tragedies, and late romances. Special attention to developing the student’s ability to read and interpret the text.
ENG 3343 Shakespeare & the Stage (3) AS ENG
A study of from five to eight of Shakespeare’s plays, major tragedies, and late romances. Special attention to developing the student’s ability to read and interpret the text.
ENG 4001 Environmental Systems Engineering (3) EN GX
CR: ENG 3353. An introduction to various aspects of environmental problems faced by today’s society. Topics covered are: air pollution, water pollution, noise pollution, solid waste management, ionizing radiation, disease transmission, and food protection.
ENV 4004 Environmental Engineering Lab (2) EN GX
Laboratory experience in the measuring of environmental parameters.
ENV 4020 Environmental Technology (3) EN GX
A study of the principles of integrated municipal solid waste management; waste minimization, recycle and disposal options. Design of landfill disposal systems. Course restricted to Civil and Environmental Engineering majors.
ENV 4351 Water Quality and Treatment (3) EN GX
PR: ENG 3353. An introduction to municipal water supply and waste water treatment. Topics include water requirements and waste volumes, water quality, physical and chemical treatment processes, and advanced wastewater treatment processes.
ENV 4502 Water Treatment Engineering (3) EN GX
PR: ENG 3353. CR: ENV 4001. The theory and the design of unit operations normally used in the practice of environmental engineering, such as agitation and mixing of liquids, filtration,
leaching, gas absorption, sedimentation and clarification, drying, and evaporation.

ENV 4503 Wastewater Treatment Engineering (3) EN EGX
PR: ECH 3023C, EGN 3535, ENV 4001. The theory and design of unit processes normally used in environmental engineering such as coagulation of colloidal materials, water stabilization, water softening and neutralization, ion exchange, desorption and oxidation processes for removal of iron and magnesium.

ENV 4552E Environmental Unit Operations and Processes (3) EN EGX
PR: ENV 4001, ENV 4417 or CI. Theory, experimental investigation, and modeling of operations and processes in engineered and natural systems. Laboratory evaluation of unit operations and processes used in water and wastewater treatment, including chlorination, activated carbon absorption, biological treatment, gas/liquid mass transfer, filtration, coagulation, flocculation, and settling. Application of experimental data to process analysis and design. Field monitoring of surface water quality; simulation of transport and transformation of pollutants in surface waters.

ENV 485F Capstone Environmental Engineering Design MW (3) EN EGX
PR: CWR 4103, ENV 4001, ENV 4417. A capstone environmental design experience for seniors in Civil and Environmental Engineering. A design oriented course to design both industrial and domestic wastewater treatment and other critical water transport systems and wastewater and collection systems. The course emphasizes the design procedure normally used in engineering practice.

ENV 5103 Air Pollution Control (3) EN EGX
PR: EGN 3303. Behavior and effects of atmospheric contaminants and the principles of making measurements in the air environment. Basic concepts of meteorology and control technology are discussed. Regulatory aspects and air pollution standards are covered.

ENV 5334 Hazardous Waste Management and Remedial Action (3) EN EGX
PR: ENV 5345 and one of the following: ENV 6347, ENV 6519, ENV 6558; or CI, majors only Introduction to hazardous waste management and remediation: RCRA regulatory concepts, definitions, aspects of hazardous waste management from within the plant to final disposal. History of hazardous waste cleanup leading to CERCLA and its amendments, site investigations; site control; those aspects of treatment that are unique to remedial action. (PR: undergraduate preparation in environmental engineering or an environmental science program)

ENV 5345 Solid Waste Control (3) EN EGX
PR: CI. Introduction to solid waste management, including its definition as an umbrella for hazardous waste regulatory concepts; waste types, quantities, and characterization; collection and recycling; facility siting; disposal; water and treatment systems; waste management and recovery; recycling; integration of waste management with other waste streams; and environmental impacts. The course includes an introduction to solid waste management, including waste management, recycling, and treatment systems. (PR: environmental engineering or an environmental science program)

ENV 5504C Environmental Engineering Processes (3) EN EGX
PR: ENV 4001, ENV 4004L, ENV 4417 Theory, experimental investigation, and modeling of operations and processes in engineered and natural systems. Laboratory evaluation of unit operations and process used in water and wastewater treatment including chlorination, activated carbon adsorption, biological treatment, gas/liquid mass transfer, filtration, coagulation, flocculation, and settling. This course is restricted to majors, has no external laboratory section associated with the course, is not available on an S/U basis only, is not cross-listed with another department or college.

EPH 5004C Introduction to Entomology (4) AS BIO
PR: BSC 2010, BSC 2010L, BSC 2111, BSC 2111L & CHM 2045, CHM 2046 & MAC 1105 or higher-level MAC course, or STA 2023. CP: PCB 3023 or PCB 3043 or PCB 3063 or PCB 3712 or CHM 2211. An introduction to general aspects of insect morphology, physiology, behavior and systematics. Fieldwork required. Lecture and Laboratory.

EPH 5051 Advanced Techniques in Motor and Physical Disabilities (3) ED EDS
PR: EEX 4011 or DPR. Biological and functional aspects of motor and physical health disabilities, including dysfunctions in central nervous system covering motor, sensory, language and psychological disorders.

EPH 5321 Educational Strategies for Physically and Multihandicapped Students (3) ED EDS
PR: EPH 5001. Educational management of students with cerebral palsies, motor disabilities, or multihandicapped conditions including rehabilitation and other community services.

ESE 4322 Classroom Management for Diverse School and Society (3) ED EDI
Focuses on classroom management in secondary schools including classroom climate, specific strategies to address management issues, school safety, violence, diversity, ethics, and educational law.

ESE 5342 Teaching the Adolescent Learner (3) ED EDI
Emphasis is placed on adolescent developmental and learning needs linking them to practices in the classroom appropriate to the diverse secondary education population (ESOL, special education, multicultural, at-risk, etc.) in preparation for planning responsive standards-based instruction.

ESE 5344 Classroom Management for a Diverse School and Society (3) ED EDI
This course covers practical, theoretical, philosophical and ethical aspects of school and society, the education profession, and secondary schools with particular focus on classroom management, school violence, school safety, educational law, and other critical social issues.

ESI 4221 Industrial Statistics and Quality Control (3) EN EGS
PR: EGN 3443, EIN 4411. Application of statistical techniques to the control of industrial processes. Control charts, acceptance sampling, design of experiments, analysis of variance and regression.

ESI 4244 Design of Experiments (3) EN EGS
PR: EGN 3443. Activity forecasting models and control. Design and control of inventory control models, both designs applicable to engineering analyses. Analysis of variance and regression.

ESI 4312 Deterministic O. R. (3) EN EGS
PR: COP 2510, EGN 4450. An introduction to operations research techniques with particular emphasis on deterministic models. Linear programming, dynamic programming, goal programming, integer programming, and PERT/CPM networks are considered.

ESI 4313 Probabilistic O. R. (3) EN EGS
PR: COP 2510, EGN 4443. Probabilistic models in Operations Research. Discrete and continuous time processes, queuing models, inventory models, simulation models, Markovian decision process and decision analysis.

ESI 4523 Industrial Systems Simulation (3) EN EGS
PR: ESI 4313. A study of the development and analysis of computer simulation models: Monte Carlo, time-slice, and next-event. Introduction to specific purpose simulation languages.

ESI 4905 Independent Study (1-5) EN EGS
PR: CI. S/U only. Specialized independent study determined by the student’s needs and interests.

ESI 5911 Senior Project (3) EN EGS
PR: EIN 4364, CR: EIN 4333, ESI 4523. Analysis and design of systems in a directed project format. Individual or group work consisting of project proposal, project activities, and final report. Student projects are directed by faculty, with chairman’s approval.

ESI 5219 Statistical Methods For Engineering Managers (3) EN EGS
Not open to students who have had EGN 3443. Study of statistical methods applied to engineering management problems involving estimation and prediction under conditions of uncertainty.

ESI 5236 Reliability Engineering (3) EN EGS

ESI 5306 Operations Research For Engineering Management (3) EN EGS
Not open to students who have had ESI 4312. ESI 5219 or equiv., majors only. Linear programming, non-linear programming, queuing, inventory, network analysis.

ESI 5470 Manufacturing Systems Analysis (3) EN EGS
PR: CC, majors only. The study of systems of manufacturing entities such as machine tools, robots, and materials handlers. Emphasis is on mathematical description of integrated systems and system optimization. Fieldwork required. Lecture and Laboratory.

ESI 5522 Computer Simulation (3) EN EGS
PR: ESI 4521 or equiv., majors only. Design of discrete and continuous simulation models. Model validation and verification. Statistical analysis of simulation model output.
ETG 3933 Selected Topics in Technology (1-5) EN ESB
Selected Topics in Technology is repeatable for credit for 12 hours.

ETG 4931 Special Topics in Technology I (1-5) EN ESB
PR: CI. No credit for Engineering Majors.

EUH 2011 Ancient History I HP (3) AS HTY
An introductory survey of ancient history. EUH 2011 treats the ancient Near East and Greece from the origins of civilization to the full development of the Hellenistic kingdoms prior to conflict with Rome.

EUH 2012 Ancient History II HP (3) AS HTY
An introductory survey of ancient history. EUH 2012 deals with Rome through the Regal, Republican, and Imperial periods, from the beginnings of civilization in Italy to the division of the Roman Empire. A.D. 285.

EUH 2021 Medieval History I HP (3) AS HTY
A thematic survey of the Middle Ages. EUH 2021 deals with the nascent, Christian civilization of Europe, circa 300-1050 A.D.

EUH 2022 Medieval History II HP (3) AS HTY
A thematic survey of the Middle Ages. EUH 2022 treats the mature medieval civilization of Europe, circa 1050-1500.

EUH 2030 Modern European History I HP (3) AS HTY
A thematic survey of Europe in the modern age. EUH 2030 treats the period from the Renaissance to the French Revolution.

EUH 2031 Modern European History II HP (3) AS HTY
A thematic survey of Europe in the modern age. EUH 2031, treats the period from the French Revolution to the present.

EUH 3142 Renaissance and Reformation (4) AS HTY
An introduction to the Italian Renaissance. EUH 3142 presents a period from 1300 to 1600 A.D., focusing on the intellectual, social, and economic changes that influenced the development of the Renaissance and the Reformation.

EUH 3143 Renaissance: Culture and Society (4) AS HTY
A survey of the major themes of British history since the Glorious Revolution, including social, political, and economic developments leading to the creation of the modern democratic welfare state.

EUH 3143 Roman Empire  (4) AS HTY
A survey of Roman history from the rise of the Roman Republic to the decline of the Roman Empire.

EUH 3151 Roman Republic  (4) AS HTY
A survey of Roman history from the rise of the Roman Republic to the fall of the Roman Empire.

EUH 3152 Ancient Greece  (4) AS HTY
A survey of ancient Greece focusing on the brilliant period following the Persian Wars, but embracing as well the formative Bronze, Middle and Archaic ages, and the decline culminating in the conquest of Greece by Philip II of Macedon in 338 B.C.

EUH 3153 Classical Greece  (4) AS HTY
A study focusing on the career of Alexander the Great and the Greek and Macedonian conquest of Imperial Persia. Also treated are the great hellenistic kingdoms prior to Rome’s conquest of the eastern Mediterranean.

EUH 3202 History of Imperial Russia, 1689-1917 (4) AS HTY
A study of the major themes of British history since the Glorious Revolution, including social, political, and economic developments leading to the creation of the modern democratic welfare state.

EUH 3202 History of Imperial Russia, 1689-1917 (4) AS HTY
A survey of the major themes of British history since the Glorious Revolution, including social, political, and economic developments leading to the creation of the modern democratic welfare state.

EUH 3205 History of Nineteenth Century Europe  (4) AS HTY
A comparative study of economic, political, social, and intellectual developments in nineteenth century Europe.

EUH 3206 History of Twentieth Century Europe  (4) AS HTY
A comparative study of economic, political, social, and intellectual developments in twentieth century Europe.

EUH 3377 History of the French Revolution (4) AS HTY
A study of the French Revolution, the period of political, social, and economic upheaval that led to the rise of modern democratic states.

EUH 3412 Roman Republic  (4) AS HTY
A study of Roman history from the rise of the Roman Republic to the decline of the Roman Empire.

EUH 3413 Roman Empire  (4) AS HTY
A study of Roman history from the rise of the Roman Republic to the decline of the Roman Empire.

EUH 3450 History of the Soviet Union, 1917-1991 (4) AS HTY
A study of Soviet society under communism from the Revolution to the collapse of the USSR. Topics include the origins and development of revolutionary socialism, the Bolshevik seizure of power, Stalinism and the Great Terror, popular dissent and resistance, the treatment and experience of ethnic minorities, Gorbachev and the dissolution of the Soviet Union.

EUH 3570 History of the Islamic World, 600-1600 (4) AS INT
A study of the Islamic world from the rise of Islam to the end of the Ottoman Empire. Topics include the political, social, and cultural development of the Islamic world, as well as the impact of Islamic law and thought on the development of European thought.

EUH 3575 History of Imperial Russia, 1689-1917 (4) AS HTY
A survey of the major themes of British history since the Glorious Revolution, including social, political, and economic developments leading to the creation of the modern democratic welfare state.

EUH 3575 History of Imperial Russia, 1689-1917 (4) AS HTY
A survey of the major themes of British history since the Glorious Revolution, including social, political, and economic developments leading to the creation of the modern democratic welfare state.

EUH 3576 History of the Soviet Union, 1917-1991 (4) AS HTY
A study of Soviet society under communism from the Revolution to the collapse of the USSR. Topics include the origins and development of revolutionary socialism, the Bolshevik seizure of power, Stalinism and the Great Terror, popular dissent and resistance, the treatment and experience of ethnic minorities, Gorbachev and the dissolution of the Soviet Union.

EUH 3580 Evolutionary Biology (4) AS INT
A study of the history of life on Earth, focusing on the evolution of major groups of organisms and the processes that have shaped biological diversity.

EUH 3580 Evolutionary Biology (4) AS INT
A study of the history of life on Earth, focusing on the evolution of major groups of organisms and the processes that have shaped biological diversity.

EUH 3590 Evolutionary Biology (4) AS INT
A study of the history of life on Earth, focusing on the evolution of major groups of organisms and the processes that have shaped biological diversity.

EUH 3600 History of the Islamic World, 600-1600 (4) AS INT
A study of the Islamic world from the rise of Islam to the end of the Ottoman Empire. Topics include the political, social, and cultural development of the Islamic world, as well as the impact of Islamic law and thought on the development of European thought.

EUH 3600 History of the Islamic World, 600-1600 (4) AS INT
A study of the Islamic world from the rise of Islam to the end of the Ottoman Empire. Topics include the political, social, and cultural development of the Islamic world, as well as the impact of Islamic law and thought on the development of European thought.

EUH 3600 History of the Islamic World, 600-1600 (4) AS INT
A study of the Islamic world from the rise of Islam to the end of the Ottoman Empire. Topics include the political, social, and cultural development of the Islamic world, as well as the impact of Islamic law and thought on the development of European thought.

EUH 3600 History of the Islamic World, 600-1600 (4) AS INT
A study of the Islamic world from the rise of Islam to the end of the Ottoman Empire. Topics include the political, social, and cultural development of the Islamic world, as well as the impact of Islamic law and thought on the development of European thought.

EUH 3600 History of the Islamic World, 600-1600 (4) AS INT
A study of the Islamic world from the rise of Islam to the end of the Ottoman Empire. Topics include the political, social, and cultural development of the Islamic world, as well as the impact of Islamic law and thought on the development of European thought.

EUH 3600 History of the Islamic World, 600-1600 (4) AS INT
A study of the Islamic world from the rise of Islam to the end of the Ottoman Empire. Topics include the political, social, and cultural development of the Islamic world, as well as the impact of Islamic law and thought on the development of European thought.
EVR 4104 Karst Environments (3) AS ESP
PR: EVR 2001. The objective is to provide an understanding of the scientific principles pertaining to karst environments in Florida and around the world. Both physical processes and human interactions/impacts will be examined. Not restricted to majors and not repeatable.

EVR 4114 Climate Change (3) AS ESP
PR: EVR 2001. The objective is to provide an understanding of the scientific principles pertaining to global and regional climate change. Both mechanisms causing the change and human impacts on climate will be examined. Not restricted to majors and not repeatable.

EVR 4218 Research Methods in Wildlife Ecology (3) AS ESP
Research Methods in Wildlife Ecology will review the ways in which data are collected, analyzed, and reported, so that informed decisions about wildlife management and conservation can be made. The course will have both classroom and field components.

EVT 4562 Vocational Education for Special Needs Students (4)
Focuses on modifying the vocational education curriculum, laboratory, shop, student outcomes, learning activities, tests, media, etc., to accommodate the unique learning needs of minority, handicapped, disadvantaged, non-traditional and other special needs students.

EVT 4940 Environmental Science Internship (3) AS ESP
CR: EVT 4936. S/U only. One full semester of internship in a public or private school. In special programs where the internship experience is distributed over two or more semesters, students will be registered for credit which accumulates from 9-12 semester hours.

EVT 4946 Supervised Field Experience: Industrial-Technical Education (1-6) ED EDV
PR: CI. S/U only. Planned supervised functions in the area of specialization and coordinated with selected schools, government offices, social agencies, businesses and industries on site.

EVT 5369 Preparation and Development for Teaching (4) ED EDV
PR: PSY 3213 with a grade of C or better or CI. Survey of procedures, methods, empirical findings, and theoretical interpretations of the field will be covered.

EVT 5375 Supervised Teaching Experience (3) AS ESP
PR: CI. S/U only. Specialized independent study determined by contract and report required.

EVT 4909 Directed Study: Industrial-Technical Education (1-3) ED EDV
PR: CI. S/U only. Contract and report required.

EVT 4910 Environmental Science and Policy Project (3) AS ESP
Restricted to senior majors. S/U only. Environmental science project consists of a written report, oral presentation, and research in a field related to environmental science/environmental policy. Supervised by a faculty member.

EVT 4919 Special Topics (3) AS ESP
Each topic is identified under the direction of a faculty member with the content depending on the interests of the students and faculty involved. Open to all students.

EVT 4920 Senior Seminar in Industrial-Technical Education (2)
Open to senior majors only. S/U only. A topical reading and discussion seminar focusing on the interdisciplinary nature of environmental science and environmental policy.

EVT 4930 Selected Topics (1-4) AS ESP
Open to majors. S/U only. Not restricted to majors and not repeatable.

EVT 4931 Environmental Science Internship (3) AS ESP
Open to senior majors only. S/U only. Not restricted to majors and not repeatable.

EVT 4940 Environmental Science Internship (3) AS ESP
Open to senior majors only. S/U only. Not restricted to majors and not repeatable.

EVT 4946 Supervised Field Experience: Industrial-Technical Education (1-6) ED EDV
PR: CI. S/U only. Planned supervised functions in the area of specialization and coordinated with selected schools, government offices, social agencies, businesses and industries on site.

EVT 4949 Selected Topics (1-4) AS ESP
Each topic is identified under the direction of a faculty member with the content depending on the interests of the students and faculty involved. Open to all students.

EVT 4950 Independent Study (1-6) AS ESP
To provide advanced students with the opportunity for independent study in areas of specific interest.

EVT 4951 Independent Study (1-6) AS ESP
To provide advanced students with the opportunity for independent study in areas of specific interest.

EVT 4975 Internship: Industrial-Technical Education (1-12) ED EDV
CR: EVT 4936. S/U only. One full semester of internship in a public or private school. In special programs where the internship experience is distributed over two or more semesters, students will be registered for credit which accumulates from 9-12 semester hours.

FIL 2000 Film: The Language Of Vision
Intermediate problems in film with emphasis on the exploration of materials and media and the development of individual concepts.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 3403 Principles of Finance (3) BA FIN</td>
<td>Survey of the risks and returns of financial instruments in relation to the investment objectives of individual and institutional investors. Includes an examination of the capital markets, information flows, and analytical techniques in terms of their impact on the valuation process.</td>
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<tr>
<td>FIN 4905 Independent Study (1-3) BA FIN</td>
<td>PR: CI, CC. S/U only. Specialized independent study determined by the student's needs and interests.</td>
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<tr>
<td>FLE 4363 ESOL 1 - Curriculum and Pedagogy of ESOL (3) ED EDX</td>
<td>This course is designed to prepare preprofessional teachers to provide linguistically and culturally appropriate instruction, assessment, and learning opportunities for students with Limited English Proficiency.</td>
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<tr>
<td>FLE 4336 ESOL 2 - Literacy Development in English Language Learners (3) ED EDX</td>
<td>This course is designed to provide students with a critical understanding of instructional delivery which caters to the linguistic and literacy needs of minority/heritage communities. Providing students with a sociocultural-theoretical framework.</td>
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<tr>
<td>FIN 4914 Advanced Investment Analysis and Management (3) BA FIN</td>
<td>FIN 4915 Independent Research (1-3) BA FIN</td>
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<tr>
<td>FIN 4304 Principles of Investments (3) BA FIN</td>
<td>PR: ECO 2013 and FIN 4303. Survey of the risks and returns of investment media in relation to the investment objectives of individual and institutional investors. Includes an examination of the capital markets, information flows, and analytical techniques in terms of their impact on the valuation process.</td>
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<tr>
<td>FIN 4324 Bank Management (3) BA FIN</td>
<td>FIN 4443 Financial Policies and Strategies (3) BA FIN</td>
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<tr>
<td>FIN 4225 Federal Reserve System and Monetary Policy (3) BA FIN</td>
<td>FIN 4245 Federal Reserve System and Monetary Policy (3) BA FIN</td>
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<tr>
<td>FIN 4201 Advanced Film (3) VP ART</td>
<td>FIN 4414 Advanced Corporation Finance (3) BA FIN</td>
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<tr>
<td>FIN 4441 Financial Statement Analysis (3) BA FIN</td>
<td>FIN 4443 Financial Policies and Strategies (3) BA FIN</td>
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<tr>
<td>FIN 3604 International Finance (3) BA FIN</td>
<td>FIN 3403 Principles of Finance (3) BA FIN</td>
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<tr>
<td>FIN 4314 Methods of Teaching Foreign Languages and ESOL in the Elementary School (3) ED EDX</td>
<td>FIN 4317 Teaching Students with Limited English Proficiency (3) ED EDX</td>
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<tr>
<td>FIN 4204 Personal Finance (3) BA FIN</td>
<td>FIN 4533 Methods of Teaching Foreign Languages and ESOL in the Secondary School (3) ED EDX</td>
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<tr>
<td>FIN 4233 Money and Banking (3) BA FIN</td>
<td>FIN 4316 Language Principles and Acquisition (1-3) ED EDX</td>
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<tr>
<td>FIN 2106 Introduction to Investments (3) BA FIN</td>
<td>FIN 4514 Advanced Investment Analysis and Management (3) BA FIN</td>
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<tr>
<td>FIN 2104 Personal Finance (3) BA FIN</td>
<td>FIN 4905 Independent Study (1-3) BA FIN</td>
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<td>FIN 2935 Selected Topics in Finance (1-6) BA FIN</td>
<td>FIN 4905 Independent Study (1-3) BA FIN</td>
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<td>FIN 3232 Money and Banking (3) BA FIN</td>
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<td>FIN 4304 Principles of Finance (3) BA FIN</td>
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<td>FIN 4317 Teaching Students with Limited English Proficiency (3) ED EDX</td>
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<tr>
<td>FIN 4412 Working Capital Management (3) BA FIN</td>
<td>FIN 4324 Bank Management (3) BA FIN</td>
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<tr>
<td>FIN 4413 Financial Policies and Strategies (3) BA FIN</td>
<td>FIN 4303. An examination of the financial policies of corporations, with special reference to dividend policy, financial structure, capital expenditures, acquisitions, mergers, and reorganizations.</td>
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<tr>
<td>FIN 4443 Financial Policies and Strategies (3) BA FIN</td>
<td>FIN 4301. A study of the financial components of language, linking them to methods and techniques of providing comprehensive instruction and supporting the development of oral proficiency and literacy skills for (LEP) children.</td>
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<tr>
<td>FIN 4446 Financial Statement Analysis (3) BA FIN</td>
<td>FIN 4303. A study of the financial components of language, linking them to methods and techniques of providing comprehensive instruction and supporting the development of oral proficiency and literacy skills for (LEP) children.</td>
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<tr>
<td>FIL 3845 World Cinema 6A FA (4) VP ART</td>
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<tr>
<td>FIL 4414 Advanced Film (3) VP ART</td>
<td>FIL 4303. Financial management of the firm, including the financial structure, the firm's capital structure, financial resources, capital expenditures, and sources of financial resources.</td>
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<tr>
<td>FIL 4406 More advanced projects in filmmaking to further develop works both technically and conceptually.</td>
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<tr>
<td>FIL 5489C Cinematography (4) VP ART</td>
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<td>CP: FIL 3845. More advanced projects in filmmaking to further develop works both technically and conceptually.</td>
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<td>FIL 2106 Introduction to Investments (3) BA FIN</td>
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FRE 4421 Composition II (3) AS WLE
Continuation of French composition. This course is designed to follow FRE 3420.

FRE 4471 Advanced Overseas Study (1-6) AS WLE
PR: FRE 3470 or CI. Departmental approval required. Intensive language study in France.

FRE 4700 French Linguistics (3) AS WLE
PR: LIN 3010 and FRE 2201 or equivalent. An introduction to the phonological, morphological and syntactic structure of French.

FRE 4805 Directed Study (1-3) AS WLE
Departmental approval required.

FRE 4930 Selected Topics (1-3) AS WLE
Study of an author, movement or theme.

FRE 5222 Advanced Written Expression (3) AS WLE
PR: FRE 4421, or equivalent. Course is designed to give advanced training in free composition in French.

FRE 5566 Contemporary France (3) AS WLE
PR: FRE 3500 or equivalent or graduate standing. An advanced course in French civilization and culture including a study of recent social, artistic and political trends as well as various current intellectual movements. Text and discussions in French.

FRT 3001 Great French Love Stories in Translation MW (3) AS WLE
An overview of the evolution of the concept of romantic and passionate love in French literature throughout the centuries and its impact on western literature and thought.

FRT 3140 French Literary Masterpieces in English Translation MW (3) AS WLE
A survey of the major literary works of France, tracing not only literary but intellectual and cultural history from the Middle Ages to the present.

FRW 4100 The French Novel MW (3) AS WLE
PR: FRE 3234, FRE 3420 or CI. Study of the most representative novels from the 17th to the 20th centuries in France, examining literary movements, ideas, and techniques. Course taught in French.

FRW 4101 Introduction to French Drama and Poetry MW (3) AS WLE
PR: FRE 3234. A study of the history of drama and poetry. Will include medieval drama, Racine, Corneille, Molliere, Anouilh, Sartre, Ionesco and others. Will also include Villon, Ronsard, D’Urfay, Lamartine, Hugo, Vigny, Musset, Baudelaire, Maillarmé, Rimbaud, Valéry, Peguy, Eliard, Apollinaire, Char, and others. Course content may vary from year to year. Course taught in French.

FRW 5222 Classical Prose and Poetry (3) AS WLE
PR: FRW 4101. Emphasis on Malherbe, Descartes, Pascal, La Fontaine, and Boileau.

FRW 5226 20th Century Poetry and Theatre (3) AS WLE

FRW 5286 The 20th Century Novel (3) AS WLE
PR: FRW 4100. Proust, Gide, Mauriac, Malraux, Camus, Robbe-Grillet.

FRW 5314 Classical Drama (3) AS WLE
PR: FRW 4101. Corneille, Molliere, and Racine.

FRW 5415 Literature of the Middle Ages (3) AS WLE
PR: FRW 4100 or FRW 4101. Major genres, including epics, Arthurian romances, drama and lyric poetry. Reading in modern French translation.

FRW 5425 Literature of the Renaissance (3) AS WLE
PR: FRW 4100 or FRW 4101. A study of Renaissance French humanism including Rabelais, Montaigne, and Pleiad poets.

FRW 5445 18th Century Literature (3) AS WLE
PR: FRW 4100. The classical tradition and the new currents of thought in the Age of Enlightenment.

FRW 5528 Pre-Romanticism (3) AS WLE

FRW 5535 Romanticism and Early Realism (3) AS WLE
PR: FRW 4101. A study of the romantic and early realistic movements with emphasis on Lamartine, Vigny, Musset, Hugo, and Balzac.

FRW 5556 Naturalism and Realism (3) AS WLE
PR: FRW 4100 or FRW 4101. A detailed study of realism and naturalism with emphasis on Flaubert, Zola, les Goncourt, Maupassant, and Daudet.

FRW 5745 French Literature of Quebec (3) AS WLE
PR: A survey of Francophone literature and cultures is recommended. Overview of the main representative literary works in French from Quebec in all genres (poetry, drama, novel, short story) as well as a survey of the main traits of Quebec history & culture. Open to non-majors. Not repeatable for credit. Taught in French.

FRW 5755 African and Caribbean Literature (3) AS WLE
PR: A survey of French literature. An overview of the main representative literary works in French from North and Sub-Saharan Africa as well as the Caribbean. Open to non-majors and not repeatable for credit. Course taught in French.

FRW 5829 An Introduction to Modern French Literary Criticism (3) AS WLE
A graduate elective 3 credit course entirely taught in French, which offers a survey of the main trends and methods in 20th Century literary criticism, the French having been at the forefront of the field.

FRW 5934 Selected Topics (1-3) AS WLE
PR: Upper-level or graduate standing. Study of an author, movement or theme.

FSS 2321 Introduction to Food Production Management (3) US HRM
Food preparation, standards and techniques in commercial food production and service. Factors affecting the quality of food, practical experience in food production and service, in accordance with food standards, sanitation & safety and cost control.

GEA 2000 World Regional Geography SS HP AF (4) AS GPY
Comparative and analytical analysis of representative regions of the world with emphasis on cultural, political, economic, environmental, and physical diversity.

GEA 3194 Regional Geography (4) AS GPY
Variable title course to systematically study and compare special regions identified by the instructor.

GEA 3405 Geography of Latin America 6A (4) AS GPY
Systematic geographic analysis of the Latin American world region, with emphasis on its cultural, political, economic, environmental, and physical diversity.

GEA 3500 Geography of Europe 6A (4) AS GPY
Systematic geographic analysis of the European world region, with emphasis on its cultural, political, economic, environmental, and physical diversity.

GEA 3703 Geography of Asia (4) AS GPY
Systematic geographic analysis of the Asian world region, with emphasis on its cultural, political, economic, environmental, and physical diversity.

GEB 2350 Doing Business Around the World SS (3) BA GBA
This course introduces the student to: 1) the nature of international business; 2) the framework of international organizations and the monetary system within which international business functions; 3) forces affecting international business, and 4) management responses to problems caused by international environments.

GEB 2935 Selected Topics in Business (1-6) BA GBA
Topics to be selected by department chairs.

GEB 4890 Strategic Management and Decision Making MW (3) BA GBA
PR: Senior standing and FIN 3403, MAN 3025, MAR 3023. The course is intended to provide a unifying, integrating, and coordinating opportunity to tie together concepts, principles, and skills learned separately in other, more specialized courses in Business Administration.

GEB 4905 Independent Study (1-3) BA GBA
PR: CI. Individual study contract with instructor and department chairperson required. The research project will be mutually determined by the student and instructor.

GEB 4915 Independent Research (1-4) BA GBA
PR: CI. Specialized independent study determined by the student’s needs and interests.

GEO 1930 Geography of Current Events SS (4) AS GPY
Application of basic geographic principles to the analysis of contemporary events in various parts of the world.

GEO 2200 Introduction to Physical Geography NS (3) AS GPY
CR: GEO 2200L. Principles of physical geography: maps, earth-sun relationships; meteorological, hydrological, pedological, aeolian, and glacial processes; and resultant landforms.

GEO 2200L Introduction to Physical Geography Lab (1) AS GPY
CR: GEO 2200. Laboratory portion of Introduction to Physical Geography (GEO 2200).

GEO 2371 Introduction to Earth Systems Science NS (3) AS GPY
For non-majors only. The application of basic earth system science analysis to environmental problems. Review of impact of
human activities on the surface of the earth at local and global scales.

**GEO 2400 Introduction to Human Geography (4) AS GPY**
Systematic treatment of human activities on earth; population, settlement, agriculture, industry, trade, transportation, and political aspects among those considerations.

**GEO 2931 Special Topics (1-4) AS GPY**
Topics are at the discretion of the instructor. This course will offer lower level topics to attract new majors.

**GEO 3164C Research Methods in Geography (4) AS GPY**
PR: STA 2023 or STA 2122 or QMB 2100. Statistical analysis in geographic research.

**GEO 3602 Urban Geography (4) AS GPY**
PR: GEO 2400 or CI. Spatial analysis of urban areas: growth, location, spacing, and size. Development, site, situation, internal structure, and hinterland are considered.

**GEO 4014C Geographic Techniques and Methodology (4) AS GPY**
PR: GIS 3006 and GEO 3164C, or CI. Selected topics in various geographic techniques and methodologies and their application.

**GEO 4204C Topics in Physical Geography (4) AS GPY**
PR: GEO 2200 or CI. Intensive study of a topic selected from physical geography.

**GEO 4210 Process Geomorphology (4) AS GPY**
PR: GEO 2200 or GLY 2010 or CI. Origin, evolution, and distribution of landforms of North America. A review of processes that are unique to the topics. Students will take an in-depth look at hurricane climatology, the El Nino and Southern Oscillation phenomenon, thunderstorms and lightning, satellite remote sensing, monsoons, sea-breeze convergence and Florida climatology, surface energy exchange, land use change and its impact on tropical climates.

**GEO 4265 Soil Genesis and Classification (4) AS GPY**
PR: GEO 2200, or CI. A systematic study of soil genesis and classification with a focus on North American and Florida soils.

**GEO 4280C Hydrology (4) AS GPY**
PR: GEO 2200 or CI. Introduction to the general principles that govern hydrologic processes. Approaches to hydrologic measurements and the application of hydrologic analyses to water-resource management issues are examined.

**GEO 4284 Water Resources Management NS (4) AS GPY**
PR: Senior standing. Geographic perspectives on water resources management at the global, national and local scale, including political, socio-economic, technical and scientific aspects.

**GEO 4290 Biogeography (4) AS GPY**
PR: GEO 2200 and GEO 3164C, or CI. Analysis of the present and past distribution of species at an intermediate to large spatial scale.

**GEO 4310 Natural Hazards (4) AS GPY**
PR: Junior or Senior Standing. Examination of the physical, social, economic, political and cultural forces that create the phenomena of natural hazards. Case studies from around the world will include floods, droughts, tornadoes, hurricanes, freezes, heat waves, wild fires, earthquakes, tsunami, and volcanoes.

**GEO 4372 Global Conservation 6A MW (4) AS GPY**
The distribution, exploitation, and conservation of physical and human resources, ecology.

**GEO 4421 Cultural Geography (4) AS GPY**
PR: GEO 2400 or CI. The interrelationships of culture and nature, from ancient times to the present.

**GEO 4471 Political Geography MW (4) AS GPY**
PR: GEO 2400 or CI. The geographic factors underlying political decisions and influencing their outcome; the geographic consequences of these decisions: geopolitics.

**GEO 4500 Economic Geography (4) AS GPY**
PR: GEO 2400 or CI. The spatial organization of economic production, consumption, and exchange systems.

**GEO 4604 Topics in Urban Geography MW (4) AS GPY**
PR: GEO 3700 or CI. Intensive examination of issues such as economic restructuring and inner-city decline, ghetto formation, gentrification, transportation, and policy-making.

**GEO 4700 Transportation Geography (4) AS GPY**
PR: GEO 2400 and GEO 3164 or CI. General concepts related to the movement of goods and people, with particular emphasis on spatial principles and urban transportation problems and planning.

**GEO 4900 Directed Reading (1-4) AS GPY**
PR: 20 hours in geography and CI prior to registration.

**GEO 4910 Individual Research (1-4) AS GPY**
PR: 20 hours in geography and CI prior to registration.

**GEO 4930 Selected Topics (4) AS GPY**
Topics are at the discretion of the instructor. This course will offer upper level, advanced topics in all aspects of Geography. Credit can be repeated for credit as long as the title is different, for up to 8 credits.

**GEO 4933 Geography Colloquium (1) AS GPY**
Senior standing in geography Weekly topical lectures by faculty and outside speakers. Students will develop a plan for their professional or graduate careers.

**GER 1120 Beginning German I (4) AS WLE**
CR: GER 1120L. Development of basic skills in listening and speaking; comprehension, speaking and writing of German.

**GER 1120L Beginning German I Laboratory (1) AS WLE**
CR: GER 1120. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. S/U only. A laboratory designed to offer additional practice using various instructional technologies and media.

**GER 1121 Beginning German II (4) AS WLE**
CR: GER 1120 or equivalent. CR: GER 1121L. Continued development of basic skills in listening and speaking, comprehension, speaking and writing German.

**GER 1121L Beginning German II Laboratory (1) AS WLE**
CR: GER 1121. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. S/U only. A laboratory designed to offer additional practice using various instructional technologies and media.

**GER 2200 German III (3) AS WLE**
CR: GER 1121 or CI. Study of 19th and 20th century German literature and culture. Students will learn about various aspects of Germany's artistic, intellectual, and social history, as well as general film history and criticism. Taught in English.

**GER 2201 German IV (3) AS WLE**
CR: GER 1121 or equivalent. Readings in German on the intermediate level. May be taken concurrently with GER 2201.

**GER 2240 Conversation I (3) AS WLE**
CR: GER 1121. For development of basic conversational skills.

**GER 3420 Composition I (3) AS WLE**
A fundamental course for students who have completed GER 2200 or GER 2201.

**GER 3440 German for Business and International Trade (3) AS WLE**
CR: GER 2200, or CI. An introduction to the German language in ordinary business transactions.

**GER 3500 German Civilization (3) AS WLE**
CR: GER 2200 or GER 2201. Readings in German on the cultural history of Germany.

**GER 3573 Cultural Observations in Germany (3) AS WLE**
This course allows students to experience Germany from a cultural/historical perspective and gives them insights into a city's significance within Germany as a whole. It also includes an emphasis on German language use and cultural practices.

**GER 4410 Conversation II (3) AS WLE**
Free conversation based on the current German idiom.

**GER 4421 Composition II (3) AS WLE**
Practical training in modern German usage and differences of style.

**GER 5605 Goethe (3) AS WLE**
Selected novels, poems: Werther, Wahlverwandtschaften, Wilhelm, Meister, Westostlicher, Divan.

**GER 5845 History of the German Language (3) AS WLE**
A diachronic approach to the study of the German language. The course traces the history and development of the language from Indo-European through Germanic, Old, Middle, and New High German.

**GET 3100 German Literature in English Translation MW (3) AS WLE**
Analysis and interpretation of selected major works of German literature, to be read in and, if dropped, then dropped simultaneously. S/U only.

