ACG 2021 Principles of Financial Accounting (3) BU ACC
Pr: 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) BU ACC
Pr: ACG 2021 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) BU 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 organizations.

ACG 3103 Intermediate Financial Accounting I (3) BU ACC
Pr: ACG 2071 with a grade of "C" or better (not C-); ACG 2021 with a grade of "C" or better. 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) BU ACC
Pr: ACG 3103 and ACG 3341 with a grade of "C" or better. Continuation of ACG 3103. Topics covered include property, plant and equipment, intangibles, current liabilities, long-term debt, leases, tax allocation, statement of cash flows.

ACG 3341 Cost Accounting and Control I (3) BU ACC
Pr: ACG 2071 with a grade of "C" or better (not C-); ACG 2021 with a grade of "C" or better. 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) BU ACC
Pr: ACG 3103 and ACG 3341 with a grade of "C" or better (not C-). This course provides a basic understanding of well-controlled information systems in a variety of technological environments with added emphasis on the collection, processing, and reporting of accounting information.

ACG 4123 Intermediate Financial Accounting III (3) BU ACC
Pr: ACG 3113 with a grade of "C" or better (not C-). Theory and practice underlying stockholders' equity, dilutive securities and EPS, derivatives, revenue recognition, post-retirement benefits, error analysis, full disclosure, and other current accounting topics.

ACG 4351 Cost Accounting and Control II (3) BU 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 4632 Auditing I (3) BU ACC
Pr: ACG 3113 and ACG 3401. This course provides a sound conceptual foundation of basic auditing process from the perspective of the internal auditing profession. Professional standards, ethics, legal responsibilities, and the utilization of technology are addressed.

ACG 4642 Auditing II (3) BU 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) BU ACC
Pr: Consent of Director. S/U only. Specialized independent study determined by the students' needs and interests.

ACG 4911 Independent Research (1-4) BU 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) BU ACC
The course content will depend on student demand and instructor's interest.

ACG 5205 Advanced Financial Accounting (3) BU ACC
Pr: ACG 4123 Accounting for business combinations, preparation of consolidating financial statements, Merger methods, budgeting, and partnership relationships, foreign operations and transactions, partnerships.

ACG 5505 Governmental/Not-For-Profit Accounting (3) BU ACC

ACG 5675 Internal and Operational Auditing (3) BU 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 auditing engagements.

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, physiological, psychological, and social characteristics of adult learners, and corresponding implications are explored.

ADV 3008 Introduction to Advertising (3) AS COM
Pr: MMC 2100 and MMC 3602. A study of the structures, functions, and persuasive language of advertising in mass media with attention to social, political, economic, and legal aspects.

ADV 3101 Advertising Creativity (3) AS COM
Pr: ADV 3008 and ECO 1000. Study of copywriting and art direction in the creation of advertising messages for alternative media platforms. Restricted to majors only.

ADV 3103 Radio-Television Advertising (3) AS COM
Pr: ADV 3008. 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 3008 (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 3350 Advertising Media Strategy (3) AS COM
Pr: ADV 3008 and ECO 1000. Problems, techniques, strategy of media research, planning, budgeting and effective utilization in advertising.

ADV 3350 Advertising Research (3) AS COM
Pr: ADV 3008. 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 3008 and ADV 3101. 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 4204 Advanced Advertising Creativity (3) AS COM
Pr: ADV 3101, ADV 3300, ADV 3500, ADV 4600, ECO 1000, MAR 3023. Focused on producing advertising messages, the curriculum integrates: ethics, branding, consumer insight, message strategy, conceiving, persuasion, copywriting, design, and presentations.

ADV 4301 Advanced Media Strategy (3) AS COM
Pr: ADV 3101, ADV 3300, ADV 3500, ADV 4600, ECO 1000, MAR 3023. Emphasizing decision making and critical thinking, this advanced course prepares students for the complexities of advertising media planning, implementation, and evaluation.

ADV 4310 Digital Media (3) AS COM
Pr: ADV 3101, ADV 3300, ADV 3500, ADV 4600, ECO 1000, MAR 3023. This course focuses on the impact of new communication technologies on consumer behavior and advertising practice.

ADV 4341 Media Management (3) AS COM
Pr: ADV 3101, ADV 3300, ADV 3500, ADV 4600, ECO 1000, MAR 3023. Focused on the management aspects of advertising, the curriculum integrates: ethics, branding, consumer insight, message strategy, conceiving, persuasion, copywriting, design, and presentations.

ADV 4570 Portfolio Building (3) AS COM
Pr: ADV 3101, ADV 3300, ADV 3500, ADV 4600, ECO 1000, MAR 3023. Emphasizing decision making and critical thinking, this advanced course prepares students for the complexities of advertising media planning, implementation, and evaluation.

ADV 4600 Advertising Management (3) AS COM
Pr: ADV 3008, ADV 3101, ADV 3300. Application of analytical planning concepts to advertising planning and decision-making.

ADV 4710 Portfolio Building (3) AS COM
Pr: ADV 3101, ADV 3300, ADV 3500, ADV 4600, ECO 1000, MAR 3023. This course goes beyond the basics of copy and layout to develop a broader understanding of the creative advertising process. It stresses creativity and organizational ability in portfolio building, along with technical skills in portfolio production.

ADV 4800 Advertising Campaigns (3) AS COM
Pr: ADV 3101, ADV 3300, ADV 3500, ADV 4600, ECO 1000, MAR 3023. A study of advertising strategies, principles, and techniques of advertising planning, including research, production, and evaluation of advertising campaigns.

ADV 4940 Advertising Practicum (1) AS COM
Pr: CI. For advertising sequence majors. S/U only. Practical experience outside the classroom where the student works for a professional advertising agency. Periodic written and oral reports to the faculty member coordinating the study.

AFA 2000 Introduction to the Black Experience [In Africa and Its Diaspora] (3) AF AF (3) 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 MW (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 (3) AS AFA
A study of social institutions as they relate to the African American community, with emphasis on social systems operating within and between African American communities.

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. The course takes an interdisciplinary approach. The course is not restricted to majors and is not repeatable for credit.

AFA 4335 Black Women in America 6A MW (3) AS AFA
An interdisciplinary survey of the contemporary experience of black women in America, including the African roots, myths, and realities surrounding that experience.

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

AFA 4500 Slavery in the Americas and the Caribbean MW (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 4502 Middle Passage MW AF HP (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 4900 Directed Readings (2-3) 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 Africana Studies (1-3) 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 America and European Expansion in Africa to 19th century; Contemporary Economic Problems in Africa.

AFA 5935 Issues in Africana 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 HP AF CAHU HHCP (3) AS HTHY
Introductory survey of African history, from the beginning of the continent's recorded history, to 1850. Course teaches skills reflected in the core foundations of knowledge in the General Education Curriculum.

AFH 3200 African History since 1850 HP AF CAHU HHCP (3) AS HTHY
Introductory survey of the history of Africa since 1850. Course looks at the state of the African continent in 1850 and the local and global factors that have shaped Africa's history since that time.

AFR 1101 The Foundation of the United States Air Force Pt 1 (1) USAFR
Intro Air Force Reserve Officer Training Corps (AFROTC) & US Air Force (USAF) includes lessons in officership/professionalism and an intro to communication skills. AFR 2001 Lead Lab augments course providing followership and leadership experiences.

AFR 1120 The Foundations of the United States Air Force Pt 2 (1) US AFR
After a year of Air Force installations, Core Values, Leadership, Team Building, and Diversity within Armed Forces. AFR 2001 Lead Lab augments course providing followership and leadership experiences, utilizing leadership and management principles.

AFR 1903 Directed Independent Studies (1-4) US AFR
PR: DPR Directed Independent Study.

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.

AFR 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 cadre 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 AF
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 WWI and WWII and how it affected the evolution of air power concepts and doctrine.

AFR 2140 The Evolution of USAF Aerospace Power Part 2 (1) US AFR

AFR 3220 Air Force Leadership and Management - I (3) US AFR
CR: AFR 2000, AFR 2001. An integrated management course emphasizing the individual as a manager in an Air Force milieu. The individual motivational and behavioral processes, leadership, communication, and group dynamics are covered to provide a foundation for the development of the junior officer's professional skills as an Air Force officer (O-1). The basics of decision making, utilization of analytic aids in planning, organizing, and controlling in a changing environment are emphasized as necessary professional concepts.

AFR 3231 Air Force Leadership and Management - II (3) US AFR
CR: AFR 2000, AFR 2001. A continuation of the study of Air Force advancement and leadership. Concentration is on organizational and personal values, management of forces in change, organizational power, politics, and managerial strategies and tactics are discussed within the context of the military organization. Actual Air Force cases are used to enhance the learning and communication processes.

AFR 4201 National Security Affairs & Preparation for Active Duty I (3) US AFR

AFR 4211 National Security Affairs & Preparation for Active Duty II (3) US AFR

AFS 2250 Culture and Society in Africa 6A AF (3) AS AFA
Topics include: African religion, value systems, art and the aesthetics, family and life-cycle, impact of Islam and Christianity and conflict of cultures.

AFS 3153 African Literature Survey 6A LW (3) AS AFA
PR: Junior or Senior standing. Explore the socio-historical, philosophical and political dynamics of African cultures through the study of African oral literature and the reading of African literary texts of various genres.

AFS 3251 Environmental - Cultural Study in Africa SS AF (3) AS AFA
CR: AFS 2250 or CI. Study tour. A study of traditional African society 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.

AMH 2010 American History I HP CAHU HHCP (3) AS HTHY
This class is an introductory survey of American history from Columbus and "First Contact" to Reconstruction.

AMH 2020 American History II HP CAHU HHCP (3) AS HTHY
A history of the United States with attention given to relevant developments in the Western Hemisphere from 1877 to the present.

AMH 3110 American Colonial History to 1750 (4) AS HTHY
A study of the evolution of American society from the Age of
Reconnaissance to 1750. Attention is given to the transformation from colonial to national powers with emphasis on ethnocultural conflict, religion, labor systems, and political culture.

AMH 3130 The American Revolutionary Era (4) AS HTY
Emphasis on the causes of the American revolution, the nature of Constitutional-making, and the establishment of the federal system. Also examines the significance of loyalism, violence, and slavery in American society from 1750-1789.

AMH 3140 The Age of Jefferson (4) AS HTY
A comprehensive study of American society and political culture from 1789-1828. Focuses on demographic trends, party systems, expansionism, Indian policy, labor, and ethnocultural conflicts.

AMH 3160 The Age of Jackson (4) AS HTY
The US evolved in 200 years from 13 colonies to the number one empire. This course will examine the link between American War and prosperity, and the varied approaches in the fight against oppression and inequality.

AMH 3201 The United States, 1877-1914 (4) AS HTY
A study of America from the end of Reconstruction to World War I. Ranging over political, social, and international developments, the course covers industrialization, immigration, unions, reform, feminism, race relations, imperialism, 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, demagoguery 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 imperial conflict; the emergence 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 1845 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 6A (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 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 policy and practices from colonial days to the present. Attention is given both to tactics and to 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 relationship 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, immigration, wars, religion 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, immigration, wars, religion and reform movements will be examined.

AMH 3571 African American History to 1865 HP CAHU HHCP (3) AS AFA
This course surveys the history of people of African descent in the U.S. from the beginning of the Atlantic Slave Trade to 1865. Major topics include the rise & fall of slavery, ethnic & racial identities, sexism, gender, culture, and community. Because of its focus on early American historical archaeology, the class brings together historical research, material culture studies, and historical archaeology methods within a professional historical archaeology setting.

AMH 3572 African American History since 1865 HP CAHU HHCP (3) AS AFA
This course explores the history of African Americans since 1865. Major topics include the struggle for equality, class and gender dimensions of the Black freedom struggle, and the varied approaches in the fight against oppression and inequality.

AMH 4601 Early American History and Archaeology (6) AS HTY
This course is a five week introductory course to the 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 3032 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, Faulkner, Hemingway, and Fitzgerald. Focuses on such writers as Toomer, Cummings, Williams, Anderson, Steinbeck, West, Stevens, Henry Miller, and others.

AML 3143 Historical Perspectives in Early American Literature HP (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 LW WRIN (3) AS ENG
A study of black American literature from the nineteenth century to the present, including the works of such writers as W.E.B. DuBois, Jean Toomer, Langston Hughes, Richard Wright, Ralph Ellison, Leroi Jones, and Nikki Giovanni.

AML 3630 U.S. Latino/Latina Literature in English (3) AS ENG
PR: ENC 1101 and ENC 1102. This 3000-level literature course surveys American English literature by Latino/Latina writers (with Spanish American ancestry). Authors may include Piri Thomas, Sandra Cisneros, Esmeralda Santiago, Luis Valdèz, Tomás Rivera, Oscar Hijuelos, etc.

AML 3641 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 3642 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 MW LW (3) AS AF
A study of the works of Zora Neale Hurston as a major Harlem Renaissance figure and a renowned Florida writer.

AML 4304 Black Women’s Literature 6A LW (3) AS AFA
Black women writers focus 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 contemporary America.

AMS 2030 Introduction to American Studies SS HP CAHU HHCP (3) AS AMS
An overview of American Studies, the interdisciplinary study of American culture. Analyzes the arts and literature, including music; social issues; popular culture; material culture; cultural diversity; and social change.
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 2270 Twentieth-century American Culture HP CAHU HHCP (3) AS AMS
An examination of cultural patterns in America from 1900 to the present with 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 the quality of life, sports and popular music, American communities, vigilante tradition, jazz music, role of the family, American success myth, youth in America. Topic varies.

AMS 3001 American Culture 1860-1915 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 1920s and 1930s CAHU (3-4) AS AMS
Course provides an interdisciplinary examination of American culture during the turbulent interwar years, 1919 through 1941. Students will examine how the arts, advertising, fashion, and social behavior registered changing cultural values.

AMS 3609 American Culture C, 1830-1865 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 social environment are stressed.

AMS 3370 Southern Women: Myth and Reality 6A HP WRIN (3) AS AMS
This course will identify the myths surrounding Southern women, discern 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, grave-stones, toys, and the material subcultures of women, African-Americans and communal societies.

AMS 3700 Racism in American Society SS HP CASB (3) AS AMS
This course will help students understand the extent and causes of racism, anti-Semitism and prejudice in the U.S. They will learn how prejudice arises, the roots of racism, and its effects on society using lectures and videos.

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 4804 Major Ideas in America MW CPST (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 primary texts. Topic varies.

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, War and Military Experience, Labor in America.

AMS 4935 Senior Seminar in American Studies (4) AS AMS
PR: Senior in American Studies or CI.

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.
will become familiar with oral history through intensive analysis of

ANT 4302 Gender in Cross-Cultural Perspective MW CPST

HHCP (3) AS ANT

PR: an anthropology or a women's studies class. Examines roles of

women, men, other genders and social, economic, and political

aspects of sex and gender, from a biocultural, 4-field anthropologi-

cal perspective, emphasizing non-Western societies and cross-

cultural comparison in past and present.

ANT 4310 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

collectors. Emphasis on various aspects of ecological adaptation, social,

political and religious systems, enculturation and worldview, folk-

lore 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 4323 Mexico and Central America (3) AS ANT

PR: ANT 2410 or DPR. Restricted to Anthropology majors, LACS

certificate students, juniors and seniors only. Focuses on the

history, contemporary values and interpersonal relationships, and

patterns of modern life in Mesoamerica. Mexico and Guatemala

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 population of the aboriginal population

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. Religious diversity, music, the graphic arts,

and the literature of the contemporary Caribbean will also be

surveyed.

ANT 4390 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 goal of

"visual literacy." Review and evaluation of the uses of visual

techniques and the evidence they provide to the social scientist.

ANT 4401 Exploring Cross-Cultural Diversity MW CPST (3) AS ANT

This course will address a variety of challenging issues related to

the general topic of cross-cultural diversity in contemporary Ameri-

can life.

ANT 4403 Environmental Anthropology (3) AS ANT

PR: ANT 2410 or DPR. Explores cultural, social, political, and

economic dimensions of contemporary environmental problems.

Emphasis placed on the links between local-level environmental
degradation and broader processes of global and national development.

ANT 4420 Urban Life 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 envi-

ronments. Emphasis on the ethnography of city life and its relation-

ship to social structure and social process. Urban economic, reli-

gious, political and religious systems, enculturation and worldview, folk-

lore and visual art.

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 in 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 4493 Methods in Cultural Research (3) AS ANT

PR: DPR. Restricted to juniors and seniors. The stages in the

development and execution of ethnological 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 case literature are studied and supervised research in the local

community is designed and carried out.

ANT 4516 Human Variation (3) AS ANT

PR: ANT 2511 or DPR. An overview of evolution and biological
variations of human races. Anatomical, morphological, and physiolog-ical patterns are surveyed geographically. Cultural influences on racial biology are explored.

**ANT 4520C Forensic Anthropology (4) AS ANT**
PR: ANT 2511 or DPR. This course is designed to familiarize students with forensic anthropology through lectures and lab work. 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 assemblage of Homo sapiens sapiens, focusing on the human lineage. Biocultural patterns and cultures of the past are also covered.

**ANT 4620 Language and Culture 6A (3) AS ANT**
PR: ANT 3610 or DPR. Examines the relationships between language and culture in cross-cultural perspective. Explores the extent to which languages shape the world views of their speakers. Emphasis is on the nature and degree of fit between linguistics and other cultural systems of knowledge.

**ANT 4701 Applied Anthropology (3) AS ANT**
PR: ANT 2410 or DPR. A review of approaches applying the anthropological perspective to contemporary human problems. Particular emphasis placed on public policy issues in United States society. Discussion of the historical development of applied anthropology, problems to be faced, and the ethics of applied research and intervention.

**ANT 4750 Language and Social Interaction 6A (3) AS ANT**
PR: ANT 3610 or DPR. Examines the role of language and other means of communication in the social settings of specific communities. Student field projects focus on the cross-cultural description and analysis of patterns of communication in ethnographic contexts.

**ANT 4824 Archaeological Field Methods (4-12) AS ANT**
PR: ANT 3101 and DPR. Offered as all or part of a summer (or other semester) field session. May or may not be combined with Florida Archaeology and Laboratory Methods in Archaeology. Students learn approaches to archaeological research concerning survey, excavation, data and materials recovery, recording, and processing.

**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 (2-4) AS ANT**
PR: Variable depending on topic or DPR. Topics to be chosen by students and instructor permitting new developing subspecialties of special interest 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 the 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 CASB (3) AS ANT**
PR: Anthropology Major/Minor. This course is the senior seminar in anthropology. The objectives are to reflect upon and integrate major material covered in previous courses, to reflect upon the status on the discipline of anthropology, and to allow students to determine where they see themselves within the discipline. We will reflect upon the four fields of anthropology and ethics, as well as key issues such as evolution, race, and culture, and students are encouraged to integrate their knowledge from previous classes.

**ANT 4940 Directed Internship Including Practicum (2-4) AS ANT**
PR: DPR. S/U only. Individual guidance in a selected internship. Contract required prior to registration. Majors and non-majors. May be repeated for credit; max 6 total hours.

**ANT 4970 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, a project 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: ARA2220 or the equivalent. Continuation of ARA2220. 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) TA ARC**
An introduction to fundamental “critical thinking” and graphic communication skills in architecture.

**ARC 2211 Introduction to Architecture HP FA (3) TA ARC**
An introduction to the design and interpretation of the architecture and urban design of various cultures.

**ARC 2701 Architectural History I HP FA (3) TA 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 2702 Architectural History II HP FA (3) TA 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 2932 Selected Topics (1-4) TA ARC**
Selected topics will include architectural diagramming, freehand drawing, model making, photography, and computer graphics. Courses are intended for nonmajors and are repeatable.

**ARC 4784 The City 6A MW (3) TA 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) TA ARC**
Variable topics will be offered for pre-professional studies for students in the Liberal Studies Major/ALA Degree Program and as electives for other undergraduates.

**ARC 5175 Computer Technology (3) TA 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) TA 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) TA 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 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 5531 Advanced Graphics Design: Digital Media (3) TA 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 logical principles, pattern recognition and utilization, and ground relationships. Development of craftsmanship, drawing as a means to design, and perceptual acuity are stressed.
ARC 552 Core Design II (3) TA ARC
PR: ARC 5531, 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 and use it as a basis for design exploration. Graphic documentation, diagramming, and model studies are stressed.

ARC 552 Core Design III (3) TA ARC
PR: ARC 5532, ARC 5467, ARC 5587, ARC 5731. CO: ARC 5689. 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 undertake 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 553 Advanced Design A (6) TA ARC
PR: ARC 5531. 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 access for accessibility, fire escape, etc.

ARC 554 Advanced Design B (6) TA ARC
PR: ARC 5532. 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 the 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 556 Advanced Design C (6) TA ARC
PR: ARC 5533. 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 process.

ARC 557 Materials and Methods of Construction (3) TA ARC
PR: ARC 5470, CC. Overview of properties of primary construction materials and systems that make up building structures and enclosures. Emphasis on elements and assemblies relative to various structural systems, costs, building codes, and craftsmanship.

ARC 5587 Structures I (3) TA 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 behavior.

ARC 5588 Structures II (3) TA ARC
PR: ARC 5587, CC. Introduction to the concepts and theories of structural analysis and design of reinforced concrete systems and elements, including practical application in building construction, Prestressing, post-tensioning, hybrid assemblies. Fundamentals of wind and seismic design. Formwork, placement, and assembly techniques.

ARC 5589 Environmental Technology (3) TA ARC
PR: ARC 5467 and ARC 5470. Comprehensive overview of the mechanical systems for buildings including: water and waste: fire protection and suppression; heating, cooling and controls: electric power distribution and illumination; communications; transportation systems, and acoustics.

ARC 5731 Architectural History I (3) TA ARC
Overview of the built environment from history through the Middle Ages. Buildings and cities in their geographical, topographical, political, aesthetic, social, technological, and economic context. Various 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) TA 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 historic 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) TA ARC
PR: CC, CI. Exploration of the philosophic, economic, aesthetic, social, historical and modern role of the architect 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) TA ARC
PR: CC. Summer study abroad. Location and description varies from year to year.

ARC 5794 Florida Architecture History (3) TA 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 (3) TA ARC
PR: CC. Summer study abroad. Location and description varies from year to year.

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

ARE 3044 Experiential Basis of Artistic Mind (3) TA 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) TA 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.

ARE 4313 Art For the Child and You (3) TA ART
Art and the intellectual, creative, emotional, and aesthetic growth of children.

ARE 4341 Art Teaching Strategies II (3) TA ART
Media and the learning process will be explored through photographic 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) TA 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) TA 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) TA ART
PR: Senior standing. Directed study contract required. Designed to extend teaching competencies in the field of art education.

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

ARE 4940 Internship: Art Education (1-12) TA ART
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 2051 History of Visual Arts II HP FA CAFA HHCP (3) TA ART
Overview of the built environment from history through the Middle Ages. Buildings and cities in their geographical, topographical, political, aesthetic, social, technological, and economic context. Various approaches to the analysis of historical architecture. The focus will be on the built environment of Europe and the Mediterranean basin.

ARH 2050 History of Visual Arts I HP FA CAFA HHCP (3) TA ART
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 historic architecture, and development of student’s own approach. Emphasis will be on the built environment of Europe and America.

ARH 5794 Florida Architecture History (3) TA 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.

ARH 4443 Crafts Workshop in Art Education (3) TA 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.

ARH 4642 Community Arts (3) TA 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.

ARH 4909 Directed Study: Art Education (1-3) TA ART
PR: Senior standing. Directed study contract required. Designed to extend teaching competencies in the field of art education.

ARH 4936 Senior Seminar in Art Education (2) TA ART

ARH 4940 Internship: Art Education (1-12) TA ART
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 2051 History of Visual Arts II HP FA CAFA HHCP (3) TA ART
Overview of the built environment from history through the Middle Ages. Buildings and cities in their geographical, topographical, political, aesthetic, social, technological, and economic context. Various approaches to the analysis of historical architecture. The focus will be on the built environment of Europe and the Mediterranean basin.
explore the experience of viewing art, inquiring into its many forms and definitions, historically and in the present.

ARH 4721C History of Printmaking 6A (4) TA 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 conceptual processes.

ARH 4115 Ancient Egyptian and Near Eastern Art (4) TA 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) TA 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 4151 Roman Art (4) TA ART
PR: ARH 2051 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) TA ART
A comprehensive study of Aegean, Mycenaean, Etruscan, Greek and Roman painting, sculpture, and architecture.

ARH 4200 Medieval Art (4) TA ART
PR: ARH 2050 or EUH 2011 recommended but not required. A comprehensive study of early Christian, Byzantine and Medieval painting, sculpture, architecture and manuscript illumination.

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

ARH 4318 Venetian Art (4) TA 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 4350 Baroque and Rococo Art (4) TA 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) TA ART
PR: ARH 2051. A comprehensive study of nineteenth century painting, sculpture and architecture in America and European. Gender/multicultural issues and methodologies in 19th century art are emphasized.

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

ARH 4455 Modern Political Iconography MW (4) TA ART
PR: DPR. The course explores art in which political themes are central to the source and the subject of aesthetic decision. 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) TA 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, symbolism and meanings.

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

ARH 4547 Buddhist Art (4) TA 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) TA ART
PR: DPR. Chinese Art proceeds chronologically, from the Neolithic era up to the contemporary art world. The course considers cultural, linguistic, technical, philosophical, political and religious influences on the art works produced by this ancient society.

ARH 4710 History of Photography MW (4) TA 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) TA ART
The history of Western printmaking from the Middle Ages to contemporary times, with an emphasis on artmaking technology and resources, 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) TA ART
The 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) TA ART
In-depth investigation of a selected period, development, or school in the history of film as art.

ARH 4800 Critical Studies In Art History 6A (4) TA 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) TA ART
PR: Minimum 8 hours of art history at the undergraduate level or equivalent. CI. 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 museums in the evolution of art.

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

ARH 4937 Seminar In The History of Art (4) TA 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) TA 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 5813 Methods of Art History (4) TA 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 5836 Collection and Exhibition Management (3) TA 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. Sessions will include art handling, registration and condition reporting, preparing works of art for transit, environmental standards for collections storage and exhibition, and the professional responsibilities of the curator.

ART 2201C Concepts and Practices I 6A FA CAFA (3-4) TA ART
Introduce students to diverse art studio practices and concepts where topics include practices of communication, sourcing inspiration, and critical theory. Studio projects are augmented by lecture, discussion, reading, writing and critical analysis.

ART 2204C Concepts and Practices II 6A FA CAFA (3-4) TA ART
PR: ART 2201. Continuation of ART 2201 building on diverse art studio practice and concepts including crafting an artistic self, measuring success, and examining the artists role. Art projects are augmented by lecture, discussion, reading, writing and critiques.

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

ART 2400C Beginning Printmaking (3) TA ART
PR: Majors Only. This course is designed as an introduction to the medium of printmaking. It concentrates on the technical production of various print media including: intaglio, relief, monoprint and serigraphy (screen printing).

ART 2500C Beginning Painting (3) TA ART
PR: Majors Only. Projects in painting with emphasis on the exploration of methods and media and the development of individual concepts.

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

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

ART 3060C Selected Topics 2-4) TA ART
PR: Majors Only. The content of this course will be determined by student demand and instructor interest. Open University offerings under this number may not be counted for degree credit for art majors.
ART 3761C Intermediate Ceramics (3) TA ART
PR: ART 2201C, ART 2203C, ART 2301C, ART 2750C, ART 3761C. 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. Majors only. Repeatable up to 15 hours.

ART 3808C Selected Topics in Drawing (3) TA ART
PR: ART 2701C, ARH 2050, ARH 2051, ARH 2301C, ARH 3704C. Majors Only. Selected Topics in Drawing 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. Majors only. Repeatable up to 15 hours.

ART 3461C Selected Topics in Printmaking (3) TA ART
PR: ART 2203C, ARH 2050, ARH 2051, ART 2301C, ART 3310C, ART 2400C, ART 3401C. Majors Only. Selected Topics in Printmaking 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. Majors only. Repeatable up to 15 hours.

ART 3513C Selected Topics in Painting (3) TA ART
PR: ART 2203C, ARH 2050, ARH 2051, ART 2301C, ART 3310C, ART 2500C, ART 3530C. Majors Only. Selected Topics in Painting 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. Majors only. Repeatable up to 15 hours.

ART 3530C Intermediate Painting (3) TA ART
PR: ART 2202C, ART 2301C, ART 2500C, ART 3310C, ARH 2050, ARH 2051. Majors only. An extension of the skills and concepts introduced in Beginning Painting with an emphasis on individual experimentation and the development of advanced critical and technical skills in the discipline. Repeatable up to 15 hours.

ART 3612C Beginning Video and Electronic Arts (3) TA ART
PR: Majors Only. An introductory exploration of the issues and practices involved in the creation of experimental computer art. The course focuses on an interdisciplinary approach to electronic media. Repeatable up to 15 hours.

ART 3613C Intermediate Electronic Media (3) TA ART
PR: ART 2201C, 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) TA ART
PR: ART 2203C, ARH 2050, ART 2051, ART 2301C, ART 3310C, ART 3612, ART 3631C. Majors Only. Selected Topics in Electronic Media 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. Majors only. Repeatable up to 15 hours.

ART 3704C Intermediate Sculpture (3) TA ART
PR: ART 2201C, ART 2203C, ART 2301C, ART 2701C, ART 3310C, ART 2500C, ART 2050, ARH 2051. This course expands upon the principles and processes introduced in Beginning Sculpture, developing a higher level of technical competence and critical sophistication. Repeatable up to 15 hours.

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

ART 3735 Selected Topics in Sculpture (3) TA ART
PR: ART 2203C, ARH 2050, ART 2051, ART 2301C, ART 3310C, ART 2701C, ART 3704C. Majors Only. Selected Topics in Sculpture 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) TA ART

ART 3781C Selected Topics in Ceramics (3) TA ART
PR: ART 2203C, ARH 2050, ARH 2051, ART 2301C, ART 3310C, ART 2750C, ART 3761C. 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. Majors only. Repeatable up to 15 hours.

ART 3843C Site, Installation, and Performance (3) TA ART
PR: ART 2203C, ART 3704C. Majors Only. Continued studies and projects in sculpture with an emphasis on site-specific sculpture, installation and performance. A critical and cultural awareness of contemporary issues and media in sculpture will be developed through studio projects, readings, discussions, critiques and demonstrations. The course may not be repeated for credit.

ART 3935 Studio Techniques: Selected Projects (2) TA ART
PR: DPR. Concentration in specialized technical data and process. Repeatable.

ART 3939 The Real World (3) TA 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) TA ART
PR: 15 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) TA ART
PR: 12 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) TA ART
PR: 12 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) TA ART
PR: 12 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 4634C Visual Design for the Internet (3) TA ART
Restricted to majors. This upper level course builds upon the concepts students encountered in the introductory level graphic design courses and focuses upon web content creation and animation techniques.

ART 4710C Advanced Sculpture (3) TA ART

ART 4782C Advanced Ceramics (3) TA ART
PR: 9 hours of Intermediate courses in the discipline and a 3.25 major GPA or DPR. Majors Only. Continued problems in ceramics. Repeatable.

ART 4806 Theme Studio (3) TA ART
PR: Majors Only. All preparation courses plus course in Studio Workshop I.

ART 4814 Paris Art Studio (3) TA ART
PR: ART 2201C or equivalent. This course will explore contemporary and historic Paris as a subject and source for artmaking, drawing upon a range of concepts and strategies that emphasize imaginative encounters with its space, streets, museums, architecture and people.

ART 4820 Directed Reading (1-4) TA ART
PR: CI. Registration by contract only. A course of reading and study in an area of special concern governed by student demand, instructor interest and/or department requirements. Registration is for contract only. Repeatable.

ART 4905 Directed Study (1-4) TA ART
PR: CI, DPR. Registration by contract only. Independent studies in the various areas of Visual Arts. Course of study and credits must be approved by contract only. A course of reading and study in an area of special concern governed by student demand, instructor interest and/or department requirements. Registration is for contract only. Repeatable.
ART 4930 Selected Topics in Art (2-4) TA ART
PR: DPR. The content of this course will be determined by student demand and instructor interest. Open University offerings under this number may not be counted for degree credit for art majors. Repeateable.

ART 4940 Extended Studies (1-4) TA ART
Extended Studies requires students to engage in art-related activities that expand upon their traditional academic experience. It is by contract and may involve internship and/or foreign study. The content of these courses is determined by major. Not repeatable.

ART 4970C Senior Thesis (4) TA ART
PR: DPR. 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.

ART 5390C Drawing (4) TA ART

ART 5422C Lithography (4) TA ART
PR: ART 4402C, CI, DPR. Advanced problems in various lithographic techniques. Emphasis on individual creative expression. Repeatable.

ART 5448C Intaglio (4) TA ART
PR: CI. Registration by contract only. Investigations into more complex intaglio processes including photogravure and color printing processes. Emphasis on personal conceptual development in graphic media.

ART 5580C Sculpture (4) TA ART
PR: ART 2701C, CI, DPR. Advanced problems in the various techniques of sculpture. Emphasis on individual creative expression. Repeatable.

ART 5790C Ceramics (4) TA ART
PR: ART 2750C, CI, DPR. Advanced problems in the various ceramic techniques, including throwing and glaze calculation. Repeatable.

ART 5910 Research (1-4) TA ART
PR: CI, DPR. Registration by contract only. Repeatable.

ART 5936 Studio Techniques: Selected Projects (2) TA ART
PR: DPR. Concentration in specialized media or processes. Repeatable.

ASH 2270 Southeast Asian History HP AF CAHU HHCP (3) AS HTY
This course examines the origins and development of Southeast Asian history over the past two millennia. Southeast Asia is comprised of Burma, Thailand, Laos, Cambodia, Vietnam, Malaysia, Singapore, Brunei, Indonesia, the Philippines, and East Timor.

ASH 3404 Modern China SS HP AF (4) AS HTY
Political, economic, and social history of China from the time of the first major Western contacts (17th-18th Centuries) through the consolidation of socialism in the late 1950's, and the Great Leap Forward.

ASL 2140C Basic American Sign Language (4) BC 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.

ASL 2150C Intermediate American Sign Language (4) BC CSD
PR: ASL 2140C, 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.

ASL 3514 American Deaf Culture (3) BC CSD
PR: ASL 4161C. 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.

ASL 4161C Advanced American Sign Language (4) BC CSD
PR: ASL 2150C, DPR. A continuation of the study of American Sign Language (ASL) at the advanced level. Added emphasis on idioms, body language, and facial expression as an integral part of ASL. An hour of laboratory course work is included.

ASL 4201C American Sign Language 4 (4) BC CSD
PR: ASL 4161C. This course is a continuation of the study of American Sign Language (ASL) at the highly advanced level. It provides advanced emphasis on skill development of the language, including storytelling and poetry. One-hour laboratory course work is included.

ASL 4301C Structure of Sign Language (4) BC CSD
PR: ASL 2140C and ASL 500C. 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.

ASL 4405 Sign Language Codes (3) BC 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 options to practice one of the sign systems.

ASL 4435 Fundamentals of Fingerspelling (2) BC CSD
PR: DPR. A concentrated study of technique in fingerspelling emphasizing clarity and rhythm in expression as well as receptive understanding.

ASN 3012 Japan Today SS (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.

ASN 3014 China Today AF (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.

ASN 3030 The Middle East AF (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.

AST 2003 Astronomy of the Solar System NS CANP (4) AS AST
AST2003 is an introduction and overview of the astronomy of the solar system. It is designed to complement AST2004 to give a comprehensive overview of the science of astronomy.

AST 2004 Stellar Astronomy and Cosmology NS CANP (4) AS AST
AST2004 is an introduction and overview of the Stellar astronomy and Cosmology. It is designed to complement AST2003 to give a comprehensive overview of the science of astronomy.

AST 2032C Illustrative Astronomy (3) AS AST
Constellations, use of small telescopes, etc., apparent motions of celestial objects, comets and meteors, seasons, weather. Current events in the space program. Planetarium and open sky demonstrations.

AST 3033 Contemporary Thinking in Astronomy NS (3) AS AST
PR: Junior or Senior Standing or CI. Seminar designed to assist the layman, with no scientific background, in comprehending contemporary developments in Astronomy. Necessary background material is provided by the instructor and a text. Topics covered in recent years include the space program, pulsars, x-ray astronomy, black holes, extra-terrestrial life, interacting galaxies, cosmology.

AST 3044 Archaeoastronomy (3) AS AST
PR: Jr. or Sr. Standing or CI. Astronomical concepts and observational techniques used by prehistoric/ancient peoples for determining change of seasons, constructing calendars, predicting eclipses, etc. Particular attention is given to Stonehenge, and to works of N.A. Indians, the Maya and Aztecs, and the Egyptians. Lec.-Lab.

AST 3652 Navigation (3) AS AST
PR: Some knowledge of geometry, algebra, and trigonometry. Timekeeping, use of sextant, constellations, celestial navigation with minimum equipment, spherical astronomy.

AST 3930 Selected Topics in Astronomy (1-4) 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: Jr. or Sr. Standing or CI. Intensive coverage of special topics to suit needs of advanced students.

BCH 3023 Introductory Biochemistry (3) AS CHM
PR: CHM 2200 or CHM 2211 and BSC 210. Introduction to the chemistry and intermediary metabolism of biologically important substances.

BCH 3023L Basic Biochemistry Laboratory (2) AS CHM
CR: BCH 3023. Practical work in determination and characterization of important biomolecules. Lec.-Lab.
BCH 4034 Advanced Biochemistry (3) AS CHM
PR: BCH 3032. Advanced undergraduate course emphasizing such topics as metabolic regulation, DNA and RNA structure and function, receptors, channels, antibodies, and contraction.

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 5046 Biochemistry Laboratory (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 research advisor.

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 nonmajors.

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 5320 Theory and Design of Bioprocesses (3) EN ECH
PR: Senior standing in engineering or CI. Open to majors and nonmajors with CI. Introduction to biotechnology, including applied microbiology, fermentation technology, bioreactor design, and transport processes in biosystems.

BME 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. May be taken by non-engineering students with CI. Repeatable as subjects vary.

BME 5937 Selected Topics in Biomedical Engineering (1-3) EN ECH
PR: Senior or GS standing in Engineering or CI. 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 none-engineering students with CI. Repeatable as subjects vary.

BMS 4402 Principles of Human Pharmacology NS (3) ME MSG
PR: Senior or graduate standing in Engineering or CI. Introduction to pharmacological engineering, including dosage forms (tablets, capsules, powders, liquids, topical forms, and aerosols), excipients, regulatory issues, clinical studies, and good manufacturing practices.

BMS 5005 Professions of Medicine: Foundations of Doctoring
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 nonmajors.

BMS 5320 Theory and Design of Bioprocesses (3) EN ECH
PR: Senior standing in engineering or CI. Open to majors and nonmajors with CI. Introduction to biotechnology, including applied microbiology, fermentation technology, bioreactor design, and transport processes in biosystems.

BMS 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. May be taken by non-engineering students with CI. Repeatable as subjects vary.

BMS 5937 Selected Topics in Biomedical Engineering (1-3) EN ECH
PR: Senior or GS standing in Engineering or CI. 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 5005 Professions of Medicine: Foundations of Doctoring
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 nonmajors.

BMS 5320 Theory and Design of Bioprocesses (3) EN ECH
PR: Senior standing in engineering or CI. Open to majors and nonmajors with CI. Introduction to biotechnology, including applied microbiology, fermentation technology, bioreactor design, and transport processes in biosystems.

BMS 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. May be taken by non-engineering students with CI. Repeatable as subjects vary.

BMS 5937 Selected Topics in Biomedical Engineering (1-3) EN ECH
PR: Senior or GS standing in Engineering or CI. 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 5005 Professions of Medicine: Foundations of Doctoring
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 nonmajors.
BSC 2011L Biodiversity Laboratory (1) AS BIN
CR: BSC 2011. Laboratory portion of Biology II Diversity relating to organismal structure and function. Microscopy, as well as, plant and animal development will be stressed.

BSC 2022 Biology of Aging NS (3) AS BCM
An introduction to the basic biology of aging. Emphasis will be placed on understanding basic principles of biology relevant to time and 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 BIN
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 and how environmental changes impact both personal and global nutrition.

BSC 2030 Save The Planet: Environmental Sciences NS (3) AS B
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 BIN
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 CANL (3) AS BIN
A comprehensive introduction to the environment, including the scientific basis of ecology, population growth, community and ecosystem ecology, biodiversity, resource use and availability, energy production, water, and land pollution.

BSC 2085 Anatomy and Physiology I for Health Professionals NS CANL (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 CANL (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 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 BIN
PR: BSC 2010, BSC 2010L, BSC 2011, BSC 2011L and CHM 2045. May be taken by majors for free elective credit. Basic biochemistry, cell structure and function, tissues, anatomical terminology, anatomy and physiology of the integumentary, skeletal, muscular, nervous systems. Lecture and Laboratory.

BSC 2094C Human Anatomy and Physiology II (4) AS BIN

BSC 2932 Selected Topics in Biology (1-4) AS BIN
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 2011L, BSC 2932, & CHM 2045. CP: BSC 2011, BSC 2011L. 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 resolving dilemmas.

BSC 2934 Honors Seminar III: Scientific Approaches (3) AS BIO
PR: BSC 2933. CP: BSC 2932. 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 and discuss their work.

BSC 3312 Marine Biology (3) AS BIN
PR: BSC 2010, BSC 2010L, BSC 2011L & CHM 2045; CHM 2046 & MAC 1105 or higher-level MAC course, or STA 2023. CP: PCB 3023 or PCB 3030 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 BIN
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 BIN
PR: BSC 3312C A detailed analysis of marine environment in the Tampa Bay or surrounding area. Field and laboratory work provide direct experiences with the system.

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

BSC 4910 Undergraduate Research (1-4) AS BIO
PR: CHM 2210 and MAC 1105 or higher MAC course or STA 2023 or PCB 3023 or PCB 3030 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 4932 Honors Seminar IV (1) AS BIO
PR: BSC 2934 and BSC 4910 or MCB 4910; CR: 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 BIN
PR: BSC 3312C and CHM 2210 and MAC 1105 or higher-level MAC course or STA 2023. CP: PCB 3023 or PCB 3030 or PCB 3063 or PCB 3712 and CHM 2211. Course focuses on developing the student's understanding of contemporary research in the field of Marine science. Background information presented and assigned reading will vary according to instructor's schedule.

BSC 4970 Biology Honors Thesis (1-3) AS BIN
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 5444 Genomics (4) AS BIN
PR: BSC 2011, CHM 2046, PCB 3063. We will be using genomic data available from multiple bioinformatics databases to answer an open-ended question fundamental to organismal evolution. The emphasis is to hone scientific inquiry skills in fledgling researchers.

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) EDEVD
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 internship 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
PR: CI. Supervised field experience and orientation to broad field of business education. Specifically designed to be preparatory for the internship.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Department</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAP 5460</td>
<td>AI Robotics (3) EN ESB</td>
<td>3</td>
<td>CAP</td>
<td>PR: EEL 4851C; CR: COT 4400. AI methods for mobile robots (ground/aerial/underwater). Understand: (1) paradigms of AI robotics; (2) machine learning techniques for behavior-based agents; (3) major path planning; (4) simultaneous localization and mapping (SLAM) algorithms.</td>
</tr>
<tr>
<td>CAP 4450</td>
<td>Computer Vision (3) EN ESB</td>
<td>3</td>
<td>CAP</td>
<td>PR: COP 4530. Introduction to topics such as image formation, segmentation, feature extraction, matching, shape recovery, texture analysis, recognition, and dynamic scene analysis.</td>
</tr>
<tr>
<td>CAP 5034</td>
<td>Construction Management &amp; Planning (3) EN EGX</td>
<td>3</td>
<td>CAP</td>
<td>PR: EGN 3613C. Fundamentals of construction management. Topics include: general definitions, organizational roles, types of contracts, analysis of labor and equipment, cost estimating, contractor cash flow analysis, planning and scheduling, project control, construction administration, quality and safety management, and use of computer software in construction management.</td>
</tr>
<tr>
<td>CCJ 4900</td>
<td>Directed Research (1-3) BC CJP</td>
<td>1-3</td>
<td>CCJ</td>
<td>PR: Junior standing, CCJ 3024 or CCJ 3610 or CI. This course is specifically designed to enable advanced undergraduate and graduate students to gain experience in the field of criminology.</td>
</tr>
<tr>
<td>CBH 4004</td>
<td>Comparative Psychology (3) AS PSY</td>
<td>3</td>
<td>CBH</td>
<td>PR: PSY 3213 with a grade of C or better or CI. The study of the evolution of behavior, similarities, and differences in capacities for environmental adjustment and for behavioral organization among important types of living beings.</td>
</tr>
<tr>
<td>CCE 4034</td>
<td>Construction Management (3) EN EGX</td>
<td>3</td>
<td>CCE</td>
<td>PR: EGN 3613C. Fundamentals of construction management. Topics include: general definitions, organizational roles, types of contracts, analysis of labor and equipment, cost estimating, contractor cash flow analysis, planning and scheduling, project control, construction administration, quality and safety management, and use of computer software in construction management.</td>
</tr>
<tr>
<td>BTE 5171</td>
<td>Curriculum Construction: Business Education (3) ED EDV</td>
<td>3</td>
<td>BTE</td>
<td>PR: Junior standing, EGN 3613C or CJE 4114 or CI. Provides a basic understanding of the complex factors related to crime, with concentration on principal theoretical approaches to the explanation of crime.</td>
</tr>
<tr>
<td>BUL 3320</td>
<td>Law and Business I (3) BU GBA</td>
<td>3</td>
<td>BUL</td>
<td>PR: BUL 3320 or CI. A comprehensive study of commercial law as it affects the practice of accounting.</td>
</tr>
<tr>
<td>BUL 3321</td>
<td>Law and Business II (3) BU GBA</td>
<td>3</td>
<td>BUL</td>
<td>PR: BUL 3320 or CI. A comprehensive study of commercial law as it affects the practice of accounting.</td>
</tr>
<tr>
<td>BUL 5332</td>
<td>Law and the Accountant (3) BU GBA</td>
<td>3</td>
<td>BUL</td>
<td>PR: BUL 3320 or CI. A comprehensive study of commercial law as it affects the practice of accounting.</td>
</tr>
</tbody>
</table>
principles. Analysis of trusses and frames using the displacement
method to one-dimensional structural problems. Virtual work
mitigate and indeterminate. Moment area theorems; influence lines;
PR: EGN 3331. Analysis of simple structural systems, both deter-
minate and indeterminate. Moment area theorems; influence lines;
is covered. Emphasis is placed on procedures and application of
results to design.

CEN 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.

CEN 4023 Software System Development (3) EN ESB
PR: COP 4530. Analysis, design, and development of software
systems using objective methodology with object oriented program-
ing and advanced software development tools (such as inte-
grated development environments).

CEN 4031 Software Engineering Concepts for Information
Technology (3) US EIT
PR: EEL 4851C. An overview of software engineering techniques
for producing high quality software. Student will participate in
a software development team.

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/commu-
nication between computer and user, and the evaluation of usability.

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

CDA 5416 Introduction to Computer-Aided Verification (3) EN ESB
PR: CDA 3201, COT 3100, COT 4400, EEL 4851C. This course
introduces basic concepts of formal verification. Topics include
formal specification, algorithms, and methodologies for scalable
verification. It is only for CSE majors or non-majors with permission
from the instructor, not repeatable.

CEG 4011 Geotechnical Engineering I (3) EN EGX
PR: EGN 3353, EGN 3331. Fundamental and experimental concepts
in soil mechanics with emphasis on soil properties, soil moisture, soil
structure, and shear strength.

CEG 4011L Geotechnical/Transportation Laboratory (1) EN EGX
CR: GEC 4011. Demonstrates and experiments verifying theoretical
bases of Geotechnical and Transportation Engineering. One hour
lecture and two laboratory hours per week.

CEG 4012 Geotechnical Engineering II (3) EN EGX
PR: CEG 4011. Design of retaining walls, earth slopes, foundations
to control settlement, soil stabilization and foundations subjected to
dynamic loads. Computer applications to soil mechanics will be
covered.

CEG 4850 Capstone Geotechnical/Transportation Design MW
CPST (4) EN EGX
PR: CEG 4011, TTE 4004. CR: CEG 4012, CNE 4851, TTE 4005 A
capstone geotechnical/transportation design experience for se-
inors in Civil and Environmental Engineering. Design of embankment
and pavement bases. Comprehensive surface streets, open high-
way intersection and site design, plan preparation.

CEN 5115 Foundation Engineering (3) EN EGX
PR: CEG 4011 or CI. Design of shallow foundations, cantilevered
and anchored retaining walls, piling, drilled piers and special founda-
tions. Computer applications to geotechnical engineering are cov-
ered.

CEN 5205 Laboratory Testing for Geotechnical Engineers (3)
EN EIT
PR: CEG 4011 or CI. Both routine and advanced forms of soil testing
are covered. Emphasis is placed on procedures and application of
results to design.

CEN 3722 Human Computer Interfaces for Information Techno-
logy (3) US EIT
Human-Computer Interface is the study of people, computer tech-
nology and the ways these influence each other. The basic
foundations of HCI in terms of psychology, computer systems and
their integration into design practice are discussed in the course.

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 4023 Software System Development (3) EN ESB
PR: COP 4530. Analysis, design, and development of software
systems using objective methodology with object oriented program-
ing and advanced software development tools (such as inte-
grated development environments).

CEN 4031 Software Engineering Concepts for Information
Technology (3) US EIT
PR: EEL 4851C. An overview of software engineering techniques
for producing high quality software through the use of software engineering concepts
and practices are covered. In addition to conceptual presentations,
students are required to participate in software development team
projects.

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/commu-
nication between computer and user, and the evaluation of usability.

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

CES 4141 Finite Element Analysis I (3) EN EGX
PR: CDA 3201, COT 3102. Introduction to the finite element method. Application of
the method to one-dimensional structural problems. Virtual work
principles. Analysis of trusses and frames using the displacement
computer analysis. Programming methods for finite elements imple-
mentation.
CGS 2034 Computers and Impact on Society SS CASB (3) EN ESB
Pr: CS 1411. Computer aided structural analysis and design using existing finite element program, static dynamic loading.

CGS 4065 Concepts of Steel Design (3) EN ESB
Pr: CS 3102. Introduction to steel design and AISC Manual of Steel Construction: Design of tension members; compression members; beams; beam columns; and bolted, welded, and riveted connections.

CGS 4702 Concepts of Concrete Design (3) EN EGB
Pr: CS 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.

CGS 4704 Capstone Structural/Materials Design (3) EN EGB
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.

CGS 4742 Concepts of Structural Design (3) EN EGB
Pr: CS 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.

CGS 4750 Capstone Structural/Geotechnical/ Material Design ME/ST (4) EN ESB

CES 4820C Timber and Masonry Design (3) EN EGB
Pr: CS 3102, CES 4702, GNG 3490. 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 EGB
Pr: EGN 3363. Course aims to develop an understanding of the behavior of deformable solids. Basic concepts, stress and strain transformations, special topics in beams, theory of elasticity. CR: Failure, beams on elastic foundation.

CES 5009 Structural Dynamics (3) EN EGB
Pr: CS 3102, EGN 3320. Behavior of structural components and systems when subjected to periodic dynamic loads.

CES 5715C Prestressed Concrete (3) EN EGB
Pr: CEE majors only. Fundamental principles of prestressing including beams, columns, connections and formwork. Introduction to masonry design including design of beams, walls, columns, and pilasters.

CGN 3021L Civil Engineering Laboratory (2) EN EGB
Pr: CS 3102, EGN 3353, EGN 3365. A laboratory experience in departmental facilities including these subject areas of materials, fluids, environmental engineering, and computer assisted data acquisition.

CGN 422 Professional and Ethical Issues in Engineering MW (3) EN EGB
Pr: CS majors only. 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 EGB
Pr: EGN 3365. Classifications and production of cements. Design and testing of concrete mixes to produce desired properties.

CGN 4905 Independent Study (1-5) EN EGB
Pr: CC. S/U only. Specialized independent study determined by the students' needs and interests.

CGN 4911 Research in Civil Engineering and Environmental Engineering (1-4) EN EGB
Pr: CC. Research course in civil and environmental engineering concepts.

CGN 4914 Senior Project (2-5) EN EGB
Pr: CC. 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 EGB
Pr: CC. New technical topics of interest to civil engineering students.

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

CGS 2060 Introduction to Computers in Business and Programming in BASIC 6A CAOR (3) EN ESB
No credit for Engineering Majors. Introduction to programming using the BASIC language and application to computational methods. Emphasis on systematic approach to problem solving. Overview of computer systems, applications, & their role in society.

CGS 2062 Computers And Society (3) EN ESB
No credit for Engineering Majors. For 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 2694 CyberEthics AF SS CAGC (3) EN ESB
Many ethical issues, e.g. privacy, freedom of speech, security, intellectual property, and workplace globalization, are impacted by computing and related technology. These issues are examined from theoretical, cultural, and geopolitical perspectives.

CGS 2100 Computers In Business (3) BU 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 2935 Special Topics in General Computer Studies (1-3) EN ESB
Courses are one-time topics in general computer studies, applicable to all students. Specific course titles will be specified when the course is posted on the schedule.

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 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 3853 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 5765 Introduction to Unix and C (3) EN ESB
No credit for Department of Computer Science & Engineering majors. Unix operating system. Internet resources. Netscape, WWW and HTML. Advanced topics on UNIX file system. Data structures. File I/O.

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. 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
CR: CHI 1121 or the equivalent. For language students who intend to attain basic proficiency.

CHI 2221 Modern Chinese IV (4) AS WLE
CR: 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
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 2032</td>
<td>Introduction to General, Organic, and Biochemistry I (CAMP) (4) AS CHM</td>
<td>QQ: No credit for science majors. Fundamental concepts of general, organic, and biological chemistry.</td>
</tr>
<tr>
<td>CHM 2045</td>
<td>General Chemistry I NS CAMP (3) AS CHM</td>
<td>QQ: PR: 550 SAT Quantitative score or completion of MAC 1105 College Algebra with a C or better AND one year of high school chemistry or completion of CHM 2023 with a grade of C or better. Principles and applications of chemistry including properties of substances and reactions, thermochemistry, atomic-molecular structure and bonding, periodic properties of elements and compounds.</td>
</tr>
<tr>
<td>CHM 2045L</td>
<td>General Chemistry I Laboratory (1) AS CHM</td>
<td>QQ: 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.</td>
</tr>
<tr>
<td>CHM 2046</td>
<td>General Chemistry II NS CAMP (3) AS CHM</td>
<td>QQ: PR: CHM 2045 and CHM 2045L with a C or better or equivalent. Principles and applications of chemistry including solutions, chemical thermodynamics, kinetics, equilibria, aqueous chemistry, electrochemistry, and nuclear chemistry.</td>
</tr>
<tr>
<td>CHM 2046L</td>
<td>General Chemistry II Laboratory (1) AS CHM</td>
<td>QQ: CP: CHM 2046. Laboratory portion of General Chemistry II. Continuation of laboratory chemistry.</td>
</tr>
<tr>
<td>CHM 2200</td>
<td>Organic Chemistry (4) AS CHM</td>
<td>QQ: PR: CHM 2046 or equivalent. Fundamental organic chemistry principles include: Structure, nomenclature, properties, preparation, reactions of hydrocarbons, alky halides, alcohol, phenols, ethers, sulfur analogs and other compounds. A one-semester course.</td>
</tr>
<tr>
<td>CHM 2211</td>
<td>Organic Chemistry II (3) AS CHM</td>
<td>QQ: PR: CHM 2210 with a C or better. Continuation of organic chemistry.</td>
</tr>
<tr>
<td>CHM 2302</td>
<td>Selected Topics in Chemistry (1-3) AS CHM</td>
<td>QQ: Topics of interest to students relating to chemistry and other sciences.</td>
</tr>
<tr>
<td>CHM 3610</td>
<td>Intermediate Inorganic Chemistry (3) AS CHM</td>
<td>QQ: 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.</td>
</tr>
<tr>
<td>CHM 3610L</td>
<td>Intermediate Inorganic Chemistry Laboratory (1) AS CHM</td>
<td>QQ: PR: Two semesters of general chemistry lecture and lab. CR: CHM 3610. Illustrative laboratory work concerning the fundamental principles of inorganic chemistry including atomic structure, bonding, transition metal chemistry, structural consequences and spectroscopic methods.</td>
</tr>
<tr>
<td>CHM 4060</td>
<td>Use of the Chemical Literature (1) AS CHM</td>
<td>QQ: PR: CHM 2045, CHM 2046, CHM 2210, CHM 2211. Discussions and assignments using abstracts, bibliographies, indexes, theses, theses, journals, patent files, electronic databases, and other information sources to obtain chemical and technical material and including written and oral presentations. Career information and opportunities also discussed.</td>
</tr>
<tr>
<td>CHM 4070</td>
<td>Historical Perspectives in Chemistry 6A MW (3) AS CHM</td>
<td>QQ: 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. Lecture-lab.</td>
</tr>
<tr>
<td>CHM 4130C</td>
<td>Methods of Chemical Investigation I (4) AS CHM</td>
<td>QQ: PR: CHM 3120C, CHM 2211, CHM 2211L, CHM 4060, CHM 4410. Techniques 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. Lecture-lab.</td>
</tr>
<tr>
<td>CHM 4131C</td>
<td>Methods of Chemical Investigation II (4) AS CHM</td>
<td>QQ: PR: CHM 4130C. Chemical forces, reactivity, periodicity, and periodicity in chemical reactions, thermochemistry, atomic-molecular structure and bonding, periodic properties of elements and compounds.</td>
</tr>
<tr>
<td>CHM 4300</td>
<td>Biomolecules I (3) AS CHM</td>
<td>QQ: 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.</td>
</tr>
<tr>
<td>CHM 4410</td>
<td>Physical Chemistry I (4) AS CHM</td>
<td>QQ: 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.</td>
</tr>
<tr>
<td>CHM 4410L</td>
<td>Physical Chemistry Laboratory (1) AS CHM</td>
<td>QQ: PR: CHM 4410. A physical chemistry laboratory with emphasis on modern techniques and equipment. Lab.</td>
</tr>
<tr>
<td>CHM 4411</td>
<td>Physical Chemistry II (4) AS CHM</td>
<td>QQ: 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. The course includes a recitation.</td>
</tr>
<tr>
<td>CHM 4413</td>
<td>Biochemical Physics (3) AS CHM</td>
<td>QQ: PR: CHM 2046, CHM 4410, 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.</td>
</tr>
<tr>
<td>CHM 4610</td>
<td>Advanced Organic Chemistry (3) AS CHM</td>
<td>QQ: PR: CHM 4410, CHM 4610, MAC 2242 or MAC 2282 or MAC 2312 and PHY 2054 or PHY 2049. AN advanced descriptive and theoretical treatment of inorganic compounds.</td>
</tr>
<tr>
<td>CHM 4905</td>
<td>Independent Study (1-3) AS CHM</td>
<td>QQ: S/U only. Special 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.</td>
</tr>
<tr>
<td>CHM 4932</td>
<td>Selected Topics in Chemistry (1-3) AS CHM</td>
<td>QQ: PR: CI. The course content will depend on the interest of faculty members and student demand.</td>
</tr>
<tr>
<td>CHM 4970</td>
<td>Undergraduate Research (1-3) AS CHM</td>
<td>QQ: 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.</td>
</tr>
<tr>
<td>CHM 5225</td>
<td>Intermediate Organic Chemistry I (3) AS CHM</td>
<td>QQ: 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.</td>
</tr>
<tr>
<td>CHM 5226</td>
<td>Intermediate Organic Chemistry II (3) AS CHM</td>
<td>QQ: PR: CHM 2210. An introduction to synthetic organic chemistry for graduate students and advanced undergraduates. Semester II.</td>
</tr>
<tr>
<td>CHM 5425</td>
<td>Applications in Physical Chemistry (3) AS CHM</td>
<td>QQ: PR: CHM 4412 and CHM 4410 or CI or GS. Applications of chemical theory to chemical systems.</td>
</tr>
<tr>
<td>CHM 5452</td>
<td>Polymer Chemistry (3) AS CHM</td>
<td>QQ: PR: Either CHM 2211, CHM 2211L, and CHM 3400 or CHM 4410 or graduate standing. Fundamentals of polymer synthesis, structure, and properties.</td>
</tr>
<tr>
<td>CHM 5621</td>
<td>Principles of Inorganic Chemistry (3) AS CHM</td>
<td>QQ: PR: CHM 4411, CHM 4610 or CI or GS. Chemical forces, reactivity, periodicity, and literature in organic chemistry; basic core course.</td>
</tr>
<tr>
<td>CHS 2440</td>
<td>General Chemistry for Engineers Lab (1) AS CHM</td>
<td>QQ: PR: CI. The following courses are representative of those that are taught under this title: Natural Products, Stereochemistry, Reactive Intermediates, Photochemistry, Instrumental Electronics, Advanced Lab Techniques, Heterocyclic Chemistry, etc.</td>
</tr>
<tr>
<td>CHS 2440L</td>
<td>General Chemistry for Engineers Lab (1) AS CHM</td>
<td>QQ: PR: CHS 2440. Laboratory portion of General Chemistry for Engineers. Introduction to laboratory techniques, study of properties of elements, synthesis and analysis of natural and commercial materials, and biochemical reactions.</td>
</tr>
<tr>
<td>CHS 3400</td>
<td>Fundamentals of Clinical Chemistry (3) AS CHM</td>
<td>QQ: PR: CHS 2440. Thermodynamics, the state of matter and solutions are presented. The course includes a recitation.</td>
</tr>
</tbody>
</table>
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: MAD 2104 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 use.

CIS 3367 Architecting Operating System Security (3) US EIT
PR: CIS 3360 or permission of instructor. This course examines tools and techniques for securing Windows and Linux operating systems. Students will acquire knowledge and skills to perform audit assessments and implement enterprise-wide operating system security.

CIS 3932 Special Topics for Information Technology (1-4) US EIT
Topics to be chosen by students and instructor permitting newly developing subdisciplinary special interests to be explored.

CIS 4250 Ethical Issues And Professional Conduct 6A MW CPST (3) ENSB
PR: Senior standing in the Department of Computer Science and Engineering. A capstone course for Department majors only, this course introduces issues and 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: Basic 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.

CIS 4364 Cryptology and Information Security (3) EN ESB

CIS 4365 Computer Security Policies and Disaster Preparedness (3) US EIT
PR: CIS 3360. When an organization’s functioning is interrupted by disasters, accidents, or natural events, a loss of data and/or productivity may occur. The impact on the organization is determined by how prepared it is for dealing with these disturbances.

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 system development process, and the fundamentals of EDP auditing.

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 which 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. Suitable for IS, criminal justice, political science, accounting information systems students.

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 applications.

CIS 4930 Special Topics in Computer Science I (1-4) EN ESB
PR: EEL 4851C or CDA 3201 and CI.

CIS 4932 Special Topics for Information Technology (1-4) US EIT
Topics to be chosen by students and instructor permitting newly developing subdisciplinary special interests to be explored.

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 sub-domain 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) BC CJP
PR: Junior standing, CCJ 3024 or CCJ 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) BC CJP
PR: Junior standing, CCJ 3024 or CCJ 3610 or CI. This course explores strategies for managing the offender, including probation, parole, diversion, and other community-based intervention and treatment approaches.

CJE 3444 Crime Prevention (3) BC CJP
PR: CCJ 3024, CCJ 3610. The aim of this course is to introduce students to the theories and constructs of crime prevention and reduction, as well as techniques and policies used currently worldwide that would enhance US response to crime and justice. No restriction, not repeatable.

CJE 3641 Introduction to Forensic Science (3) BC CJP
This course provides students an appreciation of ‘real life’ forensic science and its role in the justice system. The class introduces students to the scientific techniques employed by the forensic science community. Not restricted or repeatable.

CJE 3656 Introduction to Crime Analysis (3) BC CJP

CJE 4010 Juvenile Justice System (3) BC CJP
PR: Junior standing, CCJ 3024 or CCJ 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 4144 Private Security Systems (3) BC CJP
PR: Junior standing plus EEL 4114, CCJ 3024, CCJ 3610, CCJ 3621 or CI. Examines some of the principal methods and techniques currently used to reduce or prevent losses due to theft and casualty.

CJL 4115 Environmental Law and Crime (3) BC CJP
PR: Junior standing, CCJ 3024 or CCJ 3610. The course provides students with an introduction to issues in the area of environmental crime and environmental law.

CJL 4410 Criminal Rights and Procedures (3) BC CJP
PR: Junior standing, CCJ 3024 or CI. Emphasizes the Constitutional issues and rules that are applied and enforced by the courts while processing criminal cases.

CJL 4100 Criminal Investigation (3) BC CJP
PR: CCJ 3024 or CCJ 3610 or CI. Covers the major components of criminal investigation, with special attention to the scientific aspects of criminal investigation, with special attention to the scientific aspects of criminal investigation. Involves research into criminal investigation. Not restricted or repeatable.

CLA 3103 Greek Civilization HP CAHU (3) AS WLE
This course surveys the major social, political, and cultural aspects of the ancient Greek world, examined both topically and chronologically across the centuries of the Ancient Greece, c.1400 to 146 BCE.

CLA 3124 Roman Civilization HP CAHU (3) AS WLE
This course surveys the major social, political, and cultural aspects of the ancient Roman world, topically and chronologically, from 753 B.C.E to 476 CE, through the literary, historical, and artistic records of the Romans.

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 show for the general interest of the student.

CLA 4020 Ancient Art and Society (3) AS WLE
A course examining the role of art in the development of ancient communities. The course will cover a broad range of topics, including architecture, sculpture, and painting.

CLA 3930 Selected Topics (3) AS WLE
An examination of various aspects of Greek and Roman culture, based on ancient sources, literary and archaeological. Repeatable as topics vary.

CLA 4030 Special Topics (3-6) AS WLE
Course content varies. This course may be repeated for credit.

CLP 2001 Psychology of Adjustment SS (3) AS PSY
Genetic factors 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 4414 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 settings.

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 for intellectual and personality assessment including their applications, development, and potential abuses.

CLP 4941 Community Practicum in Selected Topics (1-9) AS PSY
PR: C or better in PSY 4931, junior standing and at least 6 hours in Psychology. Service-learning for student to apply psychological principles learned in the classroom to volunteer experiences. Community is defined at the local, national and international level. Free-standing practicum or with a corequisite course.

CLT 2044 Wordpower from Latin and Greek (3) AS WLE
Study of Greek/Latin elements as a means of building English vocabulary. Examination of Greek/Latin-based terminology from various scientific fields, its adoption into English and current usage. Attention given to Greek/Latin stems, prefixes, suffixes.

CLT 3040 Scientific and Medical Terminology (3) AS WLE
A course in the Greek and Latin word elements used in science and technology.

CLT 3103 Greek Literature in Translation 6A MW WRIN (3) AS WLE
This class investigates the most important texts of the Archaic and Classical Greek world, which are analyzed in both in a chronological sequence (c. 900 to 330 BCE) and by genre (epic poetry, philosophy, lyric, history, and drama).

CLT 3123 Roman Literature in Translation 6A MW WRIN (3) AS WLE
This course surveys the major literary texts of the ancient Roman world, examined through both the chronological order of their production (from the 3rd century B.C.E to the 2nd century C.E) and their classification into various literary genres.

CLT 3370 Classical Mythology HP CAHU (3) AS WLE
Classical Mythology surveys the myths, legends, and sagas of the Greeks and Romans chronologically (c. 1200 BCE to 17 CE) and thematically, through literature (prose and poetry), iconography (art and architecture, film (documentary and dramatic.

CNT 3403 Network Security and Firewalls (3) US EIT
PR: EEL 4762. This course surveys network security standards and emphasizes applications that are widely used on the Internet and for corporate networks. This course also examines Firewalls and related tools used to provide both network and perimeter security.

CNT 4004 Computer Networks I (3) ES ESB
PR: COP 4530 or EEL 4851C. An introduction to the design and analysis of computer communication networks. Topics include application layer protocols, Internet protocols, network interfaces, local and wide area networks, wireless networks, bridging and routing, and current topics.

CNT 4202 Networks II (3) EN ESB
PR: EEL 4781C or CNT 4004. Networking skills, hands-on experience in technologies and protocols, with emphasis on Internet technologies. Topics: Operation, Analysis and Evaluation of distributed systems, communication hardware/software, network monitoring and performance tools.

CNT 4504 Computer Networks III (3) EN
PR: EEL 4781C or CNT 4004. Networking skills, hands-on experience in technologies and protocols, with emphasis on Internet technologies. Topics: Operation, Analysis and Evaluation of distributed systems, communication hardware/software, network monitoring and performance tools.

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 3051 Analyzing Culture and Media (3) AS SPE
PR: SPC 2541. Applies theories of media and media industries to analysis of media texts to investigate relationships among culture, media, representation, and democracy. Majors only; nonmajors may not be repeated for credit.

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 presentation in the form of informational reports, conference management, persuasive communications, interviews, and public hearings.

COM 3120 Organizational Communication (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
A study of communication theory relative to persuasive interviewing with an emphasis on career interview situations.

COM 3341 Communication and Visual Culture (3) AS SPE
PR: COM 2000. Examines the nature and practices of seeing as fundamental to communication with special emphasis on cultural and rhetorical implications of visual practices in aesthetic, political, and social arenas.

COM 4016 Public Memory (3) AS SPE
PR: COM 2000, SPC 2541. Exploration of collective memory as public communication. Examines public memory as created and communicated in memorials, museums, mediated history, nostalgia, and story. For majors; nonmajors by permit. Not repeatable for credit.

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 4021 Family Communication and the End of Life (3) AS SPE
PR: COM 2000, SPC 3301. Explores theories and practices of family communication at end-of-life through language, relationships, bioethics, and case analysis of fictitious cases. For majors; nonmajors by permit only. May not be repeated for credit.

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 and health care.

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

COM 4050 Globalization and Democratic Discourse (3) AS SPE
PR: COM 2000, SPC 2541. Examines rhetoric of globalization and democracy from communication perspectives, especially the discourses of war, terrorism, nationalism, and security. For majors; nonmajors by permit only. Not repeatable for credit.

COM 4104 Communication, Tourism, and Travel (3) AS SPE

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 4414 Race and Gender in Popular Film and Television (3) AS SPE
PR: SPC 2541, COM 3051. Explores representations of race and gender in contemporary TV and film and utilizes feminist and critical race theories to interrogate social inequalities. Majors only; Nonmajors by permit only. May not be repeated for credit.

COM 4702 Communication, Language, and Mental Illness (3) AS SPE
PR: COM 2000, SPC 3301. Explores intersection of mental illness and communication as language, talk-in-interaction, and discourse as social practice. For majors; nonmajors by permit. May not be repeated for credit.

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 4931 Special Topics in Media Analysis (3) AS SPE
PR: SPC 2541, COM 3051. Selects contemporary topics in media, media genres, and forms to examine how social issues are reflected and changed. Majors only; nonmajors may not be repeated for credit.

COM 4942 Communication Intern Seminar (3) AS SPE
PR: Communication major, minimum GPA 3.0, 75 hours completed, 15 units of core requirements and 9 elective hours completed, and CI. Seminar provides students with an opportunity to put into practice
COP 4530 Data Structures (3) EN ESB
Understanding of current data structures.
Topical issues in communication.

COP 1930 Special Topics for Information Technology (1-3) US EIT
Special topics course.

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 2270 Programming in C for Engineers (3) EN ESB
PR: MAC 2281, MAC 2311 or MAC 2241. This class prepares students to use the C programming language and the MATLAB environment to develop solutions to small scale scientific and engineering problems.

COP 2510 Programming Concepts (3) EN ESB
PR: MAC 2221 or equivalent. An examination of a modern programming language emphasizing programming concepts and design methodology.

COP 2930 Special Topics for Information Technology (1-3) US EIT
Special topics course.

COP 2931 Special Topics for Information Technology (1-3) US EIT
Special topics course.

COP 3257 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 3331 Object Oriented Software Design (3) EN ESB
PR: COP 3514 Design of a computer program using an Object-Oriented programming language. Extension of programming knowledge from a procedural language to an object-oriented language. Analysis of program requirements.

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 3514 Program Design (3) EN ESB
PR: COP 2510 or comparable introductory programming course and DPR. The course extends students' programming knowledge by systematically considering the concepts involved in program design and creation. Students will also build upon their previous program development 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 computer programs 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 3931 Special Topics for Information Technology (1-4) US EIT
Topics to be chosen by students and instructor permitting newly developing disciplinary special interests to be explored.

COP 4020 Programming Languages (3) EN ESB
PR: EEL 4851C. An introduction to the specification, design, and analysis of programming languages. Topics include syntax, operational semantics, type systems, type safety, lambda calculus, functional programming, polymorphism, side effects, and objects.

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 4314 COBOL Data Structures (3) EN ESB
PR: COP 3514, COP 3313. Admission to the CSE department. CSE majors only. Understand and implement fundamentals of concise data structure and organization for program efficiency, clarity and simplicity. Implementation of different data types and structures. Understanding of current data structures.

COP 4600 Operating Systems (3) EN ESB
PR: EEL 4851C. Introduction to concepts and ideas of modern operating systems. Topics include process, parallelism, memory management, resource allocation and files. Algorithms are used to understand many of the concepts associated with operating systems.

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 files. Algorithms are used to understand many of the concepts associated with 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 4703 Database Systems for Information Technology (3) US EIT
PR: 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 4710 Database Design (3) EN ESB
PR: COP 4530 or EEL 4851C. This course covers the fundamentals and applications of database management systems, including data models, relational database design, query languages, and web-based database applications.

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. 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.

COP 4835 Web Development Tools (3) US EIT
PR: CI. This course builds on web design concepts and extends them to build and maintain complete Web Sites using the current de facto industry-standard integrated web site development environment/ applications.

COP 4930 Information Technology Seminar (1-3) US EIT
PR: Senior standing in Information Technology. A survey of current issues in Information Technology with an emphasis on keeping the IT student abreast of the variety of domains associated with their major. Speakers with a wide variety of IT experience will give seminars to senior IT students.

COP 4931 Special Topics for Information Technology (1-4) US EIT
Topics to be chosen by students and instructor permitting newly developing disciplinary special interests to be explored.

COT 3100 Introduction to Discrete Structures (3) EN ESB
PR: MAC 2281 or equivalent. Introduction to set algebra, propositional calculus and finite algebraic structures as they apply to computer systems.

COT 3115 Advanced Discrete Structures with Cryptology (3) EN ESB
PR: EEL 4851C, COT 3100. Advanced topics in discrete mathematics: number theory, groups, rings and fields, finite fields, and combinatorics, as applied to computer systems. Theoretical application of mathematical concepts to coding theory and cryptography.

COT 4210 Automata Theory and Formal Languages (3) EN ESB
PR: COT 3100, EEL 4851C. Introduction to the theory and application of various types of computing devices and the languages they recognize.

COT 4400 Analysis Of Algorithms (3) EN ESB
PR: COT 3100, EEL 4851C. Design principles and analysis techniques applicable to various classes of computer algorithms frequently used in practice.

CPO 2002 Introduction to Comparative Politics SS (3) AS POL
Comparison and analysis of representative European and non-Western political systems.
CWR 4540 Water Resources Engineering I (3) AS POL
A study of the ideologies, governmental structures, and political processes of selected nations of the non-Western world. One of the core courses.

CWR 4204 Government and Politics of Africa SS AF (3) AS AFA
Designed to provide the information and analytical tools necessary to interpret current Sub-Saharan African politics. Survey of political organization in traditional African societies; politics under colonial rule; the struggle for independence, and post-independence policies.

CWR 4930 Comparative Government and Politics of Selected Countries or Areas (3) AS POL
Studies political systems with common elements. Structure, process, domestic and foreign politics, and regional roles are considered.

CPO 5934 Selected Topics in Comparative Politics (3) AS POL Sr./GS. Studies specific substantive areas in Comparative Politics, such as political economy or the politics of specific countries or regions.

CRW 2100 Narration and Description 6A (3) AS ENG
A study of narrative and descriptive techniques in prose. By making the student sensitive to language usage, the course is designed to bridge the gap between expository writing and imaginative writing.

CRW 3111 Form and Technique of Fiction 6A (3) AS ENG
A study of short narrative forms such as the anecdote, tale, character sketch, incident, monologue, epistolary story, and short story with themes that have been used in the development of fiction and as they exist today.

CRW 3112 Fiction I 6A (3) AS ENG
PR: CRW 2100 or CRW 3111. An introduction to fiction writing, beginning with a practical study of the various elements of fiction and proceeding through the many processes of revision to arrive at a completed work of art.

CRW 3121 Fiction II 6A (3) AS ENG
PR: CRW 2100 or CRW 3111, CRW 3112. A fiction workshop which provides individual and peer guidance for the student’s writing and which encourages the development of critical skills.

CRW 3311 Form and Technique of Poetry (3) AS ENG
An examination of the techniques employed in fixed forms from the couplet through the sonnet to such various forms as the rondel, ballad, villanelle, sestina, etc. Principles in the narrative, dramatic, and lyric modes are also explored.

CRW 3312 Poetry I (3) AS ENG
PR: CRW 3311. An introduction to poetry writing utilizing writing exercises employing poetic language and devices; the exercises progress to the writing of both rhymed and unrhymed metrical and non-metrical forms.