**GET 3244 German Popular Film HP MW (3) AS WLE**
Overview of films with significant popular success at German box office from 1920 to the present. Films will be discussed in the context of Germany's artistic, intellectual, and social history as well as general film history and criticism. Taught in English.

**GET 3292 Fantastic Films of Early German Cinema HP MW (4) AS WLE**
An overview of early 20th century German films with emphasis on horror, science fiction, and fantasy films. Course offers insights into Germany's artistic, intellectual, and social history, as well as general film history and criticism. Taught in English.
GET 4293 New German Cinema to Present MW HP (4) AS WLE
An overview of post-1945 German films with emphasis on films from New German Cinema (1960s-early 80s) & its aftermath. Course offers insights into Germany’s artistic, intellectual, and social history, as well as general film history and criticism. Taught in Eng.

GEW 4100 Survey of German Literature I (3) AS WLE
Course will examine a variety of texts from the 9th to the early 19th century, exposing significant moments in German literature and thought and exploring diverse perspectives on German culture and society. Course taught in German. Not repeatable.

GEW 4101 Survey of German Literature II (3) AS WLE
Course will examine a variety of texts from the 19th century to the present, exposing significant moments in German literature and thought and exploring diverse perspectives on German culture and society. Course taught in German. Course not repeatable.

GGE 4750 Women in Contemporary German Literature and Film HP (3) AS WLE
PR: GER 2200 or above or CI. This course serves as an introduction to contemporary literary works and films by women writers and directors from German speaking countries. It will examine the works based on feminist literary and cultural theory.

GGE 4900 Directed Study (1-3) AS WLE
Departmental approval required.

GGE 4930 Selected Topics (1-3) AS WLE
Study of an author, movement or theme.

GGE 5475 20th Century Literature to 1945 (3) AS WLE
A study of major styles in German literature from 1900 to WW II with emphasis on Hauptmann, Schnitzler, Hofmannsthal, George Rilke, Kaiser, Heym, Trakl, Thomas Mann, Hesse, Kafka, Benn, Brecht.

GGE 5489 20th Century Literature: 1945 to Present (3) AS WLE
Study of major trends in German literature since WW II with emphasis on Borchert, Frisch, Durrenmatt, Boll, Uwe, Johnson, Grass, Aichinger, Eich Engers, Bachmann.

GGE 5515 The Enlightenment (3) AS WLE
Selected dramas and critical writings by Lessing, Wieland, Kant.

GGE 5545 Romanticism (3) AS WLE
Jenaer circle and Heidelberg circle; the late romantic period, the writers between Classicism and Romanticism.

GGE 5555 Realism (3) AS WLE
Selected works by Grillparzer, Grabbe, Buchner, Hebbel, Heine, Immerman, Stifter, Keller, Meyer, Storm, Raabe, Hulshoff, and Morike.

GGE 5606 Faust (3) AS WLE
Sources, form, content, and literary significance of Urfaust and Faust.

GGE 5615 Schiller (3) AS WLE
Selected dramas, philosophical, and aesthetic writings.

GGE 5634 Selected Topics (1-3) AS WLE
Study of an author, movement or theme.

GGE 2000 Introduction to Gerontology SS (3) AS GEY
This course is designed to be an introduction to the study of aging. The aging process is viewed from a multi-disciplinary perspective including the biological, psychological, and sociological aspects of aging.

GGE 3323 Community Services for Older Adults (3) AS GEY
This class is designed to introduce students to services available to older adults and to careers in the field of aging services. This course will familiarize the student with the basic aspects of nursing home administration through the practical application of gerontological case management theory and concepts.

GGE 3430 Housing for the Elderly (3) AS GEY
Major issues and aspects of conventional and planned housing for the elderly.

GGE 4360 Gerontological Counseling (3) AS GEY
An introduction to the study of the major mental health problems of the elderly. Current approaches to counseling the elderly in community and institutional settings are discussed.

GGE 4401 Research Methods in Gerontology (3) AS GEY
PR: STA 2122 or equivalent with a grade of C or better. Restricted to Gerontology majors, others by departmental permission. Methods and techniques of social research in gerontology. Design of gerontological studies, collection and analysis of data, interpretation of results, and preparation of reports.

GGE 4608 Alzheimer’s Disease Management SS (3) AS GEY
PR: GEY 2000 or 3326. This course will provide instruction on effective approaches for providing care to persons with Alzheimer’s Disease and related disorders in residential and home care settings. The major dementia disorders and typical behaviors presented by patients are presented along with strategies for successful behavior management. Building a dementia program and building dementia care teams are also covered.

GGE 4612 Psychology of Aging SS (3) AS GEY
A comprehensive overview of psychological aspects of aging. Topics will include age-related changes in sensation/perception, cognition, and personality, as well as application to late-life psychopathology.

GGE 4628 Minority Aging SS (3) AS GEY
Minority status, race, and ethnicity are socially constructed concepts that reflect our aging society’s value systems, prejudices, and social stratification. This course will expose students to these concepts through a life course and political economy perspective.

GGE 4656 Business Management in an Aging Society MW (3) AS GEY
This course provides students with an interdisciplinary perspective that addresses both business management and the impact of our aging society on business.

GGE 4641 Death and Dying SS (3) AS GEY
A broad overview of the basic concepts and psychosocial issues relating to the meaning of loss and death, the process of death, and the experience of grieving. Health care practices are considered along with community resources.

GGE 4647 Ethical and Legal Issues of Aging SS MW (3) AS GEY
A consideration of the major ethical and legal issues in aging and their implications for policies, priorities, and services.

GGE 4900 Directed Readings (1-3) AS GEY
PR: CI. A reading program with topics in gerontology conducted under the supervision of a faculty member.

GGE 4935 Special Topics in Gerontology (3) AS GEY
Courses on topics such as preirement, mental health, physical services, nursing home administration, the older woman, and elder abuse will be offered.

GGE 4945 Field Placement (1-3) AS GEY
PR: Subject to availability of internship sites approved by the School of Aging Studies. Internship in an agency or community setting. A full-time assignment to an agency or organization, designed in planning or for credit in 3rd or 4th year. For older people if in the BA program (6 hours), or to a nursing home if in the BS program (9 hours).

GGE 5620 Sociocultural Aspects Of Aging (3) AS GEY
The interrelationships between the aged (or aging) and the structure and function of the social system and its major institutionalized subsystems.
GEY 5630 Economics and Aging (3) AS GEY
Examinations of economic systems as they impact the aged. Emphasis is on applied aspects of economic planning, pensions, insurance, social security and other support systems.

GEY 5642 Perspectives on Death and Dying (3) AS GEY
Study of the various psychological, medical, legal, and religious problems caused by dying and death, and how individuals and groups have responded in the past and present.

GIS 2010C Map Interpretation (4) AS GPY
Analysis and synthesis of various types of maps and map projections.

GIS 3006 Computer Cartography (4) AS GPY
An introduction to the concepts underlying modern, computer-based mapping and to the collection and storage of digital spatial data.

GIS 4035C Remote Sensing of the Environment (4) AS GPY
PR: GIS 3006 and GEO 3164C, or CI, Analysis of satellite images and aerial photographs for studies of the environment.

GIS 4043C Geographic Information Systems (4) AS GPY
PR: GIS 3006 and GEO 3164C, or CI. An introduction to the concepts underlying Geographical Information Systems, with an emphasis on analytical capabilities of such systems in both raster and vector domains.

GIS 5049 GIS for Non-Majors (3) AS GPY
An introduction to the concepts underlying digital thematic mapping, global positioning and geographical information systems (GIS) for non-geography majors and non-geography graduate students.

GIS 5075 Global Positioning Systems (3) AS GPY
PR: GIS 5049. GIS for Non-Majors or permission from the instructor. Examination of the theory, operation and application of Global Positioning Systems (GPS).

GLY 2000 Earth and Environmental Systems NS (3) AS GLY
May substitute for GLY 2010 for geology majors. This course examines the geology of the earth's environment, using an earth systems approach that looks at interactions between the lithosphere, hydrosphere, atmosphere, and biosphere. Students will learn general principles of geology, travel world-wide on the internet, and participate in discussions of topics ranging from the scientific method to the latest geologic discoveries. Open University course; taught via internet and TV. Open University course; taught via internet and TV.

GLY 2008 Origins: From the Big Bang to the Ice Age NS(3) AS GLY
The history of the cosmos, origin of the universe, galaxies, the solar system, and earth, evolution of life, great extinction's including the dinosaurs, evolution of the primates, and the environmental future of the planet. (For both non-science and science majors.)

GLY 2010L Dynamic Earth Laboratory (1) AS GLY
PR: GLY 2010 or concurrent registration. Required for Geology majors; open to non-majors. Laboratory study of earth materials, landforms, geologic structures, topographic and geologic maps. Lec-lab-field trips.

GLY 2010L Dynamic Earth: Introduction to Physical Geology NS (3) AS GLY
Required for Geology majors; open to non-majors. Study of minerals, rocks, and dynamic processes of the earth. Introduction to the origin of earth's materials, landforms, and structures.

GLY 2015L Essentials of Geology Laboratory (1) AS GLY
Fundamental concepts and skills of modern geology, including rock and mineral identification, analysis of geologic maps, field analysis, and applications of computers in Geology. Required field trip.

GLY 2030 Hazards of the Earth's Surface: Environmental Geology NS (3) AS GLY
May substitute for GLY 2010 for geology majors. A first course in geology emphasizing environmental aspects of the earth's crust, such as earthquakes, depletion of the earth's resources, water-supply problems, and geologic aspects of land use and planning.

GLY 2050 Science of Earth and Life NS(3) AS GLY
May substitute for GLY 2010 for geology majors. The nature, history and philosophy of science intended primarily for non-science majors. Consideration of science as a way of knowing through examples taken primarily from historical geology and biology (e.g., extinction of the dinosaurs, continental drift, evolution) but also from physics and astronomy. Consideration of social relevance of science.

GLY 2101L Earth History Laboratory (1) AS GLY
Laboratory study of the history of the earth and life. Required for Geology majors; open to non-majors.

GLY 2100 History of the Earth and Life NS (3) AS GLY
PR: A course in geology. Required for Geology majors; open to non-majors. Study of the physical and biological history of the earth including evolution of the major groups of organisms, plate tectonics, and ancient environments.

GLY 2160 Geology of the National Parks (3) AS GLY
This course is an introduction to the nature of geologic processes including plate tectonics, earthquakes, volcanism, glaciation, and shoreline processes drawing on examples from our National Parks.

GLY 2930 Selected Topics in Geology (1-3) AS GLY
Does not count toward the geology major. Topical courses in a variety of areas of general interest.

GLY 3311C The Solid Earth: Petrology and Geochemistry (4) AS GLY
Igneous and metamorphic rocks of modern and ancient tectonic environments. Rock-forming processes at plate margins and intraplate sites. Essentials of hand specimen and microscopic mineralogy. Required field trip. Lec-lab. May not be repeated for credit.

GLY 3402C The Solid Earth: Plate Tectonics and Earth Structure (4) AS GLY
PR: 4 hrs. introductory geology including GLY 2015L; MAC 2312 or equivalent; PHY 2048. Plate tectonic theory and its implication re: the formation of structural features on outcrop and regional scales. Field and geophysical tools for structural analysis. Required field trip. Lec-Lab.

GLY 3525C Sedimentary Record 1: Sedimentary Processes and Sedimentary Rocks (4) AS GLY
PR: GLY 2015L, CHM 2045, MAC 2281. CR: GLY 3311C. A lecture and laboratory class that discusses sedimentary processes, formation and classification of sedimentary rock, and selected sedimentary rock groups. Examination of the rock record to solve problems in sedimentary geology.

GLY 3610C Introduction to Invertebrate Paleontology (4) AS GLY
PR: GLY 2100; BSC 2010 or equivalent strongly encouraged as background. Lectures cover principles and applications of paleontology, including biostratigraphy, taphonomy, paleoecology, and micro- and macroevolutionary patterns and processes. Labs study the invertebrate phyla comprising the bulk of the fossil record. Open University course; taught via internet and TV.

GLY 3720C The Fluid Earth (4) AS GLY
PR: GLY 2015L; MAC 2311 and MAC 2312 or equivalent; CHM 2045 and CHM 2046; PHY 2048 and PHY 2048L. Physical, chemical and biological processes affecting fluids of the lithosphere, oceans and atmosphere. Water as a geologic medium and global entity. A systems approach. Not available as S/U for geology majors; S/U available for others.

GLY 3850 Geology For Engineers (3) AS GLY
PR: Junior standing in College of Engineering or CI. No credit toward the geology major, or for those with credit for GLY 2010. An examination of geologic materials and processes designed for engineering students; classification and properties of earth materials, surface processes, site investigation techniques, applications of geology to the solution of engineering problems.

GLY 4045 Moons, Planets, and Meteoroids: An Introduction to Planetary Science MW (3) AS GLY
PR: Junior standing. Solar System exploration, from Aristotle to NASA. Modern views on the origins of meteorites, the Moon, Mars, Venus, and other planetary bodies, and the methods of planetary study. Meteor impacts, their effects, future hazard. Space science as a tool in the study of the Earth. Field trips, lectures, Internet exercises.

GLY 4053 Theories and Arguments about the Earth MW (3) AS GLY
PR: 2000 level geology course. History of thinking about the Earth: context - geologic controversies; emphasis - geologic reasoning.

GLY 4104C Sedimentary Record 3: Paleontology and Earth Evolution (4) AS GLY
PR: GLY 2015L, GLY 3552C, BSC 2010. The study of "deep time", including how it is measured, how it is correlated over the Earth's surface, and how important physical, biologic, and chemical geologic processes have varied with time. Lec-Lab.

GLY 4554C Sedimentary Record 2: The Earth's Surface (4) AS GLY
PR: At least one course in Geology with lab. Principles of weathering, erosion, production, and transport of sediment on the earth's surface, and the resulting geomorphology. Modern sedimentary environments and the processes and response systems that govern them. Course is open to anyone with at least one course in geology with lab. Course is not available on an S/U basis for geology majors; it is for other majors.
GLY 4948L Practical and Applied Geology: Computational Geology (1) AS GLY  
PR: Junior standing, declared Geology major, and at least 12 credit hours of Geology courses, or CI: CR: Enrollment in other Practical/Applied sections. Completion of Geology supporting course sequence highly recommended. Hands-on course designed to teach the basic computational skills of a practicing geologist. Topics vary widely, with several different offerings each semester. May be repeated for credit.

GLY 4949L Practical and Applied Geology: Computational Geology (1) AS GLY  
PR: Junior standing, declared Geology major, and at least 12 credit hours of Geology courses, or CI. CR: Enrollment in other Practical/Applied sections. Completion of Geology supporting course sequence highly recommended. Hands-on course designed to teach the basic computational skills of a practicing geologist. Topics vary widely, with several different offerings each semester. May be repeated for credit.

GLY 4950 Selected Topics in Geology (1-4) AS GLY  
PR: Junior standing, declared Geology major, and at least 12 credit hours of Geology courses, or CI. CR: Enrollment in other Practical/Applied sections. Completion of Geology supporting course sequence highly recommended. Hands-on course designed to teach the basic computational skills of a practicing geologist. Topics vary widely, with several different offerings each semester. May be repeated for credit.

GLY 4952 Geological Field Excursion (2) AS GLY  
PR: Senior standing in geology or CI. Lectures and 2-3 week field excursion to study regional geology, structure and lithogenesis of geologically complex terrain. Mapping and outcrop description techniques are emphasized. Destination of trip varies. Trip requires camping and vigorous physical activity. Lec.-field trip.

GLY 4954L Geology Colloquium (1) AS GLY  
PR: Senior or advanced junior standing. Each topic is a course under the direction of a faculty member. All areas of geology included.

GLY 4955L Undergraduate Thesis (1) AS GLY  
PR: Senior standing in Geology or CI. Lectures and 2-3 week field excursion to study regional geology, structure and lithogenesis of geologically complex terrain. Mapping and outcrop description techniques are emphasized. Destination of trip varies. Trip requires camping and vigorous physical activity. Lec.-field trip.

GLY 4956 Statistical Models in Geology (3) AS GLY  
PR: STA 2023 or equivalent or CI. Application of statistical methods to geological problems. Emphasis on sampling plans, nature of geologic distributions, and application of analyses of variance to solving geological problems. Lec.

GLY 5268C Fluid Earth 2: Hydrogeology (4) AS GLY  

GLY 5372C Computational Geology (3) AS GLY  

GLY 5720 Independent Study (1-3) AS GLY  
PR: CI. S/U only. Specialized independent study determined by the student's needs and interests.

GLY 5865 Geology Colloquium (1) AS GLY  
PR: Senior or advanced junior standing and written permission of department prior to registration. S/U only. Individual experimental investigations with faculty supervision.

GLY 5900 Geology Colloquium (1-4) AS GLY  
PR: Senior standing in Geology, S/U only. Weekly topical lectures by faculty, graduate students and invited speakers.

GLY 5901 Practical and Applied Geology: Teaching Experience (1) AS GLY  
PR: Twelve (12) or more hours upper level geology courses. A course in communicating within the disciplines of the earth sciences. Emphasis will be on: writing for publication and technical reports, preparation and presentation of posters, and preparation and presentation of oral papers in earth sciences. Course is open to anyone majoring in geology, geography, anthropology or environmental science and policy. Course is not available on a S/U basis for geology majors.

GLY 5902 Selected Topics in Geology (1-4) AS GLY  
PR: Senior standing in Geology. Topics vary widely, with several different offerings each semester. May be repeated for credit.

GLY 5903 Selected Topics in Geology (1-4) AS GLY  
PR: Senior standing in Geology. Topics vary widely, with several different offerings each semester. May be repeated for credit.

GLY 5945L Geology Colloquium (1) AS GLY  
PR: Junior standing, declared Geology major, and at least 12 credit hours of Geology courses, or CI: CR: Enrollment in other Practical/Applied sections. Completion of Geology supporting course sequence highly recommended. Hands-on course designed to give students experience in teaching geology. Topics vary widely, with several different offerings each semester. May be repeated for credit.

GLY 5946L Geology Colloquium (1) AS GLY  
PR: Junior standing, declared Geology major, and at least 12 credit hours of Geology courses, or CI. CR: Enrollment in other Practical/Applied sections. Completion of Geology supporting course sequence highly recommended. Hands-on course designed to give students experience in teaching geology. Topics vary widely, with several different offerings each semester. May be repeated for credit.
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**UNIVERSITY OF SOUTH FLORIDA - 2006/2007 UNDERGRADUATE CATALOG**

**USF Course Descriptions 365**

**GRW 2041 New Testament Greek II (4) AS REL**
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**GRW 2220 Intermediate Classical Greek (4) AS WLE**
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**GRW 1120 Beginning Modern Greek I (4) AS WLE**
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**HBR 1120 Modern Hebrew I (4) AS WLE**
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HSC 3541 Human Structure and Function NS (3) PH CFH
This course is designed to introduce students to the structural levels of the body. It covers topics such as cells, tissues, organs, and systems with emphasis on homeostasis, stress, and feedback systems. It is not restricted to majors.

HSC 4161 Health, Behavior and Society (3) PH PHC
This course focuses on an ecological perspective of the determinants of health including biology, individual behavior, social relationships, stratification from biological and psychological perspectives.

HSC 3308 War and Society MW (3) AS HTY
An examination of the ways in which societies have organized themselves for war and how societies are changed by war. Also explores gendered expectations in war and the changing conduct of war. Does not count for History major or minor credit.

HSC 3303 Selected Topics (2-4) AS HTY
This course is designed to emphasize a selected historical problem or issue that is meaningful and challenging to the student. A variety of instructional approaches will be taken to the material. Topics will be changed each semester.

HSC 4142 Foundations of Maternal and Child Health (3) PH PHC
This course provides an overview of maternal and child health issues and trends. With this primary aim, the objectives are organized around the knowledge of health assessment and interventions for families, and children.

HSC 4531 Medical Terminology (3) PH CFH
This course provides a unique educational program to improve the student’s medical vocabulary. The course includes medical and scientific content and includes discussion and writing from ancient times to the present.

HSC 3474 Science and Civilization (4) AS HTY
A thematic study of the interrelationship of science and society in modern history emphasizing the institutional forms, value structures, and social relations in science as they have developed from the scientific revolution to the present.

HSC 3930 Special Topics (2-4) AS HTY
This course is designed to emphasize a selected historical problem or issue that is meaningful and challenging to the student. A variety of instructional approaches will be taken to the material. Topics will be changed each semester.

HSC 3938 Major Issues in History MW (3) AS HTY
This course provides an introduction to the disciplines of history by examining specific historical issue and its relation to at least one of the following dimensions: gender, race and ethnicity, international perspectives, and environmental perspectives. Does not count for History major or minor credit.

HSC 4104 Theory of History (4) AS HTY
Required of all history majors. Recommended to be taken during the senior year. An analysis of the foundations of historical knowledge and historical methodology. Includes a survey of the questions of the methods of writing from ancient times to the present.

HIS 4900 Directed Reading (1-4) AS HTY
PR: CI. Arrangement with instructor prior to registration. Readings in special topics.

HIS 4920 Colloquium in History (2-4) AS HTY
Reading and discussion of selected topics in the various fields of history. The subject and scope of inquiry will be determined by the instructor for each section.

HIS 4936 Pro-Seminar in History 6A MW (4) AS HTY
PR: CI. Required of all history majors. Advanced topics in the various fields of history. Emphasis on discussion of assigned readings, discussions, and on research and writing of a major paper.

HLP 2081 Personal Wellness: A Lifetime Commitment (3) ED EDP
An examination of the bases for adopting a positive health lifestyle with a major emphasis on diet, weight management, physical fitness, stress management, and substance-abuse management.

HLP 4722 Health and Physical Education for the Child (2) ED EDE
The course helps elementary education majors understand the health, and developmental needs of K-6 children and to learn the roles of the assistant teacher in providing health services, healthy environments, and health and physical ed. instruction.

HSA 4011 Introduction to Public Health (3) PH CFH
A survey of the scope and purposes of public health and community health with emphasis on specific needs and problems of Florida.

HSC 2100 Contemporary Health Science SS (3) PH CFH
A comprehensive approach to health concerns and problems in contemporary society, including methods of assessing individual health needs.

HSC 2133 Sex, Health, and Decision-Making SS (3) PH CFH
This course will provide the student with an overview of the issues involving sexual behaviors, decision-making processes and health outcomes. The course will offer a public health perspective of the consequences of risk-taking activities as well as a psychosocial and cultural view of antecedent behaviors.

HIS 3951 Special Topics in History (2-4) AS HTY
This course is designed to emphasize a selected historical problem or issue that is meaningful and challenging to the student. A variety of instructional approaches will be taken to the material. Topics will be changed each semester.
eleventh to fourteenth centuries. A central issue covered will be the efforts of the church to create an all-encompassing Christian culture.

HUM 3242 The Enlightenment (3) AS HUM
PR: HUM 2210 or HUM 2230. By studying late seventeenth and eighteenth century literature, music, visual art, and philosophy, this course examines phenomena such as rationalism, classification systems, the influence of science, utilitarianism, reform, and secularism.

HUM 3244 Nineteenth-Century Arts and Letters (3) AS HUM
PR: HUM 2210 or HUM 2230. By studying 19th century literature, music, and visual art, this course examines phenomena such as the rise of capitalism, colonial expansion, nationalism, urbanism, and the redefinition of public and political life during this period of extreme change.

HUM 3252 Studies in Culture: The Twentieth Century HP (3) AS HUM
PR: HUM 2210 or HUM 2230. Analyses of selected works of twentieth century art, including films, paintings, music, and literature, in the context of major political, social, and economic events, such as war, depression, totalitarianism, and technological change.

HUM 3271 Eastern and Western Culture from Antiquity to 1400 AF (3) AS HUM
A comparative treatment of music, visual arts, theatre, literature, and philosophy in the East and West, proceeding chronologically from Ancient times through the Middle Ages, emphasizing Europe and India.

HUM 3273 Eastern and Western Culture Since 1400 AF(3) AS HUM
A comparative treatment of music, visual arts, theatre, literature, and philosophy in the East and West, proceeding chronologically from the Renaissance through the present, emphasizing Europe, the United States, and India.

HUM 3331 Themes in Humanities (3) AS HUM
PR: HUM 2210 or HUM 2230. A course emphasizing the analysis of primary works in relation to cultural contexts, the integration of secondary sources, and the construction of a written argument. Not restricted to majors. Offered only in fall semester.

HUM 3457 Nineteenth Century American Culture (3) AS HUM
PR: HUM 2210 or HUM 2230. This course explores American art, literature, and cultural life from the early republic through the Gilded Age. Works are studied in their historical context in order to understand how they transmitted important information about American identity.

HUM 3458 Twentieth-Century American Culture (3) AS HUM
PR: HUM 2210 or HUM 2230. A historical survey of American culture since 1900. Literature, music, visual art, film, and intellectual movements are analyzed, to understand how they have reflected and shaped cultural values and responding to changing conditions of American society.

HUM 3463 Latin American Civilization I: Pre-Columbian & Colonial (3) AS HUM
PR: HUM 2210 or HUM 2230. An overview of Pre-Columbian and Colonial Latin American Culture through 1700. Topics include literature, music, and art; ethnic diversity; political and religious tension; “high” versus “low” culture; and the clash of European and American cultures.

HUM 3466 Latin American Civilization II: Modern Latin America (3) AS HUM
PR: HUM 2210 or HUM 2230. An overview of the cultural heritage of Latin America since the time of independence. Verbal and visual texts will be used to study the difficult struggle to create a cultural identity that incorporates African, indigenous, and European traditions.

HUM 3930 Selected Topics in Humanities (1-4) AS HUM
PR: HUM 2210 or HUM 2230. Courses offered under this number will always be interdisciplinary, treating more than one art media and relating them historically or in some other way. The interdisciplinary emphasis on literature and the arts, placing them in some larger context of culture or ideas, distinguished HUM courses from related courses offered in other departments of the university. Topics will vary; course may be repeated for credit with change of content.

HUM 4402 Humanities in India (4) AS HUM
PR: Junior standing and HUM 2210 or HUM 2230, or CI. Examples from the arts and letters of India and the relationship of these arts to the Hindu and Buddhist philosophy-religions.

HUM 4404 Humanities in China (4) AS HUM
PR: Junior standing and HUM 2210 or HUM 2230, or CI. Examples from the arts and letters of China; their relationship to Taoism, Confucianism and other Chinese philosophies; Western influences on twentieth century Chinese arts and letters.

HUM 4405 Humanities in Japan (4) AS HUM
PR: Junior standing and HUM 2210 or HUM 2230, or CI. Examples from the arts and letters of Japan, their relationship to Zen Buddhism and other Japanese philosophy-religions; Western influences on twentieth century Japanese arts and letters.

HUM 4433 Ancient Greece and the Mediterranean World (4) AS HUM
PR: Junior standing and HUM 2210 or HUM 2230, or CI. A study of the poetry, drama, philosophy, historical writing, painting, sculpture and architecture of ancient Greece, including such authors as Homer, Sophocles, and Plato, and monuments such as the Parthenon.

HUM 4435 Early Medieval Culture (4) AS HUM
PR: Junior standing and HUM 2210 or HUM 2230, or CI. A study of the painting, literature, music, sculpture and architecture of early modern Italy (1300-1600), emphasizing humanism, the revival of antiquity, the tension between sacred and secular, and artists such as Michelangelo, Titian, Raphael.

HUM 4438 Northern Renaissance Culture (4) AS HUM
PR: Junior standing and HUM 2210 or HUM 2230, or CI. A study of the Northern Renaissance, 1400-1580, as exemplified in Germany, France, the Netherlands, England, and Spain. The course includes painting, architecture, literature and music, with a special study of Durer, Van Eyck, El Greco, and Bosch.

HUM 4440 Arts and Letters in the 17th and 18th Centuries (4) AS HUM
PR: Junior standing and HUM 2210 or HUM 2230, or CI. A study of the visual arts, literature and music from the mysticism and reformation of the Baroque to the rationalism and classicism of the Enlightenment, including such artists, authors and composers as Rembrandt, Gentileschi, Voltaire, Bach, and Mozart.

HUM 4444 Twentieth Century European Arts and Letters (4) AS HUM
PR: Junior standing and HUM 2210 or HUM 2230, or CI. A study of selected works of twentieth century art. The course will focus on a particular phase in the development of modernism, a set of themes, or certain stylistic aspects of various arts of the twentieth century.

HUM 4444A Nineteenth Century European Arts and Letters (4) AS HUM
PR: Junior standing and HUM 2210 or HUM 2230, or CI. A study of selected works of art, tracing the course of American expansionism in civilization, and the interaction between the arts and the sciences in American ways of life and work, 1790-1890.

HUM 4455 Twentieth Century American Culture (4) AS HUM
PR: Junior standing and HUM 2210 or HUM 2230, or CI. A study of selected works of art, tracing the course of expansion in the production and enjoyment of works of art, and interaction between the idealistic and pragmatic concerns for development of the arts in American culture, with emphasis on the Pre-Columbian and Colonial periods. The course will focus on a particular historical, geographical, or thematic topic within those periods.

HUM 4466 Modern Latin American Culture (4) AS HUM
PR: Junior standing and HUM 2210 or HUM 2230, or CI. A study of selected Latin American works of art in their cultural context, with emphasis on the period since the time of independence. The course will focus on a particular historical, geographical, or thematic topic within that period.
HUM 4905 Directed Study (1-4) AS HUM
PR: CI. Specialized individual study determined by the student's needs and interests.

HUM 4930 Selected Topics in Humanities (1-4) AS HUM
PR: Junior standing and HUM 2210 or HUM 2230, or CI. This course will develop a recurrent theme through the arts as, for example, love or death, or will focus on artistic centers such as Renaissance Florence or Paris in the 1920s. Topics will vary.

HUM 4931 Seminar in Humanities 6A (4) AS HUM
PR: HUM 3301 or CI. Seminar focuses on the writing of a substantial research paper in the humanities. Topic varies.

HUM 4938 Major Issues in the Humanities MW (3) AS HUM
The study of an important topical issue in the Humanities. Materials representing diverse views relating to that issue will be read, and works of art in different media that have relevance to the debate will be studied. Available to majors and non-majors.

HUM 4940 Internship in Humanities (1-2) AS HUM
A structured, out-of-class learning experience providing firsthand, practical training in Humanities-related professional careers in the community. Restricted to Humanities majors. Repeatable up to 4 credit hours.

HUM 4941 Study and Location (1-4) AS HUM
PR: Repeatable once for up to eight credits. The art of a culture will be examined during travel in groups, led by an instructor, to important cities or sites. Monuments, museums, architecture, plays, and/or concerts will be studied. Reading assignments and lectures. Not restricted.

HUN 2201 Nutrition (3) NU NUR
PR: Course work in chemistry and biology or permission of faculty. Open to majors and non-majors. The study of fundamental principles of normal nutrition as they relate to human life and growth from conception through senescence, interpretation of current nutrition information, and application of nutrition knowledge in the establishment of good eating habits.

HUN 3932 Selected Topics in Nutrition (3) US DEA
The content of this course will be determined by student demand and instructor interest. Repeatable up to 3 times with different topics.

HUN 4444 Clinical Nutrition (3) NU NUR
PR: HUN 2201 or equivalent. Focuses on the role nutrition has in managing and preventing disease processes.

IDH 2009 Discovery: People, Processes and Problems (3) HC HON
PR: Admission to Honors College. An appreciation of the research process in multiple disciplines culminating in the production of a collaboratively developed research proposal.

IDH 2010 Acquisition of Knowledge (3) HC HON
PR: Admission to Honors College. An appreciation of the problems of how human understanding proceeds through operations such as perception, classification, and inference, among others, as well as the open philosophical questions behind these operations.

IDH 2930 Selected Topics (1-4) HC HON
PR: IDH 2010 or CI. This course is designed to emphasize a selected problem or issue that is meaningful and challenging to University Honors students and special populations. A variety of instructional approaches will be used. Topics will vary each semester. Repeatable for a total of 8 credits.

IDH 3100 Arts/Humanities Honors (1-3) HC HON
PR: IDH 2010. An introduction to western arts and letters from the perspectives of three periods (classicism, romanticism, and modernism), the relationship of ideas to art, the similarities among the arts of a given period, and important differences between periods.

IDH 3350 Natural Sciences Honors (3) HC HON
PR: IDH 2010. An in-depth examination of knowledge concerning fundamental principles in the Sciences, their potential for application and attendant ethical and philosophical questions.

IDH 3400 Social and Behavioral Sciences Honors (3) HC HON

IDH 3500 Seminar in Applied Ethics (3) HC HON
PR: IDH 2010. This course explores ethical issues related to selected topics such as Ethics of Technology, Ethics in Business, Bio-Medical Ethics, Personal Ethics Development.

IDH 4000 Honors Program Seminar: Major Works/Majors Issues (4) HC HON
PR: IDH 2010. This course explores major works and major issues in a variety of disciplines. Each section will be devoted to content in a different academic area.

IDH 4200 Geographical Perspectives Honors (3) HC HON
PR: IDH 2010. An introduction to African, Latin American, Middle Eastern, or Asian perspectives focusing on social, political and economic, artistic, cultural and intellectual subject matter. The material will be presented within a geographical, chronological, thematic framework.

IDH 4910 Undergraduate Research (1-4) HC HON
PR: DPR. A supervised program of interdisciplinary research in areas of specific interest. Open to all USF students by application through the undergraduate research coordinator. Restricted to Honors College students.

IDH 4930 Selected Topics (1-4) HC HON
PR: IDH 2010 or CI. This course is designed to emphasize a selected problem or issue that is meaningful and challenging to Undergraduate Honors students and special populations. A variety of instructional approaches will be used. Topics will vary each semester. Repeatable for a total of 8 credits.

IDH 4950 Honors Project (1-4) HC HON
A program of independent research or study in areas of specific interest working under the supervision of a faculty mentor. Restricted to Honors College students.

IDH 4970 Honors Thesis (3) HC HON
PR: Senior Honors Standing. The development and public presentation of a senior thesis under the direction of a mentor. Course is taken for 2 semesters.

IDS 2664 Social Science Perspectives I SS (3) AS IAS
PR: Course satisfies an overview of the evolution and global expansion of Western Civilization. Examines global problems of economic growth and development; geopolitical relations among nations and states, food supply and hunger, and environmental change.

IDS 2665 Social Science Perspectives II SS (3) AS IAS
APPR: Approaches the study of human behavior and society using the lens of various institutions. The course addresses issues of social stratification, economics, education, religion and social status. The course is not restricted to any major, has no lab section, and is not cross-listed.

IDS 2666 Historical Perspectives I HP (3) AS IAS
APPR: Approaches the study of human history through a series of specific case-studies that focus on historical processes. The primary focus of the course is to understand the variety of ways that the past has been brought into and understood in the present, rather than a comprehensive survey of a limited time or place.

IDS 2667 Historical Perspectives II HP (3) AS IAS
APPR: Approaches the study of human history through a series of specific exercises that focus on what historians do: produce histories. The primary focus of the course is to understand the variety of ways that the past can be emplotted in histories, rather than a comprehensive survey of a limited time or place. With this understanding, students will produce several of their own histories.

IDS 2931 Selected Topics 5A-5B AS IAS
Selected topics in liberal arts and sciences. A basic introduction to the substance and theory of contemporary topics in humanities, social science or natural science.

IDS 2932 Selected Topics HP (3) AS IAS
Selected topics in the liberal arts and sciences.

IDS 2933 Selected Topics III SS (3) AS IAS
Selected topics in the Liberal Arts. A basic introduction to the substance and theory of contemporary topics in the arts and sciences.

IDS 2934 Selected Topics IV SS (3) AS IAS
Selected topics in the Liberal Arts. A basic introduction to the substance and theory of contemporary topics in the arts and sciences.

IDS 3115 Values and Choices 6A MW (3) ED EDF
PR: Major. An introduction to ethical analysis, the theory of values and their relationship to choices in contemporary society using historical perspective and inquiry of moral/ethical dilemmas. Available to majors or non-majors.

IDS 3186 Scientific and Ethical Dimensions of Human Disease MW (3) AS IAS
PR: DPR. An interdisciplinary perspective of the biological basis of human disease combined with critical thinking and medical ethics. Basic concepts of disease and their implications are integrated with bioethical dimensions of patient choice, physician responsibility and current health care issues.