CRW 3321 Poetry II (3) AS ENG
PR: CRW 3311, CRW 3312. A poetry workshop which provides individual and peer guidance for the student’s writing and which encourages the development of critical skills.

CRW 4120 Fiction III (3) AS ENG
PR: CRW 2100 or CRW 3111, CRW 3112, CRW 3121. An advanced fiction workshop in which works may be carried over from CRW 3112 or longer forms such as the novel may be begun.

CRW 4320 Poetry III (3) AS ENG
PR: CRW 3311, CRW 3312, CRW 3321. An advanced poetry workshop in which students are expected to create works exhibiting a firm knowledge of the principles explored in the preceding courses.

CR W 4930 Selected Topics in Creative Writing (1-4) AS ENG
PR: 12 hours of CRW courses or CI. The focus of the course will be governed by student demand and instructor interest. Topics to be covered may include writing the literary essay, writing in mixed genres, and utilizing popular conventions in serious works. May be taken twice for credit with different topics.

CWR 4202 Hydraulics (3) EN EGX
PR: EGN 3353. Fundamental and applied aspects of pipe flow, free surface flow, and unsteady flow for hydraulic systems.

CWR 4541 Water Resources Engineering I (3) EN EGX
PR: CWR 4202. A study of the engineering principles involved in sustaining and managing the quantity and quality of water available for human activities with particular emphasis on surface water and ground water hydrology.

CWR 4541 Water Resources Engineering II (3) EN EGX
PR: EGN 3353, CWR 4202. The course is intended to be a technical elective for students specializing in water resources or environmental engineering. Material in the course covers subsurface hydrology including both soil vadose zone processes and the ground water flow.

CWR 4812 Capstone Water Resources/Environmental Design MWR CPST (4) EN EGX
PR: ENV 4001, CWR 4540. CR: ENV 4417, CEG 4012 or TTE 4005. A capstone water resources design experience for seniors in Civil and Environmental Engineering. A design-oriented course to design both industrial and domestic water treatment and water transport systems and hydraulic systems.

DAA 2100 Fundamentals Of Modern Dance (2) TA DAN
A studio class for students with a serious interest in concert modern dance. Emphasis upon correct alignment, development of strength, rhythmic and dynamic activity, as well as spatial and locomotor patterns. May be repeated up to 6 credit hours.

DAA 2104 Modern Dance (2) TA DAN
PR: Admission by placement audition. A studio class for students with a serious interest in concert modern dance. Further emphasis on correct alignment, development of strength, rhythmic and dynamic activity as well as spatial and locomotor patterns. May be repeated up to 8 credit hours.

DAA 2200 Fundamentals Of Ballet (2) TA DAN
A studio class for students with a serious interest in Ballet. Emphasis on correct alignment of the body and a progressive development of positions and barre exercises as well as the application of combinations in center work using classical Ballet vocabulary (French terms). May be repeated.

DAA 2204 Ballet I (2) TA DAN
PR: Admission by placement audition. A studio class for students with a serious interest in Ballet. Further emphasis on correct alignment of the body and a further development of positions and barre exercises as well as the application of combinations in center work using classical Ballet vocabulary (French terms). May be repeated.

DAA 2500 Fundamentals Of Jazz Dance (2) TA DAN
A basic movement course in Jazz Dance involving dance vocabulary, alignment, styles and simple rhythmic patterns. May be repeated up to 6 credits.

DAA 2504 Jazz Dance (2) TA DAN
PR: Admission by placement audition and DAA 2500. A technique class for the intermediate level dancer to become acquainted with the dance styles and forms of musical theatre and concert jazz dance. Emphasis is on highly stylized movement with a strong rhythmic base. May be repeated.

DAA 2540 Theatre Dance Styles (2) TA DAN
PR: DAA 2500 or DAA 2504 or CI. Development of technical skills in social and historical dance forms frequently stylized for use by dance choreographers. Forms to be studied will include polka, clogging, waltz, folk, tap dancing, etc. May be repeated up to 6 credits.

DAA 2570 Jazz Theatre Dance (3) TA DAN
PR: Admission by placement audition and DAA 2504. Further emphasis on projection, phrasing, rhythmic patterns and dynamics. Solo and ensemble studies leading to performance. May be repeated up to 6 credits.

DAA 3108 Modern Dance II (3) TA DAN
PR: Admission by placement audition. Study of principles of modern dance technique. Practical work in exercises and movement phrases, utilizing changing rhythms and dynamic activity, Concert and performance attendance required. May be repeated.

DAA 3109 Modern Dance III (2-3) TA DAN
PR: Admission by placement audition. Continuation of DAA 3108. Further emphasis on style and phrasing. Work on projecting mood and quality by dancing and rehearsing in more advanced choreography, leading to performance. May be repeated.

DAA 3208 Ballet II (3) TA DAN
PR: Admission by placement audition. Positions and barre exercises. Emphasis on correct alignment of the body and the application of simple step combinations in centre work. The use of ballet vocabulary (French terms). Material is covered almost totally as practical work in class with a few outside projects. Concert and performance attendance required. May be repeated.

DAA 3209 Ballet III (2-3) TA DAN
PR: Admission by placement audition. Continuation of DAA 3208. Further development of the techniques of strength and form. Application of phrasing and movement. Material covered as practical work in class for concerts and performances. May be repeated.

DAA 3294 Ballet Variations (1) TA DAN
PR: DAA 3209. This course provides instruction in various forms of ballet. Semester courses include: Pointe technique, Men’s Class, Character Dance, Spanish Dance and Partnering. BFA Ballet concentration sophomore students are required to complete two semester hours. May be repeated.

DAA 3395 World Dance Topics (1) TA DAN
Students will experience fundamental knowledge of dance representing various world cultures. In addition to a dance/movement component, a connection will be made to historical, spiritual/
religious, ethnological and environmental indigenous aspects of dance and the potential of dance as a cultural experience. May be repeated.

DAA 4615 Choreography II (2) TA DAN
PR: DAA 3614. Preparation of studies in theme and variations, breath phrases and metric phrases.

DAA 4616 Dance Improvisation (2) TA DAN
For majors and non-majors. Exploring various methods of spontaneously creating dance movement in individual and group situations. Structured and unstructured approaches will be explored. May be repeated.

DAA 4654 Repertory I (1) TA DAN
PR: Admission by audition. The development and performance of solo and/or group dances.

DAA 4684 Repertory II (1) TA DAN
PR: Admission by audition. The development and performance of solo and/or group dances.

DAA 4110 Modern Dance IV (3-4) TA DAN
PR: Admission by placement audition. Intense work on the growth of personal concert dance styles. Equal emphasis will be given to training the body in the development of technical excellence. May be repeated.

DAA 4211 Ballet IV (3-4) TA DAN
PR: Admission by placement audition or CI. Perfecting the execution of barre work. Intensification of centre work. More stress on aesthetic quality of movement and phrasing. Students expected to be proficient in poine work. Outside projects, concerts, and performances are required. May be repeated.

DAA 4616 Choreography III (2) TA DAN
PR: DAA 3615. CR: DAA 3109 or above. Work directed toward duets and group dances. The students will submit choreographic ideas for Instructor’s approval, then proceed with rehearsals. Lec-lab., reading. Rehearsal hours to be arranged.

DAA 4617 Choreography IV (2) TA DAN
PR: DAA 4616. The student will prepare studies based on free form, minimal art, and chance methods. Lec-lab., reading.

DAA 4685 Performance (1-3) TA DAN
PR: Admission by audition. 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.

DAA 4687 Performance (1-2) TA DAN
PR: Admission by audition. 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.

DAA 4894 Senior Choreography Project (1-5) TA 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 a faculty advisor.

DAA 4920 Dance Studies (1-4) TA DAN
PR: CI and CC. Dance Major status. Individual study to extended competence in technique and performance of Dance through participation in special workshops.

DAA 3351 Ethnic/Folk Dance (2) TA DAN
An exploration of ethnic and folk dance forms in various cultures of the eastern and western hemispheres. Students will investigate ways of doing research, and teaching dances through studio work, videos, performances, and readings.

DAA 4300 Dance Pedagogy: Theory and Practice (3) TA DAN
PR: CI, CC. Designed to provide prospective teachers with opportunities to develop concepts of pedagogy based on principles of teaching/learning dance. Specific sections will focus on Secondary Curriculum and Methods and on Pre-K and Elementary Methods.

DAA 4310 Dance Pedagogy: Pre-School to Elementary (3) TA DAN
This course is designed to meet the needs of students in Dance Education to understand the scope and sequence of dance curriculum design and teaching methods appropriate to Pre-K and elementary students.

DAE 4340 Dance Pedagogy: Secondary Curriculum (3) TA DAN
This course is designed to meet the needs of students in Dance Education to understand the scope and sequence of dance curriculum design and teaching methods appropriate to the secondary student.

DAE 4397 Special Studies Dance Education (3) TA DAN
CR: CI and CC. For majors and non-majors. Designed to provide prospective dance teachers with opportunities to develop concepts of pedagogy based on principles of teaching/learning in dance techniques and choreography. May be repeated up to 9 credit hours.

DAE 4936 Senior Seminar in Dance Education (2) TA DAN
CR: DAE 4940 This course represents a synthesis of the teacher Candidate’s courses and is required concurrently with the internship.

DAE 4940 Internship in Dance Education (1-12) TA DAN
CR: DAE 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.

DAN 2100 Introduction To Dance 6A FA (3) TA DAN
A practicum in mounting dance concerts with shop work and backstage participation. Intended for students working in costume, set preparation, light presentation, stage management and production crew. Dance majors must have 4 credits. May be repeated.

DAN 3614 Music For Dance (2) TA DAN
PR: Designed for majors and non-majors. Development of musical skills in movement studies. Continued study of the inter-relationship of music and dance through movement experiences, observations, video, and writing.

DAN 3615 Music For Dance II (2) TA DAN

DAN 3714 Dance Kinesiology (3) TA DAN
This course will give the student an understanding of basic human anatomy and how it functions in relation to movement, injury prevention, teaching and performance. Individual structural differences and how these affect movement potential will also be studied. There will be an emphasis on the kinesiological analysis of movement with the goal of increased efficiency, enhanced performance and injury prevention.

DAN 4134 Dance History Through the 19th Century 6A LW (3) TA 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) TA 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) TA DAN
PR: DAA 4680 with Senior 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 4180 Dance Senior Seminar 2 (2) TA 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) TA DAN
Specialized study in movement theories, body alignment, and
movement patterns focusing on the scientific and analytical basis of movement with consideration for developmental processes, technique, creative expression, and performance.

DAN 4503 Special Study in Movement, Theory, Body Alignment (2) TA DAN
An examination of scientific basis of movement for the dancer through the study of body alignment and movement theories related to dance techniques.

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

DAN 4930 Selected Topics In Dance (1-5) TA DAN
Pr: CI and CC. The content of the course will be governed by student interest. May be repeated by major.

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) BC GEY
An examination of individuals and the physical, cognitive, personality, and social changes which occur throughout the entire life span.

DEP 3110 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 development.

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. Presents 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.

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.

EBD 4011 Introduction to Behavior Disorders (3) ED EDS
Pr: EEX 4012 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.

EBD 4909 Directed Study: Behavior Disorders (1-3) ED EDS
Pr: Senior standing, DPR. To extend competency in teaching field.

EBD 4941 Undergraduate Supervised Practicum in Behavior Disorders (1-6) ED EDS
Pr: EEX 4012. S/U only. DPR. Supervised field experience in assessment, classroom management, and clinical teaching with children who have emotional and behavioral disabilities.

ECH 3023C Mathematical and Energy Balances (4) EN ECH
Pr: PHY 2049, MAC 2283, CHM 2046. CP: EGN 3343. Integration of previous knowledge into the definition of reactors and separation processes, through the hierarchical use of material balance, phenochemical and energy balances and reaction equations. Representation of streams as arrows and processes as black boxes in Box Flow Diagrams. BFD. Application of degree of freedom analysis.

ECH 3240L Chemical Engineering Laboratory I (3) EN ECH
Pr: ECH 3023C, ENC 3246, EGN 3443. Laboratory experiments in mass and energy balances, transport phenomena and chemical engineering thermodynamics. Accompanied by lectures on safety, data analysis, obtaining information, practice of chemical engineering and professional preparation.

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

ECH 4123 Chemical Engineering Thermodynamics (3) EN ECH
Pr: ECH 3023, ECH 3343, MAP 2302 or EGN 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 4241L Chemical Engineering Laboratory II (3) EN ECH
Pr: ECH 4265C, ECH 3240L. Laboratory experiments in reaction engineering, process control, heat and mass transfer. Lectures on theoretical concepts explored, sensors and data acquisition, data analysis, uncertainty analysis and experimental design.

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. May be repeated. Not for major credit.

ECH 4264 Transport Phenomena (4) EN ECH

ECH 4265C Mass Transfer Operations (4) EN ECH
Pr: ECH 4845, ECH 4264, ECH 41423. 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 differential in columns. Transfer to similar parts.

ECH 4323C 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 CPST (3) EN ECH
Pr: CHM 4415C, ECH 4265C, ECH 4415C or CI. Development of cost estimation, profitability analysis and theoretical concepts explored, sensors and data acquisition, data analysis, uncertainty analysis and experimental design.

ECH 4644 Process Equipment and Safety (3) EN ECH
Pr: ECH 4264, ECH 41423. CoPr: ECH 4265. Design, sizing, selection and preparation of equipment specifications for the process industry in accordance with process safety management guidelines and OSHA requirements.

ECH 4845 Numerical Methods in Chemical Engineering (4) EN ECH

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

ECH 4936 Undergraduate Seminar (1) EN ECH
ECO 5200 Chemical Process Engineering I (4) EN ECH
PR: Bachelor of science in engineering. This course presents the principles of mass balances, chemical thermodynamics, phase equilibria, energy balances, and psychrometrics. The student will learn by doing many case studies. Computer software will be used to obtain solutions to problems in engineering.

ECO 5201 Chemical Process Engineering II (4) EN ECH
PR: Bachelor of science in science, math, or engineering. Basic concepts of fluid mechanics, including viscous fluids, pipe flow with friction loss, simple fluid machinery, momentum and external flow. Steady state conductive and convective heat transfer. Not available for chemical engineering students.

ECO 5202 Chemical Process Engineering III (4) EN ECH
PR: Bachelor of science in science, math, or engineering. Basic concepts of fluid phase equilibrium, chemical equilibrium, separation processes, and chemical reactors. Not available for chemical engineering students.

ECO 5203 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, feedforward, 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, DAF and deadline compensation.

ECO 5217 Chemical Process Control (4) EN ECH
PR: Bachelor of science in science, math, or engineering. Basic concepts of feedback control, process dynamics, process controllers (PID) including tuning, control loop stability, cascade, ratio, sensitivity, disturbance, feedforward, and deadband.

ECH 5740 Theory and Design of Bioprocesses (3) EN ECH
Introduction to biotechnology, including applied microbiology, energy technology, biomass production, bioreactor 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 593J Special Topics III (1-4) EN ECH
PR: CI.

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

ECO 1000 Basic Economics SS (3) BU ECN
No credit 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 2013 Economic Principles (Macro-economics) SS CASB (3) BU ECN
ECO 2013 introduces students to basic economic terminology, definitions and measurements of macroeconomic indicators, the role of the government and its role in the economy. Students will learn to interpret economic data, and to apply economic principles to real-world problems.

ECO 2023 Economic Principles (Micro-economics) SS (3) BU ECN
Introduction to microeconomic theory of price determination. How does the economy decide what it will produce, how to produce, and how to distribute goods and services.

ECO 2935 Selected Topics in Economics (1-3) BU ECN
Not available to undergraduate students admitted to the College of Business. Options selected by department. May be repeated if topics vary.

ECO 3101 Intermediate Price Theory (3) BU ECN
PR: ECO 2013 or ECO 2023. Development of economic theory for price determination. How does the economy decide what to produce, how to produce, and how to distribute goods and services between competing uses. May not receive credit for both ECO 3703 and ECO 3101.

ECO 3203 Intermediate Macroeconomics (3) BU ECN
PR: ECO 2013 or ECO 3101 or ECO 3703 with a grade of “C” or better. Determination of income, employment, prices, and interest rates. Aggregate demand and aggregate supply.

ECO 3622 American Economic History (3) BU ECN

ECO 3703 International Economics MW (3) BU ECN

ECO 4105 Advanced Price Theory (3) BU ECN
PR: ECO 3101 or ECO 3703 with a grade of “B” or better. An advanced survey of special topics in microeconomics: consumer behavior, production theory, and market and non-market allocation.

ECO 4120 Advanced Macroeconomic Theory (3) BU 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 the theories of money, growth, and business cycles. Discussion of how such theories accord with the data are also presented.

ECO 4270 Economic Growth (3) BU ECN
PR: ECO 3101 or ECO 3703. This course provides an introduction to the theory of economic growth, the process whereby the level of real output per capita increases over time. Emphasis is on the role of factor accumulation and productivity growth and their underlying determinants.

ECO 4303 History Of Economic Thought (3) BU ECN

ECO 4332 Radical Political Economy MW (3) BU ECN
PR: ECO 1000 or ECO 3103 or ECO 3703 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) BU ECN
PR: ECO 3101 or ECO 3703, and MAC 2241 or MAC 2233 or CI. Mathematical models of optimizing behavior and economic equilibrium.

ECO 4421 Introduction to Econometrics (3) BU ECN
PR: ECO 3101 or ECO 3703, and QMB 3200 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, multicolinearity, and specification errors.

ECO 4504 Public Finance (3) BU ECN

ECO 4604 International Trade and Policy (3) BU ECN
PR: ECO 3101 or ECO 3703 with a grade of “C” or better. Advanced analysis of international trade theory and commercial policy, international economic integration, multinational enterprise.

ECO 4613 International Macroeconomics (3) BU ECN
PR: ECO 3101 or ECO 3703 with a grade of “C” or better. Advanced analysis of international macroeconomic relationships. Foreign exchange market, international monetary system balance of payments.

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

ECO 4914 Independent Research (1-3) BU ECN
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.

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

ECP 3201 Economics of Women and Work MW (3) BU ECN
PR: ECO 1000 or ECO 2023. Survey and 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 3203 Labor Economics (3) BU ECN
PR: ECO 3101 or ECO 3703 with a grade of “C” or better. Determinants of wage and employment levels; occupational, industrial, and geographical wage differentials. Survey and research on labor market effects on labor markets: the economics of discrimination; inflation, and unemployment.

ECP 3302 Environmental Economics MW (3) BU ECN
PR: ECO 2023. An economic analysis of environmental issues. The economics of resource use and pollution control are examined using
EDE 4910 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 4926 Childhood Education Internship Level I (6) ED EDE
PR: Admission to the Elementary Education. CR: RED 4310, EDG 4620. Concurrent enrollment in EDG 4620-Elementary section. S/U only. Students spend six hours per week in a supervised in-school experience and attend a weekly seminar.

EDE 4942 Childhood Education Internship Level II (6) ED EDE
PR: EDE 4941, RED 4310, EDG 4620, EDF 3122, 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.

EDF 2005 Introduction to Education and Field Experience (3) ED EDF
Introductory 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.

EDF 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.

EDF 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.

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

EDF 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.

EDF 3604 Social Foundations of Education MW WRIN (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.

EDF 4124 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.

EDF 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.

EDF 4430 Measurement For Teachers (3) ED EDF
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 4905 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: Elementary Education (1-3) ED EDE
PR: Senior standing. To extend competency in teaching field.

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
EDG 4323: Child, Family, and Teacher Relations (3) TA EDDU

This course is designed to introduce students to child-focused subject matter, including program planning and evaluation, professional ethics and responsibilities, and the development of programs for young children. Weekly seminars are conducted in conjunction with the field experience which provides teacher candidates an opportunity for reflection on their understandings.

EDG 4909: Directed Studies (1-4) ED EDC

PR: Senior standing; Offered only as a scheduled class. Department consent required. To extend competency in teaching fields.

EEC 4008: Lit. in Early Childhood Education 6A LW (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.

EEC 4203: Programs for Young Children (3) ED EDU

PR: Admission to College of Education. 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 EDC

PR: Admission to College of Education, EDF 4111. Early Childhood majors only. Develops students' understanding of historical and social foundations of early childhood education, establishing professional standards in early childhood ed, the historical development, current theories, and practices.

EEC 4905: Independent Study (1-4) ED EDC

PR: Senior standing; CR: EEC 4940. Synthesis of teacher candidate's courses in complete college program. Requires the design and implementation of a short range communications link including a transmitter and a superheterodyne receiver.

EVEE 3391: Electronic Materials II (3) EN EGE

PR: EEE 3394. An introduction to the fundamentals of semiconductor materials and semiconductor device operation.

EVEE 3344C: Digital CMOS/VLSI Design (3) EN EGE

PR: EEE 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.

EVEE 5356: Integrated Circuit Technology (3) EN EGE

PR: EEE 4351 or GS. Physics and Chemistry of integrated circuit and discrete device fabrication, materials limitations, processing schematics, failure and yield analysis. A laboratory is integral to the course.

EVEE 5357: Analog CMOS/VLSI Design (3) EN EGE

PR: EEE 4351 or GS. Design of analog circuits for CMOS/VLSI design. Techniques for utilizing literature to teach literacy in content areas of the curriculum.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>College</th>
</tr>
</thead>
<tbody>
<tr>
<td>EEL 3100</td>
<td>Network Analysis and Design (3) EN EGE</td>
<td>3</td>
<td>EGE</td>
</tr>
<tr>
<td>EEL 3115L</td>
<td>Lab I (1) EN EGE</td>
<td>1</td>
<td>EGE</td>
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<tr>
<td>EEL 3116L</td>
<td>Lab II (1) EN EGE</td>
<td>1</td>
<td>EGE</td>
</tr>
<tr>
<td>EEL 4030</td>
<td>Electrical Systems Environments (3) EN EGE</td>
<td>3</td>
<td>EGE</td>
</tr>
<tr>
<td>EEL 4102</td>
<td>Linear Systems Analysis (3) EN EGE</td>
<td>3</td>
<td>EGE</td>
</tr>
<tr>
<td>EEL 4243</td>
<td>Switching Power Supply Design (3) EN EGE</td>
<td>3</td>
<td>EGE</td>
</tr>
<tr>
<td>EEL 4421</td>
<td>RF/Microwave Circuits I (3) EN EGE</td>
<td>3</td>
<td>EGE</td>
</tr>
<tr>
<td>EEL 4421L</td>
<td>Wireless Circuits &amp; Systems Design Laboratory (2) ENEGE</td>
<td>2</td>
<td>ENEGE</td>
</tr>
<tr>
<td>EEL 4471</td>
<td>Electromagnetics MW (3) EN EGE</td>
<td>3</td>
<td>EGE</td>
</tr>
<tr>
<td>EEL 4567</td>
<td>Linear Control Systems (3) EN EGE</td>
<td>3</td>
<td>EGE</td>
</tr>
<tr>
<td>EEL 4851C</td>
<td>Data Structures (3) ENSB</td>
<td>3</td>
<td>ENSB</td>
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<tr>
<td>EEL 4852C</td>
<td>Data Base Systems (3) ESB</td>
<td>3</td>
<td>ESB</td>
</tr>
<tr>
<td>EEL 4906</td>
<td>Professional Issues and Engineering Design MW (3) ENEGE</td>
<td>3</td>
<td>ENEGE</td>
</tr>
</tbody>
</table>

**Description:**

- **EEL 3100** Network Analysis and Design: Introduces the solution of electrical engineering problems.
- **EEL 3115L** and **EEL 3116L** Laboratory: Designed for introductory electrical engineering students to learn to design and test active electronic networks. Computer Aided Design tools and computer data acquisition strategies are examined in greater detail.
- **EEL 4030** Electrical Systems Environments: Provides an introduction to the fundamental principles of modern microwave systems, the tools used for analysis, and some common circuit topologies for matching, filtering, and power distribution. Part one of a two-part sequence.
- **EEL 4243** Switching Power Supply Design: Introduces the basic principles of switching power supply circuits for both linear and switched mode power supplies. Topics include converter topologies, design considerations, power conversion efficiency, and various control strategies.
- **EEL 4421** RF/Microwave Circuits I: Introduces passive microwave circuit design. The course covers transmission lines, microwave components, waveguide theory, and fundamental concepts in microwave integrated circuits.
- **EEL 4421L** Wireless Circuits & Systems Design Laboratory: Provides an introduction to the design and analysis of modern communication systems. Topics include wireless communication systems, modulation techniques, and digital communication systems.
- **EEL 4471** Electromagnetics MW: Covers static and dynamic electromagnetic fields, applications, and environmental effects (radiation). Introduces electromagnetic field theory, including static and dynamic electromagnetic fields.
- **EEL 4567** Linear Control Systems: Focuses on the introduction and design of linear feedback control systems. Covers block diagram, flow charts, Bode, Nyquist, and root locus techniques.
- **EEL 4851C** Data Structures: Introduces basic data structures and algorithms, including arrays, linked lists, stacks, queues, and hash tables. Focuses on understanding and implementing these data structures in C/C++.
- **EEL 4906** Professional Issues and Engineering Design: Discusses professional issues facing electrical engineers, including ethics, safety, and environmental impact.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Communication and X</th>
</tr>
</thead>
<tbody>
<tr>
<td>EEX 4604</td>
<td>Behavior Management for Special Needs and At-Risk</td>
<td>PR: EEX 4606, 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.)</td>
</tr>
<tr>
<td>EEX 4335</td>
<td>Special Electrical Engineering Topics I (1-4) EN EGE</td>
<td></td>
</tr>
<tr>
<td>EEX 4305</td>
<td>Special Electrical Engineering Topics II (1-4) EN EGE</td>
<td></td>
</tr>
<tr>
<td>EEX 4370</td>
<td>Special Electrical Engineering Topics III (1-4) EN EGE</td>
<td></td>
</tr>
<tr>
<td>EEG 5030</td>
<td>Power System Analysis (EN EGE)</td>
<td>PR: EGN 3375. Analysis and design technique for AC power systems.</td>
</tr>
<tr>
<td>EEL 5462</td>
<td>Antenna Theory (EN EGE)</td>
<td>PR: EEL 4471 or GS. Antenna theory beginning with fundamental parameter definitions and continuing with mathematical concepts, elemental antennas and arrays.</td>
</tr>
<tr>
<td>EEL 5527</td>
<td>Local and Metropolitan Area Networks (3) EN EGE</td>
<td></td>
</tr>
<tr>
<td>EEL 4930</td>
<td>Educational Assessment of Exceptional Students</td>
<td>PR: EEX 4012 or equivalent or 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.</td>
</tr>
<tr>
<td>EEX 4595</td>
<td>Independent Study: Exceptional Student Education (1-3) ED EDS</td>
<td>PR: Senior standing. DPR. To extend competency in teaching field.</td>
</tr>
<tr>
<td>EEX 4935</td>
<td>Directed Study: Student Exception Education (1-3) ED EDS</td>
<td></td>
</tr>
<tr>
<td>EEL 5594</td>
<td>Wireless Circuits and Systems Laboratory (2) EN EGE</td>
<td>PR: EEL 4471. This class will provide introductory tutorial learning, hands-on experience in analysis, design and measurement in the field of wireless communications.</td>
</tr>
<tr>
<td>EEL 5631</td>
<td>Digital Control Systems (3) EN EGE</td>
<td></td>
</tr>
<tr>
<td>EEL 5754C</td>
<td>Microprocessor Based Digital Signal Processing (3) ENE</td>
<td>PR: EEL 4851C. An introduction to the evolution of computer graphics including point-plotting, line drawing, two-dimensional transformations and graphics software packages.</td>
</tr>
<tr>
<td>EEL 5771</td>
<td>Introduction to Computer Graphics I (3) EN ESB</td>
<td>PR: EEL 4851C. Introduction to computer graphics. The purpose of this course is to introduce students to the historical and theoretical perspectives on educating students with learning disabilities, emotional disabilities, hearing impairments, mental retardation, physical handicaps, speech impairments, visual limitations, and who are gifted and talented.</td>
</tr>
<tr>
<td>EEL 4012</td>
<td>Foundations of Special Education (3) ED EDS</td>
<td>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.</td>
</tr>
<tr>
<td>EEX 4011</td>
<td>Perspectives on Learning and Behavioral Differences (3) ED EDS</td>
<td>PR: EEX 4012. The purpose of this course is to introduce students to the historical and theoretical perspectives on educating students with learning disabilities, emotional disabilities, hearing impairments, mental retardation, physical handicaps, speech impairments, visual limitations, and who are gifted and talented.</td>
</tr>
<tr>
<td>EEX 4070</td>
<td>Integrating Exceptional Students in the Regular Classroom (2-3) ED EDS</td>
<td>No credit for department majors. Designed for non-special education majors. Includes basic identification techniques and strategies to promote academic and social integration and interaction of &quot;mainstream&quot; exceptional students. Concurrent field experience projects are included.</td>
</tr>
<tr>
<td>EEX 4221</td>
<td>Educational Assessment of Exceptional Students (3) ED EDS</td>
<td>PR: EDF 3214, EDF 4430 and EEX 4012. CR: EEX 4941 and EEX 4894. 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.</td>
</tr>
<tr>
<td>EEX 4243</td>
<td>Education of Exceptional Adolescents and Adults (3) ED EDS</td>
<td>PR: EEX 4012 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.</td>
</tr>
<tr>
<td>EEX 4604</td>
<td>Behavior Management for Special Needs and At-Risk Students (3) ED EDS</td>
<td>PR: EEX 4012. CR: EEX 4941, ELD 4941, or EMR 4941. Techniques to prevent, analyze, and manage challenging and disruptive classroom behavior as well as teaching social skills.</td>
</tr>
<tr>
<td>EEX 4742</td>
<td>Narrative Perspectives on Exceptionality: Cultural and Ethical Issues (3) FA EDS</td>
<td>This course is designed to offer students a meaningful way to interpret and understand exceptionalities.</td>
</tr>
<tr>
<td>EEX 4894</td>
<td>Clinical Teaching in Special Education (3) ED EDS</td>
<td>PR: EEX 4012, DPR. CR: EEX 4941. Effective teaching principles, instructional management procedures, and specialized teaching techniques for exceptional students.</td>
</tr>
<tr>
<td>EEX 4905</td>
<td>Independent Study: Exceptional Student Education (1-3) ED EDS</td>
<td>PR: DPR. S/U only. Specialized independent study determined by the student's needs and interests.</td>
</tr>
<tr>
<td>EEX 4940</td>
<td>Internship: Exceptional Student Education (1-12) ED EDS</td>
<td>CR: EEX 4936. S/U only. One full semester of internship in an accredited public or private school.</td>
</tr>
<tr>
<td>EEX 4941</td>
<td>Practicum in Exceptional Student Education (1-4) ED EDS</td>
<td>CR: Sem I: EEX 4012; Sem II: EEX 4604; Sem III: EEX 4221 and EEX 4894. Designed to provide teacher candidates with carefully planned and supervised clinical experiences with exceptional student populations in a variety of settings. Candidates demonstrate the ability to apply concepts, theories and research. Repeatable up to six credit hours.</td>
</tr>
<tr>
<td>EEX 5705</td>
<td>Seminar in Preschool Handicapped (2) ED EDS</td>
<td>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 multicultural education, strategies for working effectively with families of school-age children, diverse cultures and family structures represented in school populations today.</td>
</tr>
<tr>
<td>EGI 4941</td>
<td>Undergraduate Supervised Practicum in Gifted Student Education (1-6) ED EDS</td>
<td>Organizer, supervised experiences with gifted children. Specific experiences may be either a combination of observation and assistance with gifted children or individualized projects.</td>
</tr>
<tr>
<td>EGI 5307</td>
<td>Theory and Development of Creativity (3) ED EDS</td>
<td>This survey course examines the characteristics and educational needs of children and youth who are gifted, including those from specific cultural or ethnic backgrounds. Topics include: seven technologically advanced media; methods of producing power, materials, transportation, communication and calculation, and technology and society.</td>
</tr>
<tr>
<td>EGN 2031</td>
<td>History of Technology HP (3) EN EGB</td>
<td>Covers the evolution of technology and its influence on society from pre-historic man to the modern day. Topics include: seven technologically advanced media; methods of producing power, materials, transportation, communication and calculation, and technology and society.</td>
</tr>
<tr>
<td>EGN 2080</td>
<td>Light and the Arts: A Quantitative Approach FA (3) EN EGB</td>
<td>Explorations 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.</td>
</tr>
<tr>
<td>EGN 3373</td>
<td>History of Technology HP (3) EN EGB</td>
<td>Covers the evolution of technology and its influence on society from pre-historic man to the modern day. Topics include: seven technologically advanced media; methods of producing power, materials, transportation, communication and calculation, and technology and society.</td>
</tr>
<tr>
<td>EGN 2081</td>
<td>Circuit Mathematics and Physics (2) EN EGB</td>
<td>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, inductors.</td>
</tr>
<tr>
<td>EGN 2082</td>
<td>History of Electrotechnology HP (3) EN EGB</td>
<td>Background of the history of electrotechnology and its relation to the development of civilization. The contributions of Volta, Faraday, Alfred Nobel, and others.</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Name</td>
<td>Description</td>
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<tr>
<td>EGN 2210</td>
<td>Computer Tools for Engineers</td>
<td>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.</td>
</tr>
<tr>
<td>EGN 3000</td>
<td>Foundations of Engineering</td>
<td>Introduction to the profession of engineering. Exposure to the different disciplines of engineering incorporate examples of tools and techniques used in design and presentation.</td>
</tr>
<tr>
<td>EGN 3321</td>
<td>Dynamics</td>
<td>PR: EGN 3311. Dynamics of discrete particles; kinematics and kinetics for rigid bodies. Lec.</td>
</tr>
<tr>
<td>EGN 3365</td>
<td>Materials Engineering I</td>
<td>PR: CHM 2045; CR: EGN 3311. Structure and property relationships in engineering materials, i.e., metal, ceramic, and polymer systems. Environmental effects are also treated.</td>
</tr>
<tr>
<td>EGN 3375</td>
<td>Electromechanical Systems</td>
<td>PR: EGN 3373 with a minimum grade of B. Analysis of electromechanical device performance: transformers, transducers, DC motors and generators, AC motors and alternators.</td>
</tr>
<tr>
<td>EGN 3420</td>
<td>Engineering Analysis</td>
<td>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.</td>
</tr>
<tr>
<td>EGN 3433</td>
<td>Modeling and Analysis of Engineering Systems</td>
<td>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.</td>
</tr>
<tr>
<td>EGN 3443</td>
<td>Probability and Statistics for Engineers</td>
<td>PR: MAC 2282. An introduction to the basic concepts of statistical analysis with special emphasis on engineering applications.</td>
</tr>
<tr>
<td>EGN 3613C</td>
<td>Engineering Economy I</td>
<td>A study in analyzing the economic limitations imposed on engineering activities using basic models which consider the time value of money.</td>
</tr>
<tr>
<td>EGN 3615</td>
<td>Engineering Economics with Social and Global Implications</td>
<td>Presents basic economic models used to evaluate engineering activities and an understanding of the social and ethical implications of financial decisions in a multicultural environment through lectures, case studies and current readings.</td>
</tr>
<tr>
<td>EGN 3835</td>
<td>Globalization and Technology SS CAGC HHCP</td>
<td>In this course the student will learn to apply financial analyses to engineering projects. In addition the student will learn the effects (ramifications) of the changing global economy. He/she will apply financial tools to business and personal situations.</td>
</tr>
<tr>
<td>EGN 4366</td>
<td>Materials Engineering II</td>
<td>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.</td>
</tr>
<tr>
<td>EGN 4430</td>
<td>Introduction to Linear Systems</td>
<td>PR: MAC 2292. Study and application of matrix algebra, differential equations and calculus of finite differences.</td>
</tr>
<tr>
<td>EGN 4831</td>
<td>Technology and Society</td>
<td>Non-technical survey of engineering activities: utilities, nuclear power, genetics, weaponry, space, etc. Students conduct individual in-depth study of environmental/ethical problem.</td>
</tr>
<tr>
<td>EGN 4905</td>
<td>Independent Study</td>
<td>PR: CI. Specialized independent study determined by the students’ needs.</td>
</tr>
<tr>
<td>EGN 4930</td>
<td>Special Topics in Engineering</td>
<td>PR: CI. New technical topics of interest to engineering students.</td>
</tr>
<tr>
<td>EGN 5212</td>
<td>Engineering Applications for Vector Analysis</td>
<td>Vector methods in electromagnetism and fluid mechanics. Vector operators, line and flux integrals, potential and transport theorems, applications.</td>
</tr>
<tr>
<td>EGN 5424</td>
<td>Engineering Applications of Complex Analysis</td>
<td>Analytic functions, conformal mapping, residue theory, Laurent series, transforms. Applications to various problems in engineering and physics.</td>
</tr>
<tr>
<td>EGN 5425</td>
<td>Engineering Applications of Advanced Matrix Computations</td>
<td>Survey of theory and software for matrix computations: factorization methods, least squares and pseudoinverses, eigenvector algorithms. Special matrices and representations for control system and finite element applications.</td>
</tr>
<tr>
<td>EGS 1113</td>
<td>Introduction to Design Graphics</td>
<td>The student learns how to graphically represent technical designs using sketches, traditional drawing tools, and AutoCAD. The lab features twenty Pentium II computers running AutoCAD R14.</td>
</tr>
<tr>
<td>EIA 3192</td>
<td>Technology Education and Society</td>
<td>EIA 3192 Technology Education and Society</td>
</tr>
<tr>
<td>EIA 3192</td>
<td>Technology Education and Society</td>
<td>Introduction to programs, facilities and opportunities in teaching Technology Education. Includes historical, current and futuristic implications of technology in society.</td>
</tr>
<tr>
<td>EIA 4360</td>
<td>Special Teaching Methods: Technology Education</td>
<td>EDEVD</td>
</tr>
<tr>
<td>EIN 3241</td>
<td>Ergonomics I</td>
<td>EIN 3241 Ergonomics I</td>
</tr>
<tr>
<td>EIN 4142</td>
<td>Project Management</td>
<td>Using the fundamentals of the design process, this course demonstrates the critical importance of ergonomic tools and underlying physical human capacities.</td>
</tr>
<tr>
<td>EIN 4142</td>
<td>Project Management</td>
<td>EIN 4142 Project Management</td>
</tr>
</tbody>
</table>
EIV 4242 Ergonomics II (3) US EIT
PR: EIV 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.

EIV 4243C Human Factors 6A (3) EN EGS
Design of man-machine systems, by taking into consideration both human and machine capabilities and limitations.

EIV 4312C Work Analysis (3) EN EGS
PR: EGN 3813 or EGN 3615, EGN 3443. Operation analysis and work design, work measurement, standard data, ergonomics, and labor costing.

EIV 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.

EIV 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.

EIV 4364C Facilities Design (3) EN EGS
PR: EIV 4312C; CR: ESI 4221, EIV 4333. Design and modification of industrial production and material handling facilities. Basic analysis techniques, use of computer programs, automated warehousing.