IDS 3662 Arts Connections FA (3) VP FA
This is an interdisciplinary course to the arts disciplines of music, dance, theatre, and art. Artists from the four disciplines will provide weekly presentations centered around issues and ideas that have formed the basis of their creative research. Influences of diversity, new technologies and community and public arts will be explored. This course will introduce students to
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
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<tbody>
<tr>
<td>INR 1015</td>
<td><em>World Perspective SS AF (3)</em></td>
<td>AS INT</td>
<td>An interdisciplinary study of the international system, major world regions, and problems.</td>
</tr>
<tr>
<td>INR 2002</td>
<td><em>Introduction to International Relations (3)</em></td>
<td>AS POL</td>
<td>Concepts and analytical tools applied to events such as politics among nations, control of foreign policies, types of actors, war, and peace.</td>
</tr>
<tr>
<td>INR 2033</td>
<td><em>Introduction to International Studies (3)</em></td>
<td>AS INT</td>
<td>An interdisciplinary study which stresses methods and analysis. A major portion will focus on the roles which different disciplines play in interpreting the international scene.</td>
</tr>
<tr>
<td>INR 3018</td>
<td><em>World Ideologies MW (3)</em></td>
<td>AS INT</td>
<td>A course which details and examines the ideologies of today’s independent countries; analyzing them in their political, social, cultural, and historical context.</td>
</tr>
<tr>
<td>INR 3033</td>
<td><em>International Political Cultures MW (3)</em></td>
<td>AS INT</td>
<td>This course will explore ways in which culture influences the nature of government, economic success or failure, and constructive and destructive modes of self and social identification.</td>
</tr>
<tr>
<td>INR 3064</td>
<td><em>International Terrorism SS AF (3)</em></td>
<td>AS INT</td>
<td>A study of contemporary international terrorism and its causes, ranging from national liberation movements to networks of philosophical anarchists.</td>
</tr>
<tr>
<td>INR 3102</td>
<td><em>American Foreign Policy (3)</em></td>
<td>AS POL</td>
<td>This course explores the evolution of international rights from the Greeks to the present. It examines human rights issues in major regions of the world.</td>
</tr>
<tr>
<td>INR 3336</td>
<td><em>Intelligence and U.S. Foreign Policy (3)</em></td>
<td>AS INT</td>
<td>An examination of the role of intelligence and the intelligence community in U.S. foreign policy, with emphasis on the period since World War II.</td>
</tr>
<tr>
<td>INR 3955</td>
<td><em>Overseas Study (1-6)</em></td>
<td>AS INT</td>
<td>A program of independent or group research in a foreign country.</td>
</tr>
<tr>
<td>INR 4035</td>
<td><em>International Political Economy (3)</em></td>
<td>AS POL</td>
<td>Analysis of the development and politics of the international economic system, focusing on questions of cooperation and conflict in trade, aid, and related relationships.</td>
</tr>
<tr>
<td>INR 4083</td>
<td><em>Conflict In The World MW (3)</em></td>
<td>AS INT</td>
<td>An interdisciplinary course examining theories of conflict, conflict resolution processes and strategies, and charismatic leadership.</td>
</tr>
<tr>
<td>INR 4254</td>
<td><em>Africa in World Affairs MW (3)</em></td>
<td>AS INT</td>
<td>An examination of Africa’s place and role in world affairs, including an analysis of the impact of external forces, international relations in post-colonial Africa, the relations of African states with the major world powers, the U.N. and its agencies.</td>
</tr>
<tr>
<td>INR 4502</td>
<td><em>International Organizations SS AF (3)</em></td>
<td>AS POL</td>
<td>Study of the operations and structure of international organizations and effects on world politics; background and achievement of the UN; regional organizations and multi-national corporations.</td>
</tr>
<tr>
<td>INR 4900</td>
<td><em>Directed Readings (1-3)</em></td>
<td>AS INT</td>
<td>PR: CI. A supervised program of extensive reading of interdisciplinary materials in areas of specific interest.</td>
</tr>
<tr>
<td>INR 4910</td>
<td><em>Directed Research (1-3)</em></td>
<td>AS INT</td>
<td>PR: CI. A supervised program of interdisciplinary research in areas of specific interest.</td>
</tr>
<tr>
<td>INR 4931</td>
<td><em>Selected Topics (1-4)</em></td>
<td>AS INT</td>
<td>Interdisciplinary studies with course content dependent on student demand and instructor’s interest.</td>
</tr>
<tr>
<td>INR 4936</td>
<td><em>Senior Seminar MW (3)</em></td>
<td>AS INT</td>
<td>PR: International Studies major and senior standing. A variable topics seminar integrating concepts and analyses relating to the academic background of INT majors. Should be taken in the student’s final semester.</td>
</tr>
<tr>
<td>INR 4943</td>
<td><em>Internship in International Studies (3-6)</em></td>
<td>AS INT</td>
<td>PR: Senior status. S/U only. For majors only. The purpose of the course is to promote the student’s understanding of global international issues within a local and practical context.</td>
</tr>
<tr>
<td>INR 5012</td>
<td><em>Globalization (3)</em></td>
<td>AS INT</td>
<td>Examination of globalization’s impact on international relations, including literature from political science, anthropology, geography, sociology, and economics, with an emphasis on the study of the nation-state system and power. Open to majors and non-majors.</td>
</tr>
<tr>
<td>INR 5086</td>
<td><em>Issues in International Relations (3)</em></td>
<td>AS POL</td>
<td>S/U only. Explores specific topics and provides the student with an opportunity for in-depth study of historical and contemporary problems in international politics.</td>
</tr>
<tr>
<td>ISC 1004</td>
<td><em>Integrated Natural Sciences I: Science that Matters NS (3)</em></td>
<td>AS INT</td>
<td>Course deals with current topics relevant to students, is inquiry based, and provides students with a community related research experience.</td>
</tr>
</tbody>
</table>

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emphasizes development of higher order (critical thinking) skills through active learning strategies.

ISC 1005 Integrated Natural Sciences II: Science that Matters NS (3) AS IDS
Discussion of integrative concepts in biology, chemistry, geology, and physics, with emphasis on major knowledge strands of the Florida and Natural Science Education Standards. This course deals with current topics relevant to students, is inquiry based, and emphasizes development of higher order (critical thinking) skills through active learning strategies.

ISM 3011 Information Systems in Organizations (3) BA QMB
PR: CGS 2100 or equivalent. An introduction to the language, concepts, structures and processes involved in the management of information systems including fundamentals of computer-based technology and the use of business-based software for support of managerial decisions.

ISM 3113 Systems Analysis and Design (3) BA QMB
PR: ISM 3011. Study of the techniques and procedures used in assessing information requirements, analyzing information flows and processing activities, and designing computer-based business systems.

ISM 3232 Business Application Development (3) BA QMB
CP: ISM 3011 with a grade of "C" or better (not C-). Presentation of business application development using a modern programming language. Topics include data structures, indexing, file processing, and user interfaces. Good programming techniques are emphasized. Business applications are developed.

ISM 3431 Management Science Production/Operations Management Applications (3) BA QMB
PR: MAC 2241. Fundamentals of production operations management (POM) and fundamentals of management science (MS). The application of MS models in the solution of POM problems.

ISM 4133 Advanced Systems Analysis and Design (3) BA QMB
PR: ISM 4212 with a grade of "C" or better (not C-). This course builds previous class and/or work experience in systems development, with particular emphasis on the use of an integrated CASE tool on a team project. Students will gain an understanding of systems development problems and approaches using a variety of methods, such as, lectures, discussion, team presentations, guest speakers, demonstrations and computer use.

ISM 4141 Web Application Development/Java (3) BA QMB
PR: ISM 3232 with a grade of "C" or better (not C-). Java will be used to introduce object oriented concepts. Programming assignments cover a variety of application features including graphical user interface, database connectivity, multithreading, & client-server computing using Java and Java Server Pages.

ISM 4417 Database Design and Administration (3) BA QMB
PR: ISM 3113 or ISM 3113 with a grade of "C" or better (not C-). Principles of database design/management for mainframe, micro, and client/server environments; including data modeling, physical vs. logical representation of database, and recovery and database tuning issues.

ISM 4420 Distributed Operating Systems (3) BA QMB
PR: ISM 3232 with a grade of "C" or better (not C-). Introduction to distributed operating systems fundamentals such as distributed systems architecture, file structures, client-server, open systems, resource allocation, and basic tools for manipulating these distributed computing environments.

ISM 4290 Senior Seminar in Information Systems (3) BA QMB
PR: ISM 4212 with a grade of "C" or better (not C-). A seminar covering advanced topics in systems management, analysis and design. Applications of these procedures to actual or hypothetical cases.

ISM 4300 Managing Information Resources (3) BA QMB
PR: ISM 4212 and ISM 4220, with grades of "C" or better (not C-). Current issues in information systems management focusing on organizational policies, procedures and standards for managing distributed computing resources.

ISM 4382 Global Information Systems (3) BA QMB
PR: ISM 3011 with a grade of "C" or better (not C-). Role of information technology in global business organizations and challenges in building information systems to enable global operations.

ISM 4400 Decision Support Systems (3) BA QMB
PR: QMB 3200, ISM 3011, with a grade of "C" or better (not C-). Study of quantitative analysis tools and their use in organizational decision making. Emphasis on a structured approach to making complex business decisions; demonstrating several forms of mathematical modeling and other management science techniques.

ISM 4403 Electronic Commerce Systems (3) BA QMB
PR: ISM 3011 with a grade of "C" or better (not C-), MIS major or CC. This course is designed to familiarize students with the opportunities and challenges associated with electronic commerce, to explore the underlying technologies used in implementing electronic commerce systems, and to develop the practical skills needed to design and develop effective Web pages.

ISM 4905 Independent Study (1-6) BA QMB
S/U only. Independent study as directed by designated faculty.

ISM 4930 Selected Topics in MIS (1-3) BA QMB
Selected topics in MIS.

ISM 4950 Independent Research (1-6) BA QMB
PR: CI. Individual study contract with instructor and department chairperson required. The research project will be mutually determined by the student and instructor.

ISS 1101 Knowledge and Society SS (3) AS ISS
Course introduces students to issues concerning the relationship between knowledge and society. Among the issues addressed are competing accounts of knowledge and the relationship between knowledge and other forms of human experience and different aspects of social life such as religion, morality, aesthetics, politics, and gender.

ISS 1102 Self and Society SS (3) AS ISS
Course focuses on students to issues concerning the relationship between the self (or individual) and society. Among the topics that may be addressed are the idea of human nature, how human nature is shaped by social and cultural factors; the moral obligations between individuals and society; and how our understanding of the self is shaped by gender and culture.

ISS 1103 Nature and Culture SS (3) AS ISS
This course examines competing ideas and theories concerning the relationship between nature and culture. Among the issues and questions examined are the relationship between nature and our awareness of it; to what extent is nature transformable; should "nature" dictate the shape of social institutions; how does technology affect our society and environment.

ISS 3010 Introduction to the Social Sciences (3) AS ISS
Integrates the range of social sciences fields into a global interdisciplinary perspective. Views social institutions and issues from perspectives of changing paradigms.

ISS 3930 Selected Topics in the Social Sciences (1-4) AS ISS
Interdisciplinary studies of varying topics, with course content dependent on student interest and instructor's interest.

ISS 4151 Native American Women (3) AS ISS
An interdisciplinary examination of lives of Native American Women, past and present. Topics include history, education, politics, family, etc.

ISS 4900 Directed Readings (1-3) AS ISS
PR: CI. A supervised program of intensive reading of interdisciplinary materials in areas of specific interest.
JOU 2100 Beginning Reporting (3) AS COM
PR: CI. A supervised program of interdisciplinary research in areas of specific interest.

ISS 4935 Seminar in the Social Sciences MW (3) AS ISS
PR: Senior standing and ISS 3010 or CI. The seminar which caps the interdisciplinary major. Weds personal curiosity with the application of theoretical models to research on salient social issues.

ISS 5934 Selected Topics (1-3) AS AFA
PR: CI plus senior standing or graduate status. Interdisciplinary studies with course content dependent on student demand and instructor's interest.

ITA 1120 Beginning Italian I (4) AS WLE
CR: ITA 1120L. The first course in the study of elementary Italian. Emphasis is on the development of basic skills in comprehension, speaking, and reading.

ITA 1120L Beginning Italian Laboratory (1) AS WLE
CR: ITA 1120. A laboratory designed to offer additional practice using various instructional technologies and media.

ITA 1121 Beginning Italian II (4) AS WLE
CR: ITA 1121L. The second course in the study of elementary Italian. Emphasis is on the development of basic skills in comprehension, speaking and reading.

ITA 1121L Beginning Italian II Laboratory (1) AS WLE
CR: ITA 1121. S/U only. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. A laboratory designed to offer additional practice using various instructional technologies and media.

ITA 2200 Italian III (3) AS WLE
PR: ITA 1120L. More advanced skills are acquired.

ITA 2240 Italian Conversation I (3) AS WLE
PR: ITA 2200 or CI. This advanced-level Italian course belongs to the third level of modules leading to proficiency. It aims at consolidating student's knowledge of Italian grammar and vocabulary with the ultimate goal of fostering accuracy in Italian conversation.

ITA 2241 Italian Conversation II (3) AS WLE
PR: ITA 2241 or CI. This advanced-level Italian course belongs to the third level of modules leading to proficiency. It aims at consolidating student's knowledge of Italian grammar and vocabulary with the ultimate goal of fostering accuracy in Italian conversation.

ITA 3420 Composition (3) AS WLE
A fundamental composition course for students who have completed ITA 2200.

ITA 3470 Overseas Study (1-6) AS WLE
Prior approval and early registration required. An intensive study-travel project in Italy.

ITW 4100 Survey of Italian Literature I (4) AS WLE
A survey of Italian literature from the earliest monuments to the Classicism of the 18th century.

ITW 4101 Survey of Italian Literature II (3) AS WLE
A survey of Italian literature beginning with the Classicism of the 18th century and continuing to present.

ITW 4905 Directed Study (1-3) AS WLE
Departmental approval required. Selected topics in Italian literature.

JOU 2100 Beginning Reporting (3) AS COM
PR: MMC 2100 and MMC 3602. Basic instruction in news judgment, sources of news, newsgathering, and newswriting techniques for various media. Typing ability is required.

JOU 3011 Advanced Reporting (3) AS COM
PR: JOU 2100 or RTV 3301 (RTV majors only). JOU 4200 may be taken concurrently.

JOU 3305 Critical Writing: Editorials, Reviews, Columns (3) AS COM
PR: JOU 3010 and JOU 4200. Interpretive and opinion writing for the mass media. Analysis and discussion of current events as a basis for critical thinking and editorial writing. Evaluation and editorial pages of leading newspapers. Study of journalistic techniques involved in writing reviews and personal columns.

JOU 3308 Magazine Article and Feature Writing (3) AS COM
PR: CRW 2200 and JOU 2100. Planning, researching, writing, and marketing articles for general and special interest magazines and newspaper supplements. Experiences in developing article ideas and analysis of magazine articles.

JOU 3940 Reporting Practicum (1) AS COM
PR: JOU 3101 and CI. For journalism sequence majors. S/U only. Practical experience outside the classroom where the student works for academic credit under the supervision of a professional practitioner. Periodic written and oral reports to the faculty member coordinating the study.

JOU 4181 Public Affairs Reporting (3) AS COM
PR: JOU 3101 or RTV 3301 (RTV majors only), POS 2041 and POS 2112 or POS 3142. Covering city council meetings, courthouses, city halls, society, and other special assignments. Emphasis is on coverage of major governmental units of all levels of government, including examination and interpretation of public documents and records.

JOU 4200 News Editing I (3) AS COM
PR: ECO 1000, JOU 2100, and SYG 2100. Evaluating news and its display. Editing and rewriting copy for the mass media including new media, with emphasis on the daily newspaper. News judgment, headlines and makeup. Ethical problems. Introduction to theories of design and graphics.

JOU 4206 Newspaper and News Publication Design (3) AS COM
PR: JOU 4200 or CI. Theoretical and practical applications of newspaper and news publication design, including typography, graphics, graphics software and electronic picture editing. Exercises in design for newspapers and news publications in both print and electronic formats.

JOU 4212 Magazine Design and Production (3) AS COM
PR: JOU 4200. Theoretical and practical application of design principles for magazines. Design software. Study of visual design, page architecture, typography, color and illustrations. Integration of design elements in the design of magazine covers. Design elements specific to magazine and production preparation.

JOU 4941 Editing Practicum (1) AS COM
PR: Senior standing. JOU 4200 and CI. For journalism sequence majors. S/U only. Practical experience outside the classroom where the student works for academic credit under the supervision of a professional practitioner. Periodic written and oral reports to the faculty member coordinating the study.

JOU 4944 Magazine Practicum (1) AS COM
PR: Senior standing and CI. For journalism sequence majors. S/U only. Practical experience outside the classroom where the student works for academic credit under the supervision of a professional practitioner. Periodic written and oral reports to the faculty member coordinating the study.

JOU 5105 Newswriting and Editing (3) AS COM
PR: GS in Mass Communications or CI. Introduction to the basics of gathering, writing, and editing the news, with an emphasis on practical assignments done under professional conditions and standards. Discussions, readings emphasize the larger context and implications of journalism.

JOU 5305 Explorations in Newswriting (3) AS COM
PR: CC. Students work to develop writing styles, reporting on and creating stories about significant issues, events, and ideas. The course explores the art of narrative news writing. Students can be accurate, thorough, fair, and compelling, effectively bringing readers into stories and giving them a bigger stake in the news. The focus is on-going beyond traditional practices of reporting and writing news stories.

JPN 1120 Modern Japanese I (4) AS WLE
CR: JPN 1120L. An intensive study of basic skills: pronunciation, listening comprehension, speaking, and some composition.

JPN 1120L Modern Japanese I Laboratory (1) AS WLE
CR: JPN 1120. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. S/U only. A laboratory designed to offer additional practice using various instructional technologies and media.

JPN 1121 Modern Japanese II (4) AS WLE
PR: JPN 1120 or equivalent. CR: JPN 1121L. A continuation of JPN 1120. More sophisticated oral/aural skills are attained. Basic reading skills are acquired.

JPN 1121L Modern Japanese II Laboratory (1) AS WLE
CR: JPN 1121. S/U only. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. A laboratory designed to offer additional practice using various instructional technologies and media.

JPN 2200 Modern Japanese III (3) AS WLE
PR: JPN 1121 or equivalent. Continuing study to attain basic proficiency in Japanese, including reading, listening comprehension, speaking, and some composition.

JPN 2221 Modern Japanese IV (3) AS WLE
PR: JPN 2220 or equivalent. Continuation of JPN 2220.
LAE 4414 Teaching Writing in the Elementary School, Grades K-6 (3) ED EDE
PR: Elementary Education majors or CL. The purpose of this course is for students to understand children’s writing development and to design and implement instructional strategies for teaching composition in an integrated Language Arts curriculum.

LAE 4323 Methods of Teaching English: Middle School (3) ED EDE
Must be taken one or two semesters prior to internship. Recommended to be taken with LAE 4464. Whole language methods of integrating reading, writing, speaking, listening, viewing, and critical thinking activities into a literature-based program for middle school students.

LAE 4335 Methods of Teaching English: High School (3) ED EDE
PR: LAE 4464. Must be taken one semester prior to internship concurrently with LAE 4530. Whole language methods of integrating reading, writing, speaking, listening, viewing, and critical thinking activities into a literature-based program for high school students.

LAE 4414 Teaching Literature in the Elementary School, Grades K-6 A LW (3) ED EDE
PR: Certification in English and/or Mass Communications and departmental approval required. S/U only. Permits study options in Japanese not available in regularly scheduled curriculum at departmental discretion.

JPN 4905 Directed Study (1-5) AS WLE
Departmental approval required. Course permits study options in Japanese not available in the regularly scheduled curriculum at departmental discretion.

LAH 2020 Latin American Civilization HP AF (3) AS HTY
An introduction to selected issues, events, and people in Latin American history from 1492 to the present. Focus on Argentina, Brazil, Chile, Cuba, and Mexico. Intended for students in any discipline; no prerequisites. An entry-level course for Latin American studies.

LAH 2733 Latin American History in Film HP AF (3) AS HTY
Through the use of films and readings, the course introduces the broad sweep of Latin American history from the pre-Columbian period to today. Emphasizes the social-cultural context to understand the peoples and events that have shaped Latin America.

LAH 3130 Colonial Latin America (4) AS HTY
A study of the Spanish and Portuguese Colonial empires in the New World from 1492-1830.

LAH 3200 Modern Latin America (4) AS HTY
A study of the emergence of the Latin American states. The course will examine developments in Latin America during the nineteenth and twentieth centuries. Special attention is given to the Third World character of the region.

LAH 3430 History of Mexico (4) AS HTY
Mexican history from pre-Columbian cultures to the twentieth century. Emphasis falls on the colonial political economy, social development, the wars of independence, development of the 19th century Mexican state and the Mexican revolution.

LAH 3470 History of the Caribbean (4) AS HTY
A thematic study of the circum-Caribbean from pre-Columbian cultures to the twentieth century, emphasizing the development of the Caribbean political economy with emphasis on monoculture, plantation society, and post-colonial relationships.

LAH 3480 History of Cuba (4) AS HTY
Cuban history from pre-Columbian cultures to the Cuban Revolution. Emphasis on colonization, the sugar economy, the struggles for independence, the political economy of the Republic, and the 20th century revolutionary process.

LAS 3002 Latin America (3) AS INT
Area study courses are multi-disciplinary in nature and deal with one or more countries of a region. Each course combines some measure of political, economic, historical, religious, geographic, anthropological, and sociological analysis in dealing with salient features and current problems.

LAS 3004 The Americas - Latin and Caribbean (3) AS INT
This is a telecourse that is designed to introduce the complexities of Latin America and the Caribbean to students in the U.S. (Open University - televised course).

LAS 3116 Latin America Through Film AF (3) AS INT
This course will use film, video, selected readings, and lectures to teach the interested student about Latin America.

LAT 1120 Beginning Latin I (4) AS WLE
An introductory course in Latin grammar with appropriate readings.

LAT 1121 Beginning Latin II (4) AS WLE
PR: LAT 1120 or equivalent. An introductory course in Latin grammar with appropriate readings.

LAT 2220 Intermediate Latin I (4) AS WLE
PR: LAT 1121 or equivalent. Readings in Latin at an intermediate level.

LAT 2221 Intermediate Latin II (4) AS WLE
PR: LAT 2220. This class will introduce students to their first Latin author, and to the techniques and skills of intermediate work in Latin. It will also provide a comprehensive review of Latin Grammar. It is not restricted to majors, and not repeatable for credit.

LIN 2002 Language and a Movie AF (2-3) AS WLE
For Freshmen and Sophomores. Standing only. Offers initial exposure to foreign languages and cultures. Through lecture, demonstration, discussion, and the viewing of full-length feature films, students are introduced to a variety of prominent modern and ancient languages and cultures.

LIN 3010 Introduction to Linguistics (3) AS WLE
Introduction to the basic principles of linguistic science; phonological and grammatical analysis and description; language and thought; change and genetic relationships.

LIN 3670 English Grammar and Usage (3) AS ENG
A course in the basics of traditional English grammar designed as a complement to our composition and creative writing courses, as well as a prerequisite for those who wish to take professional exams, and as a basic course for students interested in improving their knowledge of English. Will not be counted toward the English major.
LIN 3801 Language and Meaning (3) AS WLE
A survey introduction for non-specialists to the basic principles of semantics and the way language conveys ideas. This course is also available on WUSF/TV Channel 16 by the O.U. Program.

LIN 4040 Descriptive Linguistics (3) AS WLE
PR: LIN 3010 or CI. Introduction to the basic techniques of formalizing linguistic descriptions through elementary phonological, morphological, and syntactic data solution-problems drawn from a variety of languages. Both taxonomic and generative analyses and descriptions will be developed and compared.

LIN 4575 Language Types of the World (1-4) AS WLE
PR: LIN 3010. An analysis of the interrelation of a language and the structure of the society using it. The linguistic behavior patterns characteristic of particular social, political, economic, educational, and racial groups. Problems in communication between strata.

LIN 4671 Traditional English Grammar (3) AS ENG
A course primarily using the sentence diagram to present a detailed analysis of the parts of speech, verb tenses, sentence functions, and other basic grammatical classifications of traditional English grammar.

LIN 4680 Structure of American English (3) AS ENG
An introductory survey of traditional, structural, and generative transformational grammars and their techniques for the analysis and description of linguistic structure in general, and contemporary American English, in particular.

LIN 4710 Language and Communication: Acquisition and Development (3) AS WLE
PR: LIN 3010. A survey of current research and theory in the processes of normal acquisition and development of language and communication in children, the acquisition and development of phonology, syntax, semantics, pragmatics, and nonverbal communication and the role of language in general cognitive development.

LIN 4903 Directed Reading (1-3) AS WLE
PR: CI. Readings in special topics.

LIN 4930 Selected Topics (1-3) AS WLE
PR: CI. Course content depends upon students' needs and instructor's interest and may range over the entire field of linguistics.

LIN 5700 Applied Linguistics (3) AS WLE
Analysis of the phonological, morphological, and syntactic features of English as a basis for linguistic application to problems of English language acquisition by non-native speakers.

LIS 2001 Library and Information Skills (3) AS LIS
An introduction to a variety of information resources (print and electronic) and search techniques. The course is designed to instruct students how to locate, evaluate, and effectively use information.

LIS 2004 Introduction to the Internet (3) AS LIS
Covers the history, structure, and use of the Internet, with an emphasis on using the Internet to answer educational, research, and other information-based needs.

LIS 2005 Library and Internet Research Skills (3) AS LIS
An introduction to information research skills as they apply to using both academic libraries and the Internet. Assignments will focus on developing skills to locate, evaluate, and use sources of information.

LIS 2937 Selected Topics in Library/Information Science (1-3) AS LIS
Covers a variety of topics in the field of library/information science such as emerging technologies, administration and service, and current professional issues.

LIS 3361 World Wide Web Page Design and Management (3) AS LIS

LIS 4930 Selected Topics in Information Studies (3) AS LIS
Covers a variety of topics in the field of library/information science such as emerging technologies, administration and service, and current professional issues.

LIS 5020 Foundations of Library and Information Science (3) AS LIS
Introduction to the study of library and information science, history, organization, specialized literature, outstanding leaders, current trends, issues, and problems; the place of the information agency in society with its contributions to that society.

LIS 5268 Microcomputer Applications Library and Information Centers (3) AS LIS
Microcomputer hardware and software for libraries and their application in library/information settings. Projects using major applications for budgets, databases, and telecommunications will be undertaken.

LIS 5315 Instructional Graphics (3) AS LIS
Theoretical aspects, planning and production of instructional graphic material. The theory of graphic communications, and integrating needs for instructional materials appropriate for given behavioral objectives.

LIS 5333 TV in Schools and Libraries (3) AS LIS
Small format video tape recordings and the utilization of open and closed broadcasts in schools and libraries.

LIN 5937 Selected Topics in Library Studies (1-4) AS LIS
Covers a variety of topics in such areas as collection development, reference services, technical services, and administration.

LIT 2000 Introduction to Literature (6A HP) (3) AS ENG
The nature and significance of literature in its various forms: fiction, drama, poetry; emphasis on the techniques of reading literature for informed enjoyment. Will not be counted toward the English major.

LIT 2010 Introduction to Fiction (6A HP) (3) AS ENG
A study of the short story and novel as literary forms; approached from an historical perspective though not restricted to any historical period. Will not be counted toward the English major.

LIT 2030 Introduction to Poetry (6A HP) (3) AS ENG
A study of the poem as literary form; approached from an historical perspective though not restricted to any historical period. Will not be counted toward the English major.

LIT 2040 Introduction to Drama (6A HP) (3) AS ENG
A study of the major forms of drama as literature and theatre; approached from an historical perspective though not restricted to any historical period. Will not be counted toward the English major.

LIT 3022 Modern Short Novel (3) AS ENG
A study of the novel from the nineteenth century to the present. Writers include James, Dostoevsky, Camus, Styron, Nabokov, Gardner, Roth, Vonnegut, among others.

LIT 3031 Survey of Poetry (3) AS ENG
A chronological sampling of the major poems written in English from the Middle Ages to the present. Recommended as the first literature course in the Poetry Option.

LIT 3043 Modern Drama (3) AS ENG
A study of such modern and contemporary dramatists as Ibsen, Strindberg, Chekhov, Pirandello, Shaw, O'Neill, Pinter, Stoppard, Brecht, Beckett, and Ionesco.

LIT 3093 Contemporary Literature (3) AS ENG
An introduction to the history, fiction, poetry, and drama written since 1945—American, British, Continental, or Multicultural. Focus may be on one, two, or all three genres or on works from any combination of nationalities.

LIT 3091 Literature of the Western World Through the Renaissance (6A) (3) AS ENG
A study of the great works of Western Literature from its beginnings through the Renaissance, including the Bible, Homer, Sophocles, Plato, Euripides, Virgil, Cicero, Dante, Petrarch, Machiaveli, and Rabelais, among others.

LIT 3102 Literature of the Western World Since the Renaissance (6A) (3) AS ENG
A study of the great works of Western Literature from the Neoclassic to the Modern Period, including such writers as Moliere, Racine, Voltaire, Dostoevsky, Chekhov, Ibsen, Kafka, Gide, Sarrette, and Camus, among others.

LIT 3103 Great Literature of the World (6A MW LW) (3) AS ENG
A survey of world literature including samples from the ancient and modern era, western and eastern traditions, male and female writers, and various ethnic cultures. Focus on values/ethics, race, ethnicity, gender, thinking, and writing skills. Will not be counted toward the English major.

LIT 3144 Modern European Novel (6A HP) (3) AS ENG
A study of the Modern European novel in translation as it developed from the eighteenth century to the present, including such writers as Dostoievsky, Flaubert, Kafka, Hesse, Camus, and Solzhenitsyn.

LIT 3155 Modern Literature (6A HP MW LW) (3) AS ENG
A study of English literature of the last century that has developed into the present. The course will be designed as a study of major works that have continued through the 20th Century and explores ways in which authors have expressed the age, its great issues and conflicts, in order to gain an historical perspective that will help relate the present to the recent past. Will not be counted toward the English major.
MAA 4211 Intermediate Analysis I (3) AS MTH
PR: MAA 2302 or CI. No credit for students with credit in MAA 5405. Complex numbers, Cauchy-Riemann equations, analytic and conformal functions, power series, Cauchy Theorem, Cauchy Integral Formula, residue theory.

MAA 4205 Real Analysis I (3) AS MTH
PR: MAA 4211. Riemann-Stieltjes integrals, uniform convergence, Fourier series. Lebesgue measure and integration on R.

MAA 5307 Real Analysis II (3) AS MTH

LIT 3304 The Image of Women in Literature (3) AS ENG
A study that seeks to trace the origins of contemporary views about women, to analyze major Eastern/Western literary portrayals of women, to examine ideas about women’s roles, and to compare/contrast cultural/racial images of women. Will not be counted toward the English major.

LIT 4386 Literature and the Occult (3) AS ENG
Study of the occult as a major ingredient in English, Continental, American, and Multicultural literature; analysis of the origins, classifications, and areas of the various major arts for classical times through the present. Focuses on values/ethnicity, race/ethnicity and gender; thinking and writing skills. Will not be counted toward the English major.

LIT 4804 Literature as Cultural Study (3) AS ENG
The study of literary texts as cultural artifacts. Literary texts as historical, social, political, psychological, philosophical, religious, etc. documents. Topics and works vary. Will not be counted toward the English major.

LIT 4930 Selected Topics in English Studies (3) AS ENG
The content of the course will be governed by student demand and instructor interest. It will examine in depth recurring literary themes or the work of a small group of writers. Special courses in writing may also be offered under this title. May be taken twice for credit with different topics.

MAC 1140 Precalculus Algebra 6A QM (3) AS MTH
PR: C (2.0) or better in MAC 1105, or 550 or better SAT Math score, or 24 or better ACT Math score, or 78 or better College-Level Math CPT score. No credit for students with prior credit for MAC 1140 or MAC 1142. Concepts of the real number system, functions, graphs, and complex numbers. Analytic skills for solving linear, quadratic, polynomial, exponential, and logarithmic equations. Mathematical modeling of real life applications. College Algebra may be taken either for General Education credit or as preparation for a pre-calculus course.

MAC 1140 Precalculus Trigonometry 6A QM (3) AS MTH
PR: C (2.0) or better in MAC 1105, or 550 or better SAT Math score, or 24 or better ACT Math Score. CP: MAC 1140. Angles, trigonometric functions, properties and graphs of trigonometric functions, right triangles, laws of sines and cosines, polar coordinates.

MAC 1140 Precalculus Algebra 6A QM (3) AS MTH
PR: C (2.0) or better in MAC 1105, or 550 or better SAT Math Score, or 24 or better ACT Math Score. CP: MAC 1142. Review of functions and graphs. Analytic geometry including conic sections and rotation of axes, systems of equations including matrix algebra and determinants, sequences and series including Binomial Theorem.

MAC 1140 Precalculus Algebra and Trigonometry 6A (4) AS MTH
PR: C (2.0) or better in MAC 1106, or 550 or better SAT Math Score, or 24 or better ACT Math Score, or 60 or better College-Level Math CPT score. No credit for students with credit for either MAC 1140 or MAC 1142. This is an accelerated combination of MAC 1140 and MAC 1142; this course is best for students who have already seen some trigonometry. See the descriptions of MAC 1140 and MAC 1142.

MTH 4402 Complex Variables 6A (3) AS MTH
PR: MAC 2302 or CI. No credit for students with credit in MAA 5405. Complex numbers, Cauchy-Riemann equations, analytic and conformal functions, power series, Cauchy Theorem, Cauchy Integral Formula, residue theory.

MAC 5306 Real Analysis I (3) AS MTH
PR: MAA 4211. Riemann-Stieltjes integrals, uniform convergence, Fourier series. Lebesgue measure and integration on R.

MAC 5307 Real Analysis II (3) AS MTH

LIT 4930 Selected Topics in English Studies (3) AS ENG
A study that seeks to trace the origins of contemporary views about women, to analyze major Eastern/Western literary portrayals of women, to examine ideas about women’s roles, and to compare/contrast cultural/racial images of women. Will not be counted toward the English major.

LIT 4386 British and American Literature by Women 6A LW (3) AS ENG
Study of the literary texts as cultural artifacts. Literary texts as historical, social, political, psychological, philosophical, religious, etc. documents. Topics and works vary. Will not be counted toward the English major.

LIT 4804 Literature as Cultural Study (3) AS ENG
The study of literary texts as cultural artifacts. Literary texts as historical, social, political, psychological, philosophical, religious, etc. documents. Topics and works vary. Will not be counted toward the English major.

LIT 4930 Selected Topics in English Studies (3) AS ENG
The content of the course will be governed by student demand and instructor interest. It will examine in depth recurring literary themes or the work of a small group of writers. Special courses in writing may also be offered under this title. May be taken twice for credit with different topics.
MAC 2282 Engineering Calculus II 6A QM (4) AS MTH
PR: C (2.0) or better in MAC 2281. No credit for students with credit in MAC 2242 or MAC 2312. Definite integral, trigonometric functions, log, exponential, series, applications.

MAC 2283 Engineering Calculus III 6A (4) AS MTH
PR: C (2.0) or better in MAC 2282 or CC. No credit for students with credit in MAC 2313. Techniques of integration, numerical methods, analytic geometry, polar coordinates, Vector algebra, applications.

MAC 2311 Calculus I 6A QM (4) AS MTH
PR: C (2.0) or better in MAC 1141 and C (2.0) or better in MAC 1140, or C (2.0) or better in MAC 1147, or 650 or better SAT Math score, or 29 or better ACT Math score, or 90 or better College-Level Math (CPT) score, and knowledge of trigonometry. No credit for students with credit in MAC 2233, MAC 2241, or MAC 2281. Differentiation, limits, differentials, extremes, indefinite integral. No credit for students with credit in MAC 2233 or MAC 2243 or MAC 2311.

MAC 2312 Calculus II 6A QM (4) AS MTH
PR: C (2.0) or better in MAC 2311 or CC. No credit for students with credit in MAC 2242 or MAC 2282. Antiderivatives, the definite integral, applications, series, log, exponential and trig functions.

MAC 2313 Calculus III 6A (4) AS MTH
PR: C (2.0) or better in MAC 2312 or CC. No credit for students with credit in MAC 2323. Integration, polar coordinates, conic sections, vectors, indeterminate forms and proper integrals.

MAD 3100 Discrete Mathematics 6A (3) AS MTH
PR: MAC 2281 or MAC 2311. No credit for Mathematics majors. An introduction to some of the aspects of Mathematics that are fundamental to digital computing. Topics include sets, numbers, algorithms, Boolean algebra, computer arithmetic, data structures, and techniques of proof and an introduction to graph theory.

MAD 4001 Numerical Analysis 6A (3) AS MTH
PR: MAP 2302 and MAS 3105. Interpolation and quadrature, finite differences, numerical solution of algebraic and transcendental equations, numerical solution of differential equations, computer techniques. Introduction to computational complexity.

MAD 4504 Theory of Computation 6A (3) AS MTH

MAD 5101 LISP: Programming With Algebraic Applications (3) AS MTH
PR: MHF 5306 or MAD 6510 or MAS 5311 or CR. Programming in LISP, functional languages, foundations of Lambda Calculus and applications (logic, computer science, mathematical logic, computer science, computer science).

MAD 5305 Graph Theory (3) AS MTH
PR: MAS 3105 or CR. Brief introduction to classical graph theory (4-color theorem, Kuratowski’s theorem, connected digraphs, condensations, incidence matrices, Polya’s Theorem, networks).

MAE 4310 Teaching Elementary School (K – 6) Mathematics I (3) ED EDE
PR: Admission to College of Education and two college level mathematics courses. Methods for teaching number ideas, computer techniques. Introduction to computational complexity.

MAE 4320 Teaching Mathematics in the Middle Grades (3) ED EDO
PR: Admission to Mathematics Education program or DPR. Techniques and materials of instruction in middle grades mathematics topics. Students are expected to observe 15 hours in middle schools.

MAE 4326 Teaching Elementary School (K – 6) Mathematics II (3) ED EDE
PR: MAE 4310. Methods for teaching informal geometry, measurement, probability, statistics, and algebraic thinking for elementary school (K – 6) classrooms.

MAE 4330 Teaching Senior High School Mathematics (3) ED EDO
PR: Admission to Mathematics Education program or DPR. Techniques and materials of instruction in mathematics. Students are expected to observe 20 hours in high schools.

MAE 4551 Reading the Language of Mathematics (3) ED EDO
PR: Admission to Mathematics Education program or DPR. The course provides the prospective secondary math teacher the opportunity to develop concepts, skills and instructional procedures for effectively integrating communication (reading, writing, listening, speaking) into the math curriculum. Required under Math Ed program.

MAE 4652 Technology for Teaching Secondary School Mathematics I (3) ED EDO
PR: Admission to Mathematics Education Program or DPR. This course prepares secondary mathematics education majors to write computer programs in both QBasic and Logo 4.0 that are appropriate for secondary school mathematics classrooms. A variety of uses of computers in mathematics instruction will also be covered.

MAE 4653 Technology for Teaching Secondary School Mathematics II (3) ED EDO
PR: Admission to Mathematics Education program or DPR. This course prepares secondary mathematics education majors to be proficient with hand-held technologies such as; graphing calculators, symbolic manipulators, calculator based laboratory systems and hand held geometric drawing tools.

MAE 4909 Directed Study: Mathematics Education (1-3) ED EDO
PR: Senior Standing and CR. To extend competency in teaching field.

MAE 4936 Senior Seminar in Mathematics Education (2) ED EDO
PR: Senior Standing; CR: MAE 4940. Synthesis of teacher candidate’s courses in complete college program.

MAN 4840 Internship: Mathematics Education (1-12) ED EDO
CR: MAE 4936. S/U only. One full semester of internship in a public or private school. In special programs where the intern experience is distributed over two or more semesters, students will be registered for credit which accumulates from 9 to 12 semester hours.

MAE 5875 Abstract Algebra for Teachers (3) AS MTH
PR: MAS 3105 and MAS 4301 and Bachelor’s degree or CR. No credit for majors. Groups, rings, fields, vector spaces as they relate to high school algebra and geometry.

MAN 3025 Principles of Management (3) BA MAN
PR: Junior standing. Examines intrapersonal, interpersonal, group/team, organizational, and environmental (both stakeholder and societal) factors influencing the management task.

MAN 3240 Organizational Behavior Analysis (3) BA MAN
PR: MAN 3025. The course covers research literature relevant to organizational functioning including behavioral effects of power and authority, formal organization, structural variation, leadership, motivation, and communication.

MAN 3301 Human Resource Management (3) BA MAN
To develop a broad exposure to new approaches, techniques, and future trends in the management of personnel. A study of the major functions in personnel including job analysis, manpower planning, selection, performance evaluation, training, and wage and salary administration.

MAN 3401 Industrial Relations (3) BA MAN
Conceptualization of the administrative problems arising from unionization. Emphasis on the relationship between management and employee representation in private and public employment.

MAN 4120 Managerial Behavioral Laboratory (3) BA MAN
PR: MAN 3240 or equivalent. Development of direct understanding of personal, interpersonal, and intergroup factors present in organizational interaction. Stress is on observation and evaluation of experiential exercises and written application of results within a laboratory setting.

MAN 4129 Theory and Practice of Management Skills (3) BA MAN
This course involves the transference of management theories into practice. It requires the active involvement of students in developing and practicing the skills needed to be a successful manager.