EIN 4311A Automation and Robotics (3) EN EGS
PR: EIV 4621. Introduction to the practices and concepts of automation as applied to material handling, inventory storage, material transfer, industrial processes and quality control.

EIN 4621 Manufacturing Processes (3) EN EGS
PR: EGS 1113. The study of basic manufacturing processes and precision assembly. CAD/CAM including NC programming.

EIN 4891 Capstone Design MW CPST (3) EN EGS
PR: EIV 4364. Team of students work on the design of a product/service company and performed tasks that range from product/service definition (and assessment of market needs) to production and evaluation of economic/financial feasibility. The product/service design will use existing prototype(s) that need revisions, improvements and enhancements considering design, usability, producibility/manufacturability, and delivery.

EIN 4933 Special Topics in Industrial Engineering (1-5) 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 5174 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 the management transformation (paradigm shift) that is evolving. Unrestricted. Nonrepeatable for credit.

EIN 5182 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 professional positions.

EIN 5275 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 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 equiv., majors only. Statistical models for analyzing engineering alternatives from an economic viewpoint. The use of advanced engineering economy concepts in solving industrial problems.

EIN 5510 Manufacturing Systems Analysis (3) EN EGS
PR: CC, majors only. The study of systems of manufacturing entities such as machines, tools, robots, and materials handlers. Emphasis is on mathematical description of integrated systems and system optimization.

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 4300 Special Teaching Methods: Industrial-Technical Education (4) ED EDV
Instructional techniques in industrial-technical education. Vocational Industrial Clubs of America activities may be included.
PR: EML 4501, EML 4124

Comprehensive design or feasibility project analysis of machine elements and mechanical systems. Emphasis covered are: introduction of engines, fuels and combustion, numerical dynamics of machinery, electronics and fluid mechanics. Topics This course is for the application of thermodynamics, chemistry, advanced propulsion concepts. Special topics for class discussion.

PR: ENG 3373; Standard electrical voltages; power wiring in industrial plants; NEMA motor designs and their uses; 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.


PR: EGN 3385. Description of mechanical material cutting, forming and fabrication methods, as used in modern industrial manufacturing processes.

PR: EGN 3373 Standard electrical voltages; power wiring in industrial plants; NEMA motor designs and their uses; 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.

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.

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.

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.

PR: EML 4501, EML 4124 Comprehensive design or feasibility project requiring application of previously required mechanical design knowledge.

PR: CI. Comprehensive design or feasibility study project. In some cases may be a continuation of EML 4551.
ENL 3111 Shakespeare from an Historical Perspective (3) AS ENG
A critical study of British fiction from 1900 to the present, with emphasis on such writers as Conrad, Lawrence, Joyce, Woolf, Huxley, Orwell, Burgess, Murdoch, Golding, and others.

ENL 3332 British Novel: Conrad to the Present (3) AS ENG
The study of two or three major figures in British Literature. The course may include such writers as Fielding and Austen, Yeats, Joyce and Woolf. Specific topics will vary. May be taken twice for credit with different topics.

ENL 4131 Chaucer (3) AS ENG
An intensive study of The Canterbury Tales and major critical concerns.

ENL 4338 Advanced Studies in Shakespeare (3) AS ENG
PR: ENL 3331 or ENL 3332, or CI. Intensive study of selected plays of Shakespeare, with special attention to significant critical issues and to the Elizabethan and Jacobean cultural setting.

ENL 4341 Milton (3) AS ENG
Study of the poetry and major prose of John Milton, with special emphasis on Paradise Lost.

ENV 4417 Water Quality and Treatment (3) EN GE
Introduction to 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 4574 Film and Culture 6A CPST WRIN (3) AS ENG
PR: Junior/Senior Standing. Students will be introduced to key concepts and techniques of Film Studies, including the history of film; an examination of film genres; an overview of foreign cinema; and the study of issues of class, race, gender, and sexuality.

PR: EGN 3353. Behavior and effects of atmospheric contaminants
ENL 4341 Milton (3) AS ENG
Study of the poetry and major prose of John Milton, with special emphasis on Paradise Lost.

ENV 5103 Air Pollution Control (3) EN GE
PR: EGN 3353. Behavior and effects of atmospheric contaminants

ENV 2073 Global Warming: Science and Politics of a Contem- porary Issue NS CANP (3) EN GE
Non-technical introduction to the greenhouse effect and how human activities purportedly affect the global climate. Investigation of the relationship between science and the political process.

ENL 3323 Early Shakespeare (3) AS ENG
Survey of poetry, drama, and fiction by such writers as Eliot, Yeats, Thomas, Conrad, Shaw, Joyce, Lawrence, Huxley, Woolf, Forster, Waugh, Owen, Auden, O'Casey, and others.

ENL 3332 Late Shakespeare (3) AS ENG
A study of 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.

ENL 3334 Shakespeare from an Historical Perspective 6A HP CPST ENG
This course introduces students to at least six of Shakespeare's plays. The course will focus on artistic elements of the plays; the political, social, and intellectual milieu of the period; as well as issues of class, race, and gender.
and the principles of making measurements in the environment. Basic concepts of meteorology and control technology are discussed. Regulatory aspects and air pollution standards are covered.

ENV 5344 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. Undergraduate preparation in environmental engineering or an environmental science program. 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; thermal treatment.

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.

ENY 5504C Introduction to Entomology (4) AS BIN
PR: BSC 2010, BSC 2010L, 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. An introduction to general aspects of insect morphology, development, and classification. The identification of local forms will be emphasized. Fieldwork required. Lecture and Laboratory.

ENY 5505C Aquatic Entomology (4) AS BIN
PR: ENY 3004C and CHM 2210 and MAC 1105 or higher-level MAC course or STA 2023 or STA 2023. CP: PCB 3023 or PCB 3043 or PCB 3063 or PCB 3712 and CHM 2211. Taxonomy, development, and ecology of aquatic insects with emphasis on local forms. Fieldwork required. Lecture and Laboratory.

EPD 5051 Advanced Topics in Motor and Physical Disabilities (3) ED ED EDS
PR: EE 4012 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.

EPD 5321 Educational Strategies for Physically and Multihandicapped Students (3) ED ED EDS
PR: EPD 5051. Educational management of students with cerebral palsy, motor disabilities and multihandicapped conditions including rehabilitation and other community services.

ESC 4705 Geology and Development of Modern Africa MW (3) AS GLY
An in-depth look at how geology has affected the politics, history and culture of Africa. Units include the Nile and hydropolitics, deserts and climate,ifting and hominin evolution, and mining and politics.

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 4442 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 Statistical Quality Control (3) EN EGSS
PR: EGN 3443. This course will present the theory and methods of quality monitoring including process capability, control charts, acceptance sampling, quality engineering, and quality design.

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

ESI 4312 Deterministic O.R. (3) EN EGSS
PR: COP 2510, EGN 3454. 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 EGSS

ESI 4523 Systems Simulation (3) EN EGSS

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

ESI 4911 Senior Project (1-2) EN EGSS
PR: ESI 4534. CR: EIS 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's needs and interests are the determining factors. With chairman's approval.

ESI 5051 Statistical Methods For Engineering Managers (3) EN EGSS
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 EGSS
PR: ESI 5129 or equivalent; majors only. PR: EGN 3443 or equivalent. Fundamental concepts of reliability. Estimation of reliability of systems and components. Measures of availability, maintainability and reliability.

ESI 5306 Operations Research For Engineering Management (3) EN EGSS
Not open to students who have had ESI 3123. ESI 5219 or equivalent, majors only. Linear programming, non-linear programming, queuing, inventory, network analysis.

ESI 5522 Computer Simulation (3) EN EGSS
PR: ESI 4521 or equivalent, majors only. Design of discrete and continuous simulation models. Model validation and verification. Statistical analysis of simulation model output.

ETG 3612 Operations Management (3) EN ESB
PR: MAC 1105, CR: STA 2023. This course examines global strategies, project management, forecasting, location, scheduling, human resources, quality management, and continuous improvement in operations management.

ETG 3931 Special Topics for Information Technology (1-4) US EIT
Topics to be chosen by students and instructor permitting newly developing subspecialty interests to be explored.

ETG 3933 Selected Topics in Technology (1-5) EN ESB
Selected Topics in Technology is repeatable for credit up to 12 hours.

ETG 3934 Selected Topics in Technology (1-5) EN ESB
Selected Topics in Technology is repeatable for credit up to 12 hours.

ETG 4302 Special Topics in Technology (1-4) US EIT
Topics to be chosen by students and instructor permitting newly developing subspecialty interests to be explored.

ETG 4303 Special Topics in Technology I (1-5) EN ESB
PR: CI. No credit for Engineering Majors.

ETG 4304 Special Topics in Technology II (1-5) EN ESB
PR: CI. No credit for Engineering Majors.

ETI 4116 Industrial Quality Control (3) US EIT
PR: STA 2023. This course teaches the student the fundamental concepts of managing quality assurance systems.

EUH 2000 Western Civilization I (3) AS HTY
This course surveys the development of Western civilization from the beginnings of Near Eastern civilization to the Renaissance.

EUH 2001 Western Civilization II (3) AS HTY
This course surveys the development of Western civilization from the Renaissance to the present.

EUH 2011 Ancient History I HP CAHU HNCP (3) AS HTY
An introductory survey of ancient history. EUH 2011 treats the ancient Near East, Egypt and Greece from the origins of civilization
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Gen Ed</th>
<th>Core</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>EUH 2012</td>
<td>Ancient History II HP (3) AS HTY</td>
<td>4</td>
<td></td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>EUH 2021</td>
<td>Byzantium History HP (3) AS HTY</td>
<td>4</td>
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<td></td>
<td>A thematic survey of the history of the medieval Byzantine Empire focusing on the period under Justinian.</td>
</tr>
<tr>
<td>EUH 2022</td>
<td>The Medieval West HP CASB HHC (3) AS HTY</td>
<td>4</td>
<td></td>
<td></td>
<td>An introductory survey of medieval history. EUH 2022 examines the European and Mediterranean worlds, exploring the evolution and transformation of beliefs, institutions and social structures, ca. 500-1500.</td>
</tr>
<tr>
<td>EUH 2030</td>
<td>Modern European History I HP (3) AS HTY</td>
<td>4</td>
<td></td>
<td></td>
<td>A thematic survey of Europe in the modern age. EUH 2030 treats the period from the Renaissance to the French Revolution.</td>
</tr>
<tr>
<td>EUH 2031</td>
<td>Modern European History II HP CAHU HHCP (3) AS HTY</td>
<td>4</td>
<td></td>
<td></td>
<td>This course explores the social, political and economic forces which have shaped Europe over the past two hundred and fifty years.</td>
</tr>
<tr>
<td>EUH 3181</td>
<td>Medieval Culture (4) AS HTY</td>
<td>4</td>
<td></td>
<td></td>
<td>A history of Europe from the Renaissance to the Thirty Years' War (1400-1618). The cultural, social, and economic characteristics will provide the framework for artistic, philosophical, religious, and political developments.</td>
</tr>
<tr>
<td>EUH 3185</td>
<td>Viking History (4) AS HTY</td>
<td>4</td>
<td></td>
<td></td>
<td>The role of the Vikings in the shaping of Western history. A comprehensive survey of their institutions, outlook and daily life. Viking expansion into Europe and North America.</td>
</tr>
<tr>
<td>EUH 3188</td>
<td>Medieval Society (4) AS HTY</td>
<td>4</td>
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<td></td>
<td>A study of the daily life and attitudes of the medieval nobleman, peasants, townspeople, and the agrarian-urban economy and society which affected their lives.</td>
</tr>
<tr>
<td>EUH 3189</td>
<td>Medieval Politics (4) AS HTY</td>
<td>4</td>
<td></td>
<td></td>
<td>An inquiry into the nature, distribution, and use of political power during the Middle Ages, in such institutions as feudalism, monarchy, cities, and the church.</td>
</tr>
<tr>
<td>EUH 3202</td>
<td>History of 17th and 18th Century Europe (4) AS HTY</td>
<td>4</td>
<td></td>
<td></td>
<td>A history of Europe from the beginning of the Thirty Years' War to the outbreak of the French Revolution. Political and institutional developments will be assessed in the light of society and the economy.</td>
</tr>
<tr>
<td>EUH 3206</td>
<td>History of Nineteenth Century Europe (4) AS HTY</td>
<td>4</td>
<td></td>
<td></td>
<td>A comparative study of economic, political, social, and intellectual developments in nineteenth century Europe.</td>
</tr>
<tr>
<td>EUH 3401</td>
<td>Classical Greece (4) AS HTY</td>
<td>4</td>
<td></td>
<td></td>
<td>A study 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.</td>
</tr>
<tr>
<td>EUH 3402</td>
<td>Age of Alexander (4) AS HTY</td>
<td>4</td>
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<td>A study focusing on the career of Alexander the Great and on the Greek and Macedonian conquests of Persia. Alexander treated are the three hellenic kingdoms prior to Rome's conquest of the eastern Mediterranean.</td>
</tr>
<tr>
<td>EUH 3412</td>
<td>Roman Republic (4) AS HTY</td>
<td>4</td>
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<td></td>
<td>A study of the Roman Republic from 509 B.C. to the assassination of Julius Caesar in 44 B.C., with a prelude treating Rome's early development under royal rule. Political growth and change provide the framework for the treatment.</td>
</tr>
<tr>
<td>EUH 3413</td>
<td>Roman Empire (4) AS HTY</td>
<td>4</td>
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<td></td>
<td>A study of Imperial Rome from the assassination of Julius Caesar in 44 B.C. to the death of the emperor Constantine in A.D. 337. Emphasized is the Republican spirit within the imperial government, the development of the Mediterranean empire including much of the near East and Europe.</td>
</tr>
<tr>
<td>EUH 3461</td>
<td>German History to 1870 (4) AS HTY</td>
<td>4</td>
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<td></td>
<td>A political, social, and cultural approach to the history of the Germanys from 49 B.C. through 1870, with emphasis on the Protestant Reformation, the rise of Brandenburg-Prussian, and the unification under Bismarck.</td>
</tr>
<tr>
<td>EUH 3462</td>
<td>German History 1870 to the Present (4) AS HTY</td>
<td>4</td>
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<td></td>
<td>A political, social, and cultural approach to the history of the German Empire from 1870 through the 1970's. The nation's two attempts to try for world power status are highlighted, as well as the Weimar Republic, prototype of the Weimar democracy.</td>
</tr>
<tr>
<td>EUH 3501</td>
<td>British History to 1688 (4) AS HTY</td>
<td>4</td>
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<td></td>
<td>A study of major developments in British history from the 15th century to 1668.</td>
</tr>
<tr>
<td>EUH 3502</td>
<td>British History 1688 to Present (4) AS HTY</td>
<td>4</td>
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<td></td>
<td>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 demographic welfare state.</td>
</tr>
<tr>
<td>EUH 3576</td>
<td>History of Imperial Russia, 1689-1917 (4) AS HTY</td>
<td>4</td>
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<td></td>
<td>A survey of social, political, economic, and cultural development in the Russian Empire from Peter the Great to Nicholas II. Topics include the expansion and modernization of the Empire, the culture of the Imperial court, peasant and social reforms, the role of the West, and the collapse of the Romanov dynasty.</td>
</tr>
<tr>
<td>EUH 3576</td>
<td>History of the Soviet Union, 1917-1991 (4) AS HTY</td>
<td>4</td>
<td></td>
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<td>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.</td>
</tr>
<tr>
<td>EUS 3000</td>
<td>Europe SS (3) AS INT</td>
<td>3</td>
<td></td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>EUS 3022</td>
<td>Russia SS HP AF (3) AS INT</td>
<td>3</td>
<td></td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>EVR 2001 Introduction to Environmental Science NS (3) AS ESP</td>
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<td></td>
<td>An introductory lecture course linking the human and physical/biological world. The course will develop an understanding of population and resource interactions and complement the lecture course. Field trips.</td>
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<tr>
<td>EVR 2001L Environmental Science Lab (1) AS ESP</td>
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<td>A laboratory course linking the human and physical/biological world. The lab will develop an understanding of population and resource interactions and complement the lecture course. Field trips.</td>
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<tr>
<td>EVR 2002 Environmental Science: Regional and Global Issues NS CANP (3) AS ESP</td>
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<td>Students will learn how the environment functions and how humans, through social, political and economic activities, are creating a degraded, dysfunctional environment.</td>
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<tr>
<td>EVR 2217 Energy, Environment and Sustainability NS CANP (3) EN</td>
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<td>Critical analysis of energy sources, distribution and consumption using scientific methodology. Attributes of commonly used energy sources including environmental impact. Social, political, and economic implications at a global perspective.</td>
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<tr>
<td>EUS 4027 Wetland Environments MW (3) AS ESP</td>
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<td>Study of the general properties and ecology of wetlands, examination of the distribution and functions of wetlands, and consideration of wetland conservation and policies.</td>
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<tr>
<td>EVR 4104 Karst Environments NS (3) AS ESP</td>
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<td>An introduction to environmental policy using class lectures, student projects, and independent readings. Emphasis will be placed on understanding basic policy mechanisms and major policy actions, related to environmental issues at the local, national and international level.</td>
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<tr>
<td>EUS 4114 Climate Change NS (3) AS ESP</td>
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<td>A laboratory course linking the human and physical/biological world. The lab will develop an understanding of population and resource interactions and complement the lecture course. Field trips.</td>
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<tr>
<td>EUS 4114 Climate Change NS (3) AS ESP</td>
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<td>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.</td>
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<tr>
<td>EUS 4218 Research Methods in Wildlife Ecology (3) AS ESP</td>
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<td>An introduction to environmental policy using class lectures, student projects, and independent readings. Emphasis will be placed on understanding basic policy mechanisms and major policy actions, related to environmental issues at the local, national and international level.</td>
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<tr>
<td>EUS 4900 Directed Readings (1-6) AS ESP</td>
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<td>To provide advanced students with interdisciplinary research experience in areas of specific interest.</td>
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</table>
EVT 4905 Independent Study: Industrial-Technical Education (1-12) ED
To provide advanced students with the opportunity for independent
study in areas of specific interest.

EVT 4910 Environmental Science and Policy Project (3-12) AS ED
Open to senior majors only. S/U only. Environmental science project
consisting of research in a field related to environmental science/
environmental policy. Supervised by a faculty member. Contract and
report required.

EVT 4921 Environmental Science and Policy Seminar (1) AS ESP
Restricted to senior majors. 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
Each topic is a course under the direction of a faculty member with the
content depending on the interests of the students and faculty
involved. All areas of Environmental Science, Policy, Ethics and Law
included.

EVT 4940 Environmental Science Internship (3-12) AS ESP
Open to senior majors only. S/U only. The purpose of this course is to
promote the student’s understanding and application of environ-
mental science and policy within a practical organizational context.
Contract and report required.

EVT 4946 Supervised Field Experience: Industrial-Technical
Education (1-16) ED EDV
Open to advanced students. S/U only. Planned supervised functions in areas
of specialization and coordinated with selected schools, government,
offices, social agencies, businesses and industries on site. The
development of selected instructional materials, use of new
educational media, performance evaluation instruments, and coun-
selling techniques.

EXP 4104 Sensory Processes (3) AS PSY
PR: PSY 3213 with a grade of C or better or CI. Available to both
majors and non-majors. Psychophysical and neurophysiological
data and theory underlying sensory processes. Visual, auditory,
chemical, and somatosensory systems, with particular emphasis on
visual processes.

EXP 4204 Perception (3) AS PSY
PR: PSY 3213 with a grade of C or better or CI. Topics include sensory
and physiological bases of perception and how people process
relevant information in their environments.

EXP 4304 Motivation (3) AS PSY
PR: PSY 3213 with a grade of C or better or CI. A survey of motivational
processes and mechanisms from physiological and psychological
viewpoints.

EXP 4404 Psychology of Learning (3) AS PSY
PR: PSY 3213 with a grade of C or better or CI. Survey of methods,
empirical findings, and theoretical interpretations in conditioning
and instrumental learning.

EXP 4640 Psychology of Language (3) AS PSY
PR: PSY 3213. Historical survey of relationships between psychology
and linguistics leading to the emergence of psycholinguistics as a
field of study. The current status of theory and research in the field
will be covered.

EXP 4680C Cognitive Psychology (3) AS PSY
PR: PSY 3213 with a grade of C or better or CI. Survey of methods,
empirical findings, and theoretical interpretations of human learning,
information processing, verbal learning, and judgment and decision-
making.

FIL 1002 Introduction to Film Studies HP SS CAHU HCUP (3) AS
HUM
Students will be introduced to key concepts and techniques of Film
Studies, including the history of film; an examination of film genres;
an overview of foreign cinema; and the study of issues of class,
race, gender, and sexuality.

FIL 2000 Film: The Language Of Vision 6A FA (4) TA ART
Exploration of the history of creative filmmaking from its beginnings
to the present time. Open to both majors and non-majors.

FIL 3004 Film as Mass Communication I: Syntax (3) AS COM
PR: MMC 2100 and MMC 3602 or DPR. The development of the film
was a cultural and economic phenomenon that emerged in the mid-
20th century. Open to both majors and non-majors.

FIL 3427C Beginning Film (3) TA ART
Students will be introduced to key concepts and techniques of Film
Making.

FIL 3427C Cinematography  (4) TA ART
PR: FIL 3845. More advanced projects in filmmaking to further
develop works both technically and conceptually.

FIL 3845 World Cinema 6A FA (4) TA ART
Intermediate problems in film with emphasis on the exploration of
materials and media and the development of individual concepts.

FIL 3846 Personal Finance (3) BU FIN
Not available for credit to upper-level students who have been
admitted to the College of Business. May not be counted toward
major requirements in FIN or GBA. Survey of the problems and
techniques of personal financial planning. Includes consumer
credit, insurance, home ownership, and personal investing, with
attention given to current economic and legal constraints.

FIL 4433C Advanced Film (3) TA ART
PR: FIL 3845. More advanced projects in filmmaking to further
develop works both technically and conceptually.

FIL 4569C Cinematography (4) TA ART
PR: PSY 3213. Advanced studio work using black and white, color
and sound as technical and aesthetic factors in visual, artistic
productions.

FIN 2100 Personal Finance (3) BU FIN
Not available for credit to upper-level students who have been
admitted to the College of Business. Topics to be selected by
department chair.
FLE 4290 Technology in the Foreign and Second Language Classroom (3) ED EXD
This course prepares pre-service and in-service teachers to infuse technology into foreign language and ESOL instruction. Students will develop technology skills and knowledge based on pedagogical principles that reflect research and theory in Second Language Acquisition and will apply this practical and theoretical knowledge to K-16 Foreign Language/ESOL instructional situations.

FLE 4314 Methods of Teaching Foreign Languages and ESOL in the Elementary School (3) ED EXD
PR: EDG 4620 or concurrent registration. Fluency in target language and in English. Methods of planning and teaching foreign languages in the elementary school. The emphasis is on teaching communicatively and on integrating technology in the K-6 classroom.

FLE 4316 Language Principles and Acquisition (1-3) ED EXD
PR: FLE 4317. Overview of applied Second Language Acquisition theory and the 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.

FLE 4317 Teaching Students with Limited English Proficiency (3) ED EXD
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.

FLE 4333 Methods of Teaching Foreign Languages and ESOL in the Secondary School (3) ED EXD
PR: FLE 4314. Fluency in the target language and in English or DPR. Methods of teaching foreign languages within a communicative framework. Includes examination and practice of current instructional techniques in listening, speaking, reading and writing skills, testing, error correction, and computer assisted language instructional. The emphasis is on teaching foreign languages and teaching for cultural understanding at the secondary level 7-12.

FLE 4370 Practicum in Foreign Language Teaching in the Secondary School (3) ED EXD
PR: Senior standing or enrollment in Plan II Master’s Program or DPR. Required concurrently with FLE 4314 or FLE 4333. Fluency in the target language and in English. Pre-internship field experience in a K-12 environment. Will include observation and practice in a K-12 classroom and as class meetings.

FLE 4936 Senior Seminar in Foreign Language Education (2) ED EXD
PR: Senior standing. Required concurrently with internship. Synthesis of teacher candidate’s courses in complete college program.

FLE 4940 Internship: Foreign Language Education (1-12) ED EXD
Intern takes Senior Seminar in Education concurrently. S/U only. One full semester of internship in a public or private school.

FLE 5145 Language Principles, Acquisition and Teaching (3) ED EXD
PR: FLE 5345 Restricted to Education majors and not repeatable for credit. Overview of applied SLA theory and components of language. Methods & techniques of comprehensible instruction and the development of oral proficiency and literacy skills for LEP children.

FLE 5291 Technology in the Foreign Language Classroom (3) ED EXD
PR: FLE 5313 and FLE 5331. This course is intended to prepare foreign/second language teachers to provide pedagogically and technologically enhanced instruction for foreign language and second language students in the K-16 realm. Basic computer literacy is recommended.

FLE 5313 Methods of Teaching Foreign Language and ESOL in the Elementary School (3) ED EXD
This course is designed to provide training in the theory and methods of teaching foreign languages and ESOL in the elementary school (FLES) to both pre- and in-service teachers.

FLE 5331 Methods of Teaching Foreign Language and ESOL in the Secondary School (3) ED EXD
PR: FLE 5313. This course provides for the development of knowledge and skills necessary to prepare students to assume roles as foreign language (FL) and ESOL teachers at the secondary school level. It represents the second part of a sequence of methods courses.

FLE 5345 Teaching English Language Learners K-12 (3) ED EXD
This course is restricted to Education majors and is not repeatable for credit. It is designed to prepare preprofessional teachers to provide linguistically and culturally appropriate instruction, assessment, and learning opportunities for LEP students.

FLE 5366 ESOL Education in Content Areas (3) ED EXD
Enables participants to meet the special linguistic & cultural educational needs of limited English proficient (LEP) students in content area classes. Provides a theoretical & practical foundation for ESOL competencies in courses include ESOL infusion.

FLE 5985 Dual Language Internship (3) ED EXD
This course is for teachers who are interested in bilingual education. The aim is to deconstruct the philosophical, theoretical, political, social and educational underpinning of instruction (K-16) when it is delivered through two languages.
issues in French speaking Africa. Course materials will be available which will look at cultural, socio-economic, political and gender. This is a film based course and technologically enhanced course.

Southeast Asia, Louisiana. Maghreb, Sub-Saharan Africa, the Indian Ocean, the Middle East, France:  French Canada, the Caribbean, Belgium, Switzerland, the main French speaking cultures throughout the world, outside of An undergraduate 3 credit course, which offers an overview of the Departmental approval required. An intensive study-travel project.

PR: FRE 2200 or equivalent. An introduction to the French language for students who have completed FRE 2200 and/or 2201. PR: FRE 2201 or equivalent. This course is designed to build readingiciency. Departmental approval required.

PR: FRE 1121. For development of basic conversational skills. PR: FRE 2241 or equivalent proficiency. Conversation practice with concentration on current idiomatic usage. PR: FRE 2200 or equivalent. Readings in French while giving students a broad background in French culture.

FRW 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 6A LW WRIN (3) AS WLE
PR: Junior or senior status, completion of ENC 1101 and 1102 or their equivalent. A survey of the great love stories that French literature gave to the world from the Middle Ages to the 21st century and that contributed to the evolution of love, influencing not only other literatures but also other cultures throughout history.

FRT 3140 French Literary Masterpieces in English Translation 6A LW WRIN (3) AS WLE
PR: Junior or senior status, completion of ENC 1101 and 1102 or their equivalent. A survey of the major literary works of France, tracing not only literary but also 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 century to the 21st century 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, Moliere, Anouilh, Sartre, Ionesco and others. Will also include Villon, Ronsard, DuBellay, Lamartine, Hugo, Vigny, Musset, Baudelaire, Mallarme, Rimbaud, Valery, Peguy, Eluard, Apollinaire, Chat, 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
PR: FRW 4101, Valery, Claudel, Anouilh, Motherland, Sartre, Ionesco.

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, Moliere, and Racine.

FRW 5415 Literature of the Middle Ages (3) AS WLE
PR: FRW 4100 or FRW 4101. Major genres, including epic, 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 Balzac, Hugo, and others.

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.
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 avant-garde 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 3231 Introduction to Food Production Management (3) US HU
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.

GEB 3900 World Regional Geography SS HP AF CAGC (4) AS GPY
Systematic geographic analysis of the African world region, with emphasis on its cultural, political, economic, environmental, and physical diversity.

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

GEO 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.

GEO 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.

GEO 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) BU 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.

GEO 2400 Human Geography SS CAGC (4) AS GPY
Human geography encompasses those branches in geography which focus primarily upon the relationships between humans and the environments they construct. This course will examine the object of study of human geography, as well as explore many of the components of human geography, including economic geography, geopolitics, cultural geography, urban geography, population geography, and the relationships between geography and globalization.

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 2523 or STA 2522 or QMB 2520. 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 4114C Geographic Techniques and Methodology (4) AS GPY
Pr: GIS 3006 and GEO 3164C, or CI. Selected topics in various geospatial 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 the landforms of North America.

GEO 4244 Tropical Meteorology NS (4) AS GPY
Pr: GEO 2200, one geography course, or CI. This course examines the tropical atmosphere, its interaction with land and ocean, as well as weather and climate phenomena that are unique to the topics. Students will take an in-depth look at hurricane climatology, the El Niño 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 4300 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 4340 Natural Hazards SS CAGC (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, tsunamis, 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 4502 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 3602, 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 3164C, 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.
GET 3522 Fantastic Films of Early German Cinema HP MW (4) AS WLE
Overview of films with significant popular success at German box office from 1920s to 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 4523 New German Cinema to Present MW HP (3) AS WLE
An overview of post-1945 German films with emphasis on films from New German Cinema (1960s-early 1980s) & its aftermath. Course offers insights into Germany’s artistic, intellectual, and social history, as well as general film history and criticism. Taught in English.

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, emphasizing 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, emphasizing significant moments in German literature and thought and exploring diverse perspectives on German culture and society. Course taught in German. Not repeatable.

GEW 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.

GEY 3625 Sociocultural Aspects of Aging SS AF CASB (3) BC GEY
This course examines the role and function of case management in aging. The aging process is viewed from a multi-disciplinary perspective including the biological, psychological, and sociological aspects of aging.

GEY 3601 Physical Changes and Aging (3) BC GEY
This class is designed to introduce students to services available to seniors and to careers in the field of aging services. Content includes theoretical and practical issues, as well as exposure to opportunities for service and employment.

GEY 3625 Sociocultural Aspects of Aging SS AF CASB (3) BC GEY
A study of major trends in German literature since World War II with emphasis on Hauptmann, Schnitzler, Hofmannsthal, George Rilke, Kaiser, Heym, Trakl, Thomas Mann, Hesse, Kafka, Benn, Brecht. Departmental approval required.

GEY 3645 Physical Changes and Aging (3) BC GEY
A study of major trends in Geriatric Literature from 1945 to present. (3) AS WLE
Study of major trends and themes in German literature since World War II with emphasis on Borchert, Frisch, Durrenmatt, Boll, Uwe, Johnson, Grass, Aichinger, Eich Enzensberger, Bachmann.

GEY 5515 The Enlightenment (3) AS WLE
Course will examine a variety of texts from the 9th to the early 19th century, emphasizing significant moments in German literature and thought and exploring diverse perspectives on German culture and society. Course taught in German. Not repeatable.
GEY 4327 Understanding Policies and Practices of Long Term Care (3) BC GEY
PR: GEY 2000. This course provides principles for managing disability in a variety of settings. Topics include historical context, experience of disability, and challenges of providing care for disabled persons. Course is repeatable and not restricted to GEY majors.

GEY 4328 Health Care Operations AF HP SS MW (3) BC GEY
PR: GEY 4327, ACG 2011, each with a grade of C or better. This course addresses the health care operations of long-term care facilities. This course is for students in the BS in long-term care administration, but not limited to GEY majors. The course is repeatable for credit.

GEY 4329 Regulatory and Clinical Operations (3) BC GEY
PR: GEY 4328, ACG 2011, each with a grade of C or better. This course will familiarize the student with the basic aspects of nursing home administration through the practical application of management theory and concepts. The course is not repeatable and not restricted to GEY majors.

GEY 4340 Retirement and LTC Housing for the Elderly (3) BC GEY
This course focuses on housing, environment, and long-term care theories, availability of affordable housing with services, and a number of age-related housing solutions. Repeatable for credit, and not restricted to GEY majors.

GEY 4360 Gerontological Counseling (3) BC 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.

GEY 4435 Research Methods in Gerontology (3) BC GEY
PR: GLY 2010 or concurrent registration 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.

GEY 4608 Alzheimer’s Disease Management (3) BC GEY
PR: GEY 2000 or GEY 3326. This course will provide instruction on effective approaches for providing care to persons with Alzheimer’s Disease and related disorders. The course is for students in the BA program 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.

GEY 4612 Psychology of Aging SS CASB (3) BC 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.

GEY 4628 Race, Ethnicity and Aging SS (3) BC GEY
This course addresses how people of different ethnic and racial groups age, in the physical, psychological, and social context. Topics include cultural competence and sensitivity. Not restricted; not repeatable.

GEO 4635 Business Management in an Aging Society MW CPST (3) BC GEY
This course focuses on housing, environment, and long-term care theories, availability of affordable housing with services, and a number of age-related housing solutions. Repeatable for credit, and not restricted to GEY majors.

GEO 4647 Ethical and Legal Issues of Aging SS MW CPST (3) BC GEY
Examines basic economic systems as they impact the aged. Emphasis is on applied aspects of economic planning, pensions, insurance, social security and other support systems.

GEO 4648 Perspectives on Death and Dying (3) BC 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 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 3006C 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 Geographic Information Systems, with an emphasis on analytical capabilities of such systems in both raster and vector domains.

GLY 2000L Essentials of Geology Laboratory (1) AS GLY
GLY 2000 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 2010 Dynamic Earth: Introduction to Physical Geology NS CANP (3) GLY
A lecture course in geology emphasizing the Earth’s composition, structure, and dynamics. Lectures/activities include but are not limited to plate tectonics, earthquakes, volcanism, glaciation, global warming, shorelines, and natural resources.

GLY 2010L Dynamic Earth Laboratory (1) GLY
PR: GLY 2010 or concurrent registration. Laboratory study of earth materials, landforms, geologic structures, topographic and geologic maps. Lect-lab-field trips.

GLY 2030 Hazards of the Earth’s Surface: Environmental Geology NS CANP (3) AS GLY
A lecture course in geology emphasizing catastrophic events that cause damage to humans and their possessions. Lectures and recitation activities on geologic hazards, tools geologists use to study them, and measures that can be taken to minimize them.

GLY 2050 Science, Earth and Life NS (3) AS GLY
May substitute for GLY 2010 for geology majors. The nature, history, and philosophy of science are emphasized, with special attention to scientific method. Required field trips and participation in field activities.

GLY 2051 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 2100L 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 2160 Geology of the National Parks NS CANP (3) AS GLY
This course is delivered over the internet through blackboard and requires no travel. It introduces the nature of geologic processes including plate tectonics, earthquakes, volcanism, and glaciology drawing on examples from our nation's Parks.

GLY 2830 Selected Topics in Geology (1-3) AS GLY
Does not count toward the geology major. Topical courses in geology of general interest.

GLY 3311C The Solid Earth: Petrology and Geochemistry (4) AS GLY

GLY 3402C The Solid Earth: Plate Tectonics and Earth Structure (4) AS GLY
PR: 4 hrs. introductory geology including GLY 2000L; MAC 2312 or equivalent; PHY 2048. Plate tectonic theory and its implication: the formation of structural features on outcrop and regional scales. Field and geophysical tools for structural analysis. Required field trip. Lec-Lab.

GLY 3552C Sedimentary Record 1: Sedimentary Processes and Petrology (4) AS GLY
PR: GLY 2000L, CHM 2045, MAC 2281. CR: GLY 3311C. A lecture and laboratory class that discusses sedimentary processes, formation and classification of sedimentary rock, and the sedimentary rock record. Examination of the rock record to solve problems in sedimentary geology.

GLY 3560C 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 macroevolutionary patterns and processes. Lab survey the invertebrate phyla comprising the bulk of the fossil record.

GLY 3720C The Fluid Earth (4) AS GLY
PR: GLY 2000L; 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. 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 4045C Sedimentary Record 3: Paleoontology and Earth Evolution (4) AS GLY
PR: GLY 2100L, 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 4322C Physical Volcanology (4) AS GLY
PR: GLY 3311C, MAC 2241 or MAC 2311 or MAC 2281. Physical volcanology explores the nature of volcanism on Earth and nearby planets. Topics in magma production and ascent, eruption dynamics, volcanic hazards, and volcano monitoring will be covered in lecture, laboratory, and independent exercises.

GLY 4480 Seismology (4) AS GLY
Introductory geology for majors, calculus and calculus-based physics as required for geology majors. Comprehensive introduction to theoretical and observational seismology, use of seismic waves and earthquake patterns to study earth structure, seismic hazard and risk mitigation, earthquake prediction, and techniques for the analysis of seismic data.

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 process-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 4734 Beaches and Coastal Environments MW (3) AS GLY
A comprehensive introduction to the nature of all coastal environments including beaches, dunes, tidal inlets, estuaries, reefs, and river deltas. Emphasis will be on the natural state of these environments and how human activities have and will impact them. Consideration of coastal management policies involving economics, ethics, policy, and environmental law.

GLY 4780 Geological Field Studies (1-3) AS GLY
PR: 1 geology course. Lectures and field trip to study modern geologic systems and/or geologic origins of specific regions. Mapping and field description techniques introduced. Topic/destination of trip varies. Trip requires camping and vigorous physical activity. Lec. Field trips.

GLY 4822C Fluid Earth 2: Hydrogeology (4) AS GLY

GLY 4866 Computational Geology (3) AS GLY

GLY 4905 Independent Study (1-3) AS GLY
PR: CI. S/U only. Specialized independent study determined by the student's needs and interests. May be repeated for credit.

GLY 4915 Undergraduate Research (1-3) 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 4920 Geology Colloquium (1) AS GLY
PR: Senior standing in Geology. S/U only. Weekly topical lectures by faculty, graduate students and invited speakers.

GLY 4921 Geocommunications (3) 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 4930 Selected Topics in Geology (1-4) AS GLY
Each topic is a course under the direction of a faculty member with the content depending on the interests of the students and faculty involved. All areas of geology included.

GLY 4946L Practical and Applied Geology: Teaching Experience (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 teaching experience in teaching geology. Topics vary widely, with several different offerings each semester. May be repeated for credit.

GLY 4946L Practical and Applied Geology: Laboratory Experience (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 laboratory skills of a practicing geologist. Topics vary widely, with several different offerings each semester. May be repeated for credit.

GLY 4946L Practical and Applied Geology: Field Experience (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
the basic skills of a practicing field geologist. Topics vary widely, with several different offerings each semester. May be repeated for credit.

**Gly 4949L Practical and Applied Geology: Computational Experience** (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 4970 Undergraduate Honors Thesis** (3) AS GLY
Open to those admitted to the Geology undergraduate honors program. Students will complete an independent research project under supervision of a faculty member, and present results in a senior thesis and a public presentation.

**Gly 5752 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. Destinations vary, trip requires camping and vigorous physical activity. Lec.-field trip.

**Gly 5865 Statistical Models in Geology** (3) AS GLY
PR: STA 2023 or equivalent or CI. Application of statistical methods to geologic content. Emphasis on sample plans, nature of geologic distributions, and application of analyses of variance to solving geological problems. Lec.

**Gra 2206C Typography** (3) TA ART
Restricted to majors. This foundational course explores the structure of letterforms and typography. This course provides information about the importance of type in the context of graphic design and application for printed and electronic media.

**Gra 3104 Computer Graphic Design (3) TA ART**
Restricted to majors. This course is the continuation of Graphic Design I. The coursework emphasizes the utilization of electronic media for visual problem solving. Students will increase their skill with web based design and photo-editing software.

**Gra 3110 Graphic Design I** (3) TA ART
Restricted to majors. This course explores the application of formal design principles to visual problem solving through typography, layout, and web design. Students will apply conventional and electronic tools and techniques to the graphic design process.

**Gra 3735 Multimedia Systems I** (3) TA ART
Restricted to majors. This course introduces multimedia systems and focuses on their use as tools in the production of digital media content. Content covers all key hardware, navigation, and operating components.

**Gra 4930C Graphic Design: Senior Studio (3) TA ART**
Restricted to majors. Advanced problem solving. Focus is on the integration of graphic design, advertising, and multimedia communication and their dissemination and application. Emphasis is on solving complex problems in the design production process.

**Gra 4940 Graphic Design: Internship (2) TA ART**
Competitive portfolio may be required. Restricted to majors. On site supervised work experience in an educational, graphic studio, advertising agency, or corporate environment.

**Gra 4945 Graphic Design: Professional Practicum (3) TA ART**
Restricted to majors. Students fine-tune their portfolios, create self-promotional print and digital projects and develop their resumes. Includes field trips to studios, agencies, corporate graphic departments and marketing firms.

**Gra 4955C Senior Project: Portfolio (3) TA ART**
Restricted to majors. This course covers the organization and presentation of a design/ advertising/graphic portfolio and appropriateness of design solutions. Emphasis is upon portfolio development, professional production, and self promotion skills.

**Gre 1120 Beginning Classical Greek I** (4) AS WLE
An introductory course in classical Greek grammar with appropriate readings.

**Gre 1121 Beginning Classical Greek II** (4) AS WLE
PR: GRE 1120 or equivalent. An introductory course in classical Greek grammar with appropriate readings.

**Gre 2140 New Testament Greek I** (4) AS REL

**Gre 2141 New Testament Greek II** (4) AS REL

**Gre 2220 Intermediate Classical Greek** (4) AS WLE
PR: GRE 1121 or equivalent. Readings in Greek at an intermediate level.

**Gre 1120 Beginning Modern Greek I** (4) AS WLE
CR: GRK 1120L. An intensive study of basic skills: pronunciation, comprehension, speaking and some composition.

**Gre 1120L Beginning Modern Greek I Laboratory** (1) AS WLE
CR: GRK 1120. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. SU only. A laboratory designed to offer additional practice using various instructional technologies and media.

**Gre 1121 Modern Greek II** (4) AS WLE
PR: GRK 1120 or its equivalent; CR: GRK 1121L. An intensive study of basic skills: pronunciation, comprehension, speaking and some composition.

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

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

**Gre 2221 Modern Greek IV** (4) AS WLE
PR: GRK 2220 or its equivalent. Continuation of GRK 2200. Practice of writing, speaking and some skills for language students who intend to attain basic proficiency.

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

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

**Gre 4950 Directed Reading** (1-4) AS WLE
Departmental approval required.

**Gre 5905 Directed Reading** (1-4) AS WLE
Departmental approval required.

**Gre 5934 Selected Topics** (1-4) AS WLE
Available to majors and non-majors. Study of an author, movement or theme.

**Hbr 1120 Modern Hebrew I** (4) AS WLE
CR: HBR 1120L. An intensive study of basic skills; pronunciation, comprehension, speaking and some composition.

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

**Hbr 1121 Modern Hebrew II** (4) AS WLE
CR: HBR 1120 or its equivalent; CR: HBR 1121L. A continuation of HBR 1120L. An intensive study of basic skills: pronunciation, comprehension, speaking and some composition. More sophisticated oral/aural skills are attained. Basic reading skills are acquired.

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

**Hbr 2201 Modern Hebrew IV** (4) AS WLE
PR: HBR 2200 or the equivalent. Continuation of HBR 2200. Practice of writing, speaking and listening skills for language students who intend to attain basic proficiency.

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

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

**Heb 1120 Basic Hebrew I** (4) AS REL
Designed to give students a working knowledge of Classical (Biblical) Hebrew and to introduce them to the Biblical literature in the original language.

**Heb 1121 Basic Hebrew II** (4) AS REL
Designed to give students a working knowledge of Classical (Biblical) Hebrew and to introduce them to the Biblical literature in the original language.

**Hft 3003 Introduction to Hospitality and Tourism** (3) US HRM
An overview of the hospitality industry, including all of its related fields: restaurant; lodging; meetings; conventions and expessions.
Also featured are the applications of the general marketing, human resources, finance, leadership, and management.

HFT 3263 Restaurant and Catering Management (3) US HRM
PR: HFT 3424, FSS 3231 Management of food and beverages as they relate to planning, production, supervision and cost control in restaurants and catering food services, with emphasis on techniques of food preparation, menu merchandising, food safety, bar services and wine list.

HFT 3423 Hospitality Information Systems (3) US HRM
PR: ISM 3011, HFT 3003. The study of management information systems in the hospitality management industry. The students will evaluate software and hardware computer systems and application software being used in the hospitality industry and develop selection strategies.

HFT 3424 Cost Control in Hospitality Operations (3) US HRM
PR: HFT 3003, FIN 3403. MAN 3025 Provides students with a thorough understanding of hospitality financial accounting concepts. The emphasis of the course is to use accounting information in making managerial decisions and to prepare and understand hospitality financial statements.

HFT 3503 Hospitality Marketing and Sales (3) US HRM
PR: MAR 3023 Principles of marketing and sales and practical application in hospitality marketing philosophies; the marketing mix; product differentiation; corporate travel market; and the association, convention, and trade show market.

HFT 3503 Law and Security for the Hospitality Industry (3) US HRM
PR: HFT 3003 Functions of the law, legal environment and legal reasoning. An overview of the security issues in the hospitality industry. Topics pertaining to contracts, workers’ comp and the impact of law on economic enterprise in the hospitality industry.

HFT 3861 Beverage Management (3) US HRM
PR: An introduction to the identification, use and service of wines, spirits, and other alcoholic beverages. An in-depth analysis of beverage operations to include selection/storage, inventory, purchasing, sales/promotion/merchandising, profits and bar management.

HFT 4221 Human Resources Management (3) US HRM
PR: HFT 3003, MAR 3023 Designed to educate new managers and supervisors in the complex issues involved in a comprehensive human resource program and its importance to hotel and restaurant business. Workmen’s Compensation, ADA, training, unions, EEO and discrimination issues.

HFT 4253 Lodging Management (3) US HRM
PR: HFT 3003, MAN 3023 Principles, practices, and procedures of managerial functions as they relate to the operation of hotels. Training, conflict resolution, total quality management, crisis management, employee empowerment and service standards are focus of team building.

HFT 4323 Facilities Management in Hospitality Operations (3) US HRM
PR: HFT 3003 Engineering aspects of hospitality establishments, preventive maintenance procedures, energy conservation, waste management, pollution control, life safety systems, and facilities design and layout, air conditioning lighting, sound control.

HFT 4471 Management Accounting and Finance in Hospitality (3) US HRM
PR: FIN 3403, HFT 3003, HFT 3424 Financial functions in hospitality, interpret hospitality financial statements, capital investment decision making, financial instruments and concepts. Analytical modeling for hospitality operations, including ratio analysis and capital budgeting tools.

HFT 4853 Restaurant Trends and Challenges Seminar (3) US HRM
PR: Senior standing. Advanced level course focusing on contemporary management issues and challenges facing the foodservice and hospitality industries. Topic covered will be applicable to current trends applicable to a variety of situations.

HFT 4930 Special Topics in Hospitality (1-3) US HRM
PR: HFT 3003 Topics to be selected by instructor and department chairperson for pertinent Hospitality Management issues.

HFT 4936 Hotel Management Seminar (3) US HRM
PR: Senior standing. Advanced level course focusing on current problems and trends in hotel management and the hospitality industry.

HFT 4945 Advanced Internship (3) US HRM
PR: HFT 3003 Advanced Internship combines practical experience with didactic academic analysis. Principles, theory and standard practices applied to operational situations. S/U only.

HIS 2931 Special Topics (2-4) AS HTY
This course emphasizes a selected historical problem or issue. A variety of instructional approaches will be taken, and topics may vary.
HSC 4134 Prevention of Mental Illness (3) PH PHC
This course provides an overview of prevention strategies and interventions to reduce the incidence of mental illnesses.

HUM 2273 Eastern and Western Culture Since 1400 AF (3) AS HUM
A comparative treatment of the arts, literature, music, and philosophy in the East and West, proceeding chronologically from the Renaissance through the present, emphasizing Europe, the United States, and India.

HUM 2320 European Humanities: Renaissance - 20th Century HP (3) AS HUM
Ancient times through the Middle Ages, emphasizing Europe and the Mediterranean. The course focuses on the contributions of prevention science and public health in impeding the development of mental disorders and the events that lead to mental disorders with the major developmental focus on childhood.

HUM 2271 Eastern and Western Culture from Antiquity to 1400 AD (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 the Mediterranean.

HUM 2920: Special Topics (1-4) AS HUM
An introductory course dealing with a recurrent theme in the arts or focusing on a particular artistic center (a nation or city at a particular time).

HUM 3458 Twentieth-Century American Culture (3) AS HUM
A comparative treatment of the arts, literature, music, and philosophy in the East and West, proceeding chronologically from ancient times through the Middle Ages, emphasizing Europe and the Mediterranean.
HUM 3465 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 attempt to be interdisciplinary, treating more than one art media and relating them historically or in some other way. The interdisciplinary emphasis on the arts and the literacies, 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 4433 Ancient Greek Culture (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 culture of Europe and the Mediterranean world from the 4th to 11th centuries through the readings of early Medieval historians, poets, and theologians, as well as the study of illuminated manuscripts, mosaics, painting and architecture.

HUM 4437 Italian Renaissance Culture (4) AS HUM  
PR: Junior standing and HUM 2210 or HUM 2230, or CI. A study of the visual arts, literature, music, sculpture and architecture of early modern Italy (1400 -1600), emphasizing the transition from the culture 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 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 ornament 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 4442 Arts and Letters of the Romantic Period (4) AS HUM  
PR: Junior standing and HUM 2210 or HUM 2230, or CI. Continental masterworks of fiction, painting, and music in the context of European cultural history from the French Revolution to the Revolutions of 1848.

HUM 4444 Nineteenth Century European Arts and Letters (4) AS HUM  
PR: Junior standing and HUM 2210 or HUM 2230, or CI. A study of continental literary, musical, and artistic masterworks from the Revolutions of 1848 until the outbreak of World War I.

HUM 4445 Twentieth Century Arts and Letters I (4) AS HUM  
PR: Junior standing and HUM 2210 or HUM 2230, or CI. Analysis 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 4446 Twentieth Century Arts and Letters II (4) AS HUM  
PR: Junior standing and HUM 2210 or HUM 2230, or CI. Analysis 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 4452 Nineteenth Century American Culture (4) AS HUM  
PR: Junior standing and HUM 2210 or HUM 2230, or CI. 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. 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 4464 Modern Latin American Culture (4) AS HUM  
PR: Junior standing and HUM 2210 or HUM 2230, or CI. Analysis 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 deal with a recurrent theme in the arts as, for example, love or death, or will focus on artistic centers such as Renaissance Florence or Paris in the 19th century. Topics will vary.

HUM 4931 Seminar in Humanities 6A (4) AS HUM  
PR: HUM 3331 or CI. Senior status required. Seminar focuses on the writing of a substantial research paper in the humanities. Topic varies. Offered only in spring semester.

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 relate to the relevance of 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 on Location (1-4) AS HUM  
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 nutrition and the relationship of nutrition to human health 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.

HUM 4444 Clinical Nutrition (3) NU NUR  
PR: HUM 2201 or equivalent. Focuses on the role nutrition has in causing and preventing disease processes.

IDH 2009 Honors 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 3010 Acquisition of Honors (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 3335 Honors Natural Sciences (3) HC HON  
PR: IDH 2010. An exploration of current knowledge concerning fundamental principles in the Sciences, their potential for application and attendant ethical and philosophical questions. Honors College students should repeat for up to 4 credit hours.

IDH 3400 Social and Behavioral Sciences Honors (3) HC HON  

IDH 3600 Seminar in Applied Ethics (3) HC HON  
PR: IDH 2010. This course explores ethical issues related to selected topoi such as Ethics of Technology, Ethics in Business, Bio-Medical Ethics, Personal Ethics Development.
IDS 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.

IDS 4200 Geopolitical 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, and humanities background.

IDS 4910 Undergraduate Research (1-4) HC HON
PR: DFR. A supervised program of interdisciplinary research in areas of special interest. Open to all students. Approval through the undergraduate research coordinator.

IDS 4920 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.

IDS 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.

IDS 4960 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 4965 Honors Graduate Project (3) HC HON
PR: Senior Status and permission of Honors College. Advanced Honors Project. Repeatable up to 12 hours.

IDS 5975 Honors Thesis (3) HC HON
PR: Senior Status and permission of Honors College. Advanced Honors Thesis. Repeatable up to 12 hours.

IDS 2664 Social Science Perspectives I SS (3) AS IAS
Provides 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
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
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
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 I (5) 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
An in-depth examination of values and their relationship to choices in contemporary society using historical perspective and inquiry of ethical justifications. Available to all majors or non-majors.

IDS 3186 Scientific and Ethical Dimensions of Human Disease MW (3) AS IAS
PR: DFR. An interdisciplinary perspective of the biological basis of human disease combined with critical thinking and medical ethics. Basic concepts of human disease are integrated with bioethical dimensions of patient choice, physician responsibility and current health care issues.

IDS 3662 Arts Connections FA (3) TA FAI
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 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 the role the arts play in shaping the public perceptions of the arts, as well as reflecting the underlying values and paradigms that form our culture(s).

IDS 3663 Critical Issues Affecting the Arts 6A MW (3) TA FAI
PR: Junior standing or CI. A discussion-based examination of cultural trends, educational policies, governmental regulations, and financial factors which impact Art, Dance, Music, and Theatre.

IDS 3668 Images of Contemporary Urban Culture 6A LW (3) AS IAS
Offers multiple perspectives on the vision, theories, and practices of contemporary urban culture through the use of various literary genres. Examines the cultural realities of contemporary urban life, such as social stratification, discontinuity, anonymity and poverty, as well as its many potentials such as creative energy, diversity, and relational networks. Must have enough credit hours required for exit course admittance.

IDS 3949 Cooperative Education, Parallel (0-2) US COE
PR: 45+ semester hours completed, cumulative GPA 2.5+, have a declared major and be accepted in Cooperative Education Program. Part-time (10-25 hrs/wk) paid or for credit, career-related work experience. This course may be repeated up to 6 credit hours. Prerequisite: 45+ hours of credit, GPA 2.5+, a declared major and be accepted in Cooperative Education Program. S/U Only.

IDS 4910 Community Research (1-4) AS CEL
PR: CEL Program approval. Repeatable up to 8 credit hours. To provide students with a community related research experience.

IDS 4942 Community Internship (1-4) AS CEL
PR: CEL Program approval. Repeatable up to 8 credit hours. To provide students with a community related research experience.

IDS 4955 International Community Internship (1-4) AS CEL
PR: CEL Program approval. Repeatable up to 8 credit hours. To provide students with an international community research experience.

IDS 5956 International Community Internship (1-4) AS CEL
PR: CEL Program approval. To provide students with an international community internship experience. Repeatable up to 8 credits.

IDS 5177 The Atelier, Its Management and History (3) TA ART
The Atelier will consider the history of printmaking and other forms of collaborative art production through the prism of the atelier and its management.

IDS 5178 Problems in Museum Studies (3) TA 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 typography of museums. Students will develop managerial and administrative skills as they meet with and discuss the job descriptions of curators, educators, collection managers, marketing professionals, exhibit designers, registrars, and fundraisers.

INF 3001 Applied Psychology SS (3) AS PSY
The application of psychological principles and the functions of psychologist in education, government, industry, and clinical practice.

INF 4004 Industrial Psychology (3) AS PSY
PR: PSY 3213 with a grade of C or better or CI. Applications of psychological principles to industry. Topics include: selection, training, motivation, job satisfaction, supervision, decision-making.

INF 4010 World Perspectives 6A AF (3) AS INT
An interdisciplinary study of the major international issues, major world regions and problems.

INR 2002 Introduction to International Relations (3) AS POL
Concepts and analytical tools applied to events such as politics among nations, control of foreign policies, types of actors, war and peace.

INR 3003 Introduction to International Studies (3) AS INT
An interdisciplinary study of international issues and different disciplines play in interpreting the international scene.
INR 3011 Globalization (3) AS INT
Influence of globalization on political-economic and social systems around the world. International organizations involved with globalization processes are studied along with nations benefiting and suffering from the consequences of globalization.

INR 3018 World Political Movements MW (3) AS INT
A course which details and examines the ideologies of today’s independent countries; analyzing them in their political, social, cultural and historical context.

INR 3033 International Political Cultures MW 3 (3) AS INT
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.

INR 3038 International Wealth and Power SS (3) AS INT
Introduction to the relationship between politics and economics, emphasizing the analysis of government policies in response to both domestic and international economic problems.

INR 3081 International Issues and Actors (3) AS INT
Departmental approval required. For majors and minors in INT only. An examination of the most important issues in international affairs. The course analyzes the behavior of major foreign policy actors in the international arena, including nation states, non-governmental and international organizations.

INR 3084 International Terrorism SS AF (3) AS INT
A study of contemporary international terrorism and its causes, ranging from national liberation movements to networks of philosophical anarchists.

INR 3102 American Foreign Policy (3) AS POL
Analysis of the development and scope of United States foreign policy, emphasizing goals and objectives, policy formulation and implementation, themes and issues.

INR 3141 Global Security Policy (3) AS INT
A study of security issues, regional and global (such as proliferation, arms control, arms transfers) as they relate to contemporary international politics.

INR 3202 International Human Rights MW 3 (3) AS INT
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.

INR 3336 Intelligence and U.S. Foreign Policy (3) AS INT
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.

INR 3955 Overseas Study (1-6) AS INT
A program of individual or group research in a foreign country.

INR 4035 International Political Economy (3) AS POL
Analysis of the development and politics of the international economic system, focusing on questions of cooperation and conflict in trade, aid, and investment relationships.

INR 4083 Conflict In The World MW (3) AS INT
PR: Junior/Senior standing. An interdisciplinary course examining theories of conflict, conflict resolution processes and strategies, arms control, and the concept of Early Warning Systems related to the outbreak of conflict.

INR 4254 Africa in World Affairs MW (3) AS INT
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.

INR 4403 International Law SS (3) AS POL
Studies essential components of the international legal system; recognition; succession; sea, air and space law, treaties, diplomats, International Court of Justice; laws of war, etc. Introduces the student to legal reasoning as employed in the international context.

INR 4502 International Organizations SS AF (3) AS POL
Study of the operations and structure of international organizations and their effects on world politics; background and achievement of the UN; regional organizations and multi-national corporations.

INR 4900 Directed Readings (1-3) AS INT
PR: CI. A supervised program of intensive reading in interdisciplinary materials in areas of specific interest.

INR 4910 Directed Research (1-3) AS INT
PR: CI. A supervised program of interdisciplinary research in areas of specific interest.

INR 4931 Selected Topics (1-4) AS INT
Interdisciplinary studies with course content dependent on student direction and instructor’s interest.

INR 4936 Senior Seminar MW (3) AS INT
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.
ISM 3011 Information Systems in Organizations (3) BU 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 decision making.

ISM 3113 Systems Analysis and Design (3) BU QMB
PR: ISM 3011 with a grade of "C" or better (not C-). The course presents concepts, procedures, and tools needed to build computer-based information systems. The objective is to develop project management, data collection, analysis, design, testing and documentation skills.

ISM 3232 Business Application Development (3) BU QMB
PR: ISM 3011 with a grade of "C" or better (not C-). Presentation of business application development using an object-oriented programming language. Good program design techniques are emphasized. Business applications are developed.

ISM 3431 Management Science Production/Operations Management Applications (3) BU QMB
PR: MAC 2233 or MAC 2241. Fundamentals of production operations management (POM) and fundamentals of management science (MIS). The application of MIS models to the solution of POM problems.

ISM 4133 Advanced Systems Analysis and Design (3) BU QMB
PR: ISM 4212 with a grade of "C" or better (not C-). This course builds previous course 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 approaches and problems using a variety of methods, such as, lectures, discussion, team presentations, guest speakers, and presentations.

ISM 4141 Web Application Development/Java (3) BU 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, and client-server computing using Java and Java Server Pages.

ISM 4212 Database Design and Administration (3) BU QMB
PR: ISM 3113 with a grade of "C" or better (not C-). An introduction to the concepts and principles of database management. Provides potential designers, users and managers of database systems with an understanding of physical vs. logical representations, data modeling, implementation, and data management.

ISM 4213 Advanced Database Administration (3) BU QMB
PR: ISM 3113, ISM 4212, with grades of "C" or better (not C-). Essential concepts of database administration in a business environment are covered in order to prepare students to understand and deal with database administration issues and concepts. Students gain hands-on experience by administering a database environment and completing assignments that involve resource management, data administration, security, backup, recovery and database tuning issues.

ISM 4220 Business Data Communications (3) BU QMB
PR: ISM 4212 and ISM 3011, with a grade of "C" or better (not C-). Fundamentals of data communication, including network architectures, communication protocols, transmission standards, and internetworking. Basic concepts in distributed computing will also be covered.

ISM 4233 Information System Interface Design (3) BU QMB
PR: ISM 3232 with a grade of "C" or better (not C-). An introduction to the theories of human-computer interaction and the principles and practices of information system interface design, evaluation, and integration. Students develop programs utilizing various user interface design techniques.

ISM 4234 Object-Oriented Design and Development (3) BU QMB
PR: ISM 3232 with a grade of "C" or better (not C-). This course presents an object-oriented approach to building information systems. Students will learn to create object models of the business world and to develop information system designs based on these objects.

ISM 4240 Distributed Operating Systems (3) BU QMB
PR: ISM 3113 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 operating environments.

ISM 4290 Senior Seminar in Information Systems (3) BU QMB
PR: ISM 4212 with a grade of "C" or better (not C-). A seminar course covering advanced topics in systems management, analysis and design. Applications of these procedures to actual or hypothetical cases.

ISM 4300 Managing Information Resources (3) BU QMB
PR: ISM 4122 and ISM 4220, with grades of "C" or better (not C-). Current issues in information systems management focusing on managing computer resources and social issues such as ethics, privacy, and legal issues.
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LAE 5932 Selected Topics in the Teaching of English  (3) ED EDT
Departmental approval required. S/U only. Permits study options in Japanese not available in regularly scheduled curriculum at departmental discretion.

LAE 4905 Directed Study  (1-5) AS WLE
PR: Certification in English and/or Mass Communications and approval of graduate advisor. Investigation of topics which are of special interest to the student and are related to the teaching of English in the secondary school. Topics will be selected by the student in accordance with his particular goals and will be approved by the student's graduate advisor.

LAIH 2020 Latin American Civilization HP AF CAGC HHCP (3) AS HTY
This course introduces the principle historical events, trends, conflicts and outcomes that have shaped the Spanish and Portuguese Americas from the Pre-Columbian period (prior to 1492) to the present.

LAIH 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. Emphasis is placed on the social-cultural context to understand the peoples and events that have shaped Latin America.

LAIH 3130 Colonial Latin America  (4) AS HTY
A study of the Spanish and Portuguese Colonial empires in the New World from 1492-1830.

LAIH 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.

LAIH 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.

LAIH 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 colonial/neo-colonial relationships.

LAIH 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 introduce students to Latin America. It is for non-majors, repeatable up to 09 credits.

LAS 4023 African Diaspora in Latin American and the Caribbean CAGC HHCP (3) AS AFA
This course examines the development and history of the African Diaspora in Latin America and the Caribbean from colonization through the modern era. While primarily a history course, anthropological and sociological perspectives are also incorporated.

LAS 4934 Selected Topics: Latin American Studies  (3-9) AS INT
Latin American region will be analyzed through different specific topics to provide students analytical tools to understand hemispheric relations and the relevance of this complex region for the USA. Open to non-majors, repeatable up to 09 credits.

LAS 4940 Internship in Latin American and the Caribbean  (1-9) AS INT
PR: CI. Designed to complement other instruction focused on Latin America and the Caribbean. Open to all majors and is repeatable up to 9 hours.

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  (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 technical 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.

LDR 1010 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 their leadership skills is examined.

LDR 4230 Global Leadership (3) US STL
A focus on historical and contemporary issues concerning the role, responsibilities and processes for leaders in the global environment. Addresses leadership concerns relating to social, cultural, ethical, political, economical, and environmental issues.

LDR 4564 Images of Leadership in Print and Film (3) US STL
Covers a variety of topics in the field of leadership, including the role of language in general cognitive development.

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 organization. Study of group processes and applications for building and leading organizations from corporate and non-profit perspectives.

LDR 3331 Leading in the Workplace (3) US STL
Explores the complex challenges of leadership through the examination of leaders and workplace situations. Designed to view leadership as a process focusing on the leader, the followers, and real-world workplace situations. Appropriate for working adults.

LDR 4204 Ethics and Power in Leadership (3) US STL
PR: LDR 2010, LDR 4114. 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 applications to problems of English language acquisition by non-native speakers.

LIS 2005 Library and Internet Research Skills CASB (3) AS LIS
This course covers the development of undergraduate research, critical thinking skills to identify, evaluate, and use appropriate information sources to address educational, research, and other information needs.

LIS 2002 Language and a Movie AF (3) AS WLE
Covers a variety of topics in such areas as collection development, reference services, technical services, and administration.

LIS 4930 Selected Topics (1-3) AS LIS
Covers a variety of topics in 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
This course involves the transference of leadership theories into practice. It provides a practical forum for students to examine and develop personal leadership skills.

LIS 3263 Community Leadership Practicum (3) US STL
PR: CI. Readings in special topics.

LIS 3214 Leadership in the Fraternal Movement (3) US STL
Designated Greek Life Position. Leadership course designed for Greek Life board members, chairpersons of chapters, governing councils and auxiliary organizations. Study of group processes and applications for building and leading organizations from corporate and non-profit perspectives.

LIT 2000 Introduction to Literature (3) AS ENG
PR: CI. This course provides a comprehensive introduction to the history of the English language, focusing on its development as a literary language.

LIT 3801 Language and Meaning 6A (3) AS WLE
A survey introduction to 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.

LIT 4040 Descriptive Linguistics (3) AS WLE
PR: LIN 3010. An 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 analysis and descriptive organization will be developed.

LIT 4575 Language Types of the World (1) AS WLE
PR: LIN 3010. An analysis of the interrelation of a language and the structure of the society using it, the linguistic patterns characteristic of particular social, political, economic, educational, and racial groups. Problems in communication between strata.

LIT 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 and American English.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIT 2040</td>
<td>Introduction to Drama 6A HP CAHU (3) AS ENG</td>
<td>This course will introduce students to the literary form of drama as well as to the various “schools” of literary criticism. Will not count toward the English major.</td>
</tr>
<tr>
<td>LIT 3022</td>
<td>Modern Short Fiction HP (3) AS ENG</td>
<td>PR: ENC 1110 and ENC 1102. This course for English majors and minors explores modern short prose in World, British, and American literatures; genres include the short story, the long short story, the short novel, and the essay. Not repeatable.</td>
</tr>
<tr>
<td>LIT 3031</td>
<td>Survey of Poetry (3) AS ENG</td>
<td>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.</td>
</tr>
<tr>
<td>LIT 3043</td>
<td>Modern Drama (3) AS ENG</td>
<td>A study of such modern and contemporary dramatists as Ibsen, Strindberg, Chekhov, Pirandello, Shaw, O’Neill, Pinter, Stoppard, Brecht, Beckett, and Ionesco.</td>
</tr>
<tr>
<td>LIT 3093</td>
<td>Contemporary Literature (3) AS ENG</td>
<td>An introduction to the 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.</td>
</tr>
<tr>
<td>LIT 3101</td>
<td>Literature of the Western World Through the Renaissance (3) AS ENG</td>
<td>A study in English 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.</td>
</tr>
<tr>
<td>LIT 3102</td>
<td>Literature of the Western World Since the Renaissance (3) AS ENG</td>
<td>A study in English of the great works of Western Literature from the Neoclassic to the Modern Period, including such writers as Molliere, Racine, Voltaire, Dostoevsky, Chekhov, Ibsen, Kafka, Gide, Sartre, Camus, and Solzhenitsyn, among others.</td>
</tr>
<tr>
<td>LIT 3103</td>
<td>Great Literature of the World 6A MW LW WRIN (3) AS ENG</td>
<td>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 and gender; thinking and writing skills.</td>
</tr>
<tr>
<td>LIT 3114</td>
<td>Modern European Novel 6A HP (3) AS ENG</td>
<td>A study of the Modern European novel in translation as it developed from the nineteenth century to the present, including such writers as Dostoevsky, Flaubert, Kafka, Hesse, Camus, and Sartre, among others.</td>
</tr>
<tr>
<td>LIT 3155</td>
<td>Twentieth-Century Literature 6A HP MW LW WRIN (3) AS ENG</td>
<td>Examines major literary works of the 20th Century written in English and explores ways authors have expressed the age, its great issues and conflicts, in order to gain an historical perspective that will be relevant to the recent past.</td>
</tr>
<tr>
<td>LIT 3301</td>
<td>Cultural Studies and the Popular Arts 6A MW LW WRIN (3) AS ENG</td>
<td>A study of American and international cultures as they are represented in the film, fiction, and other cultural artifacts of various ethnic and national groups. Focuses on values/ethics, race, ethnicity and gender; thinking and writing skills.</td>
</tr>
<tr>
<td>LIT 3374</td>
<td>The Bible As Literature 6A MW LW WRIN (3) AS ENG</td>
<td>Major emphasis on literary types, literary personalities of the Old and New Testaments, and Biblical archetypes of British and American literary classics. Focuses on values/ethics, race, ethnicity and gender; thinking and writing skills.</td>
</tr>
<tr>
<td>LIT 3383</td>
<td>The Image of Women in Literature 6A MW LW WRIN (3) AS ENG</td>
<td>This course seeks to trace the origins of contemporary views about women, to analyze major Eastern and Western literary portrayals of women, to examine ideas about women’s roles, and to compare and contrast cultural and racial images of women.</td>
</tr>
<tr>
<td>LIT 3410</td>
<td>Religious and Philosophical Themes (3) AS ENG</td>
<td>The classical and existentialist ideals, allusions, and symbols in the writings of Dostoevsky, Nietzsche, Mann, Joyce, Eliot, Camus, Sartre, among others.</td>
</tr>
<tr>
<td>LIT 3451</td>
<td>Literature and the Occult 6A MW LW WRIN (3) AS ENG</td>
<td>An introduction to the occult tradition as a major ingredient in English, Continental, American, and Multicultural literature. Focuses on values/ethics, race/ethnicity and gender; thinking and writing skills.</td>
</tr>
<tr>
<td>LIT 3930</td>
<td>Special Topics in English Studies (3) AS ENG</td>
<td>The study of various specialized areas of literary interest, suitable for junior and senior English majors. Topics will vary according to student interest and instructor expertise. May be taken twice for credit with different topics.</td>
</tr>
<tr>
<td>LIT 4386</td>
<td>British and American Literature by Women 6A (3) AS ENG</td>
<td>Survey of women’s literary tradition in England and America from the seventeenth century to the present. Thematic focus includes self, marriage, sexuality, madness, race and generations. Writing intensive.</td>
</tr>
</tbody>
</table>
functions, properties and graphs of trigonometric functions, right triangles, inverse trigonometric functions, 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 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 1114. 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 1147 PreCalculus Algebra and Trigonometry 6A QM CAMA (4) 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 60 or better College-Level Math CPT score. No credit for students with credit for either MAC 1140 or MAC 1114. This is an accelerated program designed for students with strong background in high school algebra and trigonometry. This course is best for students who have already seen some trigonometry. See the descriptions of MAC 1140 and MAC 1114.

MAC 2233 Business Calculus 6A QM CAMA (4) AS MTH
PR: C (2.0) or better in MAC 1105, or C (2.0) or better in MAC 1140, or C (2.0) or better in MAC 1147, or 590 or better SAT Math score, or 20 or better ACT Math score, or 78 or better College-Level Math CPT score. No credit for mathematics majors or students with credit for either MAC 2241, MAC 2281, or MAC 2311. Linear equations and functions, mathematics of finance, differentiation and integration of algebraic, exponential and logarithmic functions with applications to business, economics, and finance.

MAC 2241 Life Sciences Calculus I 6A QM CAMA (4) AS MTH
PR: C (2.0) or better in MAC 1114, or C (2.0) or better in MAC 1140, or 650 or better SAT Math score, or 29 or better ACT Math score, or 80 or better College-Level Math CPT score, and knowledge of trigonometry. No credit for math majors or students with credit in MAC 2233, MAC 2281, or MAC 2311. Differentiation and integration of algebraic, trigonometric, exponential, and logarithmic functions with applications to life sciences.

MAC 2242 Life Sciences Calculus II 6A QM CAMA (4) AS MTH
PR: C (2.0) or better in MAC 2241. No credit for Mathematics majors or students with credit in MAC 2282 or MAC 2312. Techniques of integration, differential equations, functions of several variables, series and Taylor polynomials.

MAC 2281 Engineering Calculus I 6A QM CAMA (4) AS MTH
PR: C (2.0) or better in MAC 1114 and (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 mathematics majors or for students with credit in MAC 2233, MAC 2281, or MAC 2311. Differentiation, limits, differentials, extremes, indefinite integral. No credit for mathematics majors or for students with credit in MAC 2233 or MAC 2243 or MAC 2311.

MAC 2282 Engineering Calculus II 6A QM CAMA (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 QM CAMA (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 CAMA (4) AS MTH
PR: C (2.0) or better in MAC 1114 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 mathematics majors or 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 CAMA (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 QM CAMA (4) AS MTH
PR: C(2.0) or better in MAC 2312 or CC. No credit for students with credit in MAC 2283. Integration, polar coordinates, conic sections, vectors, indeterminate forms and proper integrals.

MAD 4304 Theory of Computation 6A (3) AS MTH

MAD 5101 LISP: Programming With Algebraic Applications 6A (3) AS MTH
PR: MTH 5306 or MAD 6510 or MAS 5311 or CI. Programming in LISP, functional languages, foundations of Lambda Calculus and algebraic applications (theorem proving and game playing).

MAD 5305 Graph Theory (3) AS MTH
PR: MAS 3105 or CI. Introduction to classical graph theory (4-color theorem, etc.), directed graphs, connected digraphs, colorations, incidence matrices, Pólya's Theorem, networks.

MAE 4630 Teaching Elementary School (K – 6) Mathematics I (3) EDEO
PR: Admission to College of Education and two college level mathematics courses. Methods for teaching number ideas, computation skills, and mathematical reasoning in elementary (K – 6) classrooms.

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) EDEO
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. The 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.
MAN 4802 Entrepreneurship and Small Business Management (3) BU MAN
To develop a broad approach to starting and managing new enterprises, and to introduce students to the major functions and operations of small business management.

MAN 4504 Operations Management: A Systems Approach (3) BU QMB
Emphasis is placed on the application of various decision science methodologies to problems in management. Includes emphasis on the roles of individuals and groups in the identification, evaluation, and analysis of cases involving operations management problems.

MAN 4120 Managerial Behavioral Laboratory (3) BU MAN
PR: MAN 3240 or equivalent. Development of direct understanding of personal, interpersonal, and intergroup factors present in organizational interaction. Stress is on a series of experiential exercises and written application of results within a laboratory setting.

MAN 4429 Theory and Practice of Management Skills (3) BU 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) BU MAN
PR: MAN 3240 or CI. 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) BU 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 the organization's effectiveness and reflect on its strengths and weaknesses.

MAN 4283 Employment Laws (3) BU 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, labor relations, and collective bargaining agreements. Emphasis on the relationship between management and labor and unionization. Emphasis on the relationship between management and unions and the development of organizational interaction. Stress is on a series of experiential exercises and written application of results within a laboratory setting.

MAN 4430 Seminar in Negotiations and Administration of Labor Agreements (3) BU 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) BU QMB
PR: ISM 3431 or equivalent. Studies the problems of "operations" in all types of enterprises in both the public and private sectors. Emphasis is placed on the application of various decision science methodologies to problems in management.

MAN 4507 Operations Production Systems (3) BU QMB
PR: MAN 4504 or CI. Study of the analysis of production systems and control systems. Master production planning, inventory management, quality control, material requirements planning, production, and control systems. Emphasis on organizational effectiveness.

MAN 4600 International Management (3) BU 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 advantages through international operations.

MAN 4702 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, time, and productivity occurs. The extent to which the loss affects the organization's health depends on its ability to deal with these disruptions.

MAN 4802 Entrepreneurship and Small Business Management (3) BU 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, startup and management of the firm, and options for succession or termination.

MAN 4804 Small Business Management Counseling (3) BU 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) BU MAN
PR: CI. SU only. Specialized independent study determined by the students needs and interests.

MAN 4930 Selected Topics in Management (1-3) BU MAN
Topics to be selected by instructor and department chairperson for individual student needs.

MAN 4931 Independent Research (1-4) BU 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, higher order linear 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 5507 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, and numerical solutions of differential equations to assess managerial and supervisory skills and to measure organizational functioning and work design.

MAR 4231 Retailing Management (3) BU MKT
PR: MAR 3023 or CI. A study of the role of promotion in the marketing process, and the role of sales in today's marketing environment. Emphasis on learning adaptive selling techniques and developing effective interpersonal communications skills.

MAR 2931 Selected Topics in Marketing (1-4) BU MKT
Not available for credit to upper-level students who have been admitted to the College of Business. Topics to be selected by department chairperson.