MAN 4280 Organizational Development and Change (3) BA MAN
PR: MAN 3240 or CR. A lab course where students experimentally apply behavioral science techniques in an “action-research” framework to the cycle of planned change so as to build a more effective organization.

MAN 4282 Organizational Assessment (3) BA MAN
PR: MAN 3240. The analysis and measurement of factors which influence organizational effectiveness and the quality of work life. Data based cases will be used by students to assess managerial and supervisory skills and to measure organizational functioning and work design.

MAN 4402 Employment Laws (3) BA MAN
Federal and state regulation of the employment relationship, including wage and hour laws; EEO; affirmative action programs; employee benefits; insurance; workers’ compensation, safety, health, employee’s personal rights; collective bargaining legislation.
MAN 4430 Seminar in Negotiations and Administration of Labor Agreements (3) BA MAN
Case studies in contract negotiation, administration, grievance settlement, and arbitration. Assumes familiarity with industrial relations system.

MAN 4504 Operations Management: A Systems Approach (3) BA QMB
PR: ISM 3431 or equivalent. Studies the problems of "operations" in all types of enterprises in both the public and private sectors. Emphasizes application of the application of various decision science methodologies to problem situations.

MAN 4507 Operation Production Systems (3) BA QMB
PR: MAN 4504 or CI. Study of closed loop production planning and control systems. Master production planning, inventory, management, materials requirements planning, capacity, management, production activity. Relationship to organizational effectiveness.

MAN 4600 International Management (3) BA MAN
PR: MAN 3025, Senior Standing or CI. Examines the effects of international cultural differences on business practices within and outside the United States and provides methods to build synergies and establish/enhance competitive advantage via those differences.

MAN 4802 Entrepreneurship and Small Business Management (3) BA MAN
PR: ACG 2021, ACG 2071, MAR 3023, or CI. Study of the factors involved in starting and managing a small- to medium-sized business. Emphasis on conduct of pre-business feasibility study, start-up of business, successful management of the firm, and expanding business.

MAN 4804 Small Business Management Counseling (3) BA MAN
PR: MAN 4802 or CI. Field application in small business settings by (a) analyzing an on-going small business and developing recommendations for making improvements; or (b) conducting a feasibility study for a new enterprise and developing a strategy for implementation if favorable.

MAN 4905 Independent Study (1-3) BA MAN
PR: CI. S/U only. Specialized independent study determined by the students needs and interests.

MAN 4930 Selected Topics in Management (1-3) BA MAN
Topics to be selected by instructor and department chairperson for pertinent Management issues.

MAN 4931 Independent Research (1-4) BA MAN
PR: CI. Individual study contract with instructor and department chairperson required. The research project will be mutually determined by the student and instructor.

MAP 2302 Differential Equations 6A (3) AS MTH
PR: MAC 2283 or MAC 2313. First order linear and nonlinear differential equations, applications.

MAP 5316 Ordinary Differential Equations I (3) AS MTH
PR: MAP 2302 and MAA 4211, or CI. Existence and uniqueness theory, properties of solutions, linear systems, stability theory.

MAP 5317 Ordinary Differential Equations II (3) AS MTH
PR: MAP 5316 and MAA 5307 or CI. Topics selected from fixed point theory, comparison theory, oscillation theory, Poincare-Bendixson Theory, Lyapunov functions, eigenfunction expansions.

MAP 5345 Applied Partial Differential Equations (3) AS MTH
PR: MAP 5407 or CI. Separation of variables, the heat equation, wave equation, Laplace's equation, classification, Green's functions with emphasis on applications.

MAP 5407 Methods of Applied Mathematics (3) AS MTH
PR: MAP 2302 or CI. Sturm-Liouville theory, Fourier series, Green's functions, matrix methods for linear systems of ordinary differential equations, and topics from calculus of variations, control theory, numerical solutions of differential equations.

MAR 2931 Selected Topics in Marketing (1-4) BA MKT
Not available for credit to upper-level students who have been admitted to the College of Business. Topics to be selected by department chairman.

MAR 3023 Basic Marketing (3) BA MKT
PR: Junior standing. Survey of the marketing of goods and services within the economy. Attention is paid to the impact of marketing on other functional areas of business as well as society.

MAR 3401 Professional Selling (3) BA MKT
PR: MAR 3023 or CI. A study of the stages of the professional selling process, and the role of sales in today's marketing environment. Emphasis on learning adaptive selling techniques and developing effective interpersonal communications skills. Sales careers are examined.

MAR 3613 Marketing Research (3) BA MKT
PR: QMB 2100, MAR 3023. A study of research methods and techniques applicable to problem solving in marketing. Attention is also given to defining information needs, determining the value of information, interpreting and reporting information for use in marketing decision making.

MAR 3823 Marketing Management (3) BA MKT
PR: MAR 3023. An applications oriented study of the marketing function at an intermediate level. Emphasis upon techniques for analyzing and problem solving. Builds upon the principles and concepts learned in MAR 3023, and provides a strong foundation for the remaining courses in the marketing curriculum.

MAR 4156 International Marketing (3) BA MKT
PR: MAR 3023. A study of the basic concepts of marketing and the buyer behavior in international marketing, and managing the total marketing effort of firms, and coordination of marketing activities in development of a promotional program is emphasized.

MAR 4213 Logistics and Physical Distribution Management (3) BA MKT
PR: MAR 3023 or CI. A study of logistics in the marketing of goods and services. Includes a description and analysis of the logistics environment as well as components of the physical distribution system with emphasis on information flows and the application of quantitative techniques used in establishing and controlling customer service levels.

MAR 4231 Retailing Management (3) BA MKT
PR: MAR 3023. A comprehensive study of the retailing structure, institutions, and environment. Includes pertinent management theories and practices for organizing, merchandising, planning and controlling retail operations, both large and small.

MAR 4333 Promotion Management (3) BA MKT
PR: MAR 3023 or CI. A study of the role of promotion in the marketing program of the firm, including the promotional tools available to the marketing manager and the various types of decisions made in the promotional area. Decision making process in development of a promotional program is emphasized.

MAR 4403 Sales Management (3) BA MKT
PR: MAR 3023 or CI. A study of sales management and strategy as a subset of marketing management. Emphasis is placed on developing the problem-solving and decision-making skills required of the sales manager in the modern market-oriented company.

MAR 4433 Business to Business Marketing (3) BA MKT
PR: MAR 3023. A study of the marketing of goods and services to the industrial and institutional sectors. Includes characteristics of the markets and channels of distribution, sales, management, research and promotional practices, marketing policies and techniques.

MAR 4503 Buyer Behavior (3) BA MKT
PR: MAR 3023 or CI. A study of the basic concepts of buyer behavior, including pre- and post-purchase attitudes and behavior patterns, information processing, perception of the functional areas of marketing and the buyer's decision-making process. Managerial applications to marketing are emphasized.

MAR 4824 Management Marketing Problems (3) BA MKT
PR: Senior Standing, MAR 3823, MAR 3613, MAR 4333. The integration of marketing knowledge applied to decision roles in managing the total marketing effort of firms, and coordination with other major functional areas on specific problems.

MAR 4903 Independent Research (1-3) BA MKT
PR: CI. Individual study contract with instructor and department chairperson required. The research project will be mutually determined by the student and instructor.

MAR 4905 Independent Study (1-3) BA MKT
PR: CI. S/U only. Specialized independent study determined by the students' needs and interests.

MAS 4933 Selected Topics In Marketing (1-3) BA MKT
Not available for credit to upper-level students who have been admitted to the College of Business. Topics to be selected by department chairman.

MAS 1100 Constructive Number Theory and Linear Algebra (3) US DEA
PR: Acceptance in USF-Hillsborough County Mathematics and Science Program. Computational, and constructive aspects of number theory. Topics include: properties of integers, Diophantine Equations, congruence, quadratic residues polynomials over the integers, systems of linear equations, matrices and determinants.

MAS 3105 Linear Algebra (4) AS MTH
CP: MGF 3301 and either MAC 2283 or MAC 2313. Linear systems, matrix algebra, vector spaces, linear independence, inner product spaces, Gram-Schmidt algorithm, linear transformations and matrix representations, determinants, eigenvalues, diagonalization, quadratic forms.
MAS 4156 Vector Calculus 6A (4) AS MTH
PR: MAS 3105 and either MAC 2313 or MAC 2283. Implicit function and inverse function theorems, parameterized surfaces, submanifolds on Euclidean space, exterior calculus of differential forms, differentiation of vector fields, line and surface integrals, divergence, and Stokes' Theorem. Qualitative study of the dynamics and general circulation of the atmosphere. Surface and upper level atmosphere linkages in the mid latitudes will be examined. Discussion of the regional climatic patterns and anomalies throughout the world.

MAS 4214 Elementary Number Theory 6A (3) AS MTH
PR: MAC 2312. No credit towards Mathematics major. Divisibility, prime numbers. Fundamental Theorem of Arithmetic, Diophantine equations, the algebra of congruencies, number functions and other selected topics.

MAS 4301 Elementary Abstract Algebra 6A (3) AS MTH
PR: MAS 3105. An introduction to the basic algebraic structures; groups, rings, integral domains, and fields; homeomorphisms and isomorphisms.

MAS 5107 Advanced Linear Algebra (3) AS MTH

MAT 5215 Number Theory (3) AS MTH
PR: MAS 3105 and MAS 4301, or CI. Fundamental theorem of arithmetic, modular arithmetic, Chinese remainder theorem, Mersenne primes, perfect numbers, Euler-Fermat theorem, pseudo primes, primitive roots, law of quadratic reciprocity, factoring and primality testing algorithms.

MAS 5311 Algebra I (3) AS MTH
PR: MAS 3105 and MAS 4301 or CI. Group theory: Sylow theorems; classification of groups of small order. Ring theory: ideals, quotient rings, polynomial rings, Euclidean domains, principal ideal domains and unique factorization.

MAS 5312 Algebra II (3) AS MTH
PR: MAS 5311 or CI. Continuation of MAS 5311. Finite generated modules over principal ideal domain, basic field theory, finite fields. Galois theory.

MAT 2930 Selected Topics in Mathematics 6A (1-4) AS MTH
PR: CI. The course content will depend on the interest of faculty members and student demand.

MAT 2936 Technology Seminar 6A (1) AS MTH
S/U only. A two hour/week technology seminar to acquaint students majoring in mathematics, physics, and other sciences with the computer tools necessary in scientific communication and document preparation.

MAT 4906 Independent Study 6A (1-4) AS MTH
PR: CI. S/U only. Specialized independent study determined by the student's needs and interests. The written contract required by the College of Arts and Sciences specifies the regulations governing independent study.

MAT 4937 Mathematics Majors Seminar 6A (1) AS MTH
PR: MAS 4301. A forum for students interested in the major. The course content will depend on the interest of faculty members and student demand.

MAT 4970 Mathematics Senior Thesis 6A (3) AS MTH
PR: Admission to Mathematics Honors Program and CC. S/U only. Course restricted to mathematics majors.

MAT 5932 Selected Topics (1-4) AS MTH
PR: CI. Each course covers a single topic outside the usual curriculum.

MCB 2000 Microbiology for Nursing and other Healthcare Professionals (3) NU NUR
Basics of microbiology for health professionals. Focus on disease states and the role of bacteri, viruses, fungi, rickettsiae and other pathogenic organisms.

MCB 2000L Microbiology Lab for Nursing and other Healthcare Professionals (1) NU NUR

MCB 3020C General Microbiology (4) AS BIO
PR: BSC 2010, BSC 2010L, BSC 2011, BSC 2011L, and CHM 2210 and MAC 1105 or higher-level MAC course or STA 2023. CP: PCB 3023 or PCB 3063 or PCB 3712. Structure and function of bacteria, archaea, viruses, and eukaryotic microbes. Laboratory includes media preparation and culturing, staining and enumeration techniques. Lecture and Laboratory.

MCB 4115C Determinative Bacteriology (5) AS BIO
PR: MCB 3020C, CHM 2210, MAC 1105 or higher-level MAC course or STA 2023. CP: PCB 3023 or PCB 3043 or PCB 3063 or PCB 3712 and CHM 2211. Survey of bacterial classification; detailed examinations of bacteria important to man in agriculture, industry and as pests and pathogens.

MCB 4404 Microbial Physiology and Genetics (4) AS BIO
PR: MCB 3020C and CHM 2210 and MAC 1105 or higher-level MAC course or STA 2023 and PHY 2053. CP: PCB 3023 or PCB 3043 or PCB 3063 or PCB 3712 and CHM 2211. Physiological, metabolic, and genetic phenomena pertinent to understanding the growth, development, ecology, regulation, and reproduction of microorganisms. Emphasizes the interdependence of physiological and genetic approaches. Lecture only.

MCB 4404L Microbial Physiology and Genetics Laboratory (1) AS BIO
CR: MCB 4404. Laboratory portion of Microbial Physiology and Genetics. Topics relating to both environmental and metabolic capabilities of bacteria. Laboratory only.

MCB 4503 Virology (3) AS BIO
PR: MCB 3020C and CHM 2210 and MAC 1105 or higher-level MAC course or STA 2023. CP: PCB 3023 or PCB 3043 or PCB 3063 or PCB 3712 and CHM 2211. The biology of viruses associated with plants, animals, and bacteria will be considered: the nature of viruses, mechanisms of viral pathogenesis, and interactions with host cell. The course content will depend on the interest of faculty members and student demand.

MCB 4910 Microbiology Undergraduate Research (1-4) AS BIO
PR: CC. For B.S. Microbiology majors only. S/U only. Individual investigation with faculty supervision.

MCB 4934 Seminar in Microbiology (1) AS BIO
PR: Senior or advanced junior standing. S/U only. Biology majors may take for elective credit.

MCB 5206 Public Health and Pathogenic Microbiology (3) AS BIO
PR: MCB 3020C. A comprehensive survey of pathogenic microbes responsible for disease in man and other animals and the impact of these infectious agents on the public health. These pathogens will be studied with respect to their morphology, cultivation, mechanisms of pathogenicity, laboratory diagnosis, and epidemiology.

MCB 5655 Applied and Environmental Biology (3) AS BIO
PR: MCB 3020C. A study of the applications of microbiology to the food/beverage industry, agriculture, public health, and bioremediation. This course is a microbiology elective and has a mandatory field trip.

MCB 5815 Medical Mycology (3) AS BIO
PR: MCB 3020C or CI. A modern biological survey of the medically important fungi (yeasts and molds) important to microbiologists and environmental scientists.

MET 4002 Climatology (4) AS GPY
PR: GEO 2200 or CI. An introductory survey of climate. A qualitative study of the dynamics and general circulation of the atmosphere. Surface and upper level atmospheric linkages in the mid latitudes will be examined. Discussion of the regional climatic patterns and anomalies throughout the world.

MGF 1107 Mathematics for Liberal Arts 6A QM (3) AS MTH
PR: C (2.0) or better in MAT 1033, or 440 or better SAT Math score, or 19 or better ACT Math Score, or 72 or better Elementary Algebra CPT score. Concepts and analytical skills in areas as logic, linear equations, linear programming, mathematics of finance, permutations and combinations, probability, and descriptive statistics.

MGF 1107 Mathematics for Liberal Arts 6A QM (3) AS MTH
PR: C (2.0) or better in MAT 1033, or 440 or better SAT Math score, or 19 or better ACT Math Score, or 72 or better Elementary Algebra CPT score. Concepts and analytical skills in areas as logic, linear equations, linear programming, mathematics of finance, permutations and combinations, probability, and descriptive statistics.

MGF 1116 Mathematical Experience 6A (3) AS MTH
PR: Two years of high school algebra. Introduction to some important and interesting basic ideas in mathematics with an emphasis on a mathematical way of thinking. Concepts such as definitions, axioms and proofs are explained. Topics from number theory, combinatorics, algebra and geometry are used. Some topics are presented in their historical context and their impact on the development of mathematics is discussed.

MGF 2131 Chaos and Fractals 6A QM (3) AS MTH
PR: C (2.0) or better in MAT 1033, or 440 or better SAT Math score, or 19 or better ACT Math Score, or 72 or better Elementary Algebra CPT score. Computer experiments in the behavior of
functions under iteration: periodicity, attractors, stability, complex patterns, fractal dimension, sensitive dependence.

MGF 3301 Bridge to Abstract Mathematics 6A QM (4) AS MTH
CP: MAC 2313 or MAC 2283. Techniques and logic of the construction of proofs. Topics will be selected from propositional logic, set theory, relations and functions, equivalence relations, Boolean algebra, cardinality, and limits.

MHF 4403 The Early History of Mathematics 6A MW (3) AS MTH
PR: MAC 2312 and upper-level standing. A study of the history and development of mathematics and of its impact from the formation of number systems to the Renaissance.

MHF 4406 The History of Modern Mathematics 6A MW (3) AS MTH
PR: MAC 2313. Traces the development of mathematical ideas in Western culture.

MHF 5306 Mathematical Logic and Foundations I (3) AS MTH
PR: MAS 4301 or CI. Two-course sequence covering: predicate calculus and classical model theory; transfinite set theory and the system ZFC: recursion theory and decidability.

MHF 5402 The Early History of Mathematics (3) AS MTH
PR: MAC 2312 A study of the history and development of mathematics and its cultural impact from the formation of number systems to the Renaissance.

MHF 5405 History of Modern Mathematics (3) AS MTH
PR: MAC 2313. Traces the development of mathematical ideas in Western culture. Special emphasis is placed on those concepts which led to the Calculus. This course is open to majors and non-majors alike.

MHS 3411 Multidisciplinary Behavioral Healthcare Services (3) FM FMH
PR: CI or Junior Standing minimum. Working in behavioral healthcare requires the application of specific knowledge and skills. This open enrollment course offers a practical multidisciplinary look at service delivery. Students will examine their career and educational goals in context.

MHS 4002 Behavioral Health Systems Delivery (3) FM FMH
PR: MHS 3411 This course is designed to provide students with an understanding of the significant issues and trends in behavioral health delivery. Systems in America. Four major areas will be emphasized: 1) history and legislation; 2) systems delivery; 3) programs and policies; 4) selected at-risk populations. This course is not repeatable for credit and is open to non-majors in behavioral healthcare.

MHS 4052 Human Relations Skills in Counseling MW (4) ED EDG
Introduction to the theory of human relations dynamics and development of skills required for effective interpersonal relations. Lecture sessions and experiential training.

MHS 4408 Exemplary Practices in Behavioral Healthcare Treatment (3) FM FMH
PR: MHS 3411 This course explores exemplary clinical practices in public behavioral health service delivery. Best or exemplary practices are defined as those that have both a track record and their efficacy has been empirically validated. Modules may begin with a historical perspective of the treatment of a specific disease or mental health condition, the development of skills required for effective interpersonal relations.

MHS 4425 Field Experience in Behavioral Healthcare (3) FM FMH
PR: MHS 3411, MHS 4002, MHS 4408 This experiential class allows the student to observe and participate with multidisciplinary staff of a provider agency. The student will attend team meetings, observe individual, group, and case management services. Assignments will be made to maximize the student’s time investment in the field. Observations and experiences will be discussed in biweekly class meetings. Students are required to spend 120 hours (an average of 8 hours per week for 15 weeks) in an agency. Approval required two months in advance of semester.

MHS 4905 Independent Study: Guidance and Counseling Education (1-4) ED EDG
PR: DPR, Supervisor. Specialized independent study determined by the student’s needs and interests.

MHS 4906 Directed Study (1-4) FM FMH
Directed study. Student must have a contract with an instructor.

MHS 531 Selected Topics (1-4) FM FMH
The course content will depend on student demand and instructor’s interest. The course may be repeated for different topics up to 8 hours.

MHS 5320 Foundations of Mental Health Counseling (3) AS REH
PR: CC. A skill-building course on the utilization of one’s self in mental health counseling relationships. Includes study of the origin, history, professional functions and current issues in the discipline of mental health counseling.

MHS 5480 Human Growth and Development (3) AS REH
PR: RCS 5780, MHS 5210, Majors only. Human development theory as applied in psychotherapy and case management rehabilitation, mental health, and addiction settings.

MHS 5905 Directed Studies (1-4) ED EDG
Independent study, selected topic.

MLS 4031 Introduction to Medical Technology (2) AS IAS
PR: Senior standing and acceptance into an approved affiliated hospital. A hospital clinical course on the principles and methods of medical technology, including professional ethics, safety regulations, quality control, phlebotomy, medical terminology, laboratory math, and computer applications.

MLS 4860 Clinical Urinalysis and Body Fluids (2) AS IAS
PR: Senior standing and acceptance into an approved affiliated hospital. A hospital clinical course on laboratory methodology and diagnosis using urine and other fluids such as semen, spinal, pleural, peritoneal, and joint fluids.

MLS 4861 Clinical Immunology (2) AS IAS
PR: Senior standing and acceptance into an approved affiliated hospital. A hospital clinical course on the tissues, cells, and molecules of the human immune system, emphasizing the detection of serum antibodies and disease states.

MLS 4862 Clinical Hematology (6) AS IAS
PR: Senior standing and acceptance into an approved affiliated hospital. A hospital clinical course on laboratory methodology and diagnosis using urine and other fluids such as semen, spinal, pleural, peritoneal, and joint fluids.

MLS 4863 Clinical Microbiology (6) AS IAS
PR: Senior standing and acceptance into an approved affiliated hospital. A hospital clinical course emphasizing pathogens responsible for diseases in man, including morphology, physiology, and laboratory diagnosis of bacteria, fungi, parasites, and viruses.

MLS 4864 Clinical Chemistry (6) AS IAS
PR: Senior standing and acceptance into an approved affiliated hospital. A hospital clinical course on the analysis of chemical substances found in the body as related to the diagnosis of human disease, including topics such as instrumentation, electrophoresis, therapeutic drug-monitoring assays, tumor markers, and toxicology.

MLS 4865 Clinical Immunohematology (6) AS IAS
PR: Senior standing and acceptance into an approved affiliated hospital. A hospital clinical course on the analysis of chemical substances found in the body as related to the diagnosis of human disease, including topics such as instrumentation, electrophoresis, therapeutic drug-monitoring assays, tumor markers, and toxicology.

MMC 4123 Media Script Writing (3) AS COM
PR: Sophomore standing; 2.75 overall grade point average; grade of “C” in ENC 1101, ENC 1102, and passing score on English Diagnostic Test. An introduction to the basic skills of writing for the mass media with practice in library research, persuasive writing, and informational writing.

MMC 4200 History and Principles of Communications Law (3) AS COM
PR: MMC 2100 and MMC 3602. An introduction to the techniques of writing scripts for electronic media. Emphasis is on documentary and journalistic writing.

MMC 4203 Communication Ethics (3) AS COM
PR: MMC 2100 and MMC 3602 or CI. A study of the fundamental principles and philosophies of ethics and their application to the decision-making process in the various professions of mass communications.
MMC 4420 Research Methods in Mass Communications (3) AS COM
PR: MMC 2100 and MMC 3602. An introduction to research design and methodology, emphasizing the formulation of research questions, the selection of appropriate research methods, and the analysis of data.

MMC 4900 Directed Reading in Mass Communications (1-3) AS COM
PR: CI and permission of Professor. Directed reading and research in special topics.

MMC 4910 Individual Research in Mass Communications (1-3) AS COM
PR: CI and permission of Professor. Individual research and study in special topics.

MMC 4936 Selected Topics in Mass Communications Studies (1-3) AS COM
PR: CI and permission of Professor. Topics may be selected from a variety of areas within mass communications.

MMC 4945 Media Internship-Seminar (3) AS COM
PR: CI and 15 hours in Mass Comm. coursework. Internship and seminar in selected areas of mass communications.

MUC 3402 Electronic Music-Analog Synthesis II (3) VP MUS
PR: MUC 3401 or MUC 3442 or equivalent. The course will focus on the design and construction of analog synthesizers.

MUC 3441 Electronic Music-Digital Synthesis I (3) VP MUS
PR: MUC 3042 and MUC 3442 or equivalent. The course will focus on digital synthesis techniques, including sound recording, studio techniques, and computer-assisted composition.

MUC 3442 Electronic Music-Digital Synthesis II (3) VP MUS
PR: MUC 3401 or MUC 3402 and DFR. The course will focus on digital synthesis techniques, including sound recording, studio techniques, and computer-assisted composition.

MUC 4403 Electronic Music-Real-Time Performance I (3) VP MUS
PR: MUC 3402 and MUC 3442 or equivalent. The course will focus on real-time performance techniques, including computer-assisted composition and performance.

MUC 4404 Electronic Music-Real-Time Performance II (3) VP MUS
PR: MUC 3402 and MUC 3442 or equivalent. The course will focus on real-time performance techniques, including computer-assisted composition and performance.

MUC 4420 Jazz Composition (3) VP MUS
PR: MUT 4354 and/or DFR. The course will focus on jazz composition techniques.

MUC 5525 Jazz Composition (2) VP MUS
PR: CI. Required of all composition majors. The course will focus on jazz composition techniques.

MTG 3212 Geometry 6A (3) AS MTH
PR: MAC 3431. No credit towards mathematics major. Emphasis on axiomatics, advanced Euclidean geometry, elements of projective geometry, non-Euclidean geometry.

MTG 4214 Modern Geometry 6A (3) AS MTH
CP: MAS 3431 or CI. Topics will be selected from modern plane geometry, Mobius geometry, elliptic and hyperbolic geometry.

MTG 4302 Introduction to Topology 6A (3) AS MTH

MTG 5256 Differential Geometry (3) AS MTH
PR: MAA 2411, MAS 3105. Exterior calculus, differentiable manifolds, integration of differential forms, surfaces in 3-space, covariant derivative, curvature, matrix groups.

MTG 5316 Topology I (3) AS MTH

MTG 5317 Topology II (3) AS MTH
PR: MTG 5316. The fundamental group; elements of homotopy theory and homology theory.

MUC 2221 Composition (3) VP MUS
PR: MUT 1112 and DFR. Private instruction in original composition.

MUC 2301 Introduction To Electronic Music FA (3) VP MUS
History and repertory of electronic music; standard sound studio techniques; basic electronics as applied in electronic sound synthesis; mathematics for music, composition and electronic music.

MUC 3231 Composition (3) VP MUS
PR: Necessary competency at junior level determined by faculty jury. DFR. Private instruction in original composition.

MUC 3401 Electronic Music-Analog Synthesis I (3) VP MUS
PR: MUC 2301 and DFR. Composition for tape medium with analog synthesizers; use of computer-assisted composition.

MUC 3402 Electronic Music-Analog Synthesis II (3) VP MUS
PR: MUC 2301 and DFR. Composition for tape medium with analog synthesizers; use of computer-assisted composition.

MUC 3441 Electronic Music-Digital Synthesis I (3) VP MUS
PR: MUC 2301 and DFR. Computer assisted composition for conventional instruments; composition for computer controlled synthesis.

MUC 3442 Electronic Music-Digital Synthesis II (3) VP MUS
PR: MUC 2301 and DFR. Computer assisted composition for computer controlled synthesis.

MUC 4403 Electronic Music-Real-Time Performance I (3) VP MUS
PR: MUC 3402 and MUC 3442 or equivalent. Computer assisted composition for electronic music; performance applications; sound synthesis, interfacing electronics with conventional instruments.

MUC 4404 Electronic Music-Real-Time Performance II (3) VP MUS
PR: MUC 3402 and MUC 3442 or equivalent. Computer assisted composition for electronic music; performance applications; sound synthesis, interfacing electronics with conventional instruments.
MUE 3421 Choral Techniques and Pedagogy (1) VP MUS
A study of choral materials in a laboratory setting appropriate to elementary and secondary school music programs. Course content will change each semester.

MUE 3422 Wind Techniques and Pedagogy (2) VP MUS
PR: MUG 3040. A two-semester sequence intended to equip music education students with basic performance, pedagogical, and rehearsal techniques, applicable to brass and woodwind instruments and ensembles.

MUE 3423 String Techniques and Pedagogy (1) VP MUS
PR: DPR. A study of orchestra materials, in a laboratory setting, appropriate to elementary and secondary school music programs. Course content will change each semester.

MUE 3431 K-12 General Music Methods and Practicum (4) VP MUS
PR: MUE 2090. This course will consist of theoretical and practical training in teaching General Music Education K-12. It will include the study of philosophies, strategies and methodologies in contemporary General Music Education used in the USA and internationally.

MUE 3433 Choral Methods In The Secondary School (3) VP MUS

MUE 3432 Instrumental Music In The Secondary School (3) VP MUS

MUE 4480 Special Ensemble Methods (2) VP MUS
This course is restricted to majors and is repeatable for up to 6 credits.

MUE 4932 Senior Seminar In Music (2) VP MUS
CR: MUE 4940. DPR. Synthesis of teacher candidate’s courses in complete college program. Required concurrently with internship.

MUE 4934 Internship: Music Education (6-10) VP MUS
CR: MUE 4936. S/U only. DPR. One full semester of internship in public or private elementary and secondary schools. Restricted to majors. May not apply for credit.

MUG 3104 Basic Conducting (2) VP MUS
PR: DPR. The study and practical application of basic conducting techniques. Development of skills related to the conducting of musical scores.

MUG 4302 Instrumental Conducting (2) VP MUS
PR: MUG 3404 and DPR. A study of those techniques of conducting unique to instrumental music ensembles: baton technique, score reading, terminology, rehearsal management.

MUH 2051 Folk And Traditional Music Of World Cultures FA AF (3) VP MUS
A comparative survey of the stylistic traits and functions of the folk and traditional music of the Western and non-Western cultures. For non-majors; may be taken by majors as an elective with departmental approval.

MUH 2632 Music In The United States FA AF (3) VP MUS
Designed for majors and non-majors who use live performances, videotapes, and recordings to illustrate music as practiced in America from Colonial to present times. Included in the course will be the study of the contributions of various ethnic or minority groups and discussions of the relevant social issues connected with these contributions.

MUH 3016 Survey Of Jazz FA AF (3) VP MUS
For non-music majors. Not repeatable. A study of the evolution of traditional or "fusional" music. Jazz. In addition to presenting an overview of the most prominent artists and literature, the course will focus on the cultural dynamics involved in the development of jazz from 1890 to the present.

MUH 3300 Music History/Medieval And Renaissance (2) VP MUS
PR: DPR. Required of music majors: a study of the historical development of musical styles of the Medieval and Renaissance periods and of the music of those periods.

MUH 3301 Music History/Baroque And Classic MW (3) VP MUS
PR: MUL 2111, DPR. Required of music majors: open to non-majors with DPR. A study of the historical development of musical styles of the Baroque and Classic periods and of the music of those periods.

MUH 3302 Music History/Romantic And 20th Century MW (3) VP MUS
PR: MUL 2111, DPR. Required of music majors: open to non-majors with DPR. A study of the historical development of musical styles of the Romantic and Twentieth Century eras and of the music of those periods.

MUH 4058 Intercultural Music In The Twentieth Century MW (3) VP MUS
PR: MUE 2051 or MUL 2111, DPR. An in-depth investigation of composers born after c. 1880, from all parts of the world, who have attempted to integrate elements from two or more cultures into their compositions.

MUH 4601 History Of Jazz (3) VP MUS
PR: MUT 1112, DPR. An in-depth study of the historical development of Jazz, including the representative musical literature and sociological implications.

MUH 4811 Introduction To Music Literature 6A HP FA (3) VP MUS
PR: MUT 1112, DPR. A survey of representative music exemplars of the past and present with emphasis on the study of styles and form. Required for music majors.

MUH 3001 Issues In Music FA AF (2-3) VP MUS
Open only to non-music majors. Lectures and live performances by artist faculty of significant works written for the literature for the piano; analysis and illustration in performance of the abstract and aesthetic elements in music which vitally concern the artist-performer.

MUL 3012 Music in Your Life FA (3) VP MUS
Open only to non-music majors. A study in the art of music and the materials, designed to develop an understanding of basic principles of music and a technique for listening to music.

MUN 1100 University Pep Band (1-3) VP MUS
This course provides performance experiences with the Pep Band. The course is open to any major area. Fall Term participation in Marching Band is required prior to enrollment.

MUN 1110 University Marching Band (1) VP MUS
This course provides performance experiences with the Marching Band. The course is open to any major area.

MUN 3143 Wind Ensemble (1) VP MUS
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for large combinations of voices, string, woodwind, brass, or percussion instruments.

MUN 3213 University Orchestra (1) VP MUS
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for large combinations of voices, string, woodwind, brass, or percussion instruments.

MUN 3313 University Singers (1) VP MUS
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for large combinations of voices, string, woodwind, brass, or percussion instruments.

MUN 3343 Chamber Singers (1) VP MUS
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for large combinations of voices, string, woodwind, brass, or percussion instruments.

MUN 3383 University-Community Chorus (1) VP MUS
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for small combinations of voices, string, woodwind, brass, or percussion instruments.

MUN 3411 String Quartet (1) VP MUS
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for small combinations of voices, string, woodwind, brass, or percussion instruments.

MUN 3420 Saxophone Ensemble (1) VP MUS
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for small combinations of voices, string, woodwind, brass, or percussion instruments.
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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Department</th>
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<tbody>
<tr>
<td>MUS 4933</td>
<td>Music Senior Seminar</td>
<td>1-4</td>
<td>MUS</td>
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<tr>
<td>PR: DPR</td>
<td>S/U only</td>
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<tr>
<td>MUS 5905</td>
<td>Directed Study (1-4)</td>
<td>VP MUS</td>
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<tr>
<td>PR: DPR</td>
<td>Independent studies in the various areas of music; course of study and credits must be assigned prior to registration.</td>
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<tr>
<td>MUT 1001</td>
<td>Rudiments Of Music (2)</td>
<td>VP MUS</td>
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<tr>
<td>PR: DPR</td>
<td>Open to non-music majors; development of skills in hearing and performing music and in basic notation. Will not count as degree credit for music majors.</td>
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<tr>
<td>MUT 1111</td>
<td>Music Theory I (3)</td>
<td>VP MUS</td>
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<tr>
<td>PR: DPR</td>
<td>Required of music majors; development of skills in perceiving and writing music through the use of aural and visual analysis and examples from all historical periods of music literature.</td>
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<tr>
<td>MUT 1112</td>
<td>Music Theory II (3)</td>
<td>VP MUS</td>
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<tr>
<td>PR: MUT 1111, DPR</td>
<td>Required of music majors; development of skills in perceiving and writing music through the use of aural and visual analysis and examples from all historical periods of music literature.</td>
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<tr>
<td>MUT 1241</td>
<td>Aural Theory I (1)</td>
<td>VP MUS</td>
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<tr>
<td>PR: DPR</td>
<td>To be taken concurrently with MUT 1111, MUT 1112. Course designed to begin training in aural recognition and vocal realization of materials used in music composition. Includes rhymthic, melodic and harmonic dictation, and sight singing.</td>
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<tr>
<td>MUT 2116</td>
<td>Music Theory III (3)</td>
<td>VP MUS</td>
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<tr>
<td>PR: MUT 1112, DPR</td>
<td>Required of music majors, continuation of MUT 1111 and 1112.</td>
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<tr>
<td>MUT 2117</td>
<td>Music Theory IV (3)</td>
<td>VP MUS</td>
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<tr>
<td>PR: MUT 2116, DPR</td>
<td>Required of music majors, continuation of MUT 1111, 1112, and 2116.</td>
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<tr>
<td>MUT 2246</td>
<td>Aural Theory III (1)</td>
<td>VP MUS</td>
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<tr>
<td>PR: MUT 2116, MUT 2117, DPR</td>
<td>To be taken concurrently with MUT 2116, MUT 2117, DPR. Course designed to continue training in aural recognition and vocal realization of materials used in music composition. Includes rhymthic, melodic and harmonic dictation, and sight singing.</td>
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<tr>
<td>MUT 2641</td>
<td>Jazz Theory And Improvisation I (2)</td>
<td>VP MUS</td>
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<tr>
<td>PR: MUT 1112 and/or DPR</td>
<td>A study of jazz improvisational techniques and related jazz theory.</td>
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<tr>
<td>MUT 2642</td>
<td>Jazz Theory And Improvisation II (2)</td>
<td>VP MUS</td>
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<tr>
<td>PR: MUT 2641 or DPR</td>
<td>A study of jazz improvisational techniques and related jazz theory.</td>
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<tr>
<td>MUT 3353</td>
<td>Jazz Composition and Arranging I (3)</td>
<td>VP MUS</td>
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<tr>
<td>PR: MUT 1112 and DPR</td>
<td>Course designed to develop arranging and/or compositional skills in the jazz idiom through the study of jazz orchestration, harmonic, and melodic practices.</td>
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<tr>
<td>MUT 3354</td>
<td>Jazz Composition And Arranging II (3)</td>
<td>VP MUS</td>
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<tr>
<td>PR: MUT 3353 and DPR</td>
<td>Course designed to develop arranging and/or compositional skills in the jazz idiom through the study of jazz orchestration, harmonic, and melodic practices.</td>
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<tr>
<td>MUT 3663</td>
<td>Advanced Jazz Improvisation I (2)</td>
<td>VP MUS</td>
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<tr>
<td>PR: MUT 2642 or DPR</td>
<td>A studio course study of the improviséd solos of the major innovators in jazz. Oriented toward the continuing development of students' solbing ability. Students are required to enroll in Jazz Chamber Ensemble as a lab. Open to majors and non-majors.</td>
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<tr>
<td>MUT 3664</td>
<td>Advanced Jazz Improvisation II (2)</td>
<td>VP MUS</td>
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<tr>
<td>PR: MUT 3663, DPR</td>
<td>A continuation of Jazz Styles and Analysis I with the emphasis on contemporary jazz artists. Students are required to enroll in Jazz Chamber Ensemble as a lab. Open to majors and non-majors.</td>
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<tr>
<td>MUT 4310</td>
<td>Orchestration I (2)</td>
<td>VP MUS</td>
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<tr>
<td>PR: MUT 4310, DPR</td>
<td>Intensive study and practice in scoring music for various combinations of instruments, including symphony orchestra, band, and smaller ensembles of string, woodwind, brass, and percussion instruments.</td>
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<tr>
<td>MUT 4311</td>
<td>Orchestration II (2)</td>
<td>VP MUS</td>
<td></td>
</tr>
<tr>
<td>PR: MUT 4310, DPR</td>
<td>Intensive study and practice in scoring music for various combinations of instruments, including symphony orchestra, band, and smaller ensembles of string, woodwind, brass, and percussion instruments.</td>
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</tbody>
</table>
### USF Course Descriptions

**MUT 4571 Twentieth Century Practice (3) VP MUS**
- PR: MUT 2117, DPR.
- A study of 20th century theoretical concepts; development of skills in perceiving and writing music in the style of the period through the use of aural and visual analysis.

**MUT 5051 Graduate Review Of Music Theory (2) VP MUS**
- PR: DPR.
- A graduate level review of basic theoretical concepts with emphasis on the common practice period. The course serves to satisfy deficiencies in music theory and does not count toward the graduate degree requirements.