MAR 3023 Basic Marketing (3) BU 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 3400 Professional Selling (3) BU 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) BU 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) BU MKT
PR: MAR 3023. An applications oriented study of the marketing function at an intermediate level. Emphasis is given to the development of techniques for analysis 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) BU MKT
PR: MAR 3023. A study of procedures and problems associated with establishing marketing operations in foreign countries. Includes the institutions, principles and methods involved in the solution of these business problems as well as the effects of national differences on business practices and consumer behavior.

MAR 4213 Logistics and Physical Distribution Management (3) BU 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 marketing studies.

MAR 4231 Retailing Management (3) BU MKT
PR: MAR 3023. A comprehensive study of the retailing structure, institutions, and environment. Includes pertinent management theories and practices in analyzing, organizing, and controlling retail operations, both large and small.

MAR 4333 Promotion Management (3) BU 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) BU MKT
PR: MAR 3022 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 4453 Business to Business Marketing (3) BU 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 strategies.

MAR 4503 Buyer Behavior (3) BU MKT
PR: MAR 3023. A study of the basic concepts of buyer behavior, including purchase pre- and post-purchase and behavior patterns, information processing relating to the functional areas of marketing and the buyer's decision-making process. Managerial applications to marketing are emphasized.

MAR 4624 Marketing Management Problems (3) BU 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) BU 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) BU MKT
PR: CI. S/U only. Specialized independent study determined by the students' needs and interests.

MAR 4933 Selected Topics In Marketing (1-3) BU MKT
Topics to be selected by instructor and department chairperson.

MAS 1100 Constructive Number Theory and Linear Algebra (2) 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 6A (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, Stoke's Theorem, elementary continuous groups.

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

MAS 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, prime number research, law of quadratic reciprocity, factorization 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 3105 or CI. Study of modules over principal ideal domains, 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 4930 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 4937 Mathematics Majors Seminar 6A (1) AS MTH
PR: MAS 4301.

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.

MBC 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 bacteria, viruses, fungi, rickettsiae and other pathogenic organisms.

MBC 2000L Microbiology Lab for Nursing and other Healthcare Professionals (1) NU NUR

MBC 3020C General Microbiology (4) AS BCM
PR: BIO 2010, BSC 2010L, BSC 2111, BSC 211L, CHM 2210, and MAC 2110 or higher-level MAC course or STA 2023. CP: PCB 3023 or PCB 3043 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, PCB 3063 is recommended.

MBC 3410 Cell Metabolism (3) AS BCM
PR: BIO 2010 and BIO 2101L. This course will provide a broad framework and overview of major metabolic pathways that occur in living cells with emphasis on integration and regulation of those pathways. For majors and non-majors.

MBC 4115C Determinative Bacteriology (5) AS BCM
PR: MCB 3020C and CHM 2210 and MAC 2110 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, in industry and as pathogens.

MBC 4313 Industrial Microbiology and Biotechnology (3) AS BCM
PR: MCB 3020C. This course focuses on advanced principles of industrial microbiology. It will expose student to the many applications of industrial microbiology in daily life and through this exposure visualize future entrepreneurial opportunities.

MBC 4320 Molecular Microbiology (3) AS BCM
PR: MCB 3020C, PCB 3023, PCB 3063. Lecture based course building on principles from gen. microbiology to explore advanced topics in molecular microbiology. Emphasis is on: molecular genetics of bacteria and bacteriophages and genetic regulation of responses to the natural environment.

MBC 4404 Microbial Physiology and Genetics (4) AS BIN
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 and Laboratory.

MBC 4404L Microbial Physiology and Genetics Laboratory (1) AS BIN
CR: MCB 4404. Laboratory portion of Microbial Physiology and Genetics relating to: biochemical characteristics and metabolic capabilities of bacteria. Laboratory only.

MBC 4503 Virology (3) AS BCM
PR: MCB 3020C and CHM 2210 and MAC 1105 or higher-level MAC course or STA 2023. CP: PCB 3023 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 cells.

MBC 4905 Microbiology Undergraduate Research (1-4) AS BCM
PR: CHM 2210 & MAC 1105 or higher-level MAC course or STA 2023
MHF 5405 History of Modern Mathematics (3) AS MTH
PR: MAC 2313. Traces the development of modern mathematics 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) BC 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 multidisciplinary look at service delivery. Students will examine their career and educational goals in context.

MHS 4002 Behavioral Health Systems Delivery (3) BC 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-minors 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 4401 Exemplary Practices in Behavioral Healthcare Treatment (3) BC 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 population or a treatment strategy but will primarily focus on emerging methodologies.

MHS 4425 Field Experience in Behavioral Healthcare (3) BC 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 for one month in advance of semester.

MHS 4741 Research Processes in Behavioral Health (3-5) BC FMH
PR: 1 course in statistics; 1 course in research methods. Application of research processes used in the interdisciplinary field of behavioral health including research design, quantitative and qualitative methods, measurement, report writing, dissemination, and grant writing.

MHS 4905 Independent Study: Guidance and Counseling Education (1-4) ED EDG
PR: DPR. S/U only. Specialized independent study determined by the student’s needs and interests.

MHS 4906 Directed Study (1-4) BC FMH
Directed study. Student must have a contract with an instructor.

MHS 4912 Independent Research in Behavioral Health (1-4) BC FMH
PR: 1 course in statistics; 1 course in research methods. Students will conduct an independent research project in behavioral health (mental health and/or substance abuse) under the guidance of a faculty mentor. May be repeated for maximum of 8 credits.

MHS 4931 Selected Topics (1-4) BC 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 5020 Foundations of Mental Health Counseling (3) BC REH
PR: CC. A skill-building course on the utilization of one’s self in mental health counseling relationship development. Includes an exploration of the origin, history, professional functions and current issues in the discipline of mental health counseling.

MHS 5480 Human Growth and Development (3) BC REH
PR: RCS 5780, MHS 5020. Major’s 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
Field and experiential studies on a selected topic.

MLS 4038 Introduction to Medical Technology (1-2) AS CHM
PR: Senior standing and acceptance into an approved affiliated hospital. A hospital clinical course on principles and methods of medical technology, including professional ethics, safety regulations, quality control, phlebotomy, medical terminology, laboratory.
MLC 4860 Clinical Urinalysis and Body Fluids (2) AS CHM
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. Topics include: urinalysis, therapeutic drug-monitoring assays, tumor markers, and toxicology.

MLC 4866 Clinical Laboratory Management and Education (1) AS CHM
PR: Senior standing and acceptance into an approved affiliated hospital. A hospital clinical course on the basic skills of writing for the media with practice in library research, persuasive writing, and informational writing.

MMC 2100 Writing for the Mass Media (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 2100 Writing for the Mass Media (3) AS COM
PR: Junior standing and CI. Reading and directed study in special topics.

MMC 4900 Directed Reading in Mass Communications (1-3) AS COM
PR: Junior standing and CI. Reading and directed study in special topics.

MMC 4936 Selected Topics in Mass Communications Studies (1-3) AS COM
PR: MMC 2100, MMC 3602 and CI. Courses designed to meet current or specific topics of interest to instructors and students.

MMC 4945 Media Internship-Seminar (3) AS COM
PR: CI. A 35 day internship at Fort Knox, Kentucky that incorporates knowledge of leadership values, attributes, skills & actions in context of practical hands-on exercises.

PR: CI and 15 hours in Mass Comm. courses and completion of an 8-12 week paid media internship with newspaper, broadcast station, or other media-related agency approved by the School. S/U only. A small course designed to build individual confidence through the accomplishment of tough and demanding training. Students completing the course may qualify for entry into the ROTC Advanced Course.

PR: CI. A 35 day internship at Fort Knox, Kentucky that incorporates a wide range of military subjects designed to develop/evaluate leadership and officer potential. The course is intentionally stressful and designed to build individual confidence through the accomplishment of tough and demanding training. Students completing the course may qualify for entry into the ROTC Advanced Course.

PR: CI. 35 day internship at Fort Knox, Kentucky that incorporates a wide range of military subjects designed to develop/evaluate leadership and officer potential. The course is intentionally stressful and designed to build individual confidence through the accomplishment of tough and demanding training. Students completing the course may qualify for entry into the ROTC Advanced Course.

PR: CI. 35 day internship at Fort Knox, Kentucky that incorporates a wide range of military subjects designed to develop/evaluate leadership and officer potential. The course is intentionally stressful and designed to build individual confidence through the accomplishment of tough and demanding training. Students completing the course may qualify for entry into the ROTC Advanced Course.
### MUC 4403 Electronic Music—Real-Time Performance I (3) TA MUS
Explores dynamics of leadership in complex situations of current military operations in current operating environment; examines differences in courtesies, military law, principles of war & rules of engagement in international terror & more.

### MUC 4202 Leadership In A Complex World (3) US MIS

### MUC 4930 Advanced Directed Study and Research (1-3) US MIS
PR: CI and permission of Professor of Military Science. Intensive individual study in a particular aspect of military science that is not covered in regular course offerings. Request for enrollment must be made prior to registration in the form of a written proposal.

### MTG 3212 Geometry 6A (3) AS MTH
PR: MAC 2311. 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 4301 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 4211, MAS 3105. Exterior calculus, differentiable manifolds, integral theorems, differential forms 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) TA MUS
PR: MUT 1112 and DPR. Private instruction in original composition. Required of composition majors.

### MUC 2301 Introduction To Electronic Music FA (3) TA 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) TA MUS
PR: Necessary competency at junior level determined by faculty jury. DPR. Private instruction in original composition. Required of composition majors.

### MUC 3401 Electronic Music-Analog Synthesis I (3) TA MUS
PR: MUC 3401 or MUC 3402 and DPR. Computer assisted composition for conventional instruments; composition for tape medium with analog synthesizers; use of sound recording studio; repertory or analog music synthesis; technical basis of analog systems design and construction.

### MUC 3402 Electronic Music-Analog Synthesis II (3) TA MUS
PR: MUC 3401 and DPR. Composition for tape medium with analog synthesizers; use of sound recording studio; repertory or analog music synthesis; technical basis of analog systems design and construction.

### MUC 3441 Electronic Music-Digital Synthesis I (3) TA MUS
PR: MUC 3401 or MUC 3402 and DPR. Computer assisted composition for conventional instruments; composition for tape medium with computer controlled analog synthesizers; direct digital synthesis; digital systems design and construction.

### MUC 3442 Electronic Music-Digital Synthesis II (3) TA MUS
PR: MUC 3401 or MUC 3402 and DPR. Computer assisted composition for conventional instruments; composition for tape medium with computer controlled analog synthesizers; direct digital synthesis; digital systems design and construction.

### MUC 4241 Composition (3) TA MUS
PR: Necessary competency at senior level determined by faculty jury. DPR. Private instruction in original composition. Required of composition majors; a minimum of six semester hours.

### MUC 4403 Electronic Music-Real-Time Performance I (3) TA MUS
PR: MUC 3402 and MUC 3442 or equivalent. DPR. Composition for analog/digital equipment, performance applications; sound synthesis, interfacing electronics with conventional instruments.

### MUC 4404 Electronic Music-Real-Time Performance II (3) TA MUS
PR: MUC 3402 and MUC 3442 or equivalent. DPR. Composition for analog/digital equipment, performance applications; sound synthesis, interfacing electronics with conventional instruments.

### MUC 4620 Jazz Composition (3) TA MUS
PR: MUC 3354 and/or DPR. Private instruction in original jazz composition. Required of All Music Studies Comp. majors, minimum six of hours.

### MUC 5625 Jazz Composition (2) TA MUS
PR: CI. Required of all composition majors. Private instruction in original composition.

### MUE 3421 Choral Techniques and Pedagogy (1) TA 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) TA MUS
PR: MUG 3104 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) TA 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 3930 Music Education Forum (1) TA MUS
PR: Status as a music education major; permission of the Music Advisor. Discuss MusEd professional organizations (MENC, CMENC, ISME, etc.). Students join CMENC and attend the FMEA conference. Additional classroom management, school safety, professionalism, ethics, education law, and MusEd for special students. Required for MusEd majors 4 semesters @ 1 credit hour per term.

### MUE 4210 Music For The Child (3) TA MUS
PR: Admission to the College of Education. DPR. Fundamentals, the development of music skills and knowledge of music materials and teaching strategies for presenting music to children in the elementary school.

### MUE 4311 K-12 General Music Methods and Practicum (4) TA 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 4331 Choral Methods In The Secondary School (3) TA MUS

### MUE 4332 Instrumental Methods In The Secondary School (3) TA MUS

### MUE 4480 Special Ensemble Methods (2) TA MUS
This course is restricted to majors and is repeatable for up to 6 credits.

### MUE 4936 Senior Seminar In Music (2) TA MUS
CR: MUE 4936. S/U only. DPR. One full semester of internship in public or private elementary and secondary schools.

### MUE 4940 Internship: Music Education (6-10) TA MUS
CR: MUE 4936. S/U only. DPR. One full semester of internship in public or private elementary and secondary schools. Required concurrently with internship.

### MUG 3104 Basic Conducting (2) TA 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) TA 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.

### MUI 2020 The History of Blues and Rock FA CAFA HHCP (3) TA MUS
A study of the history of rock music: its roots, regions and countries of origin, evolution, styles, influences, social/cultural context, etc. Blues and rock are particularly American forms of music, but they reflect ancient practice as well.

### MUL 4090 Folk And Traditional Music Of World Cultures FA AF CAFA (3) TA MUS
A comparative survey of the stylistic traits and functions of folk and traditional music, both sacred and secular, of diverse Western and non-Western cultures. For non-majors and music education majors; may be taken by applied music majors.
MUN 2632 Music In The United States FA (3) TA MUS
This course is open to any major area.  Fall Term participation in the course provides performance experiences with the Marching Band.  The course is open to any major area.

MUN 3474 Collegium Musicum (1) TA MUS
PR: DPR. Open to all university students with the necessary proficiency in their performance media; study and performance of music for large combinations of voices, string, woodwind, brass, or percussion instruments, and piano.

MUS 3333 Singing Strampele (1) TA MUS
PR: CI. 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.
MUT 2201 Language Diction For Singers (1) TA MUS
PR: DPR. Required of voice performance majors. Specialized study in Language Diction for Singers. Specific language varies, to be arranged at each course offering.

MUS 4900 Directed Reading (1-3) TA MUS
PR: DPR. Selection of topic and materials must be agreed upon and appropriate credit must be assigned prior to registration. A contract with all necessary signatures is required for registration.

MUT 4905 Directed Study (1-4) TA MUS
PR: DPR. Independent studies in the various areas of music; course of study and credits must be assigned prior to registration.

MUT 4301 Orchestration I (2) TA MUS
PR: MUT 2117, DPR. An intensive study of the contrapuntal practice of the 18th century; development of skills in perceiving and writing music in the style of the period through the use of aural and visual analysis.

MUT 4571 Twentieth Century Practice (3) TA MUS
PR: MUT 2117, DPR. A study of 20th century theoretical concepts; development of skills in perceiving and writing music in contemporary practice through the use of aural and visual analysis.

MUT 4421 Eighteenth Century Practice (3) TA MUS
PR: MUT 3353 and DPR. A study of the major innovators in jazz. Oriented toward the continuing development of students' soloing ability. Students are required to enroll in Jazz Chamber Ensemble as a lab. Open to majors and non-majors.

MUT 3664 Advanced Jazz Improvisation II (2) TA MUS
PR: MUT 3663, DPR. 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.

MUS 3663 Advanced Jazz Improvisation I (2) TA MUS
PR: MUT 2642 or DPR. A studio course study of the improvisational solos of the major innovators in jazz. Oriented toward the continuing development of students' soloing ability. Students are required to enroll in Jazz Chamber Ensemble as a lab. Open to majors and non-majors.

MUT 3644 Advanced Jazz Improvisation III (2) TA MUS
PR: MUT 3643, DPR. 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.

MUT 4310 Orchestration II (2) TA MUS
PR: MUT 3663, DPR. An intensive study of the contrapuntal practice of the 18th century; 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) TA 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.

MUT 2241 Aural Theory I (1) TA MUS
PR: DPR. 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 rhythmic, melodic and harmonic dictation, and sight singing.

MUT 2242 Aural Theory II (1) TA MUS
PR: MUT 2241, DPR. Course designed to begin training in aural recognition and vocal realization of materials used in music composition. Includes rhythmic, melodic and harmonic dictation, and sight singing.

MUT 2261 Aural Theory III (1) TA MUS
PR: MUT 2242, DPR. Course designed to continue training in aural recognition and vocal realization of materials used in music composition. Includes rhythmic, melodic and harmonic dictation, and sight singing.

MUT 2264 Jazz Theory And Improvisation I (2) TA MUS
PR: MUT 1112 and/or DPR. A study of jazz improvisational techniques and related jazz theory.

MUT 2265 Jazz Theory And Improvisation II (2) TA MUS
PR: MUT 2264 or DPR. A study of jazz improvisational techniques and related jazz theory.

MUT 3353 Jazz Composition And Arranging I (3) TA MUS
PR: MUT 1112 and/or DPR. Course designed to develop arranging and/or compositional skills in the jazz idiom through the study of jazz orchestration, harmonic, and melodic practices.

MUT 3354 Jazz Composition And Arranging II (3) TA MUS
PR: MUT 3353 and DPR. Course designed to develop arranging and/or compositional skills in the jazz idiom through the study of jazz orchestration, harmonic, and melodic practices.
<table>
<thead>
<tr>
<th>Course Number</th>
<th>Title</th>
<th>Credit Hours</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MVB 1315</td>
<td>Tuba Principal</td>
<td>(2) TA MUS</td>
<td>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.</td>
</tr>
<tr>
<td>MVB 1411</td>
<td>Trumpet Major</td>
<td>(3) TA MUS</td>
<td>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.</td>
</tr>
<tr>
<td>MVB 1412</td>
<td>French Horn Major</td>
<td>(3) TA MUS</td>
<td>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.</td>
</tr>
<tr>
<td>MVB 4443</td>
<td>Trombone Principal</td>
<td>(2) TA MUS</td>
<td>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.</td>
</tr>
<tr>
<td>MVB 4442</td>
<td>French Horn Major</td>
<td>(3) TA MUS</td>
<td>PR: DPR. Necessary competency at senior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.</td>
</tr>
<tr>
<td>MVB 4443</td>
<td>Trombone Major</td>
<td>(3) TA MUS</td>
<td>PR: DPR. Necessary competency at senior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.</td>
</tr>
<tr>
<td>MVB 4444</td>
<td>Euphonium Major</td>
<td>(3) TA MUS</td>
<td>PR: DPR. Necessary competency at senior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.</td>
</tr>
</tbody>
</table>

Applied music courses are NOT available on S/U basis. Private and class instruction.
MVJ 1413 Jazz Guitar Major (3) TA MUS
PR: DPR. Necessary competency at senior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVJ 2320 Applied Jazz Piano Principal (2) TA 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 2323 Jazz Guitar Principal (2) TA 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 3339 Jazz Guitar Piano Principal (2) TA MUS
PR: DPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVJ 3340 Applied Jazz Piano Major (3) TA 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 1319 Applied Jazz Percussion Principal (2) TA 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 1410 Applied Jazz Piano Major (3) TA 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 1413 Jazz Guitar Major (3) TA 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 4344 Jazz Bass Principal (2) TA MUS
PR: DPR. Required of all music majors 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 4349 Jazz Percussion Principal (2) TA 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 4440 Jazz Piano Major (3) TA MUS
PR: DPR. Necessary competency at senior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVK 4443 Jazz Guitar Major (3) TA MUS
PR: DPR. Necessary competency at senior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVK 4444 Jazz Bass Major (3) TA MUS
PR: DPR. Necessary competency at senior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVK 4449 Jazz Percussion Major (3) TA MUS
PR: DPR. Necessary competency at senior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVK 4950 Applied Jazz Performance (3) TA MUS
PR: MUT 2642 and DPR. Necessary competency at junior level determined by faculty jury examination. Private and class instruction.

MVK 5250 Applied Jazz Piano Secondary (2) TA 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.

MVK 5252 Applied Jazz Bass Secondary (2) TA 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.

MVK 5253 Applied Jazz Guitar Secondary (2) TA 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.

MVK 5254 Applied Jazz Bass Secondary (2) TA 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.

MVK 5259 Applied Jazz Percussion Secondary (2) TA 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.

MVK 5951 Applied Jazz Performance (2) TA 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.

MVK 1111 Keyboard Skills I (2) TA 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 1121 Keyboard Skills II (2) TA 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 1211 Applied Piano (1) TA 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) TA 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) TA 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 1811 Beginning Piano I (2) TA MUS
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 1821 Beginning Piano II (2) TA 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) TA 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) TA 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 2231 Piano Principal (2) TA 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 2311 Piano Major (3) TA 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) TA 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) TA 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 Major (3) TA MUS
PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVK 4341 Piano Principal (2) TA 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 4441 Piano Major (3) TA MUS
PR: DPR. Necessary competency at senior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVK 4640 Piano Pedagogy I (4) TA MUS
PR: DPR. May be elected by undergraduate music majors; emphasis on the business management of the music studio, and the musical responsibilities of the studio teacher, the techniques of private instruction.

MVK 4641 Piano Pedagogy II (4) TA MUS
PR: MVK 4640, DPR. May be elected by undergraduate music majors; emphasis on the business management of the music studio, and the musical responsibilities of the studio teacher, the techniques of private instruction.

MVK 5251 Applied Piano (2-4) TA 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.

MVP 1211 Applied Percussion (1) TA 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) TA 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) TA 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 1411 Violin Major (3) TA 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 3334 Double Bass Principal (2) TA 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 1314 Double Bass Principal (2) TA 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 1411 Violin Major (3) TA 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 1314 Cello Major (3) TA 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 3334 Violoncello Principal (2) TA 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 3332 Viola Principal (2) TA 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 3333 Violoncello Principal (2) TA 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 3421 Viola Major (3) TA 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 3312 Viola Principal (2) TA 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 1411 Violin Major (3) TA 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 1313 Violin Principal (2) TA 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 1312 Viola Principal (2) TA 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 1313 Violoncello Principal (2) TA 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 1314 Double Bass Principal (2) TA 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) TA MUS
PR: DPR. Necessary competency at Sophomore level determined by faculty jury examination. 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 3431 Percussion Principal (2) TA MUS
PR: DPR. Necessary competency at junior level determined by faculty jury examination. 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 4341 Percussion Principal (2) TA 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 5251 Applied Percussion, Secondary (2-4) TA 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.
MVS 1212 Applied Viola (1) TA 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 1412 Viola Major (3) TA 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 Violin (1) TA MUS
PR: DPR. Necessary competency at Sophomore level determined by faculty jury examination. 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 2424 Double Bass Major (3) TA MUS
PR: DPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.
MVS 2421 Violin Major (3) TA MUS
PR: DPR. Necessary competency at Sophomore level determined by faculty jury examination. 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 2423 Cello Major (3) TA MUS
PR: DPR. Necessary competency at Sophomore level determined by faculty jury examination. 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 3333 Violoncello Principal (2) TA 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) TA 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 1424 Double Bass Major (3) TA 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 4451 Percussion Major (3) TA MUS
PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.
MVP 4441 Percussion Major (3) TA MUS
PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.
MVP 2421 Percussion Major (3) TA MUS
PR: DPR. Necessary competency at Junior level determined by faculty jury examination. 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 3331 Percussion Principal (2) TA 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) TA 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 2423 Violoncello Principal (2) TA 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.
### Applied Music Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Taught</th>
<th>Private and Class Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>MVV 1411 Voice Major (3) TA MUS</td>
<td>PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors.</td>
<td>3</td>
<td>Private and class instruction.</td>
<td></td>
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<tr>
<td>MVV 3434 Double Bass Major (3) TA MUS</td>
<td>PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors.</td>
<td>3</td>
<td>Private and class instruction.</td>
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<tr>
<td>MVV 4441 Violin Principal (2) TA MUS</td>
<td>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.</td>
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<tr>
<td>MVV 4341 Viola Principal (2) TA MUS</td>
<td>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.</td>
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<tr>
<td>MVV 4342 Double Bass Principal (2) TA MUS</td>
<td>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.</td>
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<tr>
<td>MVW 1315 Saxophone Principal (2) TA MUS</td>
<td>PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors.</td>
<td>2</td>
<td>Private and class instruction.</td>
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<tr>
<td>MVW 1314 Bassoon Principal (2) TA MUS</td>
<td>PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors.</td>
<td>2</td>
<td>Private and class instruction.</td>
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<tr>
<td>MVW 1312 Oboe Principal (2) TA MUS</td>
<td>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.</td>
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<tr>
<td>MVW 1311 Flute Principal (2) TA MUS</td>
<td>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.</td>
<td>2</td>
<td>Private and class instruction.</td>
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<tr>
<td>MVW 1313 Clarinet Principal (2) TA MUS</td>
<td>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.</td>
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<tr>
<td>MVW 1314 Bassoon Principal (2) TA MUS</td>
<td>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.</td>
<td>2</td>
<td>Private and class instruction.</td>
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<tr>
<td>MVW 1315 Saxophone Principal (2) TA MUS</td>
<td>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.</td>
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</tbody>
</table>

Applied music courses are NOT available on S/U basis. Private and class instruction.
448 USF Course Descriptions

**MVW 1141 Flute Major (3) TA 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) TA 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) TA 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) TA 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) TA MUS**
PR: DPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

**MVW 2121 Flute Principal (2) TA 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 2122 Oboe Principal (2) TA 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 2123 Clarinet Principal (2) TA 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 2124 Bassoon Principal (2) TA 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 2125 Saxophone Principal (2) TA 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 3131 Flute Principal (2) TA 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 3332 Oboe Principal (2) TA 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 3333 Clarinet Principal (2) TA 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 3334 Bassoon Principal (2) TA 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 3335 Saxophone Principal (2) TA 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 3431 Flute Major (3) TA MUS**
PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

**MVW 3432 Oboe Major (3) TA 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) TA 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 Major (3) TA 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) TA 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) TA 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) TA 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 4343 Clarinet Principal (2) TA 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) TA 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) TA 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) TA 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) TA 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) TA 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) TA 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) TA 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 (2-4) TA MUS**
PR: DPR. Open to senior and advanced undergraduate students
who have completed rectal requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

MVW 5252 Applied Oboe (2-4) TA MUS
PR: DPR. Open to senior and advanced undergraduate students who have completed rectal requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

MVW 5253 Applied Clarinet (2-4) TA MUS
PR: DPR. Open to senior and advanced undergraduate students who have completed rectal requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

MVW 5254 Applied Bassoon (2-4) TA MUS
PR: DPR. Open to senior and advanced undergraduate students who have completed rectal requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

MVW 5255 Applied Saxophone (2-4) TA MUS
PR: DPR. Open to senior and advanced undergraduate students who have completed rectal requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

NUR 3525L 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 and organic psychiatric/mental health problems. Emphasis is on providing holistic mental health care for patients with selected health problems related to specific mental illness. Clinical experience on history taking, physical assessment skills basic to clients across the life span.

NUR 3535 Pathophysiology in Nursing Practice (4) NU NUR
PR: Admission to the nursing major or CI. CR: NUR 3076. Pathophysiology: cells, tissues, organs and systems. Provides basic and clinical concepts of pharmacology in nursing practice. Focus is on understanding the critique of complex physiological systems and formulations following the cold war.

NSC 3123 Naval Ships Systems II (3) US NVY
PR: NSC 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.

NSC 3212C Navigation/Naval Operations II: Seamanship and Ship Operations (3) US NVY
PR: NSC 2212C. International and inland rules of the road; relative motion-vector analysis; ship handling, employment, and tactics, artilleroy communications; and operations analysis. Laboratory required.

NSC 4224 Amphibious Warfare (3) US NVY
History of amphibious warfare emphasizing doctrine and techniques as well as an understanding of the interactions of political, strategic, operational, tactical, and technical levels of war from the past.

NSC 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: NUR 3145, CR: NUR 3026L and NUR 3066. Fundamentals of Nursing Practice and Foundations for Clinical Judgment. Focus is on the development of 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 3066L Physical Examination and Assessment (2) NU NUR
CR: NUR 3026, NUR 3026L. Focus is on the use of techniques and instruments necessary for examination of patients, children and adults. Emphasizes assessment phase of critical thinking to enable student to perform evaluations of health status throughout the life span.

NUR 3066L Clinical Experience in Health Assessment - RN (1) NUR
PR: Admission to nursing major or CI. CR: NUR 3066. 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 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 and in professional nursing practice.

NUR 3145 Pharmacology in Nursing Practice (3) NU NUR
PR: Admission to the nursing major or CI; CP: NUR 3125. Focus on the basic and clinical concepts of pharmacology in nursing practice. Examine pharmacotherapeutics, pharmacodynamics, pharmacokinetics; adverse reactions and contraindications; therapeutic indications and nursing implications.

NUR 3215 Medical Surgical Nursing I (3) NU NUR
PR: NUR 3026, NUR 3026L, NUR 3066, NUR 3125, NUR 3145; CR: NUR 3215 or NUR 5580L. Focuses on 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, Hematologic System, Integumentary and Immunologic System, Cardiovascular System, Pulmonary System, Musculoskeletal, Sensory System (Visual/Auditory), Patient teaching is incorporated for each topic.

NUR 3215L Medical Surgical Nursing Clinical I (4) NU NUR

NUR 3535 Psychiatric/Mental Health Nursing (3) NU NUR
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
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<tbody>
<tr>
<td>NUR 3535L</td>
<td>Psychiatric/Mental Health Nursing Clinical (3) NU NUR</td>
<td>PR: NUR 3026, NUR 3026L, NUR 3066, NUR 3125, NUR 3145, NUR 3215, NUR 3215L; CR: NUR 4216L or NUR 4636L. Focus on the recognition and treatment of psychiatric issues in various settings.</td>
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<tr>
<td>NUR 3843</td>
<td>Problem Solving and Critical Thinking in Professional Nursing I (1) NU NUR</td>
<td>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.</td>
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<tr>
<td>NUR 4190</td>
<td>An Interdisciplinary Perspective in HIV Disease 6A LW WRIN (3) NU NUR</td>
<td>Provides an interdisciplinary perspective in HIV disease. Topics include the epidemiology, 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 the media has shaped the epidemic.</td>
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<td>NUR 4216</td>
<td>Medical Surgical Nursing II (4) NU NUR</td>
<td>PR: NUR 3026, NUR 3026L, NUR 3066, NUR 3125, NUR 3145, NUR 3215, NUR 3215L; CR: NUR 4216L or NGR 5580L. Assessment, prevention, and management of selected health care problems. Analyze effects of changes and impact of nursing intervention in: Infection Control/Endocrine/Neurologic/Musculoskeletal.</td>
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<tr>
<td>NUR 4216L</td>
<td>Medical Surgical Nursing Clinical II (5) NU NUR</td>
<td>PR: NUR 3026, NUR 3026L, NUR 3066, NUR 3125, NUR 3145, NUR 3215, NUR 3215L; CR: NUR 4216L or NGR 5580L. Preparation for patients with selected health problems. Emphasizes clinical judgment in implementing therapeutic nursing interventions for patients with complex health problems related to alterations in multiple functional health patterns.</td>
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<td>NUR 4257</td>
<td>Critical Care (2) NU NUR</td>
<td>PR: Nursing Majors or CI. Basic concepts of critical care nursing, focusing on selected health problems to analyze the effects of illness on health status.</td>
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<tr>
<td>NUR 4268</td>
<td>Geriatric Nursing: Population-Based Perspectives on Nursing Care of Older Adults 6A LW WRIN (3) NU NUR</td>
<td>PR: NUR 3026, NUR 3066, NUR 3125, NUR 3145, NUR 3215. Focuses on the development of core competencies necessary to provide holistic, evidence-based and culturally sensitive nursing care to older adults.</td>
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<td>NUR 4355</td>
<td>Child and Adolescent Health Nursing (3) NU NUR</td>
<td>PR: NUR 3215, NUR 3525 or NUR 3555, NUR 4216 and NUR 3215L, NUR 4216L and NUR 3525L or NUR 3535L or NGR 5580L. CR: NUR 4455, NUR 4635L or NGR 5680L; CP: NUR 4636. This course will explore the clinical care of children and adolescents within the context of the family. Focus on health promotion, risk assessment, and treatment.</td>
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<td>NUR 4363</td>
<td>Community/Public Health, Children and Adolescent Health, and Women's Health (3-7) NU NUR</td>
<td>PR: NUR 4216, NUR 4216L. CR: NUR 4455, NUR 4636, NUR 4355. 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, and empower children, adolescents, and families, and diverse community populations across the age spectrum.</td>
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<tr>
<td>NUR 4363L</td>
<td>Integrated Nursing Clinical: Community/Public Health, Children and Adolescent Health, and Women's Health (3) NU NUR</td>
<td>PR: NUR 4216, NUR 4216L. CR: NUR 4455, NUR 4636, NUR 4355. 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, and empower children, adolescents, and families, and diverse community populations across the age spectrum.</td>
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<tr>
<td>NUR 4355L</td>
<td>Integrated Nursing Clinical: Community/Public Health, Children and Adolescent Health, and Women's Health (3) NU NUR</td>
<td>PR: NUR 4216, NUR 4216L. CR: NUR 4455, NUR 4636, NUR 4355. 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, and empower children, adolescents, and families, and diverse community populations across the age spectrum.</td>
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<td>NUR 4365</td>
<td>Community/Public Health: Population-Focused Nursing MW (3) NU NUR</td>
<td>PR: NUR 3215, NUR 3525 or NUR 3555, NUR 4216 and NUR 3215L, NUR 4216L and NUR 3525L or NUR 3535L. In-depth examination of community health nursing, public health, epidemiology, culture, and environment essential to the prevention of childhood illness and promoting and preserving health among diverse populations at risk.</td>
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<tr>
<td>NUR 4635L</td>
<td>Community/Public Health Nursing Clinical (3) NU NUR</td>
<td>PR: NUR 3215, NUR 3525 or NUR 3555, NUR 4216 and NUR 3215L, NUR 4216L and NUR 3525L or NUR 3535L. In-depth examination of community health nursing, public health, epidemiology, culture, and environment essential to the prevention of childhood illness and promoting and preserving health among diverse populations at risk.</td>
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<tr>
<td>NUR 4643</td>
<td>Substance Abuse Across the Lifespan (3) NU NUR</td>
<td>Introduction to concepts of substance abuse and theories of addiction. The applicability of theories and concepts of substance use/abuse to clinical assessment, diagnosis and intervention with client populations across the lifespan is explored.</td>
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<tr>
<td>NUR 4638</td>
<td>Leadership and Management in Professional Nursing Practice (3) NU NUR</td>
<td>PR: NUR 4466, NUR 4465, NUR 4636 or CI. Principles of nursing leadership and management with an emphasis on decision-making, priority-setting, delegating, and managing nursing care. Focus on the preparation of the professional nurse to work collaboratively in the interdisciplinary healthcare environment. There will be in-depth examination of process improvement with a focus on the quality indicator process. Clinical experiences for registered nurse students will be designed to build upon a practice background.</td>
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<tr>
<td>NUR 4827C</td>
<td>Leadership &amp; Management in Professional Nursing Practice (3) NU NUR</td>
<td>PR: NUR 4466, NUR 4465, NUR 4636 or CI. Principles of nursing leadership and management with an emphasis on decision-making, priority-setting, delegating, and managing nursing care. Focus on the preparation of the professional nurse to work collaboratively in the interdisciplinary healthcare environment. Clinical experiences for registered nurse students will be designed to build upon a practice background.</td>
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<tr>
<td>NUR 4905C</td>
<td>Independent Study (1-5) NU NUR</td>
<td>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.</td>
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</tbody>
</table>
PCB 3023L Cell Biology Laboratory (1) AS BCM
CP: PCB 3023. Laboratory portion of Cell Biology. Metabolic processes within the cell.

PCB 3043 Principles of Ecology (3) AS BIN
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 BIN

PCB 3043L General Genetics Laboratory (1) AS BCM
PR: BSC 2010, BSC 2010L, BSC 2011L and CHM 2045, CHM 2046 & MAC 1105 or higher-level MAC course or STA 2023. CP: CHM 2210. Introduction to genetics including the fundamental concepts of Mendelian, molecular and population genetics. Lecture only.

PCB 3063L General Genetics Laboratory (1) AS BCM
CP: PCB 3063. Laboratory investigation techniques in general genetics including Mendelian and non-Mendelian relationships, and gene interactions.

PCB 3712 General Physiology (3) AS BIN
PR: BSC 2010, BSC 2010L, BSC 2011L and CHM 2045, CHM 2046 and MAC 1105 or higher-level MAC course or STA 2023. Comparative analysis of animal structure and function: organ systems and activities of body systems. Functional responses of plants to both internal and environmental signals lecture only.

PCB 3713L General Physiology Laboratory (1) AS BIN
PR: PCB 3712. Laboratory portion of General Physiology.

PCB 4024 Molecular Biology of the Cell (3) AS BCM
PR: PCB3023, PCB3063. This lecture-based course will focus on advanced principles of molecular cell biology with emphasis on protein structure and function in key cellular pathways. The course is suitable for majors/nonmajors.

PCB 4026 Molecular Biology of the Gene (3) AS BCM
PR: PCB3023, PCB3063. This lecture-based course will provide fundamental knowledge of scientific concepts and principles of the molecular aspects of DNA metabolism in pro- and eukaryotes for majors/nonmajors.

PCB 4234 Principles of Immunology (3) AS BCM
PR: PCB 3023 or PCB 3063 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 2112. 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 BCM
Lec-Lab. Experimental analysis of genetic systems. Lecture only.

PCB 4663 Human Genetics (3) AS BIOB
PR: PCB3023, PCB3063. A lecture-based course building upon principles learned in Cell Biology and Genetics to explore advanced topics applied to human heredity and inherited disorders. Instruction includes problem solving, group activities, internet and individual projects.

PCB 4674 Organic Evolution (3) AS BIN
PR: PCB 3063. 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 (3) AS BIN
CP: PCB 4723. Laboratory portion of Animal Physiology.

PCB 4843 Principles of Neuroscience (3) AS BCM
PR: PCB 4723 and CHM 2210 and MAC 1105 or higher-level MAC course or STA 2023 and PHY 2053. CP: CHM 2211. Study of the mammalian brain's structure and function, with an emphasis on human neuroanatomy, neuropsycharmacology, and neurophysiology. Topics include imaging, demyelination, mechanisms of learning/memory, and neuropathological processes. Lecture only.

PCB 5256 Developmental Mechanisms (3) AS BCM
PR: ZOO 4695. Topics in modern developmental biology to be covered in lecture and through reading and discussion. Study of the development of cells and tissues, and to gain an understanding of cellular and molecular mechanisms of differentiation and pattern formation in various eukaryotic species for majors/non-majors.

PCB 5307 Limnology (3) AS BIN
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.

PCB 5307L Limnology Laboratory (1) AS BIN
PR: CI. CP: PCB 5307. Laboratory portion of Limnology. Laboratory and field experience in the area of aquatic ecology.

PCB 5415 Behavioral Ecology (3) AS BIN
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.

PCB 5525 Molecular Genetics (3) AS BCM
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.

PCB 5616 Molecular Phylogenetics (3) AS BCM
PR: PCB 3063. Provides a theoretical and practical (computer lab) framework to allow students to carry out phylogenetic analysis using molecular data. Majors or nonmajors.

PEL 1121 Golf I (2) ED EDJ
S/U only. Introductory experience in the sport of golf. Fundamental skills, information, strategy, and participation.

PEL 1341 Tennis I (2) ED EDJ
S/U only. Introductory experiences in the sport of tennis. Basic skills, playing strategies, lecture, demonstration, and participation.

PEL 2122 Golf II (2) ED EDJ
S/U only. Continuation of PEL 1121. Emphasis on course play and refinement of strokes.

PEL 2342 Tennis II (2) ED EDJ
S/U only. Continuation of PEL 1341L. Refinement of basic skills, supplementary strokes, greater emphasis on tactics and playing strategies.

PEL 2441 Racquetball (2) ED EDJ
S/U only. Development and refinement of the skills and strategies of racquetball with opportunity for competition and tournament play.

PEM 2131 Weight Training (2) ED EDJ
S/U only. Knowledge and techniques necessary for increasing muscle function. Assessment of status and development of a personal program.

PEM 2441 Karate (2) ED EDJ
S/U only. Introductory experiences in the sport of Karate. Fundamental skills, information, participation.

PEN 1121 Swimming I (2) ED EDJ
S/U only. Development and refinement of the essential skills and information necessary for enjoying swimming. Emphasis on personal safety.

PEN 2113 Lifeguard Training (2) ED EDJ
PR: PEN 2122 or equivalent. S/U only. Knowledge and skills necessary for saving the lives of others in the event of aquatic emergency.

PEN 2136 Skin & Scuba Diving (2) ED EDJ
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 2622 Care and Prevention of Physical Injuries (3) ED EDP
DPR. Principles and techniques of conditioning athletes for competition: prevention and care of injuries in physical education and athletic activities.

PET 3010 Personal/Professional Development Seminar (3) ED EDJ
PR: Entry into the K-12 Physical Education Program. The purpose of this course is to introduce students to the historical, philosophical, and sociological foundations of physical education. It is also designed to help students understand all aspects of becoming a professional educator.

PET 3012 Professional Development in Physical Education I (1) EDED
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 3013 Professional Development in Physical Education II (1) EDED
PR: PET 3012. This is the second of a two-course sequence of orientation and socialization into the profession and is intended to develop dispositions necessary for successful professional practice.

PET 3031 Motor Behavior (3) ED EDP
PR: CC. Study of the assessment, evaluation and motor development performance of children and adolescents and application of prin-
PET 3613 Measurement and Evaluation in Athletic Training (3) ME ATH
PR: PET 3696. This course is an introduction to the study and practice of assessment techniques used when assessing athletic injuries to the upper extremity, head and spine.

PET 3618C Lower Extremity Assessment (3) ME ATH
Athletic Training majors only. The study and practice of techniques used when assessing injuries to the lower extremity, hip, pelvis, low back and gait.

PET 3621C Athletic Training Techniques (3) ME ATH
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 techniques will be covered. Credit not repeatable.

PET 3640 Adapted 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) ME ATH
Athletic Training majors only. Analysis and application of organizational skills and administrative structure of the athletic training profession, including current theory about budget management, medical record keeping, drug testing, facility design and maintenance, legal aspects of sports medicine, athletic physical examinations, medical ethics, current educational concepts, and administrative and legal aspects of the athletic training profession.

PET 3670L Clinical Experience in Athletic Training II (3) ME ATH
PR: PET 3671L. Athletic Training majors only. Performance of basic athletic training skills under the supervision of a clinical instructor at various sites. Students develop competence in introductory to mid-level athletic training skills. Weekly seminar also required.

PET 3671L Clinical Experience in Athletic Training I (3) ME ATH
PR: PET 3621C. Athletic Training majors only. Performance of basic athletic training skills under the supervision of a clinical instructor at various sites. Students develop competence in introductory athletic training skills. A weekly seminar is also required.

PET 3896Cholelithiasis and Sports Medicine (1) ME ATH
PR: Admission to Athletic Training Program. CR: PET 3613. Designed to prepare athletic training students with an introduction to the foundations of appropriate terminology, documentation, and communication methods as they relate to athletic training and sports medicine. Majors only.

PET 3713 Theory and Practice of Teaching Group Exercise (3) EDEDP
PR: Admission to the Exercise Science Program. In developing group exercise leadership skills, students will learn how to apply principles of teaching safe and effective exercises designed to enhance cardiovascular endurance, muscular strength/endurance, and flexibility.

PET 3931 Selected Topics in Sports Medicine (1-3) ME ATH DPR. Topics offered are selected to reflect student need and faculty interest.

PET 3940 Practicum in Fitness/Wellness (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 4141 Trends and Tasks- Elementary Physical Education (3) EDEDP
Taken concurrently with PET 4942 Physical Education 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) EDEDP
Taken concurrently with PET 4944 Physical Education 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: Admission to the Exercise Science Program. A presentation of the basic concepts related to exercise behavior. The content will
PET 4353 Exercise Physiology II (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 Exercise Prescription for Strength & Conditioning (3) ME ATH
PR: PET 3351. Athletic Training majors only. Techniques in conducting health-fitness test and exercise prescription for adults. Includes cardiovascular strength, flexibility, body composition, health risk testing, exercise prescribing, and monitoring.

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 4404 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 Secondary (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 mechanical principles utilized within those activities as well as on instructional progression and the preparation of materials for instruction at the secondary school level.

PET 4550 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 programming. Clinical conditions that will be considered include: cardiovascular disease, pulmonary disease, metabolic disease, arthritis, dystrophy, and geriatrics.

PET 4625 Advanced Athletic Training (3) ME ATH
PR: PET 3617C and PET 3618C. Athletic Training majors only. Advanced techniques in athletic training including orthopedic assessment, athletic training, conditioning techniques, and psychological aspects.

PET 4627 General Medical Conditions in the Athlete (3) ME ATH
PR: PET 3617C and PET 3618C. Advanced theory of pathology in injury, management of tissue and bone healing environments, fluidotherapy, cryotherapy, electrical stimulation, hydrotherapy, fluidotherapy, ultrasound, biofeedback and manual techniques will be emphasized.

PET 4632C Therapeutic Modalities (3) ME ATH
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 relating to the use of thermotherapy, cryotherapy, electrical stimulation, hydrotherapy, fluidotherapy, ultrasound, biofeedback and manual techniques will be emphasized.

PET 4633C Therapeutic Rehabilitation (3) ME ATH
Athletic Training majors only. Theories and applications methods of comprehensive therapeutic treatment and rehabilitation programs for injuries commonly sustained by the physically active.

PET 4634 Case Studies in Athletic Health Care (3) ME ATH
PR: PET 3617L. Athletic Training majors only. Performance of mid-level athletic training skills under the supervision of a clinical instructor at various sites. Students develop competence in mid-level and advanced athletic training skills. Weekly seminar also required.

PET 4673L Clinical Experience in Athletic Training IV (3) ME ATH
PR: PET 4672L. Athletic Training majors only. Continuation of clinical experience utilizing new skills under the direction of an NATA/BOC 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. Students at this level will develop instruction skills by acting as peer-supervisors for level I, II and III students.

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 4909 Independent Study in Sports Medicine (1-3) ME ATH S/U Only. Specialized independent study determined by the student’s needs and interests. Repeatable 1 time.

PET 4931 Selected Topics in Sports Medicine (3) ED EDP
PR: PET 3310, PET 3351. Pertinent and timely topics in sports medicine will be discussed. Topics and issues may vary but could include psychology of injury, environmental issues, reimbursement, pharmacology, ethical/legal issues, and performance enhancement.

PET 4933 Seminar in Sports Medicine 6A LW WRIN (3) ME ATH PR: PET 4627. The advanced study, writing, reflection and discussion of current athletic training issues. Emphasis is on professional preparation, scientific inquiry, credentialing, governance, employment practices, ethics, and scope of practice issues.

PET 4935 Case Studies in Athletic Health Care (3) ME ATH
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. CC. A full-time internship in the elementary school in which the student undertakes the full range of teaching responsibilities. A.T. majors only.

PET 4942 Physical Education Pre-Internship: Elementary (3) ED EDP
PR: CC. A part-time internship in elementary school physical education. CC. A part-time internship in middle or high school level physical education with focus on the development of practical knowledge and skills in the area of teaching responsibilities in elementary physical education.

PET 4944 Physical Education Pre-Internship: Secondary (3) ED EDP
CC. A full-time internship in middle or high school level physical education with focus on the development of practical knowledge and skills in the area of teaching responsibilities in elementary physical education.

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 S/U only. Physical Education majors only. A full-day 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) TA 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 3900C Digital Media I (3) TA ART
Restricted to majors. This course builds upon the concepts introduced in Introduction to Multimedia Systems and focuses upon digital photographic creation and editing.

PGY 3900C Digital Media II (3) TA ART
Restricted to majors. This course builds upon the concepts introduced in Digital Media I and focuses upon digital photographic, non-silver and documentory photography. Repeatable up to 9 hours.

PGY 4900C Advanced Photography (3) TA ART
PR: PGY 3900C (3 cr.), PGY 3900C (5 cr.) and a 3.25 major GPA. Majors only. Continuous problems in photography. May be repeated.

PGY 4900C Digital Media II (3) TA 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 5425C Art Photography III (4) TA ART
PR: CI. Advanced work in photography and related media leading to introduction to professional photographic systems and techniques. Focuses upon digital photographic creation and editing.

PHC 5425 Stress, Health, and 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 the variety of stress reactions and predisposition to disease, and techniques related to the recognition and prevention of an unhealthy level of stress.

PHG 5933 Special Topics (1-3) PH PHI
Provides students the opportunity to learn about the multiple ways to view controversial topics in public health. It covers current public health topics including biomedical issues, social and behavioral factors, and environmental issues.

PHH 2000 Introduction to Philosophy 6A HP CAHU (3) AS PHI
An introduction to major themes in philosophy, as well as central philosophical concepts, texts, and methods.

PHH 3062 History of Western Philosophy: Ancient Philosophy (3) AS PHI
A survey of Western philosophy from the Pre-Socratics to Late Antiquity.

PHH 3280 Medieval and Renaissance Philosophy (3) AS PHI
This course is a survey of medieval and early Renaissance philosophy in the Latin West, focusing on the thought of Augustine, Anselm, Peter Abelard, Thomas Aquinas, John Duns Scotus, and William Ockham.

PHH 3400 History of Philosophy: Modern (3) AS PHI
A survey of Western philosophy from the end of the Middle Ages to the end of the twentieth century.

PHH 3420 Early Modern Philosophy (3) AS PHI
A survey of Western Philosophy from the end of the Renaissance to the beginnings of the Enlightenment.

PHH 3440 Continental Philosophy (3) AS PHI
A survey of developments in post-Kantian European philosophy.

PHH 4600 Contemporary Philosophy 6A MW (3) AS PHI
Selected schools of twentieth century thought such as idealism, positivism, pragmatism, realism, and existentialism.

PHH 4700 American Philosophy 6A MW (3) AS PHI
Major traditions in American thought, Puritanism, the Enlightenment, Transcendentalism, Idealism, Pragmatism, and Analytic Philosophy in relation to American culture.

PHH 4820 Chinese Philosophy (3) AS PHI
Major traditions of Confucianism, Taoism and other aspects of Chinese thought. This course is available to both majors and non-majors and does not have laboratory sections associated with it.

PHI 1103 Critical Thinking 6A SS CASB (3) AS PHI
Critical thinking is the mental habit for scrutinizing one's own (potential or actual) mistakes, and correcting its own misapprehensions. We will hone this faculty by practicing the critical evaluation of real-world decisions.

PHI 1401 Science and Society 6A SS SS CANP (3) AS PHI
As consumers of scientific information, it is our social obligation to understand how scientific knowledge comes about. This course is about the process of scientific inquiry, and about scientific knowledge as the product of such inquiry.

PHI 1600 Introduction to Ethics HP SS CAHU HHCP (3) AS PHI
In order to promote reflection concerning how we should act and what kinds of people we should be, this course introduces students to ethical theories, concepts, problems, and methods.

PHI 2101 Introduction to Formal Logic 6A QM CAGR (3) AS PHI
This course is an introduction to the basic terms, concepts, and methods of formal logic.

PHI 2160 Contemporary Moral Issues SS (3) AS PHI
Open to all students. A study of contemporary moral issues concerning racism, 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 does science differ 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 3830 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 3836 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 3840 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
Analysis of religious experience and activity and examination of principal religious ideas in light of modern philosophy.

PHI 3840 Directed Study (1-3) 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 student.

PHI 4073 African Philosophy MW (3) AS PHI
A descriptive and analytical study of African philosophical thought, featuring reflective comparisons of African and Western categories of thought.

PHI 4300 Theory of Knowledge 6A MW (3) AS PHI
An examination of human knowledge; its scope and limits, and an evaluation of evidence, criteria of truth, the nature of belief, contingency for meaningfulness, theories of perception, and a study of memory and sense perception in the four major fields of nature, history, personal experience, and the a priori.

PHI 4320 Philosophy of Mind 6A MW (3) AS PHI
A study of historical issues in philosophy of mind, including the nature and status of mind, mind/body dualism, the relationship of mind and body, the problems of other minds, the physical basis for intelligence.

PHI 4362 Feminist Ethics MW (3) AS PHI
A study of the varied approaches to moral reasoning taken by feminist ethical writers such as Wolfstien, Mill, Gilligan, Daly, Hoadland 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.
A study of the method devoted to clarifying philosophical problems through analysis of the language in which these problems are stated.

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.

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.

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.

Focus on legal, ethical, and professional responsibility and accountability of the physical therapist. Learners will further develop their abilities 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.

Introduction to the peripheral nervous, 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.

Introduction to the peripheral musculoskeletal, skeletal, integumentary, and circulatory systems in normal and pathological states. Emphasis on physiology of the peripheral sensorimotor and cardiopulmonary systems. Restricted to majors.

Emphasis on physiology of the peripheral sensorimotor and cardiopulmonary systems. Restricted to majors.

Emphasis on physiology of the peripheral sensorimotor and cardiopulmonary systems. Restricted to majors.

A basic introduction to movement science and its foundational principles from four different perspectives: biomechanics; kinesiology; exercise physiology; and motor control, learning and development. Restricted to majors. Repeatable for 2 cr.

Foundationals principles of histology, pathology, histopathology, immunology, and blood vessels, as well as the response of these tissues to injury and their Potential for healing. Restricted to majors.

Foundational principles of histology, pathology, histopathology, and exercise physiology, histopathology, motor control and connective tissue identification. Restricted to 3 cr.

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.

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.

A basic introduction to movement science and its foundational principles from four different perspectives: biomechanics; kinesiology; exercise physiology; and motor control, learning and development. Restricted to majors. Repeatable for 2 cr.

Introduction to physical therapy skills used in examination, evaluation, and diagnosis for clients with uncomplicated musculoskeletal impairments. Emphasis on obtaining a history and performing physical therapy tests and measures leading to a differential diagnosis by application of principles of movement. Restricted to majors.

Inclusion of the physical therapist in administration, consultation, critical inquiry, education and patient/client management. Restricted to majors.

Introduction to physical therapy skills used in examination, evaluation, and diagnosis of and intervention for clients with activity limitations associated with cardiovascular, hematological, or pulmonary disorders. Major emphasis on selecting, justifying, administering, and interpreting physiological responses to physical agents and therapeutic exercises. Restricted to majors.

Examination, evaluation, diagnosis, and intervention for movement-related problems secondary to impairments of the nervous system.
PHY 2048 Laboratory (1) AS PHY
Introduction to selected physical therapy interventions, obtaining a patient history, and conducting a systems screen. Restricted to majors. Repeatable for 3 cr.

PHY 5316 Medical Management I (1) ME PHT
Introduction to clinical diagnostics, pharmacological principles, and common orthopedic surgical procedures as components of medical management including repair of bone and soft tissue. Restricted to majors. Repeatable for 1 credit.

PHY 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.

PHY 5822 Clinical Education I (3) ME PHT
Initial clinical practice experience for the development of patient care skills. The course is graded Satisfactory/Unsatisfactory. Restricted to majors.

PHY 5906 Directed Independent Study (1-10) ME PHT
Directed independent study, content to be decided. Restricted to majors. Not repeatable for credit.

PHY 5934 Special Topics I (1-10) ME PHT
Exploration 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.

PHY 5961 Clinical Proficiency and Problem Solving I (1) ME PHT
PHT 5960 Practicum for the synthesis of skills, knowledge, and values for management of individuals with musculoskeletal related movement disorders complemented by direct patient care learning. Restricted to majors. Repeatable for 1 credit hour.

PHY 5970 Clinical Proficiency and Problem Solving II (1) ME PHT
PHT 5960 Practicum for the synthesis of skills, knowledge, and values for management of individuals with musculoskeletal and endocrine related movement disorders complemented by direct patient care learning. Restricted to majors. Repeatable for 1 credit hour.

PHY 2050 Conceptual Physics NS CANP (3) AS PHY
No credit for Physics or Mathematics majors. A qualitative investigation of physics concepts. Emphasis is placed on using physics to describe how common things work. No previous physics knowledge required.

PHY 2048 General Physics I - Calculus Based NS CANP (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 which includes a study of mechanics, heat, and fluids.

PHY 2048L General Physics I Laboratory (1) AS PHY
PR: MAC 2282 or MAC 2312, PHY 2048. 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. Second semester of calculus based general physics. Topics studied include wave mechanics, electricity and magnetism, and optics.

PHY 2049 General Physics II - Calculus Based NS CANP (3) AS PHY
PR: MAC 2282 or MAC 2312, PHY 2048. Must be taken concurrently with lab and, if dropped, then dropped simultaneously. May not receive credit for both the PHY 2053 and PHY 2049 courses. Second semester of calculus based general physics. Topics studied include mechanics, wave motion, heat, electric and magnetic sources, as well as applications in atomic, nuclear, and condensed matter physics.

PHY 2050L General Physics II Laboratory (1) AS PHY
PR: PHY 2049L. Must be taken concurrently with lecture and, if dropped, then dropped simultaneously. May not receive credit for both the PHY 2053 and PHY 2049L courses. Second semester of calculus based general physics. Topics studied include wave mechanics, electricity and magnetism, and optics for science students.

PHY 2053 General Physics I NS CANP (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 PHY 2053 and PHY2048 PHY 2048 courses. First semester of a two semester sequence of non-calculus based general physics. Topics studied include mechanics, heat, wave motion, sound, electricity, magnetism, optical physics laboratory for science students.

PHY 2054 General Physics II NS CANP (3) AS PHY
PR: PHY 2053, PHY 2053L. Must be taken concurrently with lab and, if dropped, then dropped simultaneously. May not receive credit for both the PHY 2054 and PHY 2049 courses. Second semester of general physics. Topics studied include electricity and magnetism, optics, modern physics) laboratory for science students.

PHY 2054L General Physics II Laboratory (1) AS PHY
PR: PHY 2053, PHY 2053L. Must be taken concurrently with lecture and, if dropped, then dropped simultaneously. May not receive credit for both the PHY 2054 and PHY 2049L courses. Second semester of general physics lab for science students.

PHY 3101 Modern Physics (3) AS PHY
PR: PHY 2049, MAC 2283 or MAC 2313. Special relativity, interaction of radiation with matter, Particle-wave duality, Atomic and x-ray spectra and Bohr model of atom. Schroedinger wave equation. Introduction to solid state physics.

PHY 3321 Mechanics I (3) AS PHY
PR: PHY 2048, CR: MAC 2283 or MAC 2313. First semester of a two-semester sequence. Review of vector algebra and vector calculus. Dynamics of single particles and systems of particles; central forces; rotation about an axis; statics; and virtual work.

PHY 3323 Electricity and Magnetism I (3) AS PHY
PR: PHY 2049, MAC 2283 or MAC 2313. Electrostatic fields and potentials, dielectrics, classical conductivity, RC circuits, Fourier and finite element methods. First semester of sequence PHY 3323, PHY 3324.

PHY 3324 Optics (4) AS PHY
PR: PHY 2049; CR: MAC 2283 or MAC 2313. Reflection, refraction, dispersion, interference, diffraction, polarization, and laboratory.

PHY 3822L Intermediate Laboratory (3) AS PHY
PR: PHY 2049 or equivalent; CR: PHY 3101. Experiments in modern physics, including the areas of atomic, nuclear, solid state and wave phenomena.

PHY 4031 Great Themes in Physics 6A MW (3) AS PHY

PHY 4222 Mechanics II (3) AS PHY
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.

PHY 4324 Electricity and Magnetism II (3) AS PHY
PR: PHY 3323. Introduction to special relativity, magnetic fields and potentials, magnetic materials, RL and RLC circuits, Maxwell’s equations and applications.

PHY 4523 Statistical Physics (3) AS PHY
PR: PHY 3101, or CI. Basic concepts of quantum mechanics with applications in atomic, nuclear, and condensed matter physics.

PHY 4744C Introduction to Electronics and Test Instrumentation (3) AS PHY
PR: General Physics or CI. Introduces the 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.)

PHY 4823L Advanced Laboratory (3) AS PHY
PR: PHY 3822L. Experimental work primarily related to modern physics. Emphasis on experimental techniques used in current research.

PHY 4905 Independent Study (1-3) AS PHY
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.

PHY 4910 Undergraduate Research (1-4) AS PHY
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 independent study instructor. Credit hours, and other contractual terms, are to be determined by student/instructor agreement.

PHY 4930 Undergraduate Seminar (1) AS PHY
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.
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**Additional Course Descriptions:**

- **POS 4054 Modern Political Theory (3) AS POL**
  - Fundamentals of empirical political inquiry; systematic data collection and quantitative analysis techniques. Laboratory exercises using the computer are required.

- **POS 3931 Selected Topics (3) AS POL**
  - Selected topics in political science with course content based upon student demand and instructor's interest.

- **POS 4204 Political Behavior, Public Opinion, and Elections (3) AS POL**
  - Analysis of economic and socio-psychological factors influencing mass and elite political behavior; voting behavior, public opinion, and political activism.

- **POS 4413 The American Presidency 6A (3) AS POL**
  - 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.

- **POS 4424 The American Congress (3) AS POL**
  - Organization, procedures, committee system, party leadership, relations with governmental and non-governmental organizations and agencies, oversight, decision-making processes, House-Senate committee."
PSY 4933 Advanced Topics in Applied Behavior Analysis (4) AS PSY
PR: EXP 4404 and CLP 4414. Restricted to Psychology majors admitted to the Concentration in Applied Behavioral Analysis. Advanced seminar in the effective and ethical application of behavior analysis to human problems. Includes theoretical and conceptual issues; assessment and treatment procedures; legal, ethical, and socio-cultural issues.

PSY 4970 Honors Thesis (1-3) AS PSY
PR: PSY 321 or PSY 322, major, and permission of the Department Chair. A maximum of 3 credits of either PSY 4913 or PSY 4970 may count toward the major. The student, under supervision of a faculty member, will complete a thesis project.

PUP 4203 Environmental Politics and Policy (3) AS POL
Examines the formation and implementation of public policy in areas such as the economy, health, etc.

PUP 4204 Public Policy (3) AS POL
Examinations the formation and implementation of public policy in areas such as the economy, health, etc.

PUP 4206 Public Policy and Health Care (3) AS POL
The study of health care policy as it relates to the policy process in the American setting.

PSY 3000 Principles of Public Relations (3) AS COM
PR: MMC 2100 and MMC 3602. The underlying theory and professional practice of public relations within corporate and institutional structures and its vital role in the social and economic development of society. The relationship of the practice to the public media; public relations problem-solving process.

PSY 3900 Public Relations Research (3) AS COM
PR: PPUR 3000 and LIS 3500. The study of research methods available to public relations practitioners, evaluation of data and report writing.

PSY 4100 Writing For Public Relations (3) AS COM
PR: JOU 2100 and PSY 3000. Techniques for creating effective written public relations communications to achieve organizational goals, including news releases, proposal letters, broadcast scripts, and memos. Exercises based on case study scenarios.

PSY 4101 Public Relations Design and Production (3) AS COM
PR: PUR 3000. Theoretical and practical applications of design for public relations publications. Design software. Study of visual design, page architecture, typography, color and illustrations. Integration of design elements in the design of different types of public relations publications.

PSY 4401 Public Relations: Issues, Practices and Problems (3) AS COM
PR: PUR 3000. The theory of public relations practice and its application in the real world. The role of the public relations practitioner in business, government, and social institutions, and the nature of specialized areas of the practice. Identification of public issues, analysis of potential impact on organizations and development of strategies to deal with them successfully and responsibly. Communication techniques and trends.

PSY 4700 Public Relations Practicum (1) AS COM
PR: Senior standing and CI. For public relations sequence majors. S/U. 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.

PSY 4801 Advanced Public Relations (3) AS COM
PR: PUR 3000, PUR 4100 and PUR 4401. As final course in Public Relations sequence, it involves 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 contemporary practice.

PSY 5505 Introduction to Strategic Communication Theory and Practice (3) AS COM
The course is designed to act as a “bridge” between undergraduate and graduate public relations and advertising education, and between professional communication practices and strategic communication. The course introduces students to theoretical and practical issues in strategic communication.

QMB 2100 Business and Economic Statistics I 6A QM CAQR (3) BU 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.
REL 3120 Religion in America (3) AS REL
This course entitled New Religions in America is designed to give students an overview of the rich religious history of America particularly the unique combination of new religious movements in America spanning from 1850 – the present.

REL 3132 Witchcraft and Paganism in America (3) AS REL
A study of contemporary witchcraft and paganism, including theoretical methods, historical and symbolic, 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 the development of modern society, the role of religious 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’an, and as Judaism, the oral and written.

REL 3308 World Religions HP SS (3) AS REL
World Religions gives students an overview of the major religions of the world from their origins through the modern period. Special attention is given to the analysis of myths, rituals, history, and other features of the religions studied in the course.

REL 3312 Descent To The Sun: The Qur’an (3) AS REL
The course provides an introduction to the study of some of the foundational texts of selected religious traditions by focusing on religious and historical elements in the Qur’anic text.

REL 3311 The Religious Quest in Contemporary Films 6A SS HP CAHU (4) AS REL
This course explores the ways Hinduism, Buddhism, Judaism and Sikhism, but extended itself to include Judaism, Christianity, Islam, Zoroastrianism and Bahai. Readings from classical texts and modern literature.

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 Bahai. Readings from classical texts and modern literature.

REL 3340 Buddhism Truths and Paths (3) AS REL
This course provides a historical survey of Buddhist religion from its inception through today by focusing on the life and teachings of the historical Buddha and his principal development, the various denominations, and canonical formations.

REL 3363 Introduction to Islam HP AF (3) AS REL
This course introduces the basic elements of Islamic beliefs and practices, placing the religion 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
This course introduces the major developments in Islamic thought and its institutions, the religious results of Non-Protestant immigration, the Jewish factor; the effect of home missions and social concern programs upon American life; political entailments and the concept of church/state separation.
resurgence. Issues of diversity, gender, and social values will be included.

REL 3375 Issues in Caribbean Religions MW CPST (3) AS REL
The course examines major social, political, economic, and cultural issues in Caribbean religions mainly in Jamaica, Cuba, Haiti, and Trinidad. Issues reflected in African diasporan religions and encounters with Western and Eastern ones are studied.

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 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., Thich Nhat Hanh, Dorothy Day, Dorothee Soelle, Howard Thurman, Thomas Merton and others.

REL 3345 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 philosophy 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 3505 Introduction to Christianity (3) AS REL
Introduction to fundamental elements of Christianity, including: foundational texts and core beliefs; the background and historical development of Christian thought; the expression of the religion throughout culture; Christianity as a global religion.

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
One course in Religious Studies. How to read the principal documents of Judaism beyond the Hebrew Bible, including the Mishnah, Talmuds, Midrash, and classics of philosophy, mysticism, and theology through the modern period.

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, 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
Course contents depend on student's needs.

REL 4113 The Hero and Religion (3) AS REL
A study of the hero in religion and culture. Includes the study of history, myths and symbols, texts, beliefs, rituals and practices, believers, recruitment, socialization, and organizations.

REL 4123 Mormonism in America MW (3) AS REL
A study of Mormonism in America as an example of a new religion. Includes the study of history, myths and symbols, texts, beliefs, rituals and practices, believers, recruitment, socialization, and organizations.

REL 4134 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 value questions raised by modern technology.

REL 4171 Contemporary Christian Ethics 6A MW (4) AS REL
PR: Jr. standing or CI. A survey of representative issues in contemporary Christian ethics and their application to a number of ethical issues peculiar to personal and social life in contemporary society, with an emphasis on issues of race and gender and of contemporary theological issues.

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 Gandhi and M. L. King Jr. and ecumenical figures, such as Rose Mary Ruther and John Walker, have been 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 4195 Ancient Israel and the Development of the Hebrew Bible 6A AP AF 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 HP AF MW (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 the historical backgrounds in Judaism and Greco-Roman religion, literary, and form criticism, historical Jesus research, and the social history of earliest Christianity.

REL 4250 Jesus’ Life and Teachings (4) AS REL
An examination of the various historical studies made in the quest of identifying Jesus as an historical figure. the concern is to make a reasonable assessment of who Jesus was and what he was saying to the Jews in Palestine at the beginning of the common era.

REL 4252 New Testament II: Pauline Letters (4) AS REL

REL 4333 Hindu Texts and Contexts (3) AS REL
PR: REL 3330 or similar course focusing on Hinduism; consult instructor. An in-depth study of the classical texts of the Hindu Tradition. We will examine religious, philosophical, ethical, ritual, and mythological themes presented in these texts in order to gain a deeper understanding to the larger tradition we call "Hinduism".

REL 4343 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 Emperor Ashoka; schisms; the rise of the Great Vehicle and the philosophy of emptiness; Buddhist missions; Buddhist art and culture; Buddhist and national liberation; contemporary social and political issues.

REL 4344 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 4356 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 reason work in a religious definition of the social order; the dialectical approach to the history of religions.

REL 4670 Judaism and Christianity After the Holocaust 6A MW LW (4) AS REL
This course will explore the impact of the Holocaust on Jewish and Christian thought and identity in the light of the history of religious and cultural anti-Semitism in Western civilization.

REL 4910 Undergraduate Research (1-4) AS REL
PR: Junior standing and CI. Individual investigations with faculty supervision.
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.

RUS 3500 Russian Civilization 6A MW (3) AS WLE
PR: RUS 2220 or equivalent. Development of basic skills in conversation, composition, and reading.

RUS 4241 Conversation II (4) AS WLE
PR: Previous course in series or equivalent. Development of conversational skills.

RUS 4403 Advanced Russian Conversation & Composition I (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 Nineteenth Century Russian Literature in English 6A MW L WWRIN (3) AS WLE
PR: RUS 2220 or equivalent. Development of basic skills in conversation, composition, and reading.

SCE 4305 Communication Skills in the Science Classroom (3) EDEDN
Reading and communication skills important in understanding scientific and science education literature and communicating findings to others.
AE 4714 Environmental Psychology (3) AS PSY

PR: Completion of General Distribution Requirements in the Natural Science area. Techniques and materials for teaching science in the elementary school.

AE 4720 Teaching Methods in Middle Grade Science (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.

AE 4863 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.

AE 4936 Senior Seminar in Science Education (1-3) ED EDN


AE 4940 Internship: Science Education (1-12) ED EDN

CR: AE 4936. One full semester of internship in a public or private school.

AE 5325 Methods of Middle Grades Science Education (3) ED EDN

PR: 18 sem hrs in science, meeting FL content standards for mid grades general science. Prepare 5-9 sci teachers to teach sci skills, content; interrelationship, applications of sci as a human endeavor; nature of sci; instructional methods; nature scientific inquiry; development of sci process skills; integration of subj areas; & assessment.

AE 5337 Methods of Secondary Science Education (3) ED EDN

Course concentrates on goals, subject matter teaching strategies for high school curriculum; assessment and using data to improve student achievement; and development pedagogical content knowledge as it pertains to the teaching and learning of science.

AE 5564 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.

AE 5937 Selected Topics in Science Education (1-4) ED EDN

PR: Freshman only. An extended introduction 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.

SL 1101 The University Experience (1-2) US DEA

PR: Freshman only. An extended introduction 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.

SL 2401 Career Development Process (2) US DEA

Serves as a vocational choice resource 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.

SOP 4004 Social 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 an individual's behavior as it is affected by others.

SOP 4330 Social Psychology of HIV/AIDS (3) AS PSY

PR: PSY 2012, PSY 3017, PSY 3213 Students study social psychological theory and research while working at an AIDS service organization. They use the research as a framework for understanding, and developing solutions to, problems confronting the organization's staff and clients.

SOP 4514 The Holocaust, Social Prejudice, and Morality (3) AS PSY

PR: PSY 3213 with a grade of C or better or CI. Examines the Holocaust from social, psychological, and communication/language perspectives. Reviews root causes of prejudice, the manifestations of hatred in language, relationships, and the ultimate impacts on victims and survivors and rescuers.

SOP 4516 Environmental Psychology (3) AS PSY

PR: PSY 3213 with a grade of C or better or CI. Explores the influences of environment on behavior. Topics considered include crowding, privacy, territorial behavior, environmental design, and pollution effects. Designed for both psychology majors and non-majors.

SOW 3101 Human Behavior and the Social Environment I (4) BC SOK

PR: All provisional major courses. Restricted to full Social Work majors, others by School permission. An integrating human behavior-social environment course emphasizing dynamics of behavior and environmental factors as they relate to social work practice with individuals, families, and communities.

SOW 3102 Human Behavior And The Social Environment II (3) BC SOK

PR: SOW 3101, SOW 4341, SOW 4522. Restricted to Full Social Work majors, others by School permission. An integrating course emphasizing dynamics of behavior and environmental factors as they relate to social work practice with families, groups, organizations and communities.

SOW 3203 Introduction to Social Work (3) BC SOK

An introductory course tracing the development of social work as a profession including an examination of the knowledge, skill and attitudinal base of the profession and professional roles and functions.

SOW 3210 The American Social Welfare System SS (3) BC SOK

A general education introductory course which provides students with a framework for understanding the historical development of American social welfare. Its value base, and its response to minorities, women, children, the elderly, and the disabled.

SOW 3401 Research and Statistics For Social Work (3) BC SOK

PR: SOW 3101, SOW 4343, SOW 4522. Restricted to Full Social Work majors, others by School permission. The purpose of this course is two-fold: to familiarize the student with research as it is practiced in the profession of Social Work; and to equip the student with those theoretical understandings necessary to be a critical consumer of social work research.

SOW 4233 Social Welfare: Policy & Program (3) BC SOK

PR: All provisional major courses, SOW 3101, SOW 3401, SOW 4341, SOW 4522, SOW 4501. CR: SOW 4510, SOW 4510L. Restricted to full Social Work majors, others by School permission. An advanced policy course taking an analytical approach to contemporary social welfare policy issues and current social welfare programs.

SOW 4341 Multi-Methods of Social Work Practice I: Micro-System Intervention (5) BC SOK

PR or CR: 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 interventions with individuals, families and small groups. Course includes both didactic and experiential learning components.

SOW 4343 Multi-Methods of Social Work Practice II: Macro-System Intervention (5) BC SOK

PR: All provisional major courses, SOW 3101, SOW 4522, SOW 4501. CR: SOW 4341, SOW 4510L. 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.

SOW 4510 Integrative Seminar (3) BC SOK

PR: SOW 3302, SOW 3401, SOW 3404, SOW 3410, SOW 3401, SOW 3102, SOW 4343, SOW 4522. CR: SOW 4233, SOW 4510L. 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.

SOW 4510L Field Placement (6) BC SOK

PR: SOW 3302, SOW 3410, SOW 3401, SOW 3401, SOW 4341, SOW 3102, SOW 4522, SOW 4434. CR: SOW 4233, SOW 4510L. Supervised field placement in a social welfare organization consisting of 20 hours per week in the field with a total of 480 clock hours per semester.

SOW 4522 Multicultural America (3) BC SOK

PR: All provisional major courses. The course focuses on the students' understanding of multicultural and intergenerational issues.

SOW 4900 Directed Readings (1-9) BC SOK

PR: Completion of four social work courses including SOW 4301, 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.

SOW 4910 Directed Research (1-6) BC SOK

PR: Completion of four social work courses including SOW 4301, upper level standing and School permission. Majors only. Directed Research 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.

SOW 4930 Variable Topics in Social Work (1-3) BC SOK
Restricted to Social Work majors; others by School permission. Various title courses to expand on the four sequenced areas in the Social Work core curriculum. Allows focus on areas relevant to student's educational interest.

SOW 5930C Selected Topics in Social Work (1-4) BC SOK
PR: DPR. 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.

SPA 3002 Introduction to Disorders of Speech and Language SS (3) BC CSD
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.

SPA 3004 Introduction to Language Development and Disorders (3) BC CSD
PR: SPA 3002, SPA 3112 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.

SPA 3011 Introduction to Speech Science (3) BC CSD
PR: SPA 3030, SPA 3101 and SPA 3112. 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) BC 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) BC 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) BC CSD
PR: Junior standing. Introduction to phonetic analysis of normal and disordered speech, including extensive training in transcription using the International Phonetic Alphabet.

SPA 3110 Introduction to Disorders of Hearing (3) BC 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 3653L Overview of Language Learning in Deaf Children Lab (1) BC CSD
PR: Admission to ITT Program. CR: SPA 3653L. This course is restricted to majors only. Overview of language development of deaf children from infancy through adulthood, including various theories of language development in the deaf and communication/communication of the deaf assessment techniques, and interpreting skills relating to learning processes.

SPA 3653L Overview of Language Learning in Deaf Children Lab (1) BC 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 and languages, and the implications for interpreters.

SPA 3673 Introduction to Auditory Functions (3) BC 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 orientates the student to the variables in oral-aural communication among children who have hearing impairment. 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 measurement procedure.

SPA 4000 Communication Disorders in the Public Schools (3) BC CSD
PR: DPR. (Non-major course only). An examination of the speech, language and hearing problems affecting school-aged children and the classroom teacher’s role in the detection, prevention and amelioration of communication disorders.

SPA 4050 Introduction to the Clinical Process MW CASB (3) BC CSD
PR: SPA 3004 and SPA 3310. Observation and participation in speech-language pathology and audiology services provided at USF-CSD Clinical Laboratory. Professional and ethical issues, oral and written communication skills are stressed through clinical and practical projects.

SPA 4201 Phonological Development and Disorders (3) BC CSD
PR: SPA 3004, SPA 3101. 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) BC CSD
PR: SPA 3011 and SPA 3310. A comprehensive study of the medical and physical aspects of voice disorders. Differential diagnosis, principles of therapeutic intervention, and procedures for children and adults will be studied.