**MVB 1211 Applied Trumpet (1) VP MUS**
- PR: DPR.
- Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

**MVB 1212 Applied French Horn (1) VP MUS**
- PR: DPR.
- Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

**MVB 1213 Applied Trombone (1) VP MUS**
- PR: DPR.
- Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

**MVB 1214 Applied Euphonium (1) VP MUS**
- PR: DPR.
- Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

**MVB 1215 Applied Tuba (1) VP MUS**
- PR: DPR.
- Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

**MVB 1311 Trumpet Principal (2) VP MUS**
- PR: DPR.
- Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

**MVB 1312 French Horn Principal (2) VP MUS**
- PR: DPR.
- Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

**MVB 1313 Trombone Principal (2) VP MUS**
- PR: DPR.
- Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

**MVB 1314 Euphonium Principal (2) VP MUS**
- PR: DPR.
- Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

**MVB 1315 Tuba Principal (2) VP MUS**
- PR: DPR.
- Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

**MVB 1411 Trumpet Major (3) VP MUS**
- PR: DPR.
- Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

**MVB 1412 French Horn Major (3) VP MUS**
- PR: DPR.
- Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

**MVB 1413 Trombone Major (3) VP MUS**
- PR: DPR.
- Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

**MVB 1414 Euphonium Major (3) VP MUS**
- PR: DPR.
- Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

**MVB 1415 Tuba Major (3) VP MUS**
- PR: DPR.
- Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

**MVB 1416 French Horn Major (3) VP MUS**
- PR: DPR.
- Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

**MVB 1417 Euphonium Major (3) VP MUS**
- PR: DPR.
- Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

**MVB 1421 French Horn Major (3) VP MUS**
- PR: DPR.
- Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
MVB 3335 Tuba Principal (2) VP MUS
PR: DPR. Necessary competency at senior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.
MVB 3345 Tuba Principal (2) VP MUS
PR: DPR. Necessary competency at senior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.
MVB 3343 Trombone Principal (2) VP MUS
PR: DPR. Necessary competency at senior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.
MVB 3335 Tuba Principal (2) VP MUS
PR: DPR. Necessary competency at senior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.
MVB 3344 Euphonium Major (3) VP MUS
PR: DPR. Necessary competency at senior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.
MVB 3342 French Horn Principal (2) VP MUS
PR: DPR. Necessary competency at senior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.
MVB 3343 Trombone Principal (2) VP MUS
PR: DPR. Necessary competency at senior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.
MVB 3344 Euphonium Major (3) VP MUS
PR: DPR. Necessary competency at senior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.
MVB 3342 French Horn Principal (2) VP MUS
PR: DPR. Necessary competency at senior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.
MVB 3341 Trumpet Major (2) VP MUS
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
MVB 3343 Trombone Principal (2) VP MUS
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
MVB 3342 French Horn Principal (2) VP MUS
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
MVB 3344 Euphonium Major (2) VP MUS
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
MVB 3341 Trumpet Major (2) VP MUS
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
MVB 3340 Trumpet Major (2) VP MUS
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
MVB 3340 Trumpet Major (2) VP MUS
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
MVB 3343 Trombone Principal (2) VP MUS
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
MVB 3344 Euphonium Major (2) VP MUS
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
MVJ 2320 Applied Jazz Piano (2) VP MUS
PR: DPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
MVJ 2323 Jazz Guitar Principal (2) VP MUS
PR: DPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
MVJ 2320 Applied Jazz Piano (2) VP MUS
PR: DPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
MVJ 2323 Jazz Guitar Principal (2) VP MUS
PR: DPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
MVJ 2320 Applied Jazz Piano (2) VP MUS
PR: DPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
MVJ 2323 Jazz Guitar Principal (2) VP MUS
PR: DPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
MVJ 2320 Applied Jazz Piano (2) VP MUS
PR: DPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
MVJ 2323 Jazz Guitar Principal (2) VP MUS
PR: DPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
MVJ 2320 Applied Jazz Piano (2) VP MUS
PR: DPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
MVJ 2323 Jazz Guitar Principal (2) VP MUS
PR: DPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
MVJ 2322 Jazz Bass Principal (2) VP MUS  
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVJ 2329 Applied Jazz Percussion Principal (2) VP MUS  
PR: DPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVJ 2420 Applied Jazz Piano Major (3) VP MUS  
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVJ 2423 Jazz Guitar Major (3) VP MUS  
PR: DPR. Necessary competency at senior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVJ 3434 Jazz Bass Major (3) VP MUS  
PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVJ 3443 Jazz Guitar Major (3) VP MUS  
PR: DPR. Necessary competency at senior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVJ 4444 Jazz Bass Major (3) VP MUS  
PR: DPR. Necessary competency at senior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVJ 4449 Jazz Percussion Major (3) VP MUS  
PR: DPR. Necessary competency at senior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVJ 4950 Applied Jazz Performance (3) VP MUS  
PR: MUT 2642 and DPR. Necessary competency at junior level determined by faculty jury examination. Private and class instruction.

MVJ 5250 Applied Jazz Piano Secondary (2) VP MUS  
PR: Necessary competency determined by faculty jury audition. Required of all applied music majors. Required registration in major performance ensemble. Private and class instruction.

MVJ 5252 Applied Jazz Bass Secondary (2) VP MUS  
PR: Necessary competency determined by faculty jury audition. Required of all applied music majors. Required registration in major performance ensemble. Private and class instruction.

MVJ 5253 Applied Jazz Guitar Secondary (2) VP MUS  
PR: Necessary competency determined by faculty jury audition. Required of all applied music majors. Required registration in major performance ensemble. Private and class instruction.

MVJ 5254 Applied Jazz Bass Secondary (2) VP MUS  
PR: Necessary competency determined by faculty jury audition. Required of all applied music majors. Required registration in major performance ensemble. Private and class instruction.

MVJ 5951 Applied Jazz Performance (2) VP MUS  
PR: Necessary competency determined by faculty jury audition. Required of all applied music majors. Required registration in major performance ensemble. Private and class instruction.

MVJ 5259 Applied Jazz Percussion Secondary (2) VP MUS  
PR: Necessary competency determined by faculty jury audition. Required of all applied music majors. Required registration in major performance ensemble. Private and class instruction.

MVJ 1311 Piano Principal (2) VP MUS  
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVJ 1411 Piano Major (3) VP MUS  
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVJ 1511 Beginning Piano I (2) VP MUS  
Class is elementary piano and music fundamentals designed for students with limited keyboard experience. Primary emphasis is placed on sight-reading, accompanying, transposition, harmonicization, basic technique, and appropriate literature.

MVK 1111 Keyboard Skills I (2) VP MUS  
PR: DPR. Class is elementary piano and music fundamentals designed for students with limited keyboard experience. Primary emphasis is placed on sight-reading, accompanying, transposition, harmonicization, basic technique, and appropriate literature.

MVK 1111 Keyboard Skills II (2) VP MUS  
PR: DPR. Class is elementary piano and music fundamentals designed for students with limited keyboard experience. Primary emphasis is placed on sight-reading, accompanying, transposition, harmonicization, basic technique, and appropriate literature.

MVK 1211 Beginning Piano I (1) VP MUS  
PR: DPR. Course is open by audition only. One-half hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

MVK 1311 Piano Principal (2) VP MUS  
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVK 1411 Piano Major (3) VP MUS  
PR: DPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVK 1511 Beginning Piano I (2) VP MUS  
PR: DPR. Class is elementary piano and music fundamentals designed for students with limited keyboard experience. Primary emphasis is placed on sight-reading, accompanying,
transposition, harmonization, basic technique, and appropriate literature.

MVK 2111 Keyboard Skills III (2) VP MUS
PR: MVK 1121 or DPR. Class is elementary piano and music fundamentals designed for students with limited keyboard experience. Primary emphasis is placed on sight-reading, accompanying, transposition, harmonization, basic technique, and appropriate literature.

MVK 2121 Keyboard Skills IV (2) VP MUS
PR: MVK 2111 or DPR. Class is elementary piano and music fundamentals designed for students with limited keyboard experience. Primary emphasis is placed on sight-reading, accompanying, transposition, harmonization, basic technique, and appropriate literature.

MVK 2321 Piano Principal (2) VP MUS
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVK 2421 Piano Major (3) VP MUS
PR: DPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVK 3111 Music Majors, Level V (2) VP MUS
PR: DPR. Class is elementary piano and music fundamentals designed for students with limited keyboard experience. Primary emphasis is placed on sight-reading, accompanying, transposition, harmonization, basic technique, and appropriate literature.

MVK 3331 Piano Principal (2) VP MUS
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVK 3431 Piano Principal (2) VP MUS
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 1211 Applied Violin (1) VP MUS
PR: DPR. Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

MVS 1212 Applied Viola (1) VP MUS
PR: DPR. Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

MVS 1213 Applied Violoncello (1) VP MUS
PR: DPR. Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

MVS 1214 Applied Double Bass (1) VP MUS
PR: DPR. Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

MVP 2421 Percussion Major (3) VP MUS
PR: DPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVP 3331 Percussion Principal (2) VP MUS
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVP 4341 Percussion Principal (2) VP MUS
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVP 4441 Percussion Major (3) VP MUS
PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVP 5251 Applied Percussion, Secondary (2) VP MUS
PR: DPR. Necessary competency determined by faculty jury audition. Required registration in major performance ensemble. Required of all applied music majors. Private and class instruction.

MVP 5331 Percussion Principal (2) VP MUS
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVP 5441 Percussion Major (3) VP MUS
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVP 6441 Percussion Major (3) VP MUS
PR: DPR. Necessary competency determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVP 1121 Applied Percussion (1) VP MUS
PR: DPR. Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

MVP 1311 Percussion Principal (2) VP MUS
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVP 1411 Percussion Major (3) VP MUS
PR: DPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVP 2321 Percussion Principal (2) VP MUS
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
MVS 1413 Cello Major (3) VP MUS
PR: DPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 1414 Double Bass Major (3) VP MUS
PR: DPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 2321 Violin Principal (2) VP MUS
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 2322 Viola Principal (2) VP MUS
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 2423 Cello Major (3) VP MUS
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 2422 Viola Major (3) VP MUS
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 3334 Double Bass Principal (2) VP MUS
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 3332 Viola Principal (2) VP MUS
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 3331 Violin Principal (2) VP MUS
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 3432 Viola Major (3) VP MUS
PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVS 3433 Cello Major (3) VP MUS
PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVS 3434 Double Bass Major (3) VP MUS
PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVS 3431 Violin Principal (2) VP MUS
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
MVV 3331 Voice Principal (2) VP MUS
PR: DPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

MVV 1211 Applied Flute (1) VP MUS
PR: DPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

MVW 1212 Applied Oboe (1) VP MUS
PR: DPR. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

MVW 1213 Applied Clarinet (1) VP MUS
PR: DPR. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

MVW 1214 Applied Bassoon (1) VP MUS
PR: DPR. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

MVW 1411 Flute Major (3) VP MUS
PR: DPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVW 1412 Oboe Major (3) VP MUS
PR: DPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVW 1413 Clarinet Major (3) VP MUS
PR: DPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVW 1414 Bassoon Major (3) VP MUS
PR: DPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVW 1415 Saxophone Major (3) VP MUS
PR: DPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVW 1312 Oboe Principal (2) VP MUS
PR: DPR. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVW 1313 Clarinet Principal (2) VP MUS
PR: DPR. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVW 1314 Bassoon Principal (2) VP MUS
PR: DPR. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVW 1315 Saxophone Principal (2) VP MUS
PR: DPR. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVW 1331 Flute Principal (2) VP MUS
PR: DPR. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
MVW 3334 Bassoon Principal (2) VP MUS
PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVW 3344 Bassoon Major (3) VP MUS
PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVW 3434 Bassoon Principal (2) VP MUS
PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVW 3433 Clarinet Major (3) VP MUS
PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVW 3435 Saxophone Major (3) VP MUS
PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVW 3335 Saxophone Principal (2) VP MUS
PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVW 5255 Applied Saxophone (2) VP MUS
PR: DPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

MVW 5254 Applied Bassoon (2) VP MUS
PR: DPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

MVW 5253 Applied Clarinet (2) VP MUS
PR: DPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

MVW 5252 Applied Oboe (2) VP MUS
PR: DPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

MVW 3444 Bassoon Major (3) VP MUS
PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVW 3443 Clarinet Major (3) VP MUS
PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVW 3445 Saxophone Major (3) VP MUS
PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVW 3433 Clarinet Principal (2) VP MUS
PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVW 4341 Flute Principal (2) VP MUS
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVW 4342 Oboe Principal (2) VP MUS
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVW 4345 Saxophone Principal (2) VP MUS
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVW 4344 Bassoon Principal (2) VP MUS
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVW 4441 Flute Major (3) VP MUS
PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVW 4442 Oboe Major (3) VP MUS
PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVW 4443 Clarinet Major (3) VP MUS
PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVW 4444 Bassoon Major (3) VP MUS
PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVW 4445 Saxophone Major (3) VP MUS
PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVW 5251 Applied Flute (2) VP MUS
PR: DPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

MVW 5252 Applied Oboe (2) VP MUS
PR: DPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

MVW 5253 Applied Clarinet (2) VP MUS
PR: DPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

MVW 5254 Applied Bassoon (2) VP MUS
PR: DPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

MVW 5255 Applied Saxophone (2) VP MUS
PR: DPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

NGR 5752L Accelerated Fundamentals Clinical (2) NU NUR
Clinical intervention for patients with selected physical and mental health problems. Emphasis is on advancing communication and clinical judgment skills in therapeutic nursing interventions for patients across the life span. PR: DPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

NGR 5754L Accelerated Fundamentals Clinical II (4) NU NUR
Clinical experiences with people across the life-span in hospital and community sites, and focus on critical thinking, effective communication, interpersonal skills, behavior factors, and group dynamics. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

PR: DPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

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NUR 3215 Naval Ships Systems II (3) NU NVY
PR: NUR 2121. Capabilities and limitations of fire control systems and weapons, radar and underwater sound for target acquisition, threat analysis, tracking, weapons selection, delivery, and guidance. Various aspects of explosives, fusing and Naval Ordnance.

NUR 3214C Navigation/Naval Operations II: Seamsanship and Ship Operations (3) US NVY
PR: NUR 2212C. International and inland rules of the road: relative motion, vector analysis; ship handling, employment, and tactics, aloft communications; and operations analysis. Laboratory required.

NUR 4224 Amphibious Warfare (3) US NVY
History of amphibious warfare emphasizing doctrine and techniques as well as an understanding of the interrelations of political, strategic, operational, tactical, and technical levels of warfare from the past.

NUR 4232 Principles of Naval Management II (Leadership and Ethics) (3) US NVY
PR: NSC 2231. Integration of professional competencies and qualities of effective leadership with emphasis on moral and ethical responsibilities, accountability, communications, and military law for the junior officer.

NUR 3026 Fundamentals of Nursing Practice and Foundations for Clinical Judgment (4) NU NUR
PR: Admission to the nursing major or CI. CR: NUR 3026L. Fundamentals and foundations of nursing practice. Focus is on developing critical thinking and communication skills when applying concepts of health to meet the basic needs of the individual across the life span from within the context of the family.

NUR 3026L Nursing Fundamentals Clinical (4) NU NUR
PR: Admission to the nursing major or CI, CR: NUR 3026L. Fundamentals of clinical nursing practice. Focus is on developing effective communication & critical thinking in applying nursing process to meet the basic needs of the individual across the life span from within the context of the family.

NUR 3066L Clinical Experience in Health Assessment - RN (1) NU NUR
PR: Admission to nursing major or CI. CR: NUR 3066L. Clinical experience on history taking, physical assessment skills basic to biopsychosocial assessment and physical examination of adults and children. Emphasizes diagnostic reasoning and identification of alteration in functional health patterns.

NUR 3066 Physical Examination and Assessment (2) NU NUR
PR: Admission to nursing major or CI. Focuses on the techniques of physical assessment and examination of infants, children and adults. Emphasizes assessment phase of nursing process using critical thinking to enable the student to perform evaluations of health status and function of the individual across the lifespan.

NUR 3076 Fundamentals of Communication and Psycho-social Nursing (2) NU NUR
PR: Admission to the nursing major or CI. Focus on developing nurse relationships with individuals across the lifespan within the context of the family.

NUR 3125 Pathophysiology for Nursing Practice (4) NU NUR
PR: Admission to the nursing major or CI. Central concepts of pathophysiology: cells, tissues, organs and systems. Provides essential knowledge base in pathophysiology across the lifespan for professional nursing practice.

NUR 3145 Pharmacology in Nursing Practice (3) NU NUR
PR: Admission to the nursing major or CI. Focus on the basic and clinical concepts of pharmacology in nursing practice. Examines: pharmacotherapeutics; pharmacodynamics; pharmacokinetics; adverse reactions and contraindications; therapeutic indications and nursing implications.

NUR 3215L Medical Surgical Nursing Clinical I (4) NU NUR

NUR 3215 Medical Surgical Nursing I (3) NU NUR
PR: NUR 3026, 3026L, NUR 3066, NUR 3076, NUR 3125, NUR 3215L. Focuses on the nursing assessment, prevention, and management of selected health care problems in adults of all ages. Critical thinking is used to analyze the effects of changes in health status and impact of nursing intervention for: patients with alteration in Fluid and Electrolyte Balance, Hemolologic System, Cardiovascular System, Pulmonary System, Renal System, Endocrine, Cancer, Multisystem Dysfunction.

NUR 3284C Gerontological Nursing (2) NU NUR
PR: NUR 3113, NUR 3026, NUR 3026L, NUR 3066. Nursing Majors. Focuses on theories of aging and historical development, assessment of functional health patterns and planning health promotion and disease prevention activities with older adults. Critical thinking is used to analyze the effects of interventions on individuals and groups.

NUR 4252 Psychiatric/Mental Health Nursing (3) NU NUR
PR: NUR 3076, NUR 3066, NUR 3125, NUR 3026 and NUR 3026L. CR: NUR 3525L. Explores mind, body, and spirit alterations in functional health patterns experienced by patients with acute and chronic mental illness. Examines psychopathology, psychopharmacologic therapies and community resources and the role of the nurse in psychiatry.

NUR 3525L Psychiatric/Mental Health Nursing Clinical (3) NU NUR
PR: NUR 3076, NUR 3066, NUR 3125, NUR 3026 and NUR 3026L. CR: NUR 3525. Focus on clinical intervention using critical thinking and communication skills with patients who require complex psychopathologic care. Opportunities are offered to apply knowledge of psychopathology and psychopharmacologic therapies across the lifespan.

NUR 3605 Education Transitions for Registered Nurses (3) NU NUR
PR: Admission to the nursing major. Transition to professional nursing for the registered nurse, its theoretical perspective and empirical bases and essential skills for success in nursing education. Focus on developing a variety of learning strategies and approaches to academic achievement.

NUR 3826 Ethical Legal Aspects in Nursing and Health Care MW (3) NU NUR
PR: CI. Nursing Majors. Introduction to contemporary bioethical and legal issues confronting health care providers in a variety of settings. Focuses on identification of legal and ethical principles underlying the decision-making process in nursing and health care.

NUR 4028L Accelerated Fundamentals Laboratory (1) NU NUR
Experiences in the fundamental skills of clinical nursing practice. The focus is on applying the nursing process and developing nursing psychomotor skills.

NUR 4097 Introduction to Nursing Humanities MW (3) NU NUR
Overview of the humanities in nursing including an exploration of fictional and biographical literature, visual art, film, and multidisciplinary professional literature focusing on human experience and response to health, illness, death, and dying.

NUR 4098 Perioperative Nursing (3) NU NUR
PR: Admission to the nursing major or Registered Nurse. Provide nursing students or Registered Nurses with basic knowledge and clinical skills to function in an entry level. Extensive classroom and clinical experience in aseptic technique and considerations for various types of surgical procedures are included.

NUR 4165 Nursing Inquiry (3) NU NUR
PR: Admission to the nursing major or CI. An introductory course in statistics is recommended. An analysis of the research process. Emphasis on identification of researchable nursing problems and evaluations of research that is applicable to nursing practice. Focus on evidence-based practice for nursing.

NUR 4178 Complimentary and Alternative Therapies MW (3) NU NUR
Explore and analyze Complementary and Alternative Therapies and their effectiveness and appropriateness. Discuss Alternative Medical Systems, Mind-Body Interventions, Biologically Based Therapies, Manipulative and Body-Based Methods, and Energy Therapies.

NUR 4194 An Interdisciplinary Perspective in HIV Disease 6A MW LW (3) NU NUR
Provides an interdisciplinary perspective on HIV disease. Topics include the etiology, spectrum, and treatment of HIV disease; international perspectives; issues of race, gender, and ethnicity; values, ethics, and their influences on responses to HIV; and how health care systems should be restructured.

NUR 4195 Issues in Advanced Illness, Dying and Death MW (3) NU NUR
PR: Admission to nursing major or CI. Focuses on the nursing process and evaluation of conceptual frameworks related to patients and their families, health care providers, and society at the end of life. Analysis of historical, cultural, psychological, spiritual, social, political, ethical, legal and economic barriers to factors for improving end-of-life care.

NUR 4216L Medical Surgical Nursing Clinical II (5) NU NUR
Emphasizes clinical judgment in implementing therapeutic nursing interventions for patients with complex health problems related to alterations in multiple functional health patterns.

NUR 4216 Medical Surgical Nursing II (4) NU NUR
PR: NUR 3215, NUR 3215L, NUR 3145, CR: NUR 4216L. Focus on the nursing assessment, prevention, and management of multiple health care problems. Critical thinking is used to analyze the effects of changes in health status and the impact of nursing intervention for patients with alterations in Visual and Auditory systems, Musculoskeletal systems, Gastrointestinal systems, and Reproductive systems.

NUR 4235L Accelerated Integrated Clinical I (5) NU NUR
Focus on critical thinking, effective communication and nursing interventions for individuals of all ages in the in-patient and community settings.

NUR 4257 Critical Care (2) NU NUR
PR: Nursing Majors or CI. Basic concepts of critical care nursing, focusing on selected health problems to analyze the affects of changes in health status.

NUR 4330 Classroom Management of Children with Acute and Chronic Conditions MW (3) NU NUR
Addresses common childhood health conditions educators may see in classroom. Policy issues related to child health, management of acute and emergency situations, and the impact of childhood chronic conditions on the child’s educational performance.

NUR 4355 Child and Adolescent Health Nursing (3) NU NUR

NUR 4387 Strategies to Reduce Child and Adolescent Health Disparities MW (3) NU NUR
Service learning course that addresses child and adolescent health disparities. Plan, implement, and evaluate theory and evidence-based health promotion programs to reduce racial/ethnic, age, or gender health disparities in children and adolescents.

NUR 4455 Women’s Health Nursing (2) NU NUR
PR: NUR 4216, NUR 4216L. CR: NUR 4635L, NUR 4636, NUR 4455. Focus on health promotion, identification of risk factors, illness care, and health restoration related to the physiological and psychological changes occurring during a woman’s life cycle including pregnancy.

NUR 4635L Integrated Nursing Clinical: Community/Public Health, Children and Adolescent Health, and Women’s Health (7) NU NUR
PR: NUR 4216, NUR 4216L. CR: NUR 4455, NUR 4636, NUR 4455. Provides clinical learning experiences in diverse community and hospital settings. Focuses on nursing care designed to prevent and/or reduce risk of disease and injury, promote health and wellness, treat illness and injury in children, adolescents, adults and families, and diverse community populations across the age spectrum.

NUR 4636L Community/Public Health Nursing Clinical for the RN (3) NU NUR
CR: NUR 4636 or CI. Provides clinical learning experiences in community-based sites in both urban and rural settings. Focus on nursing care designed to prevent and/or reduce risk of disease and injury, and promote health and wellness to diverse populations across the age spectrum.

NUR 4636 Community/Public Health: Population-Focused Nursing MW (3) NU NUR
PR: NUR 4216, NUR 4216L or CI. In-depth examination of community health nursing, public health, epidemiology, culture, and environment essential to preventing illness and injury and promoting and preserving health among diverse populations at risk.

NUR 4643 Nursing Interventions into the Acute Effects of Drug and Alcohol Abuse (2) NU NUR
Focuses on the assessment and treatment of individuals and families who are in the acute phases of addiction. Emphasis will be placed on treatment outcomes for designated populations with consideration for criminal socioeconomic, political/legal factors.

NUR 4644 Nursing Interventions into the Rehabilitation of Clients Who Abuse Substance (2) NU NUR
Focuses on models of treatment and interventions for clients and families who are in the rehabilitation and relapse prevention phases of treatment for addiction. Emphasis will be placed on rehabilitation outcomes for designated populations with consideration for criminal socioeconomic, political/legal factors.

NUR 4645 Substance Abuse Across the Lifespan 6A MW LW (3) NU NUR
Introduction to concepts of substance abuse and theories of addiction. The application of theories and concepts to clinical assessment, diagnosis and intervention with client populations across the lifespan is explored.

NUR 4655 Cultural Diversity in Health and Issues MW (3) NU NUR
Explore the impact of culture on health, illness and the meanings these terms carry for members of differing sociocultural populations. Health-related practices, values, strategies for health care and beliefs among cultural groups will be analyzed.

NUR 4677L Accelerated Integrated Clinical II (5) NU NUR
Focus on nursing interventions for the patient with physical and mental health problems. Therapeutic communication and clinical judgment to implement nursing interventions with the patient and families.

NUR 4696 Occupational Health Nursing (2) NU NUR
Focuses on the historical, legal, cultural, scientific, and professional foundations of occupational and environmental health nursing; the occupational health nurse role in the delivery of health services to workers and worker aggregates/bizness, social, economic, and legal forces influencing that role; standards and characteristics of practice; and settings for occupational health nursing practice.

NUR 4755C Rehabilitation Across the Life Span (2) NU NUR
PR: Nursing Majors or CI. Basic concepts of rehabilitation related to human responses. Analysis of the changes in health status and functional performance.

NUR 4838 Leadership and Management in Professional Nursing Practice (3) NU NUR
PR: NUR 4455, NUR 4435, NUR 4466, NUR 4636L or CI. Principles of nursing leadership and management with an emphasis on decision-making, priority setting, delegating, and managing nursing care. Focus on preparation of the professional nurse to work collaboratively in the interdisciplinary health care environment. Clinical experience for registered nurse students will be designed to build upon a practice background.

NUR 4895 Educational Role of the Nurse in Healthcare (3) NU NUR
This course provides the learner with an opportunity to gain knowledge and skills to facilitate the teaching role of the nurse.

NUR 4905C Independent Study (1-5) NU NUR
PR: Permission of faculty. Open to majors and non-majors. Individual or group investigation of problems relevant to the health of individuals or groups. Project requirements individually planned with faculty preceptor.

NUR 4930 Registered Nurse First Assistant Course (3) NU NUR
PR: CI. This course will provide a foundation of knowledge and technical skills necessary for the experienced perioperative registered nurse to function in the role of registered nurse first assistant (RNFA).

NUR 4935 Selected Topics In Nursing (1-8) NU NUR
PR: Junior or senior standing or permission of faculty. Content will depend upon student demand and faculty interest and may focus on any area relevant to nursing practice. May involve class, seminar, and/or clinical laboratory.

NUR 4940 Internship for the Registered Nurse First Assistant (4) NU NUR
PR: CI. This course provides 120 hours of clinical experiences in the roles and responsibilities and technical skills required of the registered nurse first assistant (RNFA).

NUR 4948L Preceptorship (6) NU NUR
PR: NUR 4216, NUR 4216L, NUR 4355, NUR 4455, NUR 4636, NUR 4635L. Individualized contracted 150 hours of clinical practicum collaboratively planned by students, faculty, and agency personnel. Opportunity to synthesize theory and clinical practice for professional nursing.

OCE 2001 Introduction to Oceanography NS (3) MS MSC
Overview of biological, chemical, geological, and physical oceanography. Also listed under Geology.

OCE 4930 Selected Topics in Marine Science (1-4) MS MSC
Selected topics in marine science; including marine biology, marine chemistry, marine geology and geophysics, physical oceanography, and interdisciplinary topics relating to marine environments.

ORI 2000 Introduction to Communication As Performance (3) AS SPE
Designed to develop proficiency in the understanding and oral communication of literary and other written materials.
PAD 3950 Communication As Performance Laboratory (1-3) AS SPE
PR: SPC 2600 AND COM 2000 AND ORI 2000, each with a grade of C or above, or CI. The study, rehearsal, and performance of literature for Readers Theatre and Chamber Theatre productions.

PAD 4110 Performance of Poetry (3) AS SPE
PR: SPC 2600 AND COM 2000 AND ORI 2000, each with a grade of C or above, or CI. Critical appreciation of lyric and narrative poetry and communication of that appreciation to audience. Study of poetic theory and prosodic techniques.

PAD 4310 Group Performance of Literature (3) AS SPE
PR: SPC 2600 AND COM 2000 AND ORI 2000, each with a grade of C or above, or CI. Designed to introduce the student to and give experience of group approaches to performance.

PAD 4931 Performance and Video (3) AS SPE
PR: ORI 2000. CR: ORI 3950. This course features adaptation, direction, and performance of literature for video productions.

ORI 5390 Topics in Performance Genres (3) AS SPE
Variable topics course.

PAD 3003 Introduction to Public Administration SS (3) AS PAD
Examination of organizational behavior and change, policy process, public management, financial administration, and personnel management from the perspective of public and social delivery.

PAD 4444 Nonprofit Organizations and Public Policy 6A MW (3) AS PAD
Role and importance of third sector (voluntary) organizations in American society; focus on public policy through service in a voluntary organization.

PAD 4204 Public Policy Administration (3) AS PAD
Analysis of problems in the growth and development of public budgetary theory and Federal budgetary innovations.

PAD 4419 Personnel & Supervision in Today’s Organizations (3) AS PAD
Introduces students to concepts, principles and practices of personnel management and supervision that influence the attainment of desired performance goals in today’s public and not-for-profit organizations. Course participants will explore issues that influence the successful management of human resources in dynamic employment settings.

PAD 4191 Managing Information Resources in the Public Sector (3) AS PAD
Introduces students to the fundamental concepts, theories, principles and practices in public information management. Internet access is required.

PAD 4930 Selected Topics in Public Administration and Public Policy (3) AS PAD
Selected issues and topics in Public Administration and Public Policy with course content based on student demand and instructor’s interest. May be repeated for up to 6 credits as topics vary.

PAD 5055 Issues in Public Administration and Public Policy (3) AS PAD
Sr. & GS only. Selected issues and topics in Public Administration and Public Policy.

PAD 5044 Environment of Public Administration (3) AS PAD
Examination of the legal, political, and ethical environment in which public managers work.

PAD 5333 Concepts and Issues in Public Planning (3) AS PAD
PR: URP 4050 or URP 6056, GS or Sr. Analysis of basic concepts, issues, and strategies of planning, policy determination, collection of information, and decision-making.

PAD 5605 Administrative Law and Regulation (3) AS PAD
An examination of the constitutional and statutory base and limitations of the administrative process, administrative adjudication, rule-making, and the judicial review of such actions. An examination of the Constitutional and statutory base and limitations of the administrative process, administrative adjudication, rule-making, and the judicial review of such actions. Attention is also directed to regulatory commissions, their functions, powers, management and relationship with other branches of government.

PAD 5700 Research Methods in Public Administration (3) AS PAD
PR: MPA, GCPC, and GCNM majors only. Research design; skills in public agencies. Must be prepared to demonstrate proficiency in EXCEL, Access, and other relevant software packages.

PAD 5807 Urban and Local Government Administration (3) AS PAD
GS or Sr. Analysis of the role of the administrator at the municipal level, the division of functions, policy formation, alternative governmental structures, effects of the administrative process.

PAD 5836 Comparative Public Administration (3) AS PAD
GS or Sr. How organizations and managers perform within a particular environment, potential impact of innovation, and how service is accomplished in a variety of socio-economic environments.

PCB 1511 Molecular and Human Genetics (3) US DEA
PR: Acceptance in USF-Hillsborough County Biomedical and Life Science Program. Molecular genetics with applications to biomedical science; genetic engineering; chromosomes, their molecular architecture, abnormalities, and other topics. Laboratory included.

PCB 1910 Topics in Biomedical Science (3) US DEA
PR: Acceptance in USF-Hillsborough County Biomedical and Life Science Program designed to initiate high school students to the fundamentals of scientific research. Students are given lectures and perform laboratory exercises in pathogenic microbiology, immunology, marine biology, and plant biochemistry. Most of their time is spent working on individual research projects.

PCB 3023 Cell Biology (3) AS BIO
PR: BSC 2010, BSC 2010L, BSC 2011, BSC 2011L & CHM 2045, CHM 2046 & MAC 1105 or higher-level MAC course or STA 2023. CP: CHM 2210. A survey of the marine environment, the types of organisms found inhabiting a variety of marine habitats, and the adaptations of the organisms to those habitats. Emphasis is placed on shallow water Florida environment. Lecture only.

PCB 3023L Cell Biology Laboratory (1) AS BIO
CP: PCB 3023. Laboratory portion of Cell Biology. Metabolic processes within the cell.

PCB 3043 Principles of Ecology (3) AS BIO
BSC 2010, BSC 2010L, BSC 2011, BSC 2011L & CHM 2045, CHM 2046 & MAC 1105 or higher-level MAC course or STA 2023. An introduction to the basic principles and concepts of ecology at the ecosystem, community, and population level of organization. Lecture only.

PCB 3043L Principles of Ecology Laboratory (1) AS BIO

PCB 3063 General Genetics (3) AS BIO
BSC 2010, BSC 2010L, BSC 2011 & CHM 2045, CHM 2046 & MAC 1105 or higher-level MAC course or STA 2023. Comparative analysis of animal structure and function: organ systems and activities of body tissue and organs. Functional responses of plants to both internal and environmental signals lecture only.

PCB 3063L General Genetics Laboratory (1) AS BIO
CP: PCB 3063. Laboratory investigation techniques in general genetics including Mendelian and non-Mendelian relationships, and gene interactions.

PCB 3712 General Physiology (3) AS BIO
PR: BSC 2010, BSC 2010L, BSC 2011, BSC 2011L & CHM 2045, CHM 2046 & MAC 1105 or higher-level MAC course or STA 2023. Comparative analysis of animal structure and function: organ systems and activities of body tissue and organs. Functional responses of plants to both internal and environmental signals lecture only.

PCB 3712L General Physiology Laboratory (1) AS BIO
CP: PCB 3712. Laboratory portion of General Physiology.

PCB 4235 Principles of Immunology (3) AS BIO
PR: PCB 3023 or PCB 3063 or MCB 3020C and CHM 2210 and MAC 1105 or higher-level MAC course or STA 2023. CP: CHM 3023 or PCB 3043 or PCB 3063 or PCB 3712 and CHM 2211. Emphasis is on organization and functions of vertebrate immune system. Basic cellular and molecular mechanisms of immune responses in health and disease are addressed as well as the principles and applications of immunological methods. Lecture only.

PCB 4522C Experimental Genetics (3) AS BIO
Experimental analysis of genetic systems. Lec-Lab.

PCB 4674 Organic Evolution (3) AS BIO
PR: PCB 3043. An introduction to modern evolutionary theory. Lecture on population genetics, adaptations, speciation theory, phylogeny, human evolution and related areas. Lec.-dis.

PCB 4723 Animal Physiology Laboratory (1) AS BIO
CP: PCB 3712 & CHM 2210 & MAC 1105 or higher-level MAC course or STA 2023 & PHY 2053. CP: CHM 2211. Advanced presentation of mechanisms employed by animals to interact with their environment and maintain their organismal homeostasis. Lecture only.

PCB 4723L Animal Physiology Laboratory (1) AS BIO
CR: PCB 4723. Laboratory portion of Animal Physiology.

PCB 4843 Principles of Neuroscience (3) AS BIO
PR: PCB 4723 and CHM 2210 and MAC 1105 or higher-level MAC course or STA 2023 and PHY 2053. CP: CHM 2211. Study
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of the mammalian brain's structure and function, with an emphasis on human anatomy, neuropathology, and neurophysiology. Topics include brain imaging, dementia, mechanisms of learning/memory, and neuropsychological processes. Lecture only.

PET 3256 Developmental Biology (3) AS BIO
PR: PCB 3023, PCB 3063 and CHM 2210 and MAC 1105 or higher-level MAC course or STA 2023 and CI. CP: CHM 2211. Topics in modern developmental biology to be covered in lecture and through readings so as to gain a working knowledge and understanding of the cellular and molecular mechanisms of cell differentiation in both plants and animals. Lecture only.

PET 5307 Limnology (3) AS BIO
PR: PCB 3043 and CHM 2210 and MAC 1105 or higher-level MAC course or STA 2023 and PHY 2053. CP: CHM 2211. An introduction to the physical, chemical, and biological nature of fresh-water environments. Lecture only.

PET 5307 Limnology Laboratory (1) AS BIO
PR: CI. CP: PCB 3057. Laboratory portion of Limnology. Laboratory and field experience in the area of aquatic ecology.

PET 5415 Behavioral Ecology (3) AS BIO
PR: PCB 3043 and PCB 3063 or PCB 4674 and CHM 2210 and MAC 1105 or higher-level MAC course or STA 2023. CP: CHM 2211. An emphasis on the evolutionary mechanisms that influence an organism's behavioral responses to environmental events. The theoretical framework is presented and analyzed. Lecture only.

PET 5525 Molecular Genetics (3) AS BIO
PR: PCB 3063, CI. Detailed examination of DNA, RNA and protein synthesis; the effects of mutations on proteins, cellular control; selected aspects of viral, bacterial, and fungal genetics.

PET 1121 Golf I (2) ED EDP
S/U only. Introductory experience in the sport of golf. Fundamental skills, information, strategy, and participation.

PET 1341 Tennis I (2) ED EDP
S/U only. Introductory experiences in the sport of tennis. Basic skills, playing strategies, lecture, demonstration, and participation.

PET 2122 Golf II (2) ED EDP
S/U only. Continuation of PET 1121. Emphasis on course play and refinement of strokes.

PET 2342 Tennis II (2) ED EDP
S/U only. Continuation of PET 1341. Refinement of basic skills, supplementary strokes, greater emphasis on tactics and playing strategies.

PET 2441 Racquetball (2) ED EDP
S/U only. Development and refinement of the skills and strategies of racquetball with opportunity for competition and tournament play.

PET 2341 Weight Training (2) ED EDP
S/U only. Knowledge and techniques necessary for increasing muscle function. Assessment of status and development of a personal program.

PET 2441 Karate (2) ED EDP
S/U only. Introductory experiences in the sport of Karate. Fundamental skills, strategy, information, and participation.

PET 2930 Selected Topics (1-2) ED EDP
S/U only. DPR. Activities offered are selected to reflect student need and faculty interest.

PET 1121 Swimming I (2) ED EDP
S/U only. Development and refinement of the essential skills and information necessary for enjoying swimming. Emphasis on personal safety.

PET 2113 Lifeguard Training (2) ED EDP
PR: PEN 2122 or equivalent. S/U only. Knowledge and skills necessary for saving the lives of others in the event of aquatic emergency. ARC certification offered.

PET 2136 Skin & Scuba Diving (2) ED EDP
PR: PEN 2172 or equivalent. S/U only. Development of the essential skills and knowledge necessary for enjoying the sport of Skin & Scuba Diving. Correct utilization and care of equipment; emphasis on personal safety.

PET 2622C Care and Prevention of Physical Injuries (3) ED EDP
DPR. Prerequisites and techniques of conditioning athletes for competition; prevention and care of injuries in physical education and athletic activities.

PET 3012 Professional Development in Physical Education I (1) ED EDP
PR: CC. This is the first of a two course sequence of orientation and socialization into the profession and is intended to develop dispositions necessary for successful professional practice.
PET 3441 Instructional Design and Content: Middle School Physical Education (3) ED EDP
Physical Education majors only. The development of physical education content and instructional processes for middle school students. The focus is upon matching appropriate content and learning experiences to the unique needs of the pre- and early adolescent learner.

PET 3617C Orthopaedic Physical Assessment I (Upper Extremity) (3) ED EDP
Athletic Training majors only. The study and practice of techniques used when assessing athletic injuries to the upper extremity, head and spine.

PET 3618C Orthopaedic Physical Assessment II (Lower Extremity) (3) ED EDP
Athletic Training majors only. The study and practice of techniques used when assessing athletic injuries to the lower extremity, hip, pelvis and spine.

PET 3621C Athletic Training Techniques (3) ED EDP
Athletic Training majors only. Overview course including basic components of the athletic training profession including the prevention, recognition and evaluation and immediate care of athletic injuries. Medical terminology, emergency procedures, and taping procedures will be covered.

PET 3630C Techniques in Therapeutic Exercise (3) ED EDP
Athletic Training majors only. Theory and practical applications of therapeutic exercise and movement science. Includes techniques in Feldenkrais movement patterns, aquatic exercise, lifting protocols, plyometric training, isokinetic testing, stability ball training, and a variety of common exercise equipment.

PET 3640 Athletic Training: Physical Education (3) ED EDP
Physical Education majors only. A study of characteristics, programming needs and teaching of physical education for students with disabilities.

PET 3660 Athletic Training Administration and Policy (3) ED EDP
Athletic Training majors only. Analysis and application of organizational skills and administrative structure of the athletic training profession, including current trends about budget management, legal aspects of sports medicine, athletic physical examinations, medical ethics, curriculum concepts, and administrative policy.

PET 3670L Clinical Instruction in Athletic Training I (3) ED EDP
Athletic Training majors only. Observation and performance of basic athletic training skills under the direct supervision of an NATA-BOC certified/licensed athletic trainer. This course provides students with the opportunity to develop competence in a variety of introductory athletic training skills. Clinical experiences are obtained in the university’s sports medicine facilities and will be accompanied by a one-hour seminar each week.

PET 3671L Clinical Instruction in Athletic Training II (3) ED EDP
PR: PET 3670L. Athletic Training majors only. Continuation of clinical experience utilizing new skills under the direction of an NATA-BOC certified/licensed athletic trainer. This course provides students with the opportunity to develop competence in a variety of introductory and mid-level athletic training skills. Clinical experiences are obtained in the university’s sports medicine facilities and/or approved affiliates and will be accompanied by a one-hour seminar each week.

PET 3713 Theory and Practice of Teaching Group Exercise (3) ED EDP
PR: Admission to the Exercise Science Program. A study of how to develop effective programs for group exercise leadership skills, students will learn how to apply concepts, and administrative policy.

PET 3931 Selected Topics (1-3) ED EDP
DPR. Topics offered are selected to reflect student need and faculty interest.

PET 4040 Practicum in Fitness/Wellness (3) ED EDP
PR: Admission to the Exercise Science Program. This course will provide the initial field experience in a community fitness/wellness center serving general populations. Students will gain practical experience regarding teaching group exercise and conducting fitness testing and prescription.

PET 4093 Strength and Conditioning (3) ED EDP
PR: Admission to the Exercise Science Program. This course will provide students with the information necessary for designing and implementing a successful strength and conditioning program through assessment and analysis of fitness and sport movement.

PET 4114 Trends and Tasks - Elementary Physical Education (3) ED EDP
PR: Admission to the Exercise Science Program Internship: Elementary. Physical Education Majors only. Current trends are evaluated from a historical and philosophical perspective. Non-teaching tasks are identified as part of the professional role. Evaluate and continue personal-professional development plan developed in previous semesters.

PET 4142 Trends and Tasks - Secondary Physical Education (1) ED EDP
PR: Admission to the Exercise Science Program Internship: Secondary. Physical Education Majors only. Current trends are evaluated from a historical and philosophical perspective. Non-teaching tasks are identified as part of the professional role. Evaluate and continue personal-professional development plan developed in previous semesters.

PET 4219 Exercise Psychology (3) ED EDP
PR: PET 3351. A study of Exercise Physiology focusing on the adult. Includes specific populations such as the obese, heart patients, arthritics, elderly, and high performance athletes. Open to non-majors.

PET 4384 Health-Fitness Appraisal & Exercise Prescription (3) ED EDP
PR: PET 3351. Techniques in conducting health-fitness test and exercise prescription for adults. Includes cardiovascular strength, flexibility, body composition, health risk testing, exercise prescribing, and monitoring. Open to non-majors.

PET 4401 Class Management, Safety, Ethics, Law, and Organization and Administration of Physical Education (3) ED EDP
Physical Education majors only. This course will examine the various classroom management approaches, professional ethics, school law, safety, and the organization and administration of physical education programs.

PET 4402 Planning and Evaluating Fitness/Wellness Programs (3) ED EDP
PR: Admission to the Exercise Science Program. This course will focus on the design of high quality fitness/wellness programs in worksite and other settings. Students will learn and apply the major components of program planning – needs assessment, development, implementation, and evaluation.

PET 4406 Individualized Fitness/Wellness Programming (3) ED EDP
PR: Admission to the Exercise Science Program. In this course students will learn how to assess, evaluate, and design safe and effective programs for individual clients. Students will also learn how to incorporate appropriate activities for specialized clients or populations.

PET 4416 Administration of Fitness/Wellness Centers (3) ED EDP
PR: Admission to the Exercise Science Program. This course will examine management issues in the areas of human resources, budgeting, marketing, legal liability, and risk management. Students will develop skills to manage safe/effective programs and services in various fitness/wellness settings.

PET 4432 Instructional Design and Content: Physical Education Elementary (3) ED EDP
Physical Education majors only. This is the first in a two-course sequence in which students study movement forms and instructional processes suitable for elementary age students. Majors only.

PET 4433 Instructional Design and Content: Physical Education Elementary II (3) ED EDP
Physical Education majors only. This course prepares students to select, plan, conduct complex movement experiences for students K-6.

PET 4442 Instructional Design and Content: Physical Education Secondary (3) ED EDP
Physical Education majors only. Development of knowledge and skills related to the teaching of selected movement activities such as team sports, gymnastics, and physical fitness. Focus is on understanding the principles utilized within those activities as well as on instructional progression and the
PET 4950 Clinical Exercise Testing and Prescription (3) ED EDP
PR: Admission to the Exercise Science Program. A presentation of concepts related to the clinical aspects of fitness assessment and exercise prescription. Clinical conditions that will be considered include: cardiovascular disease, pulmonary disease, metabolic disease, arthritis, and geriatrics.

PET 4625 Advanced Athletic Training (3) ED EDP
PR: PET 3617C and PET 3618C. Advanced techniques in athletic training including orthopedic assessment, casting and bracing and imaging techniques.

PET 4627 General Medical Conditions in the Athlete (3) ED EDP
PR: PET 3617C and PET 3618C. Advanced theory of pathology in injury, management of tissue and bone healing environments, disease, internal illness and injury and other general medical conditions. Issues related to radiology and pharmacology are also discussed.

PET 4632C Therapeutic Modalities (3) ED EDP
Athletic Training majors only. This course provides an introduction to the theoretical and practical applications of modalities for the prevention, management and rehabilitation of physically active individuals. Concepts pertaining to the use of pharmacology, thermotherapy, cryotherapy, electrical stimulation, hydrotherapy, fluidotherapy, ultrasound, biofeedback and manual techniques will be emphasized.

PET 4633C Therapeutic Rehabilitation (3) ED EDP
Athletic Training majors only. Theories and applications methods of comprehensive therapeutic treatment and rehabilitation programs for injuries commonly sustained by the physically active.

PET 4672L Clinical Practice in Athletic Training (3) ED EDP
Athletic Training majors only. Continuation of clinical experience utilizing new skills under the direction of an NATABOC certified/state licensed athletic trainer accompanied by a one-hour seminar each week. This course provides students with the opportunity to develop competence in a variety of mid-level and advanced athletic training skills. Students may be assigned to a USF athletic team and/or one or more off-campus clinical affiliations.

PET 4673L Clinical Practice in Athletic Training II (3) ED EDP
Athletic Training majors only. Continuation of clinical experience utilizing new skills under the direction of an NATABOC certified/state licensed athletic trainer accompanied by a one-hour seminar each week. This course provides students with the opportunity to develop competence in a variety of mid-level and advanced athletic training skills. Students may be assigned to a USF athletic team and/or one or more off-campus clinical affiliations.

PET 4905 Independent Study: Professional Physical Education (1-4) ED EDP
PR: DPR: S/U only. Specialized independent study determined by the student's needs and interests.

PET 4933 Seminar in Sports Medicine 6A LW (3) ED EDP
PR: PET 3617C and PET 3618C. The advanced study, writing, and discussion of topics and issues related to the field of athletic training. Emphasis is on professional preparation, credentialing, governance, ethics, and scope of practice. Employment issues will also be studied.

PET 4935 Case Studies in Athletic Health Care (3) ED EDP
Athletic Training majors only. Capstone course intended to provide a unifying opportunity to utilize concepts, principles and skills learned from other athletic training courses.

PET 4941 Internship in Fitness/Wellness (9) ED EDP
PR: Admission to the Exercise Science Program. This course will provide the final field experience in a community fitness/wellness center serving both general and special populations. Practical experiences will focus on all aspects of program development, delivery, and management.

PET 4942 Physical Education Pre-Internship: Elementary (3) ED EDP
PR: CC. A part-time internship in elementary school physical education. Focus on the nature of the total elementary school curriculum, characteristics of students, and application of content and instruction competencies.

PET 4944 Physical Education Pre-Internship: Secondary (3) ED EDP
CC. A part-time internship in middle or high school physical education with focus on the relationship of physical education to the needs of the adolescent and the implementation of appropriate content and methodology.

PET 4946 Internship in Physical Education: Elementary (6) ED EDP
CC. A full-time internship in the elementary school in which the student undertakes the full range of teaching responsibilities in elementary physical education.

PET 4947 Internship in Physical Education: Secondary (6) ED EDP
CC. A full-time internship in middle, junior or senior high school physical education programs with focus on the implementation of appropriate content and methodology to meet the needs of secondary students.

PGY 2110C Color Photography (3) VP ART
Development of knowledge and skills of color photography for publication and presentation. Emphasis is on the use of transparency and negative color materials in their application to media.

PGY 2401C Beginning Photography (3) VP ART
Introduction to the expressive possibilities of photographic media. Projects and assignments will introduce students to both traditional and experimental ways of working with light-sensitive materials with an emphasis on the interdependence of form, technique, and concept. The course will also provide an overview of significant trends and directions in contemporary art photography.

PGY 3001 Photography in American Culture (3) AS AMS
A survey of photography as an art and a craft in America since the mid-nineteenth century. Attention devoted to technological innovations, leading personalities, major movements, and memorable icons. Open to majors and non-majors.

PGY 3410C Intermediate Photography (3) VP ART
PR: ART 2201C, ART 2203C, ART 2301C, ART 3310C, ARH 2050, ARH 2051, PGY 2401C. A mid-level course expanding the student's visual and technical skills while establishing the beginning of a personal artistic direction. Repeatable up to 9 hours.

PGY 3610C Photojournalism I (3) AS COM

PGY 3620 Photojournalism II (3) AS COM
PR: PGY 3610C. Laboratory required. Advanced process and practice of photography for publication.

PGY 3801C Digital Media I (2) VP ART
Restricted to majors. This course builds upon the concepts introduced in Introduction to Multimedia Systems and focuses upon digital photography, animation, and editing.

PGY 3930C Special Topics: Photography (3) VP ART
PR: PGY 3410C. A mid-level course expanding the student's visual and technical skills while establishing the beginning of a personal artistic direction by exposing the student to new ideas, technical skills and genres, including, but not limited to: color photography, digital photography, non-silver and documentary photography. Repeatable up to 9 hours.

PGY 4420C Advanced Photography (3) VP ART
PR: PGY 3410C (3 cr.) and PGY 3930C (6 cr.) and a 3.25 major GPA. Majors only. Continued problems in photography. May be repeated.

PGY 4802C Digital Media II (3) VP ART
Restricted to majors. This course builds upon the concepts introduced in Digital Media I and focuses upon digital photographic, web and digital video creation.

PGY 4942C Advanced Photography (4) VP ART
PR: CI. Advanced work in photography and related media leading to development of personal/expressive statements.

PHC 4542 Stress, Health and College Life (3) PH CFH
The purpose of this course is to examine the relationship between stress, as a multi-casual concept, health and disease. Focus areas include: the historical evolution and current theories of stress as they relate to types of stressors, physiological reactions and predisposition to disease, and techniques related to the recognition and prevention of an unhealthy level of stress.

PHH 2000 Introduction to Philosophy 6A HP (3) AS PHI
An introduction to selected philosophical problems and traditions.

PHH 3422 History of Philosophy: Ancient and Medieval (3) AS PHI
A survey of Western philosophy from the pre-Socratics to the end of the Middle Ages.

PHH 3450 History of Philosophy: Modern (3) AS PHI
A survey of Western philosophy from the end of the Middle Ages to the nineteenth century.

PREPARED BY USF COURSE DESCRIPTIONS
PHI 4320 Chinese Philosophy (3) AS PHI  
A survey of Confucianism, Taoism and other aspects of Chinese thought. The course is available to both majors and non-majors and does not have laboratory sections associated with it.

PHI 1103 Critical Thinking SS (3) AS PHI  
Methods of thinking that lead to reliable conclusions, with emphasis on concrete cases in ordinary thinking and the sciences.

PHI 1401 Science and Society 6A AS SS (3) AS PHI  
This class teaches students to become a better “Scientific Citizen,” i.e. to be able to better understand and participate in the process by which we come to conclusions about the natural and social world that matter to us as a society.

PHI 1600 Introduction to Ethics HP SS (3) AS PHI  
A study of ethical theories, concepts, problems and methods.

PHI 2101 Introduction to Formal Logic 6A QM (3) AS PHI  
An elementary study of prepositional, predicate, class and syllogistic logic with some attention to basic problems of logical theory.

PHI 2630 Contemporary Moral Issues SS (3) AS PHI  
Open to all students. A study of contemporary moral issues concerning death, sex, sexism, abortion, poverty, crime, war, suicide, and human rights in general.

PHI 2631 Ethics and Business SS (3) AS PHI  
An application of traditional ethical theories to contemporary problems in business.

PHI 3404 Philosophy of Science (3) AS PHI  
How is science different from other methods of inquiry about the world? What distinguishes science from pseudoscience? From religion? How do we test scientific theories? What are the factors that lead scientists to accept a theory?

PHI 3633 Biomedical Ethics (3) AS PHI  
This course will focus on the ethical issues arising from advances in medical practice, delivery of health care, and scientific research.

PHI 3636 Professional Ethics (3) AS PHI  
An examination of the ethical problems that professionals will face in the complex, global society of the next few decades: confidentiality, divided loyalty, racism/sexism, etc.

PHI 3640 Environmental Ethics SS (3) AS PHI  
A study of alternative theories of environmental ethics, including the application of these theories to contemporary environmental problems. Such as pollution, resource depletion, species extinction, and land use.

PHI 3700 Philosophy of Religion 6A SS (3) AS PHI  
An analysis of theological experience, activity and examination of principal religious ideas in light of modern philosophy.

PHI 3905 Directed Study (1-4) AS PHI  
PR: CI. Approval slip from instructor required. Individual study directed by a faculty member.

PHI 3930 Selected Topics (1-4) AS PHI  
PR: CI. Selected topics according to the needs of the senior students.

PHI 4220 Philosophy of Mind 6A MW (3) AS PHI  
A study of historical and current issues in philosophy of mind, including the nature and status of mind, mind-body duality, the relationship of mind and body, the problems of other minds, the physical basis for intelligence.

PHI 4632 Feminist Ethics MW (3) AS PHI  
A study of the varied approaches to moral reasoning taken by feminist ethical writers such as Wollstonecraft, Mill, Gilligan, Daly, Hoagland and others.

PHI 4670 Contemporary Ethical Theory (3) AS PHI  
A survey of contemporary ethical theory, focusing both on the literature about the status of ethical theorizing—moral scepticism, moral nihilism, narrative ethics—and on specific types of theories—deontological theories, consequentialist theories, rights-based theories, virtue theories.

PHI 4800 Aesthetics 6A MW (3) AS PHI  
A study of traditional and contemporary aesthetic theories with emphasis on creative process, the nature of the art work, the aesthetic response, expressiveness, form and content, as well as art and morality.

PHI 4905 Directed Study (1-4) AS PHI  
PR: CI. Approval slip from instructor required. Individual study according to the needs of the student.

PHI 5934 Selected Topics (1-3) AS PHI  
PR: CI. Approval slip from instructor required. Selected topics according to the needs of the senior students.

PHI 5938 Research (1-4) AS PHI  
PR: CI. Research supervised by a faculty member.

PHM 3020 Philosophies of Love and Sex (3) AS PHI  
Discussion of Philosophies of Love/Sex of Plato, Aristotle, Epicurus, Aquinas, Hume, Kant, Schopenhauer, Russell, Sartre, Marx, etc.

PHM 3100 Social Philosophy 6A SS HP (3) AS PHI  
An analysis of rival theories of social order and their philosophical foundations.

PHM 3400 Introduction to Philosophy of Law (3) AS PHI  
A study of the fundamental concepts of law from a philosophical standpoint including crime, justice, punishment, free speech, insanity.

PHM 4120 Major Black Thinkers MW (3) AS AFA  
PR: Junior or Senior standing. Survey of major themes and issues in African/African-American intellectual and political thought with an emphasis on theories of nationalism. Works of individuals such as Martin Delany, Booker T. Washington, W. E. B. DuBois, Marcus Garvey, Malcolm X, and Angela Davis are considered.

PHM 4331 Modern Political Philosophy 6A MW (3) AS PHI  
A survey of political philosophy from 1600 A.D. until 1900 A.D., including an examination of the ethical, metaphysical, and epistemological bases of these philosophies.

PHM 4540 Contemporary Political Philosophy 6A MW (3) AS PHI  
A survey of political philosophy in the twentieth century, including an examination of the ethical, metaphysical and epistemological bases of these philosophies.

PHM 5125 Topics in Feminist Philosophy (3) AS PHI  
A study of recent feminist philosophical approaches to epistemology, aesthetics and political philosophy. May also be taken for credit in Women’s Studies.

PHM 5126 Social Issues in Biomedical Ethics (3) AS PHI  
An examination of the social and political issues arising from rapid changes in medicine and technology. Topics covered may include social issues related to the just distribution of health care, reproductive technologies, HIV and AIDS, Eugenics, genetic testing, and maternal-fetal relations.

PHP 3786 Existentialism 6A HP (3) AS PHI  
A study of the religious and atheistic existentialists and the bearing of their views on religion, ethics, metaphysics, and theory of knowledge.

PHP 4000 Plato 6A MW (3) AS PHI  
The examination of Plato will include the dialogues Protagoras, Georgias, Meno, Republic and others.

PHP 4010 Aristotle 6A MW (3) AS PHI  
Study of Aristotle’s philosophy.

PHP 4410 Kant (3) AS PHI  
Lecture and discussion of Kant’s philosophy, especially the Critique of Pure Reason.

PHP 4740 The Rationalists 6A MW (3) AS PHI  
A careful study of the metaphysics and epistemologies of Descartes, Spinoza, Leibniz, and Malebranche.
PHT 4745 The Empiricists 6A (3) AS PHI
A study of the metaphysics and epistemologies of Locke, Berkeley, Hume, and Thomas Reid.

PHT 4784 Analytical Philosophy 6A (3) AS PHI
A study of the method devoted to clarifying philosophical problems through analysis of the language in which these problems are stated.

PHT 4788 Philosophy of Marxism 6A MW (3) AS PHI
A critical survey of Marxist philosophy from Marx and Engels to Mao Tse-Tung and Herbert Marcuse. Hegelian foundations of Marxist philosophy analyzed in detail.

PHT 5021 Professional Issues I (2) ME PHT
Foundations of systems thinking, decision-making, professional expression, responsibility, and accountability (including legal/ethical concepts), culture and argumentation for the roles of the physical therapist in administration, consultation, critical inquiry, education and patient/client management. Restricted to majors.

PHT 5022 Professional Issues II (2) ME PHT
An introduction to critical injury and educator roles and responsibilities; explores the concepts of decision-making, evaluation of research, theories of learning, research and clinical pathways. Restricted to majors.

PHT 5023 Professional Issues III (3) ME PHT
Focus on legal, ethical, and professional responsibility and accountability of the physical therapist. Learners will further develop their ability to make legal and ethical decisions. The class will examine state laws governing the practice of physical therapy and other health care services. Restricted to majors.

PHT 5171C Foundational Science I (3) ME PHT
Introduction to the peripheral nervous system, skeletal, integumentary, and circulatory systems in normal and pathological states. Includes the anatomy and physiology of bones, joints, skin, nerves, and blood vessels, as well as the response of these tissues to injury and their potential for healing. Restricted to majors.

PHT 5172C Foundational Science II (1) ME PHT
Emphasis on physiology of the peripheral sensorimotor and cardiopulmonary systems. Restricted to majors.

PHT 5173C Foundational Science III (2) ME PHT
Emphasis on physiology of the peripheral sensorimotor and cardiopulmonary systems. Restricted to majors.

PHT 5184 Movement Science I (2) ME PHT
A basic introduction to movement science and its foundational principles from four different perspectives: biomechanics, exercise physiology, anatomy, and kinesiology. The course emphasizes principles of movement and motor control in human movement. Restricted to majors. Repeatable for 2 cr.

PHT 5185 Movement Science II (3) ME PHT
PR: PHT 5184 Elaboration of movement science principles with emphasis on biomechanics, kinesiology, functional anatomy, exercise physiology, histopathology, motor control and connective tissue properties. Restricted to majors. Repeatable for 3 cr.

PHT 5271 Patient/Client Management I (3) ME PHT
Foundational principles of history, physical therapy practice, applied biomechanics, pharmacology, and medical practice. Emphasis on the physical therapy management of individuals with musculoskeletal and cardiopulmonary conditions. Restricted to majors.

PHT 5272 Patient/Client Management II (2) ME PHT
Application of principles of patient/client management to patients with cardiopulmonary disease or dysfunction and diabetes in order to identify and write plans of care for related movement dysfunction. Restricted to majors.

PHT 5273 Patient/Client Management III (3) ME PHT
Learners apply principles of patient/client management to patients with progressive, non-progressive diseases and injuries of the nervous system. Restricted to majors.

PHT 5275C Physical Therapy Science I (4) ME PHT
Introduction to physical therapy skills in examination, evaluation, intervention for movement-related problems secondary to impairments of the nervous system. Contemporary theories of motor development, motor learning and motor control will be introduced. Student knowledge will be demonstrated with clinical problem-solving scenarios. Restricted to majors.

PHT 5276C Physical Therapy Science II (4) ME PHT
Introduction to physical therapy skills used in examination, evaluation, diagnosis and intervention for clients with activity limitations associated with cardiovascular, pulmonary, musculoskeletal, and common orthopedic surgical procedures as components of medical management including repair of bone and soft tissue. Restricted to majors. Repeatable for 1 cr.

PHT 5283C Physical Therapy Procedures (3) ME PHT
Introduction to selected physical therapy interventions, obtaining a patient history, and conducting a systems screen. Restricted to majors. Repeatable for 3 cr.

PHT 5316 Medical Management I (1) ME PHT
Introduction to medical diagnostics, pharmacological principles, and common orthopedic procedures as components of medical management including repair of bone and soft tissue. Restricted to majors. Repeatable for 1 credit.

PHT 5380 Medical Management II (1) ME PHT
PR: PHT 5316 Seminar on the medical and surgical management; epidemiology; pathophysiology; pharmacology of injuries and diseases of the cardiopulmonary system including repair and regeneration. Restricted to majors. Repeatable for 1 credit.

PHT 5522 Clinical Education (3) ME PHT
Clinical education experience for the development of patient care skills. The course is graded Satisfactory/Unsatisfactory. Restricted to majors.

PHT 5906 Directed Independent Study (1-10) ME PHT
Directed independent study, content to be decided. Restricted to majors.

PHT 5934 Special Topics I (1-10) ME PHT
Preparation of physical therapy practice issues. Topics may vary each semester the course is offered. A seminar and/or lab course. Restricted to majors. Not repeatable for credit.

PHT 5960 Clinical Proficiency and Problem Solving I (1) ME PHT
Practicum for patient/client management of individuals with musculoskeletal related movement disorders complemented by direct patient care learning. Restricted to majors. Repeatable for 1 credit hour.

PHT 5961 Clinical Proficiency and Problem Solving II (1) ME PHT
PR: PHT 5960 Practicum for the synthesis of skills, knowledge, and values for management of individuals with cardiopulmonary and endocrine related movement disorders complemented by direct patient care learning. Restricted to majors. Repeatable for 1 credit hour.

PHY 2020 Conceptual Physics NS (3) AS PHY
No credit for Physics or Mathematics majors. A qualitative, non-mathematical investigation of physics, emphasizing its influence on life today.

PHY 2048 General Physics I NS (3) AS PHY
PR: MAC 2281 or MAC 2311. Must be taken concurrently with lab and, if dropped, then dropped simultaneously. May not receive credit for both the PHY 2053 and PHY 2048 courses. First semester of a two semester sequence of calculus-based general physics (mechanics, wave motion, sound, thermodynamics, geometrical and physical optics, electricity, and magnetism) for physics majors and engineering students.

PHY 2048L General Physics I Laboratory (1) AS PHY
PR: MAC 2281 or MAC 2311. Must be taken concurrently with PHY 2048 and PHY 2048L courses. First semester of a two-semester sequence of general physics (mechanics, wave motion, sound, thermodynamics, geometrical and physical optics, electricity, and magnetism) and laboratory for physics majors and engineering students.

PHY 2049 General Physics II NS (3) AS PHY
PR: MAC 2282 or MAC 2312, PHY 2048, PHY 2048L. Must be taken concurrently with lab and, if dropped, then dropped simultaneously. May not receive credit for both PHY 2054 and PHY 2049 courses. Second semester of general physics and laboratory for physics majors and engineering students.

PHY 2049L General Physics II Laboratory (1) AS PHY
PR: MAC 2282 or MAC 2312, PHY 2048, PHY 2048L. Must be taken concurrently with PHY 2054 and PHY 2049L courses. Second semester of general physics and laboratory for physics majors and engineering students.

PHY 2053 General Physics I NS (3) AS PHY
PR: MAC 1140 and MAC 1141, or MAC 1147. Must be taken concurrently with lab and, if dropped, then dropped simultaneously. May not receive credit for both the PHY2053 and PHY2049 PHY 2048 courses. First semester of a two semester sequence of
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Notes</th>
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<tbody>
<tr>
<td>PHY 2053L</td>
<td>General Physics I Laboratory</td>
<td>(1) AS PHY</td>
<td>Must be taken concurrently with lecture and, if dropped, then dropped simultaneously. May not receive credit for both the PHY 2053L and PHY 2048L courses. First semester of a two-semester sequence of general physics.</td>
</tr>
<tr>
<td>PHY 4031</td>
<td>Great Themes in Physics</td>
<td></td>
<td>PR: PHY 4049 or equivalent; CR: PHY 3101. Experiments in modern physics, including the areas of atomic, nuclear, solid state and wave phenomena.</td>
</tr>
<tr>
<td>PHY 3323</td>
<td>Solid State Physics I</td>
<td>(3) AS PHY</td>
<td>PR: PHY 3221; CR: MAP 2302. Continuation of PHY 3221. Coupled oscillators and normal modes; moving coordinate systems; Lagrange’s and Hamilton’s equations; inertia tensor; general rotation of rigid bodies.</td>
</tr>
<tr>
<td>PHY 4744C</td>
<td>Introduction to Electronics and Test Instrumentation</td>
<td>(3) AS PHY</td>
<td>PR: General Physics or CI. Fundamentals of analog and digital electronics used in measurements and instrumentation. Weekly labs give hands-on experience in breadboarding electronic circuits and using test instrumentation (oscilloscopes, digital multimeters, etc.).</td>
</tr>
<tr>
<td>PHY 4905</td>
<td>Independent Study</td>
<td>(1-3) AS PHY</td>
<td>PR: CI. S/U only. Specialized, independent study determined by the student’s need and interest. The written contract required by the College of Arts and Sciences specifies the regulations governing independent study.</td>
</tr>
<tr>
<td>PHY 4910</td>
<td>Undergraduate Research</td>
<td>(1-4) AS PHY</td>
<td>PR: Senior or advanced junior standing and CC. S/U only. An individual investigation in the laboratory or library or both, under the supervision of the instructor. Credit hours and other contractual terms, are to be determined by student/instructor agreement.</td>
</tr>
<tr>
<td>PHY 4930</td>
<td>Undergraduate Seminar</td>
<td>(1) AS PHY</td>
<td>PR: Senior or advanced junior standing or CC. S/U only. All undergraduate physics majors must enroll in this course at least once. Regular attendance is required. This course introduces students to the research areas in the Physics Department.</td>
</tr>
<tr>
<td>PHY 4936</td>
<td>Selected Topics in Physics</td>
<td>(1-4) AS PHY</td>
<td>PR: Senior or advanced junior standing and CC. Each topic is a course in directed study and under the supervision of a faculty member.</td>
</tr>
<tr>
<td>PHY 5200</td>
<td>Electronics for Research</td>
<td>(3) AS PHY</td>
<td>A rigorous introduction to the fundamentals of analog and digital electronics. Theoretical circuit analysis and weekly labs introduce practical use of diodes, transistors, analog and digital Ics, breadboarding techniques and electronics test instrumentation. Spring Semester.</td>
</tr>
<tr>
<td>PHY 5377</td>
<td>Selected Topics in Physics</td>
<td>(1-4) AS PHY</td>
<td>PR: Senior or advanced standing and CC. Each topic is a course in directed study under the supervision of a faculty member.</td>
</tr>
<tr>
<td>PHZ 2102</td>
<td>Problems in General Physics</td>
<td>(1) AS PHY</td>
<td>PR: PHY 2049 or PHY 2053. First semester of a two-semester sequence on solving problems in General Physics I. A course designed to be taken with the lecture course and to help students with developing problem-solving skills.</td>
</tr>
<tr>
<td>PHZ 2103</td>
<td>Problems in General Physics</td>
<td>(1) AS PHY</td>
<td>PR: PHY 2049 or PHY 2053. Second semester of a two-semester sequence on solving problems in General Physics II. A course designed to be taken with the lecture course and to help students with developing problem-solving skills.</td>
</tr>
<tr>
<td>PHZ 4151C</td>
<td>Computational Physics</td>
<td>(3) AS PHY</td>
<td>Introduction to computer applications in physics. Emphasis on numerical modeling and simulation of physics problems using linear algebra, differential equations and Monte Carlo methods. No prior programming experience required.</td>
</tr>
<tr>
<td>PHZ 4434</td>
<td>Materials Physics</td>
<td>(3) AS PHY</td>
<td>PR: PHY 2048, PHY 2049, PHY 3101. The physics and physical properties of materials. Strong emphasis is on the underlying physics of materials. Particular topics covered include crystal structure, phase, and electrical, thermal, optical, and magnetic properties of materials.</td>
</tr>
<tr>
<td>PHZ 4702</td>
<td>Applications of Physics to Biology and Medicine I</td>
<td>(4) AS PHY</td>
<td>PR: PHY 2054, PHY 2054L or PHY 2049, PHY 2049L. The first semester of a two-semester sequence, to discuss the applications of the physical concepts introduced in the General Physics sequence to biological systems and for medical applications. Restricted to non-majors.</td>
</tr>
<tr>
<td>PHZ 4703</td>
<td>Applications of Physics to Biology and Medicine II</td>
<td>(4) AS PHY</td>
<td>PR: PHY 2054, PHY 2054L or PHY 2049, PHY 2049L; PHY 2053 or CI. The second semester of a two-semester sequence, to discuss the applications of the physical concepts introduced in the General Physics sequence to biological systems and for medical applications. Restricted to non-majors.</td>
</tr>
<tr>
<td>PHZ 5115</td>
<td>Methods of Theoretical Physics</td>
<td>(3) AS PHY</td>
<td>PR: MAP 2302 or CI. Applications of mathematical techniques to classical and modern physics. Vector spaces including Hilbert space, orthogonal functions, generalized functions, Fourier analysis, transform calculus, and variational calculus.</td>
</tr>
<tr>
<td>PHZ 5116</td>
<td>Methods of Theoretical Physics</td>
<td>(3) AS PHY</td>
<td>PR: MAP 2302 or CI. Applications of mathematical techniques to classical and modern physics. Selected topics in complex analysis, differential and integral equations, numerical methods, and probability theory.</td>
</tr>
<tr>
<td>PHZ 514C</td>
<td>Computational Physics</td>
<td>(3) AS PHY</td>
<td>PR: CGS 5765 or CI. C programming applied to real science and engineering problems. Data analysis, numerical algorithms, modeling, parallel computation. Subjects selected from current research may include numerical biology, quantum magnetism, chaos, finance, materials science.</td>
</tr>
<tr>
<td>PHZ 5304</td>
<td>Nuclear Physics</td>
<td>(3) AS PHY</td>
<td>PR: PHY 4604 or CI. Nuclear forces, nuclear models, nuclear structure, decay, nuclear reactions, and high energy physics.</td>
</tr>
<tr>
<td>PHZ 5405</td>
<td>Solid State Physics</td>
<td>(3) AS PHY</td>
<td>PR: PHY 3101, MAP 2302. Crystal structure, x-ray and electron diffraction, mechanical and thermal properties of solids, electrical and magnetic properties of metals, band theory of</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Description</td>
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<tr>
<td>POL 1120</td>
<td>Beginning Polish I (4) AS WLE</td>
<td>CR: POL 1120L. This course features all four major skills: listening, reading, speaking, and writing. GRAMMAR exercises, dictation, readings, and vocabulary building are central in this first course. Knowledge of Russian can help. S/U available.</td>
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</tr>
<tr>
<td>POS 5159</td>
<td>Urban Policy Analysis (3) AS PAD</td>
<td>Selected topics in urban government and politics. Existence and understanding of role, function, structure, and composition of such, and their impact on American governmental institutions.</td>
<td></td>
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<tr>
<td>POS 3691</td>
<td>Introduction to Law and Politics (3) AS POL</td>
<td>POLITICAL AND LEGAL PROCESS, relationship to political life of CONSTITUTIONAL LAW, administrative law, the judicial process, and private law.</td>
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<tr>
<td>POS 3697</td>
<td>Environmental Law (3) AS POL</td>
<td>Examines some of the major issues involving environmental law. Specially, the course provides a survey and analysis of statutes, both state and federal, regulating water, air, soil pollution, and resource conservation and recovery. It will also address questions pertaining to problems of implementation, interpretation, enforcement, and development of environmental laws.</td>
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<tr>
<td>POS 3713</td>
<td>Empirical Political Analysis (3) AS POL</td>
<td>Fundamentals of empirical political inquiry: systematic data collection and quantitative analysis techniques. Laboratory exercises using the computer are required.</td>
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<tr>
<td>POS 3931</td>
<td>Selected Topics (3) AS POL</td>
<td>Selected topics in political science with course content based upon student demand and instructor's interest.</td>
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<tr>
<td>POS 4204</td>
<td>Political Behavior, Public Opinion, and Elections (3) AS POL</td>
<td>Analysis of economic and socio-psychological factors influencing mass and elite political behavior; voting behavior, public opinion, and political activism.</td>
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<tr>
<td>POS 4413</td>
<td>The American Presidency 6A (3) AS POL</td>
<td>The presidency as a political institution; analysis of powers; legislative, administrative, political, and foreign policy leadership; crisis management and decision making; White House staffing; limits on power.</td>
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<tr>
<td>POS 4424</td>
<td>The American Congress (3) AS POL</td>
<td>Organization, procedures, and committees, party leadership, relations with governmental and non-governmental organizations and agencies, oversight, decision-making processes, House/Senate comparisons.</td>
<td></td>
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<tr>
<td>POS 4614</td>
<td>Constitutional Law I (3) AS POL</td>
<td>PR: POS 2041. Leading social problems, principle institutions, and the scope of powers. Analysis of Supreme Court decisions, scholarly commentaries, and the writings of leading public figures.</td>
<td></td>
</tr>
<tr>
<td>POS 4624</td>
<td>Constitutional Law II (3) AS POL</td>
<td>PR: POS 2041. Analysis of Supreme Court decisions and scholarly commentaries on the constitutional rights of individuals.</td>
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</tr>
<tr>
<td>POS 4694</td>
<td>Women and Law I 6A MW (3) AS WST</td>
<td>Introduction to issues concerning the legal aspects of sex and sex-based discrimination as embodied in statutory and case law, focusing on constitutional and family law and reproductive freedom issues.</td>
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</tr>
<tr>
<td>POS 4905</td>
<td>Independent Study (1-3) AS POL</td>
<td>PR: 3.0 average in Political Science and CI. Specialized study determined by the student's needs and interests.</td>
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<tr>
<td>POS 4990</td>
<td>Research (1-3) AS POL</td>
<td>PR: 3.0 average in Political Science and CI. Investigation of some aspect of political science culminating in the preparation of an original research paper.</td>
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<tr>
<td>POS 4936</td>
<td>Senior Seminar (3) AS POL</td>
<td>PR: Senior standing and CI. An opportunity to work with others in a seminar format, exploring specialized topics.</td>
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<tr>
<td>POS 5155</td>
<td>Issues in Urban Government and Politics (3) AS POL</td>
<td>PR: Admission to Honor opportunity. Writing of honor thesis under direction of faculty members.</td>
<td></td>
</tr>
<tr>
<td>POS 5158</td>
<td>Urban Policy Analysis (3) AS PAD</td>
<td>Application of policy framework for urban government &amp; policies. Examine forms of government and how policies such as economic development, law enforcement, community policing, neighborhood policies (non-profit groups) can be analyzed.</td>
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</tbody>
</table>
POT 3003 Introduction to Political Theory (3) AS POL
Examine various kinds of theories used in political science for understanding political life: normative theory, empirical theory, historicism theory, analytical theory, and critical theory.

POT 3013 Classical Political Theory (3) AS POL
Analysis of basic ideas of Plato, Aristotle, Cicero, St. Thomas, and other leading pre-modern political philosophers.

POT 4054 Modern Political Theory (3) AS POL
Analysis of basic political ideas of Machiavelli, Hobbes, Locke, Rousseau, and other modern thinkers.

POT 4064 Contemporary Political Thought (3) AS POL
Examines various political views and political phenomena in the nineteenth and twentieth centuries. Diverse theoretical types and salient political phenomena will be presented.

POT 4109 Politics and Literature 6A LW (3) AS POL
Critical examination of the connections between politics and literature.

POT 4204 American Political Thought (3) AS POL
Examines political writings in the U.S. and responses to critical literature.

Examines political and salient political phenomena from the seventeenth and eighteenth centuries. Diverse theoretical types and salient political phenomena will be presented.

PSY 2012 Introduction to Psychological Science
Introduction to the science of psychology for majors and non-majors. Covers topics in psychology's core areas such as perception, physiological psychology, and cognition.

PSY 3213 Research Methods in Psychology (4) AS PSY
Research methods and statistical techniques for research in psychology. Emphasis on topics from analysis of variance.

PSY 4054 Modern Political Theory (3) AS POL
Analysis of basic political ideas of Machiavelli, Hobbes, Locke, Rousseau, and other modern thinkers.

PSY 4064 Contemporary Political Thought (3) AS POL
Examines various political views and political phenomena in the nineteenth and twentieth centuries. Diverse theoretical types and salient political phenomena will be presented.

PSY 4205 Experimental Design and Analysis (3) AS PSY
Experimental design and analysis in psychology. Emphasis on topics from analysis of variance.

PSY 4604 History and Systems of Psychology (3) AS PSY
History of methods of logical reasoning and political theory, investigation of the various schools of political philosophy such as ancient, medieval, and modern political philosophy.

PSY 4913 Directed Study (1-3) AS PSY
Directed study under supervision of a faculty member.
the student works for academic credit under the supervision of a professional practitioner. Periodic written and oral reports to the faculty member coordinating the study.

**PUR 4801 Advanced Public Relations (3) AS COM**
PR: PUR 3500, PUR 4100 and PUR 4401. As final course in Public Relations sequence, it includes an intensive study of counseling and problem-solving techniques used in professional practice. Analysis of case studies and preparation of complete Public Relations program. Extensive reading in the literature of public relations. Research methods and management for majors. Theory and research are combined to acclimate students into appropriate skills and thinking processes used by practitioners.

**QMB 2100 Business And Economic Statistics I (4) US OM (3) BA QMB**
PR: MAC 1105. Data description; exploratory data analysis; introduction to probability; binomial and normal distributions; sampling distributions; estimation with confidence intervals; tests of hypotheses; control charts for quality improvement.

**QMB 3200 Business And Economic Statistics II (3) BA QMB**
PR: MAC 2233 or MAC 2241, QMB 2100. Simple linear regression and correlation; multiple regression and model building; forecasting models; analysis of variance; chi-square tests; nonparametric methods.

**RCS 3030 Rehabiliation Counseling Issues in Alcoholism and Other Addictions (3) AS REH**

**RCS 4931 Selected Topics in Counseling Professions (3) AS REH**
Provides an overview of current issues, standards of practice, and future trends. Will cover legal and ethical and professional issues.

**RCS 5025 Rehabilitation Counseling: Concepts and Applications (3) AS REH**
PR: CC. Introduction to the profession of Rehabilitation Counseling and current issues in the field. Coverage includes rehabilitation history, legislation, case management and related services for Americans with disabilities.

**RCS 5080 Medical Aspects of Disability (3) AS REH**
PR: RCS 5780 or CP. A survey of medical conditions and disabilities encountered by rehabilitation and mental health counselors. Examines the relationship of client handicaps, physical and mental, to rehabilitation and mental health programming.

**RCS 5100 Substance Abuse I (3) AS REH**

**RCS 5700 Legal, Professional Standards and Issues in Counseling (3) AS REH**
PR: CC. An overview of all aspects of professional functioning including history, roles, organizational structures, ethics, standards and credentialing. Contemporary and developing issues in the field of professional counseling will also be addressed.

**RCS 5905 Directed Studies (1-4) AS REH**
PR: CI. Supervised rehabilitation studies under the direction of a faculty member.

**REA 1605 Learning Strategies Within Academic Disciplines (2) US REA**
To provide within any academic discipline the necessary learning strategies needed for success related to that discipline. Practice of learning strategies will be within the framework of the student’s course work, providing direct transfer to academic area material. Will not be counted toward the English major.

**REA 2105 Critical Reading and Writing 6A (4) US REA**
This course leads to the development of advanced level critical reading and the related academic writing skills, accomplished through both classroom instruction/discussion and accompanying self-paced computer lab programs.

**REA 2505 Vocabulary (3) AS ENG**
A practical course in rapid vocabulary improvement for students in all areas. Stress is on words in context. Will not be counted toward the English major.

**REA 2604 Academic Strategies (1) US REA**
Designed for students in academic difficulty, this 1-hour, midterm course aims to help students assess their immediate difficulties and develop the most appropriate strategies to effectively complete all academic expectations and improve grades.

**REA 2930 Selected Topics (1-4) US REA**
Topics will vary to meet the needs of students. Will not be counted toward the English major.

**RED 4310 Reading and Learning to Read (3) ED EDE**
PR: Admission to College of Education. This course will prepare pre-service teachers to understand the foundations of reading and the inherent learning principles to produce successful readers. The course focuses on developing appropriate instructional strategies to enhance reading development and reading across the curriculum.

**RED 4511 Linking Literacy Assessment to Instruction (3) ED EDR**
PR: RED 4310. This course will prepare pre-service teachers to use multiple assessment measures to assess and diagnose students’ strengths and needs in literacy learning. Based on individual student profiles, teachers will design instruction to enhance literacy development.

**REE 3048 Real Estate Decision Making (3) BA FIN**
PR: FIN 3403. Acquaints students with the range of knowledge required to engage in real estate decision-making in the United States. Integrates the institutional framework with which decisions are made, the elements of financial analysis, deal structuring and marketing, and the pricing, financing, and allocation of real property in the real estate markets.

**REE 4503 Real Estate Investment Analysis (3) BA FIN**
PR: FIN 4504. A comprehensive study of the determinants of the market and financial feasibility of the real estate investment decision. The development of market and site analyses, theories of urban development patterns, and the role of taxation will be studied along with the application of analytical techniques for decision making.

**REL 2210 Hebrew Bible/Old Testament (4) AS REL**
An introduction to the critical study of the Hebrew Scriptures against the background of the ancient Near East, with attention to the history and religion of the Hebrew people.

**REL 2240 Introduction to the New Testament (4) AS REL**
An introduction to the critical study of the New Testament in the context of Christian beginnings in the first century A.D. This will include readings from the Apocrypha, other Gospels, and letters.

**REL 2300 Introduction to World Religions HP SS (4) AS REL**
This course is designed to give students an overview of the world’s major religions. Students are exposed to myths, rituals, history, primary beliefs, leaders, and other information to understanding each religion. Open to majors and non-majors.

**REL 2306 Contemporary World Religions HP (4) AS REL**
This course will explore the unity and diversity of religious traditions in our contemporary global context in order to understand the mutual interactions between religions and cultures. Emphasis will be placed on the role of religions in shaping human values which can either create or resolve social conflicts, and the impact these values can have on issues of race, ethnicity and religious diversity in a multicultural world.

**REL 3005 Ancient Religious Traditions in Context (4) AS REL**
Study of the religions in their cultural setting of the peoples of the Ancient Middle East and Mediterranean.

**REL 3003 Introduction to Religious Studies (4) AS REL**
This course examines the phenomenon of religion to answer the question: Religion, what is it? Religious thought (mythology and theology) and religious behavior (ritual and morality) are closely examined from a variety of methodological perspectives.

**REL 3101 Religion and Popular Culture SS HP (4) AS REL**
An exploration and analysis of the relationship between religion and popular culture, which will include inquiry into the definition and meaning of both religion and popular culture, the impact of secularization on traditional religious systems, and the widely diverse expressions of religion in contemporary popular culture.

**REL 3111 The Religious Quest in Contemporary Films 6A SS HP (4) AS REL**
This course will use contemporary films such as Gandhi, Malcolm X, The Long Walk Home, The Color Purple, The Leap of Faith, The Chosen, and Grand Canyon, to explore the personal and social dimensions of religion in modern secular societies, with an emphasis on issues of racism, sexism and human liberation and reconciliation.

**REL 3114 Comedy, Tragedy, and Religion 6A MW (3) AS REL**
Examines the visions of life in comedy and tragedy, and relates the basic tenets of Judaism, Christianity, and Zen Buddhism.

**REL 3116 Religion and Contemporary American Holidays HP SS (3) AS REL**
Introduces students to the academic study of religion through an exploration of issues and questions related to the character and
function of holidays in contemporary America. Open to majors and non-majors. 

REL 3117 Religion and Contemporary American Sports HP SS (3) AS REL
This course explores the function of sports in America. It covers the history of sports; the status of American sports; and sports as religious events. The course is open to majors and non-majors and is not repeatable for credit.

REL 3120 Religion in America (3) AS REL
This course examines the movement from corporate church to pluralism in American religious institutions, the religious results of non-Protestant immigration; the Jewish factor; the effect of home missions and social concern programs upon American life; political entanglements and the concept of church/state separation.

REL 3131 New Religions in America (3) AS REL
A course designed to allow the student to survey the wide spectrum of contemporary sects and cults in America and learn what motivates their development.

REL 3132 Witchcraft and Paganism in America (3) AS REL
A study of contemporary witchcraft and paganism, including theories, methods, history, myths and symbols, beliefs, rituals and practices, believers, recruitment, socialization, and organizations.

REL 3140 Religion, Culture, and Society (3) AS REL
Introductory scholarly survey of religion in its complex relationship to culture and society, including definitions and theories of religion, research methods, becoming religious, social organization, and interconnections with other social institutions. Open to non-majors.

REL 3145 Women and Religion 6A (3) AS REL
Analysis of the status and roles of women as compared to men in the Judeo-Christian tradition. Contemporary issues of feminist theology, and the controversies surrounding them.

REL 3146 Womanist Vision in Religion MW (3) AS REL
This course examines the works of Black Womanist writers in religion for their contributions to and insights into the phenomena of religion in America and the world.

REL 3170 Religion, Ethics and Society Through Film 6A SS HP (4) AS REL
An ethical analysis of contemporary social issues through contemporary films such as Wall Street and Crimes and Misdemeanors, drawing on religious narrative traditions from Eastern and Western cultures which have contributed to the development of an ethic of human dignity, human rights and human liberation after Auschwitz and Hiroshima.

REL 3191 Life After Death MW (4) AS REL
An exploration of ideas about life after death and its relations to this life in Judaism, Christianity, Islam, Hinduism, and Buddhism.

REL 3280 Biblical Archaeology MW (3) AS REL
An in depth examination of the archaeological data relating to the background and content of the Bible, including ancient customs, Biblical sites and cities, Biblical history, and material culture of the Biblical period. Special attention will also be given to excavation methods and interpretation of archaeological evidence.

REL 3303 Comparative Religion: Judaism and Islam MW (4) AS REL
This course is framed within the academic study of religion, and it does not concern itself with contemporary political difference in the Middle East. It treats as Islam the normative statements of the Qur' and related traditions, and as Judaism the authoritative statements of the Torah, oral and written.

REL 3308 World Religions 6A HP SS (3) AS REL
World Religions gives students an understanding of the major religions of the world from their formative periods up to modernity. Special attention is given to myths, rituals, history, beliefs, leaders and other info relevant to understanding the religions.

REL 3318 Introduction to Chinese Religion AF HP SS (3) AS REL
The course is for majors and non-majors, and may not be repeated for credit. The course introduces the history and present state of the religious thoughts and practices in mainland China and the geographical areas in which the Chinese language is spoken.

REL 3330 Religions of South Asia AF (3) AS REL
All religions of the world came to India and all became Indian. What is this "Indianness" which stems from Hinduism, Buddhism, Jainism and Sikhism, but extended itself to include Judaism, Christianity, Islam, Zoroastrianism and Baha'is. Readings from classical texts and modern literature.

REL 3333 Introduction to Islam HP AF (3) AS REL
This course introduces the basic elements of Islamic belief and practice, placing the rise of Islam in its historical context in the Middle East, and stressing issues of diversity (including ethnicity and gender).

REL 3367 Islam in the Modern World 6A HP AF (3) AS REL
Examines the major developments in Islamic thought since the 13th century, with emphasis on the 19th and 20th century Islamic resurgence. Issues of diversity, gender, and social values will be stressed.

REL 3375 Issues in Caribbean Religions MW (3) AS REL
This course concentrates on major social and cultural issues in Caribbean religions mainly in Cuba, Haiti, Jamaica, and Trinidad, with emphasis on Afro-derived religions and Western and Eastern religious encounters.

REL 3380 Native American Religions (3) AS REL
Introduction to and survey of Native American Religions. A variety of multiplicity of perspectives, including anthropological, historical, social psychological, sociological, and philosophical.

REL 3391 In Search of the Goddess AF HP SS (3) AS REL
This course explores Goddess religion/sacred Feminine, from prehistory, to the pagan Near East and Mediterranean, Western monotheistic religions, pluralistic religions of the East, and revivals of Goddess spirituality in contemporary Europe/N. America.

REL 3420 Contemporary Religious Thought (3) AS REL
An examination of the central ideas of recent religious thinkers; such as Gandhi, Martin Luther King, Jr., Elie Wiesel, Thich Nhat Hanh, Dorothy Day, Dorothee Soelle, Howard Thurman, Thomas Merton and others.

REL 3465 Religion and the Meaning of Life 6A MW (3) AS REL
What is the meaning of life? An exploration of answers to this question in Eastern and Western religions, and in humanistic philosophies of life.

REL 3500 History of Christianity 6A HP (4) AS REL
Historical development of Western Christianity, its ideas and institutions, from the first century to the rise of religious modernism in the 19th century.

REL 3561 Roman Catholicism 6A MW (3) AS REL
An examination of the history, doctrine, and ethics of the Roman Catholic Church.

REL 3602 Classics of Judaism 6A MW (3) AS REL
PR: One course in Religious Studies. How to read the principal documents of Judaism beyond the Old Testament, particularly the Mishnah, Talmuds, and Midrash.

REL 3607 Introduction to Judaism 6A SS HP AF (3) AS REL
An introduction to Judaism: its religious tenets; its codes of ethics; its rites and customs. This course is intended as a description of what it means to be a Jew.

REL 3611 History of Judaism (4) AS REL
A study of the evolution of the religion of ancient Israel from the Exodus to the end of the second centruy of our era, seen against the background of its historical, geographical, political, social and spiritual setting.

REL 3613 Modern Judaism 6A MW LW (3) AS REL
A study of Jewish life in the West since 1789, emphasizing Jewish beliefs, practices, and institutions.

REL 3801 History of Writing (2) AS REL
Study, in reasonable detail, of the history and evolution of writing within its societal context. We will stress the development of writing in Mesopotamia, Egypt, and the Mediterranean World, looking at the transition from oral to written literature and its impact on religion.

REL 3900 Directed Readings (1-4) AS REL
PR: CI. Individual guidance in concentrated reading on a selected topic.

REL 3936 Selected Topics (1-4) AS REL
Course contents depend on students’ needs.

REL 4113 The Hero and Religion 6A MW (3) AS REL
A study of the way in which embedded religious models help to fashion the representation of an heroic protagonist. The focus of the course will be on the relationship between the hero and the “other,” as differentiated by race, gender, ethnicity, or merely inner being.

REL 4133 Mormonism in America MW (3) AS REL
A study of Mormonism in America as an example of a new religious movement which stems from and interacts with the Christian, Hindu, Buddhist, Jewish, and Islamic traditions. This course will focus on the development of an ethic of human dignity, human rights and religious freedom, and is not repeatable for credit.

REL 4161 Religion, Technology and Society (3) AS REL
An exploration of the way in which religion and technology have interacted in Western civilization so as to both express and
transform human values and identity. Special emphasis will be given to the questions raised by modern technology.

**REL 4171 Contemporary Christian Ethics 6A MW (4) AS REL**
PR: Jr. standing or CI. A survey of representative approaches to contemporary Christian ethics and their application to a number of ethical issues peculiar to personal and social problems in contemporary society, with an emphasis on issues of race and gender and of violence and non-violence.

**REL 4177 Comparative Religious Ethics 6A MW LW (4) AS REL**
A comparative study of religious ethics emphasizing how 20th century social activists, such as Ghandi and M. L. King Jr. and eco-feminists such as Rosemary Ruether and Joanna Macy, have drawn upon and transformed traditional religious stories and spiritual practices in order to create a cross-cultural and inter-religious ethic for a multi-cultural world.

**REL 4193 Comparative Mysticism (4) AS REL**
A course designed to acquaint the student with the nature of mystical experience, and some of the varieties of mystical experience recorded in the writings of the mystics, East and West.

**REL 4215 Ancient Israel and the Development of the Hebrew Bible 6A HF AF MW LW (3) AS REL**
An exploration of the formation and composition of the Hebrew Bible in light of the religious, social, political, and historical developments in antiquity.

**REL 4217 Who Wrote the Bible (Genesis-Kings) 6A MW LW (4) AS REL**
A critical examination of Genesis through 2 Kings. This course focuses on the history of the formation of the text and the development of the religious traditions represented therein. Special attention will be paid to Israelite Law, Covenant Theology, and the history of the religion(s) of the Children of Israel in their Ancient Near Eastern context.

**REL 4218 Women and the Bible 6A HF AF MW LW (3) AS REL**
How the redactors of Genesis through 2 Kings viewed women; the role women played in the society of the time in which they are portrayed and in that of the redactors; and, an attempt to find the “women’s voices,” however muted, within the biblical text.

An exploration of the Gospels and Acts, including their backgrounds in Judaism and pagan religion, literary and form criticism, historical Jesus research, and the social history of earliest Christianity.

**REL 4250 Jesus’ Life and Teachings (4) AS REL**
The purpose is to examine the text of the thirteen “Pauline Letters” in the New Testament, to compare them with the Pauline sections, and to ascertain possible theological development of Paul and the “Pauline wing” of Christianity.

**REL 4333 Hinduism (4) AS REL**
The philosophy of the saints; the complex rituals of the Brahmins; the art of its temples; the psychology and physiology of yoga; the social rigidity of the caste system; the esoteric science of meditation; the ascetic activism of Mahatma Gandhi—all of these are Hinduism, and more. Close readings of classical texts, philosophic systems and medieval poems.

**REL 4344 Buddhism in India, Sri Lanka, and South East Asia (4) AS REL**
The life and teachings of the Buddha; the order of monks and nuns; the Buddhist Empress Ashoka; schisms; the rise of the Great Vehicle and the philosophy of emptiness; Buddhist missions; Buddhist art and culture; Buddhism and national liberation; contemporary social and political issues.

**REL 4345 Buddhism in China, Japan, and Tibet (4) AS REL**
Mahayana Buddhism followed the silk routes to China and Japan, and later it crossed the Himalayas into Tibet. An overview of the variety of schools and practices of Buddhism and its adaptation by these ancient cultures.

**REL 4626 Reason in Religion: Talmudic Logic MW (3) AS REL**
Analyzes the modes of thought and of logical analysis of the Talmud of Babylonia; the way in which applied logic and practical real work in a religious definition of the social order; the dialectical argument.
RTV 4220 TV Production and Direction (3) AS COM
PR: RTV 3001 and RTV 3301. A basic course in the techniques of producing and directing TV programs. Restricted to majors only.

RTV 4340 TV News (3) AS COM
PR: RTV 4320. Advanced television reporting, integrating broadcast news writing, ENG production and television performance.

RTV 4320 Electronic Field Production (3) AS COM
PR: RTV 3001 and RTV 3301. Advanced producing, scripting, lighting, camera, and editing for video and news production. Introduction to computer editing and graphics.

RTV 4500 Telecommunications Programming and Management (3) AS COM
PR: RTV 3001. Program and management concepts, resources, costs, selection, and scheduling. Analysis of programming and management in terms of structures, appeals and strengths.

RTV 4942 TV Practicum (1) AS COM
PR: RTV 4220 and CI. For telecommunications sequence majors. S/U only. Practical experience outside the classroom where the student works for academic credit under the supervision of a professional practitioner. Periodic written and oral reports to the faculty member coordinating the study.

RUS 1120 Beginning Russian I (4) AS WLE
CR: RUS 1120L. The first course in the study of elementary Russian. Emphasis on the development of basic skills in comprehension, speaking and reading.

RUS 1120L Beginning Russian I Laboratory (1) AS WLE
CR: RUS 1120. Concurrent enrollment with a lecture session is required. If dropped, then dropped simultaneously. S/U only. A laboratory designed to offer additional practice using various instructional technologies and media.

RUS 1121 Beginning Russian II (4) AS WLE
PR: RUS 1120 or CI. CR: RUS 1121L. The second course in the study of elementary Russian. Emphasis on the development of basic skills in comprehension, speaking and reading.

RUS 1121L Beginning Russian II Laboratory (1) AS WLE
CR: RUS 1121. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. S/U only. A laboratory designed to offer additional practice using various instructional technologies and media.

RUS 2220 Russian III (4) AS WLE
PR: First year Russian or equivalent. Review and development of basic skills in conversation, composition, and reading.

RUS 2221 Russian IV (4) AS WLE
PR: RUS 2220 or equivalent. Review and development of basic skills in conversation, composition, and reading.

RUS 2270 Overseas Study (1-6) AS WLE
Intensive study of the Russian language in Russia involving at least 20 hours per week of classroom instruction and cultural excursions conducted in Russian around Moscow and other parts of Russia.

RUS 3240 Conversation I (4) AS WLE
PR: Second year Russian or equivalent. Development of basic conversational skills.

RUS 3470 Overseas Study (1-6) AS WLE
Must be enrolled in the USF Summer Study in Moscow program. Two years Russian required. Intensive Russian at Moscow Linguistic University with excursions in Moscow and Russia. Students from other institutions eligible.

RUS 3500 Russian Civilization 6A MW (3) AS WLE
A survey of the cultural history of Russia.

RUS 4241 Conversation II (4) AS WLE
PR: Previous course in series or equivalent. Development of conversational skills.

RUS 4402 Advanced Russian Conversation & Composition I (4) AS WLE
PR: RUS 4241 or CI. Third year Russian.

RUS 4403 Advanced Russian Conversation & Composition II (4) AS WLE
PR: RUS 4241 or CI. Third year Russian.

RUS 4471 Advanced Overseas Study (1-6) AS WLE
Must be enrolled in the USF Summer Study in Moscow program. Three years Russian required. Intensive Russian at Moscow Linguistic University with excursions in Moscow and Russia. Students from other institutions eligible.

RUS 4900 Selected Topics (1-3) AS WLE
Study of an author, movement or theme.

RUS 4905 Directed Study (1-3) AS WLE
Departmental approval required.

RUT 3110 Russian Classics in English 6A MW LW (3) AS WLE
Masterpieces of 19th century Russian literature in English, the major works of Pushkin, Lermontov, Gogol, Turgenev, Dostoevsky, Tolstoy, and Chekhov. Elective for all students in all departments.

RUT 3111 Twentieth-Century Russian Literature in English 6A MW LW (3) AS WLE
Masterpieces of 20th century Soviet literature in English, the major works of Bely, Olesha, Babel, Zamyatin, Bulgakov, Pasternak, and Solzhenitsyn. Elective for all students in all departments.

SCE 4236 Science, Technology, Society Interaction 6A MW (4) ED EDN
Achieve an historical and philosophical understanding of (1) the nature of the scientific enterprise: interaction of science, technology, and society (STS), (2) how to teach STS including the use of computers and related technologies, and (3) intricacies of sample STS topics.

SCE 4305 Communication Skills in the Science Classroom (3) ED EDN
Reading and communication skills important in understanding scientific and science education literature and communicating findings to others.

SCE 4310 Teaching Elementary School Science (3) ED EDE
PR: Admission to College of Education and completion of General Education Requirements in the Natural Science area. Technologies and materials for teaching science in the elementary school.

RUT 3110 Russian Classics in English 6A MW LW (3) AS WLE
Masterpieces of 19th century Russian literature in English, the major works of Pushkin, Lermontov, Gogol, Turgenev, Dostoevsky, Tolstoy, and Chekhov. Elective for all students in all departments.

SCE 4320 Teaching Methods in Middle Grade Science (3) ED EDN
PR: Completion of 25 semester hours of Science or CC. Not designed for high school certification purposes. Survey techniques and materials unique to science, grades 5-9.

SCE 4330 Teaching Methods in the Secondary School-Sciences (3) ED EDN
PR: Completion of 26 hours in approved science areas, EDG 4620 or CP. and CC. Techniques and materials of instruction in secondary school sciences.

SCE 4936 Senior Seminar in Science Education (1-2) ED EDN
PR: Senior standing; CR: SCE 4940. Synthesis of teacher candidate’s courses in complete college program.

SCE 4940 Internship: Science Education (1-12) ED EDN
CR: SCE 4936. One full semester of internship in a public or private school.

SCE 5364 Reading and Communication in Science Education (3) ED EDN
This course prepares secondary science teachers to teach literacy practices in science. It includes methods for selecting appropriate reading and language approaches. Communication in science and functional aspects of scientific literacy are examined.

SCE 5937 Selected Topics in Science Education (1-4) ED EDN
SLS 1101 The University Experience (2) US DEA
PR: Freshman only. Core course required to USF. Topics include purposes of higher education, structure and function of USF, career planning, selecting a major, study skills, managing time, academic advising, computer resources, and decision-making.

SLS 2260 Leadership Fundamentals (3) US STL
Covers a broad range of leadership topics from self-development and understanding of self, to group behavior, organizational design, ethics and teamwork. The potential of every individual to develop effective leadership skills is examined.

SLS 2401 Career Development Process (2) US DEA
Students will study vocational choice theories and participate in career decision processes. Development of self-awareness and knowledge of career opportunities and requirements necessary for decision making. Available to lower level majors or non-majors.

SLS 3930 Selected Topics in Student Leadership (1-4) US STL
Course content will depend upon the interest of the faculty member and student demand.

SLS 3948 Community Leadership Practicum (3) US STL
PR: SLS 2260. PR: SLS 4272. This course involves the transference of leadership theories into practice. It provides a practical forum for students to examine and develop personal leadership skills.

SLS 4221 Organizational Theories and Processes (3) US STL
PR: SLS 2260 and SLS 4272. Participants will delve into the nature of organizational dynamics, they will utilize concepts, generalizations, theories, and frames of reference to analyze organizations and leadership to understand and improve their function.
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Introduction to instrumentation and measurement procedures.

Course includes both didactic and experiential learning components.

Pr: SOW 3101, SOW 4522. All provisional major courses. Restricted to full Social Work majors; others by School permission.

First practice course emphasizing development of skills and intervention methods with individuals, families and small groups.

Course includes both didactic and experiential learning components.

Pr: SOW 3101, SOW 4522. All provisional major courses. Restricted to full Social Work majors; others by School permission.

Second practice course emphasizing intervention at the community and organizational level. Builds upon theoretical and practical content of SOW 4341. Course includes both didactic and experiential learning components.

Pr: SOW 3302, SOW 3101, SOW 4341, SOW 4510. Restricted to full Social Work majors in senior year.

Integrates content and theory from core classes with practice experiences students are having in field placement.

Pr: All provisional major courses. Course focuses on students' understanding of multicultural and intergenerational issues.

Pr: Completion of four social work courses including SOW 3401, upper level standing, and School permission. Content dependent upon student interest and ability. A contract will be jointly developed by student and instructor specifying nature of work to be completed.

Pr: Completion of four social work courses including SOW 3401, upper level standing and school permission. Majors only. Directed Research which is intended to provide students with research experience in areas of specific interest in social work. A contract will be developed between student and instructor specifying nature of work to be completed.

Restricted to Social Work majors; others by School permission. Variable title courses to expand on the four sequence areas in the Social Work core curriculum. Allows focus on areas relevant to student's educational interest.

Restricted to Social Work majors, both graduate and undergraduate; other by School permission. Course is taken as an elective. Various title course will selectively expand specific social work content areas.

Pr: Junior standing and DPR. The scope of speech-language pathology as a profession and a field of study. An introduction to speech and language disorders, etiologies, major treatment approaches, and research findings.

Pr: SPA 3002, SPA 4112 or DPR. This course introduces theoretical concepts and research findings concerning the normal developmental process of language learning as a basis for differentiating developmental delay or disorder of language.

Pr: SPA 3030, SPA 3112 or DPR. Concentrated study of the acoustic, physiological and perceptual aspects of sound as related to normal and pathological speech communication. Introduction to instrumentation and measurement procedures.
SPA 3030 Introduction to Hearing Science (3) AS CSD
PR: Junior standing. SPA 3101, SPA 3112, SPA 3310. Introduction to the field of hearing including: physics of sound, auditory anatomy and physiology, and psychophysics of hearing.

SPA 3101 Anatomy and Physiology of the Speech and Hearing Mechanism (3) AS CSD
PR: Junior standing. The neurological and anatomical basis of communication disorders. Comparisons of normal and pathological organic structures and their functional dynamics.

SPA 3112 Applied Phonetics in Communication Disorders (3) AS CSD
PR: Junior standing. Introduction to phonetic analysis of normal and disordered speech, including extensive training in transcription of International Phonetic Alphabet.

SPA 3310 Introduction to Disorders of Hearing (3) AS CSD
PR: SPA 3030 and SPA 3101. The etiology, pathology, and management of disorders of the outer ear, middle ear, inner ear, retrocochlear, and central auditory systems.

SPA 3612C Basic American Sign Language (4) AS CSD
PR: DPR. Introduction to American Sign Language (ASL) as used in the deaf community. General discussion of ASL structure and introduction to various manual communication systems and philosophies. Emphasis on building a basic vocabulary. One hour of laboratory course work is included. Open to all majors.

SPA 3633 American Deaf Culture (3) AS CSD
PR: SPA 4614C. An overview to American Deaf Culture, including its norms, values and belief systems. This course will also provide insight to deaf history in North America, and the importance of ASL to the culturally Deaf community.

SPA 3650 Fundamentals of Interpreting (3) AS CSD
PR: SPA 4615C. An overview of the profession of interpreting, its standards and settings is provided. It provides a basic practical experience component of interpreting and transliterating skills.

SPA 3653 Overview of Language Learning in Deaf Children (3) AS CSD
PR: Admission to ITT Program. CR: SPA 3653L. This course is restricted to majors only. Overview of language development of deaf children is introduced through various theories, including various theories of language development in the deaf and communication/language of the deaf assessment techniques, interpreting skills relating to learning processes.

SPA 3653L Overview of Language Learning in Deaf Children Lab (1) AS CSD
PR: Admission to ITT Program. CR: SPA 3653. This course is restricted to majors only. An exploration and overview of communication modes and language used in public school settings by deaf children. Includes a study of how systems overlap and a development of flexibility in using different modes of language, and the implications for interpreters.

SPA 3664 Language and Cognitive Processing Skills in English (4) AS CSD
PR: SPA 4615C; CR: SPA 3665. Students develop the cognitive processing and language skills within English that are preliminary steps for interpretation. It will develop student's ability to segment information to perform various cognitive tasks intralinguially. For Majors only.

SPA 3665 Language and Cognitive Skills in ASL (4) AS CSD
PR: SPA 4615C; CR: SPA 3664. Students acquire cognitive processing and language development within ASL that are preliminary steps for performing simultaneous interpretation. This course also includes a service component by volunteering in various deaf communities. For majors only.

SPA 3666 Translation from English and from ASL (3) AS CSD
PR: SPA 3664, SPA 3665. A course of intralingual language exercises that introduces students to and provides practice in techniques of rephrasing and restructuring meaning in ASL and in English. For majors only.

SPA 3673 Introduction to Auditory Functions (3) AS CSD
PR: Admission to ITT Program. This course is restricted to majors. An overview of hearing science and speech science relating to the educational environment. This course orientes the student to the variables extent in oral-aural communication among children who have hearing impairments. It addresses techniques and methods of hearing measurement and amplification of sound as well as the interpreter's role in audiological evaluation and speech language therapy.

SPA 3690 Communication Disorders in the Public Schools (3) AS CSD
PR: DPR. (Non-major course only). An examination of the speech, language and hearing problems affecting school-age children and the classroom teacher's role in the detection, prevention and amelioration of communication disorders.

SPA 4050 Introduction to the Clinical Process MW (3) AS CSD
PR: SPA 3004 and SPA 3310. Observation and participation in speech-language pathology and audiology practicum in the University clinical laboratory. Ethical issues, multicultural concerns, and creativity are stressed through clinical and practical projects.

SPA 4201 Phonological Development and Disorders (3) AS CSD
PR: SPA 3004, SPA 3011. An examination of normal and deviant articulatory and phonological acquisition and behavior. Presentation of major theoretical orientations and the therapeutic principles based upon them.

SPA 4210 Vocal Disorders (3) AS CSD
PR: SPA 3011 and SPA 3310. A comprehensive study of the neurological and physiological aspects of voice disorders. Differential diagnosis, principles of therapeutic intervention, and procedures for children and adults will be stressed.

SPA 4222 Fluency Disorders (3) AS CSD
PR: SPA 4201. A comprehensive study of disfluent speech behavior. Differential diagnosis, principles of therapeutic intervention, and procedures for children and adults will be studied. Major theories and models of the development and treatment of fluency disorders are also presented.

SPA 4335 Sign Language Codes (3) AS CSD
PR: DPR. A review of the sign systems (SEE I, SEE II, L.O.V.E., and Signed English) used to code messages through the use of fingerspelling. The student will have the opportunity to practice one of the sign systems.

SPA 4555 Counseling of Communicatively Handicapped and Family (3) AS CSD
PR: SPA 3611 and SPA 3310. Discussion of role of counseling in the treatment of communication disorders. Based on exploration of theoretical constructs, this course demonstrates application of therapeutic methodologies to reduction of communication handicaps.

SPA 4613C Intermediate American Sign Language (4) AS CSD
PR: SPA 3612C, DPR. A continuation of the basic course which expands the student's signing skills and introduces American Sign Language (ASL) idioms. Provides a greater opportunity for skill development in ASL structure and idiomatic usage. One hour of laboratory course work is included.

SPA 4614C Advanced American Sign Language (4) AS CSD
PR: SPA 4613C, DPR. A continuation of the study of American Sign Language (ASL) at the advanced skill level. Added emphasis on idioms, body language, and facial expression as an integral part of ASL. An hour of laboratory course work is included.

SPA 4615C American Sign Language 4 (4) AS CSD
PR: SPA 4614C. This course is a continuation of the study of American Sign Language (ASL) at the highly advanced level. It provides added emphasis on skill development of the language, including storytelling and poetry. One-hour laboratory work is included.

SPA 4617C Structure of Sign Language (4) AS CSD
PR: SPA 4613C, DPR. This course is a basic introduction of semiotic and linguistic consideration of American Sign Language (ASL). It includes aspects of phonology, morphology, syntax, semantics, and discourse of ASL. A one-hour laboratory is incorporated into the coursework.

SPA 4624 Sign Language Codes (3) AS CSD
PR: CI. A review of the sign systems (SEE I, SEE II, LOVE, and Signed English) used to code messages through the use of sign. The student will have the opportunity to practice one of the sign systems.

SPA 4626 Fundamentals of Fingerspelling (2) AS CSD
PR: DPR. A concentrated study of technique in fingerspelling emphasizing clarity and rhythm in expression as well as receptive understanding.

SPA 4632 Nature and Needs of the Deaf and Hard of Hearing (3) AS CSD
A study of the effects of auditory disorders upon the organization and expression of behavioral patterns as they relate to motivation, adjustment and personality.

SPA 4654 ASL to English Consecutive Interpretation (2) AS CSD
PR: CR: SPA 4653. Students consecutively interpret conversational discourse of planned and unplanned conversational language samples from ASL to English with delays of a few seconds after the source utterance is finished. For majors only.

SPA 4655 English to ASL Consecutive Interpretation (2) AS CSD
PR: SPA 3650, SPA 3666; CR: SPA 4654. Students consecutively interpret conversational discourse from English to ASL with delays from conversational language samples of various lengths.
ranging from single utterances to discourse units of several
minutes duration. For majors only.

SPA 4656 Simultaneous Interpretation Monologic (4) AS CSD
PR: SPA 3650, SPA 3666. Students simultaneously interpret
monologic talk from ASL and from English with target language
beginning before the conclusion of the source utterance and
continuing as the student listens to the continuing source
utterance. For majors only.

SPA 4658 Simultaneous Interpretation Dialogic (4) AS CSD
PR: SPA 3650, SPA 3666. Students interpret dialogues from ASL to English
and from English to ASL with the target language production
beginning before the conclusion of the source utterance and
continuing as the student listens to the continuing source
utterance. For majors only.

SPA 4685 Practicum: Interpreting in Schools (1-8) AS CSD
This course is restricted to ITT majors. This course provides
practice sessions in school settings under supervision of an
experienced interpreter and course instructor. Each practicum
student will shadow an interpreter, and participate in discussion
about the overall performance.

SPA 4691 Senior Seminar in Interpreter Training (3) AS CSD
PR: SPA 4656. Students expand upon previously learned topics and
discuss factors that will affect their profession. Topics include:
professional organization, certification, ethics and discuss
best practices and will produce a professional portfolio. For
majors only.

SPA 4906 Independent Study (1-10) AS CSD
Indep. Study. Will allow UG students to work independently under
the supervision of Faculty members in the pursuit of content
gained independently. The course is repeatable for a total of 10
credits. Majors only.

SPA 4910 Directed Research (1-10) AS CSD
Directed Research will allow the UG student to obtain supervised
research experience under the direction of a Faculty member.
The course is repeatable for a total of 10 credits. Majors only.

SPA 4930 Selected Topics (1-6) AS CSD
PR: DPR. Intensive study of topics in Speech-Language Pathology,
Audiology, and/or Aural Rehabilitation conducted under the supervision of a faculty member.

SPA 4962 Undergraduate Comprehensive Examination (1) AS CSD
PR: SPA 4656. This purpose of this course is to ensure that graduates from ITT are thoroughly prepared for entry into the job
market. For majors only and repeatable if necessary. It consists of
2 parts: individual meetings with an advisor and a comprehensive exam.

SPA 4970 Honors Thesis (1-10) AS CSD
The student, under the supervision of a Faculty member will
formalize, conduct, analyze and report in writing a research project
under the direction of a Faculty member. The course is repeatable for a total of 10 credits. Majors only.

SPA 5101 Psychoacoustics (3) AS CSD
Relationship between physical auditory stimuli and psychological
response. Human perception of intensity, loudness, frequency,
and pitch. Impact of cochlear hearing loss and age on auditory

SPA 5132 Instrumentation (3) AS CSD
PR: SPA 5120, SPA 6930, SPA 5506. Instruction in the use of
clinical and laboratory instrumentation. Emphasis placed on
electronic circuitry, signal generation, filtering, and calibration.
Hands-on experience with equipment typically used in clinical
auditory research will be provided.

SPA 5150L Speech Science Instrumentation (3) AS CSD
PR: DPR or SPA 3011 or equivalents. Underlying principles and
laboratory exercises in the use of audio recording, acoustic
analysis, and clinical instrumentation.

SPA 5153 Quantitative Problem Solving in Speech Pathology and
Audiology (2) AS CSD
Fundamental mathematical and statistical concepts; meaningful,
practical, and interesting presentation. Students get a solid
foundation in the mathematical and statistical concepts in CSD
and apply concepts to solve practical or clinical problems.

SPA 5204 Advanced Clinical Phonology (3) AS CSD
The principles of generative phonology will be applied to the
assessments and treatment of phonological disorders. Emphasis
is placed on making a child’s phonology more functional for
communication purposes.

SPA 5303 Auditory Anatomy and Physiology (3) AS CSD
Provide a comprehensive understanding of the physiological
acoustics of the auditory periphery, neuroanatomy and
electrophysiology of the central auditory system, and
psychoacoustic principles as they relate to clinical audiologic
practice. For majors only.

SPA 5312 Peripheral and Central Auditory Tests (4) AS CSD
PR: DPR. The study of behavioral and electro physiologic clinical
tests designed to assess the functions of the peripheral and the
central auditory systems. Emphasis on normal and appropriate
intervention strategies. Prosthetic intervention, perceptual
intervention, communication strategies intervention, and
counseling issues.

SPA 5348 Language-Learning in the School-Age Years (3) AS CSD
PR: SPA 4201 and DPR. Metalinguistic and metacognitive
development are linked to the interactional demands of classroom
and clinical discourse; observational tools are applied to evaluation
and intervention planning.

SPA 5506 Speech-Language Pathology and Audiology Practicum
(1-8) AS CSD
PR: DPR. Participation in speech-language pathology and
audiology practicum in the University Communication Disorders
Center and selected field settings.

SPA 5552 Diagnostic Principles and Practices (3) AS CSD
PR: Admission to the graduate program or DPR. The
administration, evaluation, and reporting of diagnostic tests and
procedures used in assessment of speech and language
disorders.

SPC 2341 Persuasion SS (3) AS SPE
Examines the role of persuasion in public and social life. Students
will be introduced to key concepts and theories of
persuasion from a variety of historical and contemporary
perspectives. Students will use these concepts to create, analyze,
and respond to persuasive messages.

SPC 2600 Public Speaking SS (3) AS SPE
The nature and basic principles of human communication;
emphasis on improving speaking and listening skills common to
all forms of oral communication through a variety of experience
in public discourse.

SPC 3212 Communication Theory (3) AS SPE
PR: SPC 2600 and COM 2000 each with a C or above or CI. The
study of source, message, and receiver variables in human
communication; communication settings; descriptive and
predictive models of communication; communication as a process.

SPC 3230 Rhetorical Theory HP (3) AS SPE
PR: SPC 2600 and COM 2000 each with a C or above or CI. This
course surveys the foundations and historical evolution of major
concepts, issues, theorists, and approaches to the study of
rhetoric from Plato to recent contemporary theorists.

SPC 3301 Interpersonal Communication SS (3) AS SPE
A study of interpersonal communication in informally structured
settings with emphasis on the understanding, description, and
analysis of human communication.

SPC 3425 Group Communication 6A (3) AS SPE
PR: SPC 2600 and COM 2000 each with a C or above or CI. A survey of theory and research in group communication. Group
discussions and communication exercises to increase awareness of
the dynamics of human communication in small group settings.

SPC 3513 Argumentation and Debate (3) AS SPE
PR: Junior standing or CI. Study of principles of argumentation
as applied in oral discourse, analysis of evidence and modes of
reasoning, Practice in debate preparation and delivery.

SPC 3602 Advanced Public Speaking (3) AS SPE
PR: SPC 2600 and COM 2000 each with a C or above or CI. Study
and application of communication strategies in speaking
extemporaneously and from manuscript. The course includes
study of selected public addresses as aids to increased
understanding of speaking skill.

SPC 3631 Rhetoric of the Sixties HP (3) AS SPE
Survey of the rhetorics associated with the civil rights movement,
the Great Society, the anti-Vietnam War movement, the
counterculture, the black power movement, and the women’s
movement.

SPC 3653 Popular Forms of Public Communication (3) AS SPE
PR: COM 2000 with C or above of consent of instructor (CI).
Analysis of public communication with emphasis on various
presenational forms.

SPC 3680 Rhetorical Analysis (3) AS SPE
PR: SPC 2600 and COM 2000 each with a C or above or CI. This
course introduces students to fundamentals of message analysis.
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<tr>
<th>Course Code</th>
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<td>Communication and Cultural Diversity SS</td>
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<td>AS SPE</td>
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<tr>
<td>SPC 4201</td>
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<td>SPC 4305</td>
<td>Communicating Emotions 6A</td>
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<td>SPC 5930</td>
<td>Discourses in Discourse 3</td>
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**Notes:**
- **SPC 3710 Communication and Cultural Diversity SS:** Examination of communication and cultural diversity within the United States. Cultural groups include gender, racial and ethnic (e.g., African American, Latino American, Asian American), social class, age and generation, religious (e.g., Jewish) and physical ability.
- **SPC 4201 Oral Tradition MW:** Study of orality, its forms, functions, and transformations, in traditional and literate societies from folkloric and psychological traditions and from contemporary communication and cultural studies perspectives.
- **SPC 4305 Communicating Emotions 6A:** Study of emotional experience, what emotions mean to us, how we talk about them, and the ways group and cultural membership influence them. Focus on attachment and loss in romantic, family and group relationships.
- **SPC 4310 Relationships on Film:** Examination of the ways in which cinema inscribes conceptions and meanings of romance, love, intimacy and sexuality. Focus on systems of interpretation fostered by cinema representations of intimacy, sexuality, emotional, subjectivity, and betrayal.
- **SPC 4431 Family Communication:** Examines the processes and functions of communication in family relationships. Examination of scholarly and popular literature on family structures, family systems, family development, and family stories. Analysis of families in fiction and cinema.
- **SPC 4632 Rhetoric and Social Change 6A MW:** Examination of social change is symbolized and motivated in the rhetorics of institutions, campaigns, social movements and individuals.
- **SPC 4683 Rhetorical Analysis of Mass Media:** Examination of the ways in which mass media inscribes conceptions and meanings of social class, age and generation, religious (e.g., Jewish) and physical ability.
- **SPC 4714 Communication, Culture and Community MW:** Examines the relationships among culture, communication, institutions, and public and private life. Students explore the possibilities and problems of contemporary forms of community through service in a volunteer organization.
- **SPC 4900 Directed Readings 1-3:** Senior standing, minimum GPA of 2.5, 15 hours of core requirements and 9 elective hours completed, and/or CI. Individualized reading with professor to complement undergraduate research projects.
- **SPC 4903 Honors Readings 3:** Admission to Communication Honors Program, minimum GPA of 2.5, 15 hours of core requirements and 9 elective hours completed, and/or CI. Individual investigations with faculty supervision.
- **SPC 4905 Undergraduate Research 1-3:** Senior standing, minimum GPA of 2.5, 15 hours of core requirements and 9 elective hours completed, and/or CI. Individual research and preparation of an undergraduate honors thesis.
- **SPC 4930 Selected Topics 1-3:** Senior standing, minimum GPA of 2.5, 15 hours of core requirements and 9 elective hours completed, and/or CI. Variable topics.
- **SPC 4932 Senior Seminar in Communication 3:** Senior standing, minimum GPA of 2.5, 15 hours of core requirements and 9 elective hours completed, and/or CI. Exploration of selected topics of current significance to the several areas of communication through group discussion and research.
- **SPC 4970 Honors Thesis 3:** Admission to Communication Honors Program. Involves individual research and preparation of an undergraduate honors thesis.
- **SPC 5238 Topics in Rhetorical Analysis 3:** Introduction to a variety of critical perspectives applied to rhetoric in specialized contexts. Topics vary depending upon interest of students and faculty.
- **SPC 5930 Discourses in Discourse 3:** Variable topics course.
SPN 3520 Spanish American Civilization (3) AS WLE
PR: SPN 3520 or equivalent. Study of an author, movement, or theme. Focus on the culture and civilization of Spanish America. For majors and non-majors.

SPN 4313 Teaching Elementary (K-6) Social Studies (3) ED EDE
PR: Admission to College of Education and Reading. This course is designed to study techniques and strategies employed by K-6 social studies teachers that are effective in motivating elementary school aged youth to acquire the information, skills, and modes of reasoning unique to the social sciences.

SSE 4333 Teaching Middle Grades Social Science (3) ED EDW
This course is designed to study techniques and strategies employed by social sciences teachers that are effective in motivating teenage youth to acquire the information, skills, and modes of reasoning unique to the social sciences. Students are expected to plan and present instructional plan(s) demonstrating use of various methods, techniques, and materials that achieve concrete outcomes. Theoretical foundations of social studies are also studied. Fieldwork is required.

SSE 4334 Teaching Secondary Grades Social Science (3) ED EDW
PR: SSE 4333. This course is a continuation of SSE 4333 with further development of the instructional techniques and strategies and the information, skills, and modes of reasoning unique to the social sciences with an emphasis on the secondary school environment. The teaching profession, school settings, legal, and classroom management issues are also studied. Fieldwork in a high school is required.

SSE 4335 Teaching Social Science Themes (3) ED EDI
PR: SSE 4333 for Undergraduate Students; SSE 5331 for Graduate Students; SSE Majors only. The course is a laboratory-based, capstone course in which knowledge, skills, and dispositions are demonstrated by students teaching social studies co-curricular units using the thematic approaches adopted by the National and State accrediting bodies.

SSE 4380 Global And Multicultural Perspectives in Education (3) ED EDW
PR: EDG 3604 and EDG 4620, or DPR. Examination of the major issues surrounding global and multicultural perspectives in education. Available to non-Education majors.

SSE 4600 Reading and Basic Skills in the Social Studies Class (3) ED EDW
Reading skills and other basic skills as applied to the social studies are examined. Students plan and present instruction appropriate to the social studies classroom. Fieldwork in middle or senior high schools is required. Restricted to majors.

SSE 4640 Communication Skills in the Social Sciences (2) ED EDW
PR: SSE 4333, SSE 4334. This course emphasizes preparation for instruction and demonstration of instructional techniques in social sciences covered in SSE 4333 and SSE 4334 with an emphasis on students developing their communication, presentation, and organizational skills.

SSE 4670 Economics USA: Principles of Economics for Teachers (3) ED EDW
S/U only. A television course focusing on content and teaching methodology related to economics. Satisfactory completion will be determined by the instructor.

SSE 4936 Senior Seminar in Social Science Education (2) ED EDW
PR: SSE 4333 or senior high school setting. Restricted to majors.

SSE 4940 Internship: Social Science Education (1-12) ED EDW
CR: SSE 4936. S/U only. One full semester of internship in a public or private school. In special programs where the internship experience is distributed over two or more semesters, students will be registered for credit which accumulates from 9 to 12 semester hours.

SSE 5331 Foundations, Curriculum & Instruction of Social Science Education (3) ED EDI
Social studies curriculum, methods of instruction and social, philosophical and psychological foundations are examined. Social studies methods are studied and presented in an instructional plan(s) appropriate to middle and senior high school levels demonstrating command of the course content.

SSE 5332 Methods & Strategies in Social Science Education (3) ED EDI
Social studies methods and strategies are examined with an emphasis on the secondary school environment. The teaching profession, school settings, and current issues are examined. Students are expected to plan and present instructional plan(s) appropriate to senior high school demonstrating command of the course content.

SSE 5641 Reading and Basic Skills in the Content Area (3) ED EDI
Reading skills and the other basic skills as applied to the social studies are examined. Students are expected to plan and
present instructional plan(s) appropriate to the social studies classroom. Demonstrating content of the course content.

Fieldwork in a middle school is required.

SSE 5644 Economic Decision-Making for Teachers (3) ED EDW
PR: Admission to College of Education or DPR. Provides teachers (K-12) with an understanding of economic concepts. Emphasis will be on the world economy. Teachers analyze economic/business concepts from the perspective of individuals currently operating businesses in the Tampa Bay area. Focus of the instruction is on the operational world of businesses.

STA 1022 Basic Statistics 6A QM (3) AS MTH
PR: C (2.0) or better in MAT 1033, or 440 or better SAT Math score, or 19 or better ACT Math Score, or 72 or better Elementary Algebra CPT score. No credit for Mathematics majors. Basic philosophy of statistical thinking. Acquisition of data. Techniques for organizing and presenting statistical data. Sample mean, variance and standard deviation. Statistical decisions—estimation and hypothesis testing. Design of experiments, linear association and prediction. Statistical software: MINITAB.

STA 2023 Introductory Statistics I 6A QM (4) AS MTH
PR: C (2.0) or better in MAT 1033, or 440 or better SAT Math score, or 19 or better ACT Math Score, or 72 or better Elementary Algebra CPT score. No credit for Mathematics Majors. Descriptive statistics, basic probability principles, discrete and continuous probability distributions: binomial, Poisson, uniform, normal, t, chi-square and F; hypothesis testing, correlation, regression; response surfaces; Latin squares, Split Plots, etc. The course presents application of these concepts to the social sciences, life sciences, physical sciences, engineering and business.

STA 2122 Social Science Statistics 6A QM (3) AS ISS
Descriptive and inferential statistics - through ANOVA, correlation-regression, chi-square and non-parametrics. The course presents statistics with the view that numbers are a limited, but important aspect of understanding the world. Draws concepts and hypothesis from a wide range of disciplines.

STA 3024 Introductory Statistics II 6A (3) AS MTH
PR: STA 2023 or CC. Factorials, ANCOVA; multiple curvilinear regression; response surfaces; Latin squares, Split Plots, incomplete designs; distribution free methods.

STA 4321 Essentials of Statistics 6A (3) AS MTH

STA 4442 Introduction to Probability 6A (3) AS MTH
PR: MAG 2313. Introduction to probability theory using calculus. Basic ideas of probability and random variables, discrete probability functions, continuous probability densities, joint distributions, transformations of random variables, moments and generating functions of random variables, limit theorems.

STA 5446 Probability Theory I (3) AS MTH
PR: STA 4442 and MAA 4212 or CI. Axioms of probability, random variables in Euclidean spaces, moments and moment generating functions, modes of convergence, limit theorems for sums of independent random variables.

STA 5526 Non-Parametric Statistics (3) AS MTH
PR: STA 5326 or CI. Theory and methods of non-parametric statistics, order statistics, tolerance regions, and their applications.

SUR 5100 SC Engineering Land Surveying (3) EN EGX
Principles of land surveying for engineering practice. Traverses, levels, boundary surveys, route surveys, coordinate geometry, and mapping.

SYA 3110 Classical Theory (3) AS SOC
PR: SYG 2000 or CI. The analysis of the philosophical foundations, central principles, and historical development of Sociological theory. Required for Sociology majors and minors.

SYA 3120 Contemporary Theory (3) AS SOC
PR: SYA 3110 and SYG 2000 or CI. An examination of recent trends in sociological theory. Emphasis is on theories examining symbolic interactions, lived experience, popular culture, and social structures.

SYA 3301 Research Methods (3) AS SOC
PR: STA 2122 or equivalent. Introduction to the scientific method and its application to social science research. Research design, sample design, and critical evaluation of social research. Required for Sociological concentration K-12 instructional programs.

SYA 3310 Qualitative Inquiry 6A LW (4) AS SOC
PR: SYG 2000 or CI. DPR. Exploration of human relationships and behaviors, orientations, and the larger culture through research techniques such as interviews, participant observation, life histories, and narratives.

SYA 4304 Sociological Research Experience (1-3) AS SOC
PR: SYG 2000 and class standing of sophomore, junior or senior. A flexible-unit course for advanced undergraduate students interested in participating in an ongoing faculty research project. Students will complete selected research tasks (background research, data collection and data analysis) with faculty supervision.

SYA 4910 Individual Research (1-3) AS SOC
PR: Four courses in sociology, including SYA 3300, upper level standing, at least 3.0 overall GPA, or CI. DPR. Content depends on student contract. A contract of the research topic and the sponsoring faculty member must be signed before class registration.

SYA 4930 Topics in Sociology (3) AS SOC

SYA 4949 Sociological Internship (1-6) AS SOC
PR: Senior or graduate standing in Sociology plus CI. Supervised placement in community organization or agency for a minimum of 10 hours of volunteer work per week, and a weekly seminar on applying sociological skills and methods in the placement setting.

SYD 3411 Peasant Perspectives AF (3) AS SOC
PR: SYG 2000 or 6 hours of other Social Sciences Gen. Ed. coursework or CI. Examines the applicability of sociological concepts to peasant life around the world, and explores the roles played by "western" societies in creating and sustaining the conditions under which peasants live.

SYD 3700 Racial and Ethnic Relations SS HP (3) AS SOC
Comparative study of interracial relations, social tensions, attitudes, and modes of adjustment in various areas of the world.

SYD 4410 Urban Sociology (3) AS SOC
The social structure of the community in modern industrial societies. Analysis of community change.

SYD 4411 Urban Life (3) AS SOC
PR: SYG 2000 This course provides a number of insights into how living in cities has changed throughout history, how it varies culturally, and how it has been theorized in sociology.

SYD 4800 Gender and Society (3) AS SOC
Historical and current issues surrounding gender in America. Emphasis on exploring the causes, meaning, and consequences of gender differences, interpersonal relationships, and institutional participation.

SYG 2000 Introductory to Sociology SS (3) AS SOC

SYG 2001 Sociology Problems SS (3) AS SOC
The analysis of social causes and dimensions of major public issues such as crime, the environment, inequality, gender, employment, and substance abuse.

SYG 2412 Marriage (3) AS SOC
Study of pre-marital relations. Social, cultural, and personal factors related to success and failure in mate selection and marriage. Does not count for sociology major credit.
SYG 3011 Social Problems Through Film (3) AS SOC
PR: SYG 2000 or SYG 2010. Examines how sociologists define and study social problems, and investigates the role of the popular media in the construction of social problems. Explores the solutions aimed at social problems in a comparative and historical perspective, work, family, activism, spirituality, and sexuality through short stories, poetry, and scholarly research.

SYO 3120 Sociology of Families (3) AS SOC
With a goal to understand American families in the present, this course will examine variations in family types by social class, race, ethnicity, and historical era. Exploration of current controversies about how families should be organized and about what they should do for their members as well as social policies related to families.

SYO 3200 Sociology of Religion (3) AS SOC
PR: SYG 2000 or CI. An examination of the meanings of religion lived in the experience of the contemporary United States. Includes the construction and maintenance of religious meanings and communities, the impact of those meanings and communities on daily lives, use and impact of religious discourse in daily lives, social meaning by religious beliefs.

SYO 3500 Social Organization (3) AS SOC
PR: SYG 2000 or CI. Social organization in the broadest sense, including institutions and associations, as well as variations in roles and status.

SYO 3530 Poverty, Inequality, and Stratification (3) AS SOC
Introduction to one of the most common features of modern society, social inequality. A survey of perspectives to explain the causes of inequality and reasons for its persistence.

SYO 4250 Sociology of Education (3) AS SOC
PR: SYG 2000 Application of sociological theory to the social institution of education. Primary attention directed toward the social organization of educational systems.

SYO 4300 Political Sociology (3) AS SOC
PR: SYG 2000 or CI. An examination of the social factors that affect governmental policies, politics, and political behavior.

SYO 4370 Occupations and Professions (3) AS SOC
PR: SYG 2000 or CI. A comparative analysis of professions, particularly medicine, law, teaching, allied health professions, engineering. Focus on the process of professionalizing service occupations like police work, business management, public administration and social work.

SYO 4400 Medical Sociology (3) AS SOC
PR: SYG 2000 or CI. The study of illness and the sick person including the roles of health professionals, beliefs, and practitioners. Focus on the hospital as an organization, the cost, financing, and politics of health care.

SYO 4600 Disability and Society MW (3) AS SOC
PR: SYG 2000 or CI. Examination of the applicability of sociological concepts to the experience of disability, and of disability as a means to a better understanding of the nature of social experience.

SYO 5365 Industrial Sociology (3) AS SOC
An examination of the social forces that help shape industrial perceptions, behaviors, and personality. The study of ways individuals develop identity and self-worth.

SYO 5360 Sociology of Sexualities (3) AS SOC
Explores the interactions, among and between people, and people and institutions that form the boundaries through which sexualities are understood in the United States. Addresses interactions with and within medical and religious institutions, racial/ethnic cultures, families and popular culture.

SYO 3304 Constructing Social Problems (3) AS SOC
Examines how social actors, media, politicians, and scientists construct public images of social problems; analysis of the process of forming social policy and how public images of social problems shape the characteristics of social service agencies.

SYO 3562 Family Violence (3) AS SOC
An exploration of the complexity of the causes and consequences of physical and emotional violence among family members. Topics include the meanings and behaviors of violence, the process of help-seeking, and social interventions for offenders and victims. Open to nonmajors.

SYO 4012 Emotions in Society (3) AS SOC
PR: SYG 2000 or SYG 2010. Examines the theories, concepts, and larger social contexts of emotions, and investigates sociological research on feelings such as anger and fear; pride and shame; love, friendship and sympathy; sadness and depression; grief and hope.
THE 4174 New British Theatre and Drama 6A MW LW (3) VP TAR
PR: THE 2305 and Junior Standing. A study of contemporary theatrical practice and key dramatic texts in the British Isles. This course is restricted to majors.

THE 4180 Theatre Origins 6A MW LW (3) VP TAR
PR: THE 3110 or THE 3111 and one of the following: THE 4320, THE 4330, THE 4360, THE 4401, THE 4434, THE 4435, THE 4442, THE 4480. Open to senior non-majors with CI. An analysis of the development of theatre out of myth, ritual, and liturgy. Emphasis placed on what attempts to understand the resulting phenomena (e.g. Aristotle’s Poetics) can teach us about the nature of our art. Either THE 4180 or THE 4562 is required of all theatre majors.

THE 4264 History Of Costume (3) VP TAR
PR: Sophomore standing. Open to upper level non-majors with CI. A survey of clothing and dress from Ancient Egypt to the 20th Century with an emphasis on cultural and social influences. (A requirement in the design track/costume.)

THE 4265 Architecture And Decor (3) VP TAR
PR: Sophomore standing. Open to upper level non-majors with CI. A survey of architecture and furniture from ancient Egypt to the 20th Century. (A requirement in the design track/architecture.)

THE 4320 Theatre of Myth and Ritual/Northern European (950-1600) & Oriental (400-1200) 6A MW LW (3) VP TAR
PR: THE 3110 or THE 3111. Open to upper level non-majors with CI. An investigation into the interrelationship of myth, ritual, and theatre. Considers northern European liturgical and secular plays as compared to Hindu, Chinese, and Japanese drama.

THE 4330 Shakespeare for The Theatre 6A MW LW (3) VP TAR
PR: TPA 2200. This course is a selective study of special emphasis on their performance values. Web-based version open to non-majors with CI; campus based version restricted to majors.

THE 4350 The 19th Century Theatre Revolution 6A LW (3) VP TAR
PR: THE 3110 or THE 3111. Open to upper level non-majors with CI. Survey of the European art theatre revolution against the romantic realism of the commercial stage and its effect on subsequent theatrical art. Required for Theatre majors.

THE 4401 American Drama 6A MW LW (3) VP TAR
PR: THE 2305 and Junior Standing. A course in the function of the script for the theatre artist treating materials in the American theatre. This class is restricted to majors only.

THE 4434 Caribbean Theatre 6A MW LW (3) VP TAR
PR: THE 2305. CR: THE 3110 or THE 3111. Open to upper level non-majors with CI. This course is a study of plays and popular theatrical forms of the Caribbean. The student will investigate the social and political forces that shape the culture of the Caribbean, the residual effects of the colonialism and the turbulence of independence as expressed in the dramatic art and theatre of the East Indies.

THE 4435 Theatre of Pluralism 6A MW LW (3) VP TAR
PR: THE 3110 or THE 3111. Open to upper level non-majors with CI. A study of the practice of theatre as it reflects cultural heritage, gender, race and sexual orientation. Study of contemporary scripts, critical and artistic statements.

THE 4442 Comedy of The Classic And Neo-Classic Stage 6A LW (3) VP TAR
PR: THE 3110 or THE 3111. Open to upper level non-majors with CI. A study of comedic function in scripts from Greek and Roman, Restoration and French Neoclassic of the late 17th century and other plays from the late 18th and late 19th centuries which reflect similar characteristics.

THE 4480 Drama-Special Topics (3) VP TAR
PR: THE 3110 or THE 3111. Open to upper level non-majors with CI. A study of a significant playwright or grouping of playwrights, reflecting similar characteristics. Other plays from the late 18th and late 19th centuries which focus on the theory and practice of performance.

THE 4560 Honors Seminar (2) VP TAR
Enrollment limited to upper level majors who have been formally admitted to the department honors program. Not available S/U. Readings in the literature, history and theory of the stage in preparation for THE Theatre Honors Practicum. Past topics have included New German Theatre, Popular Theatre, New American Theatre, Jacobean Theatre.

THE 4594 Honors Practicum (3) VP TAR
PR: THE 4593. Honors Practicum grows out of the Honors Seminar and engages students in workshops or production with guest artists. Past artists have included the Free Theatre of Miami, the San Francisco Mime Troupe, playwrights Eric Overmeyer, Jeff Jones and Gary Hill.

THE 4595 Honors Thesis (1-3) VP TAR
PR: THE 4594. A practical or written thesis related to the seminar and practicum and approved by the department honors committee.

THE 4761 Methods of Teaching Theatre for Adolescents (3) VP EDC
Methods of effective drama and theatre instruction in middle school, junior and high schools, recreation centers, community, and professional theatres.

THE 4905 Directed Studies (1-4) VP TAR
Independent study in the various areas of Theatre. Course of study and credits must be assigned prior to registration.

THE 4930 Selected Topics In Theatre (1-8) VP TAR
PR: CI. The content of the course will be governed by student demand and instructor interest. May be lecture or class discussion or studio format.

THE 5909 Directed Studies (1-6) VP TAR
PR: CI and CC. Independent studies in the various areas of Theatre. Course of study and credits must be assigned prior to registration.

THE 5931 Selected Topics In Theatre (1-8) VP TAR
PR: CI. The content of the course will be governed by the student demand and instructor interest. May be lecture or class discussion or studio format.

TPA 2200 Introduction to Technical Theatre I (3) VP TAR
CR: TPA 2290L or CI. An introductory course in technical production including stage lighting, costume construction, theatre production/organization, and sound. Required for Theatre majors. Requires sequential semester enrollment with TPA 2211 and TPA 2291L. Open to non-majors.

TPA 2211 Introduction to Technical Theatre II (3) VP TAR
CR: TPA 2291L or CI. An introductory course in technical production including stage lighting, costume construction, and sound. Required for Theatre majors. Requires sequential semester enrollment with TPA 2200 and TPA 2290L. Open to non-majors.

TPA 2248 Workshop In Stage Makeup (1) VP TAR
Beginning theory and practice in make-up for the stage. Open to non-majors. Theatre majors given preference. A studio course.

TPA 2290L Technical Theatre Lab I (1) VP TAR
CR: TPA 2200 or CI. A practical laboratory involving the pre-performance preparation of all technical aspects of a major production such as: painting, sewing, lighting, and sound. Students are assigned two areas of study per semester. Required of all Theatre majors. Open to non-majors.

TPA 2291L Technical Theatre Lab II (1) VP TAR
CR: TPA 2211 or CI. A practical laboratory involving the pre-performance preparation of all technical aspects of a major production such as: painting, sewing, lighting, and sound. Students are assigned two areas of study per semester. Required of all Theatre majors. Open to non-majors.

TPA 2292 Production Involvement I (1) VP TAR
PR: TPA 2200, TPA 2290L, TPA 2211, TPA 2291L or CI. The rehearsal, construction, and performance of major theatrical works. Assignments are made by a faculty committee following the students completion of a PI request form, available in the Theatre Office, and enrollment in this course.

TPA 3007 Introduction to Design II (3) VP TAR
PR: TPA 2200, TPA 2211, TPA 2290L, and TPA 2291L. Open to non-majors. This course will include lectures, demonstrations, individual student presentations, and studio activities. The course work will provide an introduction to the various aspects of design including: two and three dimensional design, basic presentation and visual communication skills, research, and project analysis/organization.

TPA 3008 Introduction to Design I (3) VP TAR
PR: TPA 3007. This course will include lectures, demonstrations, individual student presentations, and studio activities. The course work will provide an introduction to the various aspects of design including: two and three dimensional design, basic presentation and visual communication skills, research, and project analysis/organization. Open to non-majors.

TPA 3208 Drafting and CAD I (3) VP TAR
PR: TPA 2200, TPA 2290L, and TPA 2291L. The course will include lectures, demonstrations, individual student presentations, and studio activities. The course work will provide an opportunity to develop skills and techniques in the visual presentation of various design and technical drawings. Open to non-majors.
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- **TPA 3221 Lighting: Theory And Practice (3) VP TAR**
  - Pre-Requisite: TPA 3008 or CI. Open to non-majors with CI. Credit for study of lighting design concepts and practical experience with computer lighting systems. Required in the design track/ lighting.

- **TPP 4310 Directing I (3) VP TAR**
  - Pre-Requisite: TPP 3155 or TPP 3921. Preparatory for professional directing; stage management and the activities of the performance production crews. Placement by audition. If cast in production student must accept role. Required of all Theatre majors. May be repeated. Open to non-majors with CI.

- **TPP 2500 Body Disciplines (2) VP TAR**
  - Pre-Requisite: TPP 2190. Laboratory course in various disciplines or systems and understanding the body’s motive powers, with focus on their use for the stage performer.

- **TPP 3921 Acting Studio II (8) VP TAR**
  - Pre-Requisite: TPP 3920. Continuation of Acting Studio I with greater emphasis on addressing individual needs in order to explore emotionally complex characters and scenes in an intensive and systematic way. This course will be team taught by the Performance faculty.

- **TPP 4140 Styles Of Acting (3) VP TAR**
  - Pre-Requisites: TPP 4180 and CI. Examination of the actor’s craft and skills needed to fulfill the demands of classical theatre forms.

- **TPP 4180 Advanced Scene Study (3) VP TAR**
  - Pre-Requisites: TPP 3920 and CI. An acting workshop focusing on application of character development and rehearsal techniques over a sustained period leading toward a project showing at semester’s end.

- **TPP 4190 Studio Theatre Performance II (1) VP TAR**
  - Pre-Requisite: TPP 2190. A practical laboratory involving the rehearsal and performance of a major production. Activities may include acting, directing, stage management, and the activities of the performance production crews. Placement by audition. If cast in production student must accept role. Required of all Theatre majors. May be repeated. Open to non-majors with CI.

- **TPP 4220 Audition Workshop For Actors (2) VP TAR**
  - Pre-Requisites: TPP 3155 or TPP 3230. Open for professional audition; discussion of professional objectives.

- **TPP 4310 Directing I (3) VP TAR**
  - Pre-Requisites: TPP 3155 or TPP 3230. An elective sequence in directing. A workshop course in which the student first encounters the basic tasks of the director by preparing and directing one or two scenes.
and then progresses to more complex scene work in a variety of styles and finally proceeds to the short play or theatre pieces.

TPP 4311 Directing II (3) VP TAR
PR: TPP 4310 and CI. An elective sequence in directing. A workshop course in which the student first encounters the basic tasks of the director by preparing and directing one or two scenes; and then progresses to more complex scene work in a variety of styles and finally proceeds to the short play or theatre pieces.

TPP 4600 Writing For The Theatre (3) VP TAR
PR: TPP 3111 or THE 3111. An elective sequence in writing, in which the student first encounters the problems unique to dramatic language and situation, then progresses to complexities of character, plot, and stage dynamics. Normally the aim would be to complete several performance-worthy self-contained scenes.

TPP 4920 Senior Workshop For Actors (3) VP TAR
PR: TPP 2500, TPP 3790, TPP 3155, or TPP 3921. A workshop in advanced vocal and movement techniques.

TPP 4923 Music Theatre Workshop (3) VP TAR
PR: TPP 2110 and audition. Open to non-majors by audition only. Exploration of Musical Theatre materials and performance techniques for the performer, individual and ensemble work.

TSL 4374 Methodology of Teaching English Overseas (3) AS WLE
PR: Upper-level standing. Designed to introduce and prepare the enrollee in the various facets of teaching English as a foreign language in the overseas setting. It will include aspects of teaching verbal skills and comprehension as well as writing. It involves a practicum at the English Language Institute on campus.

TSL 5321 ESOL Strategies for Content Area Teachers (3) AS WLE
Course designed for public school teachers working with limited English Proficient (foreign) students in the classroom. The new ESOL requirements specify that this course be offered to content area teachers and to ESOL teachers.

TSL 5371 Methods of Teaching English As A Second Language (3) AS WLE
Analysis of the methods of teaching English pronunciation and structure to speakers of other languages.

TSL 5372 ESOL Curriculum and Instruction (3) AS WLE
Analysis of the methods of teaching English pronunciation and structure to speakers of other languages.

TSL 5471 Language Testing (3) AS WLE
PR: TSL 5371. Lecture course on testing English as a second/foreign language.

TSL 5525 Cross-Cultural Issues in ESL (3) AS WLE
PR: LIN 5700. Lecture course on cultural issues in Teaching English as a Second/Foreign Language.

TTE 4004 Transportation Engineering I (3) EN EGX
PR: EGN 3321. Principles of surface transportation system development, design, and operations; administration, modal characteristics, capacities, and functional classifications; vehicle kinematics, human factors and minimum design standards; traffic flow theory and queuing, capacity and signalization; transportation planning and economics.

TTE 4004 Transportation Engineering II (3) EN EGX
PR: TTE 4004. Techniques for the geometric route design of surface transportation systems; horizontal and vertical alignments. Spiral curves, superelevations and earthwork analysis; drainage, soils, and a rigid and flexible pavement design; right-of-way acquisition and Environmental Impacts; site layout & design, and operation of alternate modes including bus, air, rail, water, and pipeline facilities and terminals.

TTE 5205 Traffic Systems Engineering (3) EN EGX
PR: TTE 4004 or equivalent. Traffic models, intersection analysis, capacity analysis, data methods collection, parking studies, vehicle and speed studies, freeway management, and advanced technologies.

TTE 5501 Transportation Planning and Economics (3) EN EGX
PR: College Algebra & CI. Fundamentals of urban transportation planning; trip generation, trip distribution, modal split, traffic assignment; introduction to environmental issues; analysis, evaluation an choice of transportation alternatives.

URP 4050 City Planning and Community Development (3) AS POL
An introduction to the development, role, and components of city planning, and to the political and administrative policies of government in attempting to regulate or control urbanization.

URP 4052 Urban and Regional Planning (4) AS GPY
PR: GEO 2400, GEO 3602. The geographic foundations of the modern city, metropolitan development, and the trend toward megalopolis. Examined are the political problems of conflicting jurisdictions at the local, county, state, national, and international levels.
provide a framework for examining behavior, physiology, and ecology in an explicit evolutionary context. Vertebrates common to Florida and the southeastern United States will be emphasized.

ZOO 2710C Anatomy of Chordates (4) AS BIO

ZOO 3205C Advanced Invertebrate Zoology (4) AS BIO
PR: BSC 2010, BSC 2010L, BSC 2011, BSC 2011L & CHM 2046, CHM 2046 & MAC 1105 or higher-level MAC course, or STA 2023. CP: PCB 3023 or PCB 3043 or PCB 3063 or PCB 3712. An introduction to the major invertebrate groups, with emphasis on local forms. Fieldwork required. Lecture and Laboratory.

ZOO 3713C Comparative Vertebrate Anatomy (4) AS BIO
PR: BSC 2010, BSC 2010L, BSC 2011, BSC 2011L & CHM 2046, CHM 2046 & MAC 1105 or higher-level MAC course, or STA 2023. CP: PCB 3023 or PCB 3043 or PCB 3063 or PCB 3712. Anatomy of selected vertebrate types emphasizing evolutionary trends. Lecture and Laboratory.

ZOO 4233 Parasitology (4) AS BIO
PR: BSC 2010, BSC 2010L and CHM 2210 and MAC 1105 or higher-level MAC course or STA 2023. CP: PCB 3023 or PCB 3043 or PCB 3063 or PCB 3712 and CHM 2211. Fundamentals of animal parasitology and parasitism, the biology of selected animal parasites, including those of major importance to man. Lecture and laboratory.

ZOO 4512 Sociobiology MW (3) AS BIO
This course is restricted to seniors. Not for major’s credit. An analysis of Animal and human behavior such as sex, territoriality, and aggression in the context of evolution.

ZOO 4513 Animal Behavior (3) AS BIO
PR: PCB 3023 or PCB 3043 or PCB 3063 & CHM 2210 & MAC 1105 or higher-level MAC course or STA 2023. CP: CHM 2211. An introduction to comparative animal behavior, with analysis of types of animal behavior, their function and evolutionary origin. Lecture only.

ZOO 4603C Animal Embryology (4) AS BIO
PR: PCB 3023 and CHM 2210 and MAC 1105 or higher-level MAC course or STA 2023. CP: CHM 2211. Structural and functional events involved in differentiation and morphogenesis. Lec.-Lab.

ZOO 4753C Histology (4) AS BIO
PR: PCB 3023, PCB 3063 & CHM 2210 & MAC 1105 or higher-level MAC course or STA 2023. CP: CHM 2211. Comparative approach to the study of tissues and the relation of their structure and function. Lecture and Laboratory.

ZOO 5458 Ichthyology (3) AS BIO
PR: Senior or GS in Biology. ZOO 2701C, CI. PCB 4674 is suggested. Evolution, systematics, structure, behavior, physiology, and ecology of fishes.

ZOO 5458L Ichthyology Lab (1) AS BIO
CR/PR: ZOO 5456 Laboratory portion of Ichthyology relating to evolution, systematics, structure, behavior, physiology and ecology of fishes.

ZOO 5463C Herpetology (4) AS BIO
PR: CI. Major aspects of amphibian and reptilian biology emphasizing fossil history, evolutionary morphology, sensory physiology, life history and reproductive behavior. Lec.-Lab. Field trip.

ZOO 5555C Marine Animal Ecology (4) AS BIO
PR: PCB 3043, senior standing. CI. Investigation of energy flow, biogeochemical cycles, and community structure in marine environments. Lec.-Lab.