SPA 4222 Fluency Disorders (3) BC 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 origin of stuttering are also presented.

SPA 4335 Sign Language Codes (3) BC 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 sign. The student will have the opportunity to practice one of the sign systems.

SPA 4555 Counseling of Communicatively Handicapped and Deaf Individuals (3) BC CSD
PR: SPA 3011 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 4632 Nature and Needs of the Deaf and Hard of Hearing (3) BC 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 4685 Practicum: Interpreting in Schools (1-8) BC 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 4906 Independent Study (1-10) BC 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) BC 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) BC CSD
PR: SPA 3011 and SPA 3310. 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) BC CSD
PR: INT 4250. 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) BC CSD
The student, under the supervision of a faculty member. 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 5120 Psychoacoustics (3) BC CSD

SPA 5132 Instrumentation (3) BC CSD
PR: SPA 5120, SPA 6830, 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 re-instrumentation will be provided.

SPA 5133 Speech Science Instrumentation (3) BC CSD
PR: DPR or SPA 3011 or equivalent. 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 (3) BC 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 these concepts to solve practical or clinical problems.

SPA 5204 Advanced Clinical Phonology (3) BC CSD
The principles of generative phonology will be applied to the assessment and treatment of phonological disorders. Emphasis is placed on making the child’s phonology more functional for communication purposes.

SPA 5303 Auditory Anatomy and Physiology (3) BC 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 measurement paradigms.

SPA 5312 Peripheral and Central Auditory Tests (4) BC CSD
PR: SPA 4201 and DPR. Metalinguistic and metacognitive development are linked to the functional demands of classroom and clinical discourse; observational tools are applied to evaluation and intervention planning.

SPA 5403 Language-Learning in the School-Age Years (3) BC CSD
PR: SPA 4201 and DPR. Assess and manage persons with hearing loss. Effects of hearing impairment, assessment issues, and appropriate intervention strategies. Prosthetic intervention, perceptual intervention, and communication-centred, and the ways in which they influence them. Focus on attachment and loss in familial, group and family relationships.

SPA 5404 Family Communication (3) BC CSD
PR: SPA 3301 and COM 2000 with a C or above or CI. The study of interpersonal communication in informally structured settings is linked to the functional demands of classroom and clinical discourse; observational tools are applied to evaluation and intervention planning.

SPA 5406 Speech-Language Pathology and Audiology Practicum (1-8) BC CSD
PR: DFR. 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) BC 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 2541 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 2608 Public Speaking CAHU 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 experiences in public discourse.

SPC 3212 Communication Theory (3) AS SPE
PR: COM 2000 with 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 CASB (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 are conducted and exercises are given 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 the use of persuasive techniques to develop and support arguments. Focus on 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 a variety of contexts using group, individual, and one-on-one sessions.

SPC 3631 Rhetoric of the Sixties HP (3) AS SPE
Survey of the rhetoric associated with the civil rights movement, the Great Society, the anti-Vietnam War movement, the counterculture movement, and the women’s movement.

SPC 3635 Popular Forms of Public Communication (3) AS SPE
PR: COM 2000 with C or above or consent of instructor (CI). Analysis of public communication with emphasis on various presentational 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. Students examine persuasive strategies and language in oral and written discourse.

SPC 3710 Communication and Cultural Diversity SS CAGC HHCP (3) AS SPE
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 (3) AS SPE
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 (3) AS SPE
PR: COM 2000 with C or above or consent of instructor (CI). Examination of the ways in which cinema inscribes conceptions and meanings of romance, love, intimacy and sexuality. Focus on systems of interpretation fostered by cinematic representations of objects, subjectivity, subjectivity, and intimacy.

SPC 4431 Family Communication (3) AS SPE
PR: SPC 3301 and COM 2000 with a C or above or CI. This course examines the processes and functions of communication in family relationships. Examination of scholarly and popular literature on family structure, family systems, family development, and family stories. Analysis of families in fiction and cinema.

SPC 4632 Rhetoric and Social Change 6A MW (3) AS SPE
PR: SPC 3230 or SPC 3680. This course examines how social change is symbolized and motivated in the rhetorics of institutions, campaigns, social movements and individuals.

SPC 4683 Rhetorical Analysis of Mass Media (3) AS SPE
PR: SPC 3230 or SPC 3680, SPC 2600 and COM 2000 each with a C or above or CI. An introduction to the criticism of media forms and effects. Contemporary perspectives of the aesthetic and persuasive dimensions of mass media are examined. Students will engage in critical, subjective, and cultural analysis of media forms.

SPC 4714 Communication, Culture and Community MW (3) AS SPE
Examines the relationships among culture, communication, institutions, and public and private life. Students explore the possibilities and problems of contemporary forms of communication through service in a volunteer organization.

SPC 4900 Directed Readings (1-3) AS SPE
PR: Senior standing, COM 2000, a 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) AS SPE
PR: Admission to Communication Honors Program, COM 2000 AND SPC 2600 with grades of C or better. Focused readings directed toward preparation of a proposal for an undergraduate honors thesis.

SPC 4905 Undergraduate Research (1-3) AS SPE
PR: Senior standing, COM 2000, a minimum GPA of 2.5, 15 hours of core requirements and 9 elective hours completed, and/or CI. Individual investigations with faculty supervision.

SPC 4930 Selected Topics (1-3) AS SPE
PR: Senior standing, minimum GPA 2.5, 15 hours of core requirements and 9 elective hours completed, and/or CI. Examination of selected topics of current significant to the several areas of communication through group discussion and research.

SPC 4970 Honors Thesis (3) AS SPE
PR: Admission to Communication Honors Program. Involves individual research and preparation of an undergraduate honors thesis.
SPN 3441 Spanish for Business and International Trade II (3) AS
A study of vocabulary and business practices of the Spanish speaking world. Overview of cultural differences within the Spanish-speaking world, with emphasis on their impact on business and international trade.

SPN 3500 Spanish Civilization (3) AS WLE
PR: SPN 2201 or equivalent. The culture and civilization of Spain. For majors and non-majors.

SPN 3520 Spanish American Civilization (3) AS WLE
PR: SPN 2201 or equivalent. Readings and discussions on the culture and civilization of Spanish America. For majors and non-majors.

SPN 4301 Expository Writing (3) AS WLE
PR: SPN 3300 or SPN 2340. Practical training in contemporary Spanish structure, usage and stylistic devices.

SPN 4411 Advanced Conversation (3) AS WLE
PR: SPN 2241 or equivalent. Not open to native or near-native speakers of Spanish. Intensive practice in the formulation and expression of ideas in standard Spanish.

SPN 4470 Advanced Overseas Study (1-6) AS WLE

SPN 4700 Spanish Linguistics (3) AS WLE
PR: LIN 3310 or equivalent (may be taken concurrently with CI) and SPN 2201 or equivalent. An introduction to Hispanic linguistics: Phonology, morphology, syntax, and lexicography.

SPN 5525 Modern Spanish American Civilization (3) AS WLE
PR: SPN 3300 or equivalent or graduate standing. Advanced readings and discussions dealing with Spanish American civilization and culture, including a study of social, artistic and political trends. Text and discussion in Spanish.

SPN 5567 Modern Spanish Civilization (3) AS WLE
PR: SPN 3500 or equivalent or graduate standing. Advanced readings and discussions dealing with contemporary Spanish civilization and culture, including a study of recent social, artistic and political discussions in Spanish.

SPT 3100 Masterpieces of Hispanic Literature (3) AS WLE
This course analyzes major literary works from Spain and Latin America. Through a selection of works from the medieval period to the present students will view the intellectual and cultural history of the Spanish speaking world.

SPT 3520 Spanish American Civilization (3) AS WLE
Readings and discussions on the culture and civilization of Spanish America. For majors and non-majors.

SPW 3030 Introduction to Hispanic Literary Studies (3) AS WLE
PR: SPN 3300 or SPN 2340, Prose fiction, drama, poetry, and essay; techniques of literary analysis.

SPW 4100 Survey of Spanish Literature I (3) AS WLE
PR: SPW 3030 or equivalent. A study of Spanish literature from its origins through the 17th century.

SPW 4101 Survey of Spanish Literature II (3) AS WLE
PR: SPW 3030 or equivalent. A study of the later periods of Spanish literature.

SPW 4130 Survey of Spanish American Literature I (3) AS WLE
PR: SPW 3030 or equivalent. An introduction to the study of Spanish American literature from the Discovery to the Romantic period. Emphasis will be on foundational writers of history, descriptive and lyric poetry, theater, fiction and essay.

SPW 4131 Survey of Spanish-American Literature II (3) AS WLE
PR: SPW 3030 or equivalent. An introduction to the study of Spanish-American literature from the Modernism period to the present. Emphasis on modern writers since Dario.

SPW 4900 Directed Study (1-3) AS WLE
Departmental approval required.

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

SPW 5131 Colonial Spanish American Literature (3) AS WLE
PR: SPW 4131. Introduction to Colonial Spanish American Literature from the discovery through the Romantic Period.

SPW 5355 Spanish American Drama and Poetry (3) AS WLE
PR: SPW 4131. Major writers of all genres. Emphasis on modern writers.

SPW 5387 Spanish American Prose (3) AS WLE
PR: SPW 4131. Emphasis on the gauchito theme and contemporary prose fiction.

SPW 5388 Golden Age Poetry and Drama (3) AS WLE
PR: SPW 4100. Lope de Vega, Alarcón, Tirso, Calderón, and others.

SPW 5405 Medieval Literature (3) AS WLE
PR: SPW 4100 or equivalent. Overview and in-depth study of principal works and authors of the period such as El Poema de Mio Cid, Libro de Buen Amor, and La Celestina.

SPW 5465 19th Century Literature (3) AS WLE
SPW 5605 Cervantes (3) AS WLE
Cervantes' masterpiece Don Quijote de la Mancha.

SPW 5725 Generation of 1898 (3) AS WLE
PR: SPW 4101. The major figures of the period and their main followers.

SPW 5728 Vanguard Literature 1918 and 1936 (3) AS WLE

SPW 5934 Selected Topics (3) AS WLE
PR: Upper-level or GS. Study of an author, movement, or theme.

SSE 4313 Teaching Elementary (K-6) Social Studies (3) ED EDE
PR: Admission to College of Education or CI. 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. Students will have 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 student teachers. Fieldwork in middle or senior high schools is required. Restricted to majors.

SSE 4600 Reading and Basic Skills in the Social Studies Class (3) ED EDW
PR: Senior standing; CR: SSE 4940. Synthesis of teacher candidate’s courses and preparation for the professional interview and application process.

SSE 4940 Internship: Social Science Education (1-12) ED EDW
CR: SSE 4936, SU only. One full semester of internship in a public or private school. In special programs where the internship experience is divided 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. Students are expected to plan and present instructional plan(s) appropriate to middle and secondary 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 are 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 command 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 operation of basic elements of a market 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 application of economic/business concepts and the social studies themes adopted by the National Council for the Social Studies.

STA 1022 Basic Statistics 6AQM (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 decision—estimation and hypothesis testing. Design of experiments, linear association and prediction. Statistical software: MINITAB.

STA 2212 Social Statistics 6AQM CAQR (3) AS ISS
PR: SPW 4101. The major figures of the period and their main followers. Students are taught the fundamental vocabulary and symbols of statistics as well as commonly used statistical procedures in social sciences. Students conduct and analyze data and make conclusions about research questions.

STA 2304 Introduction to Probability II 6AQM CAQR (3) AS MTH
PR: STA 2023 or CC. Factorials, ANCOV; multiple curvilinear regression: response surfaces; Latin squares, Split Plots, incomplete designs; distribution free methods.

STA 3421 Essentials of Statistics 6AQM CAQR (3) AS MTH

STA 4442 Introduction to Probability I 6AQM CAQR (3) AS MTH
PR: MAC 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 5166 Statistical Methods I 6AQM CAQR (3) AS MTH
PR: STA 4321 or CI. Statistical analysis of data by means of statistics package programs. Regression, ANOVA, discriminant analysis, and analysis of categorical data. Emphasis is on inter-relation between statistical theory, numerical methods, and analysis of real life data.

STA 5228 Sampling Techniques 6AQM CAQR (3) AS MTH

STA 5326 Mathematical Statistics I 6AQM CAQR (3) AS MTH
PR: STA 5446. Sample distribution theory, point & interval estimation, optimality theory, statistical decision theory, and hypothesis testing.

STA 5446 Probability Theory I 6AQM CAQR (3) AS MTH
PR: STA 4442 and MAA 412 or CI. Axioms of probability, random variables in Euclidean spaces, moments and moment generating functions, modes of convergence, limit theory for sums of independent random variables.

STA 5526 Non-Parametric Statistics 6AQM CAQR (3) AS MTH
PR: STA 5326 or CI. Theory and methods of non-parametric statistics, order statistics, tolerance regions, and their applications.

SUR 2101C Engineering Land Surveying 3AEN EGX
Principles of engineering surveying for professional practice. Traverses, levels, boundary surveys, route surveys, coordinate geometry, and mapping.

SYA 3110 Classical Theory 3AS SOC
PR: STA 2000 or CI. Analysis of the philosophical foundations, central principles, and historical development of Sociological theory. Required for Sociology majors and minors.

SYA 3120 Contemporary Theory 3AS SOC
PR: SYA 3110 and SYA 2000 or CI. An exploration of recent trends in sociological theory. Emphasis is on theories examining symbolic
interactions, lived experience, popular culture, and social structures.

SYA 3300 Research Methods (3) AS SOC
PR: STA 2122 or equivalent. Introduction to the scientific method and its application to social science research. Research design, sampling techniques, and critical evaluation of social research. Required for Sociology majors.

SYA 3310 Qualitative Inquiry 6A LW (4) AS SOC
PR: SYG 2000 or CI. DPR. Exploration of human relationships and behaviors, organizations, 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 the interest of the student. A contract between the student and the sponsoring faculty member must be signed before class registration.

SYA 4930 Topics in Sociology (3) AS SOC
Selected specialized topics in Sociology. Topics such as AIDS in society, drugs in society, problems in education, sociology of childhood, public life, socio-biology. Content will vary by term and by section. See class schedule for specific contents each semester. This course, in different content areas, may be repeated for credit.

SYA 4935 Senior Seminar MW CASB (3) AS SOC
PR: Senior standing, SYG 2000, SYA 3110, SYA 3300 plus 6 hours of Sociology electives. Major only. DPR. The opportunity for senior sociology majors to apply sociological theory and methods to topics of relevance in today's society.

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 3441 Peasant Perspectives AF (3) AS SOC
PR: SYG 2000 or 6 hours of another 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 CASB (3) AS SOC
This course introduces students to a sociological understanding of race and ethnic relations. Students will analyze sociological theories on race and stratification through readings, lectures, discussion, multimedia, and group research projects.

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 CPST (3) AS SOC
PR: Senior Standing. This exit course introduces students to the theory and practice of urban and community research. Students will conduct supervised individual and group research on a Tampa Bay neighborhood of their choice.

SYG 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 Introduction to Sociology SS CASB (3) AS SOC
This course introduces undergraduate students to the discipline of sociology. During the semester, we will analyze sociological theories, core concepts, and issues through readings, lectures, discussions, films, and hands-on research assignments.

SYG 2010 Contemporary Social Problems SS CASB (3) AS SOC
This course introduces students to a sociological understanding of "contemporary social problems." On such concepts as culture, deviance and social institutions, we will analyze varying definitions, causes and solutions to these problems.

SYG 3011 Social Problems Through Film (3) AS SOC
PR: SYG 2000 or SYG 2010. Examines the way social problems are portrayed in popular media through selected Hollywood films, 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, international perspective.

SYG 3235 Latina Lives 6A AF LW WRIN (3) AS SOC
PR: SYG 2000 or SYG 2010. An exploration of the experiences of Latinas in the U.S.by examining the sociological themes of migration, work, family, oppression, activism, identity construction, spirituality, and sexuality through short stories, poetry, and scholarly research.

SYO 3120 Sociology of Religion (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 defined 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 experiences in 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 movements motivated 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 role and status.

SYO 3530 Social Inequalities in a Global Society (3) AS SOC
Introduction to the major concepts and theories used to explain inequality. The topics of race, gender, and sexual orientation will be treated in relation to class, rather than as a parallel dimension of stratification.

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 government, 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 disease and the sick person including the analysis of health practices, beliefs, and practitioners, the hospital as an organization, the cost, financing, and politics of health care.

SYO 4430 Disability and Society MW WRIN (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
PR: SYG 2000 or CI. DPR. An exploration of the history of industrial sociology and the application of sociological theory to the study of industrial organizations.

SYP 3000 Social Psychology SS CASB (3) AS SOC
Course explores social forces shaping individual perceptions/behaviors/personality. Addresses our participation in society, how people influence each other, how we act based on beliefs and why & this is important.

SYP 3004 Constructing Social Problems (3) AS SOC
Examination of how activists, 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.

SYP 3060 Sociology of Sexualities (3) AS SOC
Examines 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.

SYP 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.

SYP 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, belonging/personality. Address our participation in society, how people influence each other, how we act based on beliefs and why this is important.

SYP 4111 Identity and Community (3) AS SOC
This course is a sociological examination of the meanings of identity in the post-modern era. Topics will include the characteristics of identity at the levels of individuals, institutions, culture, and the processes of identity construction and change.
THE 4266 Architecture And Decor (3) TA 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 with an emphasis on cultural and social influences. (A requirement in the design track/costume.)

THE 4267 Theatre of Myth and Ritual/Northern European (950-1600) & Oriental (400-1200) 6A MW LW (3) TA TAR
PR: THE 3110 or THE 3111. Open to upper level non-majors with CI. An examination into the interrelationship of myth, ritual, and theatre. Considers northern European liturgical and secular plays as compared with Hindu, Chinese, and Japanese drama.

THE 4330 Shakespeare for The Theatre 6A MW LW LRIN HHCP (3) TA TAR
Study of select Shakespeare plays through current and past performance. Examination of texts, filmed rehearsals, scholarly sources, and commercial movies. Performance required in face to face sections.

THE 4360 The 19th Century Theatre Revolution 6A LW (3) TA 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 theatre activity.

THE 4401 American Drama 6A MW LW LRIN HHCP (3) TA TAR
PR: THE 2305 and THE 3110 or THE 3111. A study of plays and popular theatrical forms of the Caribbean including carnival and calypso. The student will investigate the social and political forces that shape the culture of the Caribbean.

THE 4401 American Drama 6A MW LW LRIN HHCP (3) TA TAR
PR: THE 2305 and 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 theatre activity.

THE 4402 Classical And Neo-Classic Stage 6A LW (3) TA 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 4442 Comedy of The Classic And Neo-Classic Stage 6A LW (3) TA TAR
PR: THE 3110 or THE 3111. Open to upper level non-majors with CI. A study of significant playwrights or groupings of playwrights, e.g. Molière, Brecht, recent American dramatists.

THE 4562 Contemporary Performance Theory 6A MW CPST HHCP (3) TA TAR
PR: THE 2305 and THE 3110 or THE 3111. Open to upper level non-majors with CI. A study of select Shakespeare plays through current and past performance. Examination of texts, filmed rehearsals, scholarly sources, and commercial movies. Performance required in face to face sections.

THE 4593 Honors Seminar (2) TA 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 Theatre Honors Practicum. Past topics have included New German Theatre, Popular Theatre, New American Theatre, Jacobean Theatre.

THE 4594 Honors Practicum (3) TA TAR
PR: THE 4593. Honors Practicum grows out of the Honors Seminar and prepares students in workshops or production with guest artists. Past artists have included the Free Theatre of Munich, the San Francisco Mime Troupe, playwrights Eric Overmyer, Jeff Jones and Gary Hill.

THE 4595 Honors Thesis (1-3) TA TAR
PR: THE 4594. A practical or written thesis related to the seminar and practicum and approved by the departmental honors committee.

THE 4761 Methods of Teaching Theatre for Adolescents (3) TA TAR
PR: THE 2305 and THE 3110 or THE 3111. 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 5909 Directed Studies (1-6) TA TAR
PR: CI and CG. 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) TA TAR
PR: CI. The content of the course will be governed by the student direction and instructor interest. May be lecture or class discussion or studio format.
TPA 2200 Introduction to Technical Theatre I (3) TA TAR
CR: TPA 2290L or CI. An introductory course in technical production including coursework in the areas of design and 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 2291L Technical Theatre Lab I (1) TA 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) TA TAR
PR: TPA 2200, TPA 2290L, TPA 2211, and TPA 2291L. Open to non-majors with CI. A practical course in the working organizational function of the stage manager in theatre, dance, opera, and other productions. May be repeated. Open to non-majors with CI.
TPA 2211 Introduction to Technical Theatre II (3) TA 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 3007 Introduction to Design I (3) TA TAR
PR: TPA 2200, TPA 2290L, and TPA 2211. Open to non-majors. Theatre majors given preference. A studio course. 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 3008 Introduction to Design II (3) TA 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.
TPA 3208 Drafting and CAD I (3) TA TAR
PR: TPA 2200, TPA 2211, 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.
TPA 3211 Lighting: Theory And Practice (3) TA TAR
PR: TPA 3208 or CI. Intermediate lighting design course concerned with graphic presentations, color theory, design concepts, and practical experience with computer lighting systems. A requirement in the design track/lighting.
TPA 3231 Costume Construction (3) TA TAR
PR: TPA 3208 or CI. A practical course in the drafting of patterns for costumeing the actor. Materials, skills, and techniques for construction of costumes and costume accessories will be treated. Included topics: pattern making, dressmaking, field trip, 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 with CI. Basic study of audio components, fundamental principles of recording, multiple channel recording, editing, reproduction and reinforcement. Methods and techniques used in theatre to create sound effects.
TPA 3265 Sound For The Stage (3) TA TAR
PR: TPA 2200, TPA 2290L, TPA 2211, and TPA 2291L. Open to non-majors with CI. Basic study of audio components, fundamental principles of recording, multiple channel recording, editing, reproduction and reinforcement. Methods and techniques used in theatre to create sound effects.
TPA 3296 Design Practicum (2) TA TAR
PR: TPA 3008. This is a studio/laboratory course in the practical aspects of production. The course is intended to provide realized production experience to the advanced theatre design student in such areas as costume, lighting, and scenic design; stage properties design; technical direction; and theatrical production craft/skill areas. The student will be individually mentored by a faculty member through the process of developing and realizing a production design/craft/skill.
TPA 3306 Stage Management (2) TA TAR
PR: TPA 2200, TPA 2290L, TPA 2211, and TPA 2291L. Open to non-majors with CI. A practical course in the working organizational function of the stage manager in theatre, dance, opera, and other productions. May be repeated. Open to non-majors with CI.
TPA 3307 Scene Painting (2) TA TAR
PR: TPA 3008 and TPA 3208 plus two of TPA 3231, TPA 3221, or TPA 3251. TPA 4011 will include studio design project activities in the areas of costume, lighting, and scenic design. The course work will stress the nature of collaborative work and the various stages and processes involved with the development of a design from the first meeting to the final paper/model design.
TPA 4012 Design Studio I (3) TA TAR
PR: TPA 4011. This course will include studio design project activities in the areas of costume, lighting, and scenic design. The course work will stress the nature of collaborative work and the various stages and processes involved with the development of a design from the first meeting to the final paper/model design. Evaluation of the project will emphasize the process followed in the development of the design including: thumbnail/idea sketching, research, and production concept. The course will include seminar (production) discussions, lectures, demonstrations, individual and group work, and individual student presentations.
TPA 4013 Design Studio II (3) TA TAR
PR: TPA 4012. This course will include studio design project activities in an individual’s selected primary and secondary areas of costume, lighting, and scenic design. The course work will stress the nature of collaborative work and the various stages and processes involved with the development of a design from the first meeting to the final paper/model design.
TPA 4077 Scene Painting (2) TA TAR
PR: TPA 3007. Open to upper level non-majors with CI. A practical course in the painting of stage scenery: media and application.
TPA 4273 Stage Properties: Techniques And Materials Studio (2) TA TAR
PR: TPA 3007. Open to upper level non-majors with CI. Demonstration of and experience with materials used in construction of stage properties. Modeling of prototypes and basic casting techniques. Organization of shop.
TPA 4293 Production Involvement II (1) TA TAR
PR: TPA 2292 or CI. The rehearsal, construction, and performance of major theatrical works. Assignments are made by a faculty committee following the student’s completion of a PI request form, available in the Theatre Office, and enrollment in this course.
TPA 4298 Advanced Design Practicum (3) TA TAR
PR: TPA 4011. This is a studio/laboratory course in the practical aspects of production. The course is intended to provide realized production experience to the advanced theatre design student in such areas as costume, lighting, and scenic design; stage properties design; technical direction; and theatrical production craft/skill areas. The student will be individually mentored by a faculty member through the process of developing and realizing a production design/craft/skill.
TPP 2110 Voice-Body-Improvisation (3) TA TAR
Exploring the elements basic to acting skills, a participation course. Required of all theatre majors. Open to non-majors.
TPP 2190 Studio Theatre Performance I (1) TA TAR
PR: TPP 2110, THE 2020. A practical laboratory involving the rehearsal and performance of a major production. Activities may include costuming, direction, technical 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 2290 Body Disciplines (3) TA TAR
PR: TPA 2290. Body disciplines in various disciplines or systems and understanding the body’s motive powers, with focus on their use for the stage performer.
TPP 3121 Improvisation (3) TA TAR
PR: TPP 2110. An intensive study in improvisation as an enhancement of the actor’s skill. Exercises and theatre games as flexible
forms which accommodate improvisation and physical invention are examined and developed to heighten creativity.

TPP 3155 Scene Study I (3) TA TAR
PR: Audition and all core 2000 level courses. Identify and investigate the fundamental elements of acting as applied to scene exploration, rehearsal, and presentation.

TPP 3230 Laboratory Workshop In Performance (3) TA TAR
PR: Audition and TPP 2110. May be repeated twice for a total of 9 hours credit. Open to upper level non-majors by audition only. The content of the course will be governed by student demand and instructor interest.

TPP 3580 Special Skills In Movement (3) TA TAR
PR: TPP 2110 or CI. May be repeated for credit. Open to upper level non-majors with CI. Stage combat, circus and acrobatic techniques, and other special techniques of movement.

TPP 3790 Voice Preparation For The Actor (3) TA TAR
PR: TPP 2110. A concentrated laboratory on freeing the breathing function, developing body and oral resonance, and strengthening muscles used on the formation of speech sounds.

TPP 3920 Acting Studio I (8) TA TAR
PR: Audition, all lower level core theatre courses and junior standing. An intensive and comprehensive ensemble workshop that explores the basic principles of acting and the skills necessary for play, scene and character analysis. An emphasis is placed on the integration of body, voice, mind and emotions. This course will be team taught by the Performance faculty.

TPP 3921 Acting Studio II (8) TA TAR
PR: TPP 3920. A continuation of Acting Studio I with greater emphasis on addressing individual needs in order to explore ensemble and character and scenes in an intensive and systematic way. This course will be team taught by the Performance faculty.

TPP 4140 Styles Of Acting (3) TA TAR
PR: TPP 4180 and audition or CI. Examination of the actor's craft and skills needed to fulfill the demands of classical theatre forms.

TPP 4180 Advanced Scene Study (3) TA TAR
PR: Audition and TPP 3155 or TPP 3921. 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 4193 Studio Theatre Performance II (1) TA TAR
PR: 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 4221 Audition Workshop for Actors (3) TA TAR
PR: TPP 3155 or TPP 3921. Preparation for professional audition; discussion of professional objectives.

TPP 4310 Directing I (3) TA TAR
PR: TPP 3155 or TPP 3230. An elective sequence in directing. A workshop in which the student 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) TA 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) TA TAR
PR: TPP 3110 or THE 3111. An elective sequence in writing, in which the student first encounters the forms: unique to the 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) TA TAR
PR: TPP 2110 or CI. A workshop in advanced vocal and movement techniques.

TPP 4923 Music Theatre Workshop (3) TA TAR
PR: TPP 2110 or CI. A workshop in advanced vocal and movement techniques.

TSL 4081 ESOL 2 - Literacy Development in English Language Learners (3) ED EDX
PR: TPP 4080 or TPP 3921. 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-critical theoretical framework.

TSL 4251 ESOL 3 - Applying Linguistics to ESOL Teaching and Testing (3) ED EDX
PR: TPP 4080 and TSL 4081. This course provides an overview of the components of language, linking them to methods and techniques of providing comprehensible instruction to English Language Learners (ELLs) and supports the development of professional literacy skills.

TSL 4324 ESOL Competencies and Strategies (1-3) ED EDX
Designed to enable participants to meet the special limitations and cultural educational needs of ESOL students in content area classes. Designed to provide a theoretical and practical foundation for ESOL competencies and strategies.

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 5085 ESOL I - Theory and Practice of Teaching English Language Learners (3) ED EDX
This course is for undergraduate degree holding, preprofessional (prepractise) teachers to learn about appropriate instruction, assessment and learning opportunities for Limited English Proficient (LEP) students in the content areas.

TSL 5086 ESOL II-Secondary Language & Literacy Acquisition in Children & Adolescents (3) ED EDX
PR: FLE 5430. This course is designed to provide students with a critical understanding of instructional delivery which caters for the linguistic and literacy needs of minority/heritage communities.

TSL 5240 ESOL III-Language Principles, Acquisition & Assessment (3) AS WLE
PR: FLE 5431. This course provides an overview of the components of language, linking them to methods and techniques of providing comprehensible instruction to LEP students.

TSL 5325 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 5351 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 Instruction (3) AS WLE
Analysis of the methods of teaching English pronunciation and structure to speakers of other languages.

TSL 5440 Language Testing (3) AS WLE
PR: TSL 5377. Lecture course on testing English as a 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.

TSL 5940 ESOL Practicum (1-3) ED EDX
PR: FLE 5345 and FLE 5145. Must be taken in the semester prior to final internship. This course is restricted to Education majors and will not be repeatable for credit. A structured field experience with Limited English Proficient students.

TTE 4003 Transportation and Society (3) EN EGX
This course provides a multidisciplinary introduction to transportation, and its impacts on society. It explores how transportation interacts with the economy, the environment and the social and political nature of society.

TTE 4004 Transportation Engineering I (3) EN EGX
PR: TPP 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 support to prepare professionals to operate, manage, design, plan, and finance transportation systems.

TTE 4005 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 models 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, volume and speed studies, freeway management, and advanced technology.

TTE 5501 Transportation Planning and Economics (3) EN EGX
PR: College Algebra & Cl. Fundamentals of urban transportation planning; trip generation, trip distribution, modal split, traffic assignment. Introduction to environmental impact analysis, evaluation an introduction to transportation alternatives.

URP 4050 City Planning and Community Development (3) AS POL
An introduction to the development, role, and components of city planning, and the political and actual 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.

URS 3002 Introduction to Urban Studies (3) AS ISS
An interdisciplinary introduction to the process of urbanization in the United States and the diverse communities it has created. Study of Tampa Bay region is emphasized.

VIA 3007 Introduction to Visual Communications (3) COM
PR: MMC 2100 and MMC 3602. Survey of visual communication theory, techniques and contemporary application in the visual media. Critical examination of visual communication in newspapers, magazines, television, motion pictures and new media.

VIA 3943 Visual Communication Practicum (1) AS COM
PR: Senior standing and Cl. For visual communications option 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.

WOH 3293 Islam in World History AF HP (4) AS HTY
This course examines the origins, spread, and development of Islam within the context of the main global historical processes and events of the past 1500 years.

WST 2250 Female Experience in America HP CAHU HHCP (3) AS WST
This course explores the lives and experiences of women and girls in America from 1870 to the present, examining how issues of gender, race, class, ethnicity, and sexuality shaped both their experiences and our historical understanding of their lives.

WST 2600 Human Sexual Behavior SS (3) AS WST
The dynamics of human sexuality; biological, constitutional, cultural, and psychological aspects. The range of sexual behavior across groups. Sources of beliefs and attitudes about sex, including sex roles and especially human sexuality.

WST 3015 Introduction to Women's Studies SS AF CASB (3) AS WST
This course introduces the interdisciplinary field of Women's Studies through a critical examination of the way gender, race, class and sexuality are socially constructed and demonstrates how activism is inherent in Women's Studies discourse.

WST 3210 European Feminist History: Pre-18th Century 6A HP (3) AS WST
Survey of European feminist history prior to the 18th century (focusing primarily on Western Europe). Examines women's lives, roles, ideas, as well as origins of Western attitudes toward relation of power to gender, race and class. No prerequisites.

WST 3220 European Feminist History: Enlightenment to the Present HP (3) AS WST
A survey of European feminist history from the 18th century through the 20th century (focusing primarily on Western Europe). Examining women's lives, roles and ideas, as well as the dominant attitudes supporting women over this time period.

WST 3225 Women, Environment and Gender MW CANL (3) AS WST
PR: BSC 1005 or BSC 2010, any Introductory science course from biology, chemistry, physics, public health, or environmental science. Survey of intersection of women's studies, gender and environment with focus on women's health. Exploration of hypothesis formulation and testing, current issues.

WST 3303 Issues in Feminism SS (3) AS WST
Survey of major issues relevant to the female experience: marriage and the family, sexuality, work, creativity.

WST 3370 Women and Social Action SS (3) AS WST
Course focuses on organized women working collectively in diverse social settings to empower themselves and others to challenge gender stereotypes; to reduce harassment, poverty, violence and homelessness; to enhance health-care and family life and to confront barriers in education, the media and the criminal justice system.

WST 3412 Women in the Developing World (3) AS WST
Survey of status of women in Asia, Africa, Latin and Caribbean Americas, compared to that in USA, Canada, West Europe, Marxist-Leninist countries. (May also be taken for credit in Government and International Affairs.)

WST 3620 Men and Sexism (3) AS WST
Ways in which sex role conditioning affects the lives of men. Factors in this conditioning and alternatives to masculine sex role models.

WST 4262 Literature by Women of Color in the Diaspora 6A LW (3) AS WST
Will not be counted toward the English major. An introduction to contemporary women writers of color in the U.S.: Native Americans, African Americans, Asian Americans, and Chicanas/U.S.Latinas. Readings will include literature and contextual articles on historical and cultural issues.

WST 4310 History of Feminism in the U.S. 6A MW (3) AS WST
A study of feminist critiques of American women's experiences and status for their implications for women's lives, by 19th- and 20th-century theorists, and how adequately these various critiques address the intersections of gender, class, ethnicity, and race.

WST 4320 Politics and Issues in Women's Health CASB (3) AS WST
This course will focus on celebrating women's health and wholeness: mental, physical, emotional, spiritual, social, economic, and understanding the potential negative effects of institutional and interpersonal oppression on health and wellness.

WST 4335 Women and Film (3) AS WST
A study of representation of women in films and the responses of feminist film theorists and filmmakers.

WST 4350 Women and Science MW (3) AS WST
An examination of selected issues related to women and the natural and physical sciences including: historical participation of women in science, current status of women in science, and feminist critiques of science as a discipline.

WST 4410 Postcolonial Women Writers (3) AS WST
Will not be counted toward the English major. Introduces the literature of women from various anglophone countries in Africa, the Caribbean, and South Asia; some U.S. writers will be included to represent a third world diasporic consciousness.

WST 4522 Classics in Feminist Theory MW CAHU HHCP (3) AS WST
Introduction to women's studies through a critical examination of the way gender, race, class and sexuality are socially constructed and demonstrates how activism is inherent in Women's Studies discourse.

WST 5308 Feminist Spirituality (3) AS WST
Open to non-majors. Focuses on the many voices of contemporary feminist spirituality, emerging from women's experiences in diverse religious, ethnic and cultural traditions, and representing a range of theoretical perspectives from biblical feminism to goddess worship and wicca.
WST 5825 Internship in Women’s Studies  (3) AS WST
PR: Must have completed Comprehensive Exam. Majors Only. All required courses in MA program, CC. Student placement in approved intern setting for a minimum of 150 hours of supervised experience. S/U. Department Approval Required.

WST 5934 Selected Topics   (1-4) AS WST
PR: DPR. Study of current research methods and scholarship on women from a multidisciplinary perspective.

WST 5940 Internship in Women’s Studies  (3-6) AS WST
PR: Majors only. All required courses in MA program, CC. Permit. Student placement in an approved intern setting for a minimum of 240 hours of supervised experience. S/U only.

YOR 1120 Yoruba I  (4) AS WLE
This course is designed to familiarize students with modern orthography and to develop skills in reading, writing, speaking, and understanding spoken Yoruba. Pronunciation in Yoruba and achieving basic communicative competence in the language are among the skills to be attained in the course.

ZOO 2303 Vertebrate Zoology  (3) AS BIN
PR: BSC 2010, BSC 2010L, BSC 211, BSC 211L. The origin, diversity, and adaptations of the vertebrates. Phylogenetic systematics (cladistics) will be used as the basis for determining evolutionary relationships of organisms. Monophyletic groupings 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 BIN
PR: BSC 2010, BSC 2010L, BSC 211, BSC 211L. Anatomy of selected vertebrate types emphasizing evolutionary trends. Lec.-lab.

ZOO 3205C Advanced Invertebrate Zoology  (4) AS BIN
PR: BSC 2010, BSC 2010L, BSC 211, BSC 211L & 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. Phylogeny, taxonomy, development, physiology, macro-, microanatomy and natural history of marine/freshwater dwelling invertebrate phyla (including protists and excluding parasites and insects) covered in integrated manner. Extensive lab work/Some fieldwork.

ZOO 3713C Comparative Vertebrate Anatomy  (4) AS BIN
PR: BSC 2010, BSC 2010L, BSC 211, BSC 211L & 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. Anatomy of selected vertebrate types emphasizing evolutionary trends. Lecture and Laboratory.

ZOO 4233 Parasitology  (4) AS BIN
PR: BSC 2011, BSC 2011L and CHM 2210 and 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 4694 Developmental Biology  (4) AS BCM
PR: PCB 3023, BSC 2011, BSC 2011L, BSC 2010, BSC 2010L CHM 2045, and CHM 2046. This course will use a problem solving approach to provide fundamental knowledge of scientific concepts and principles involved in the mechanisms underlying patterns of embryonic development for majors/nonmajors.

ZOO 4753C Human Histology and Histopathology  (4) AS BCM
PR: PCB 3023, PCB 3063 & CHM 2210 & MAC 1105 or higher-level MAC course or STA 2023. CP: CHM 2211. The study of cellular and tissue organization as the basis of function in the human body. Functional morphology in normal and diseased states will be emphasized using an organ system approach.

ZOO 5456 Ichthyology  (3) AS BIN
PR: Senior or GS in Biology, ZOO 2701C, CI. PCB 4674 is suggested. Evolution, systematics, structure, behavior, physiology, and ecology of fishes.

ZOO 5456L Ichthyology Lab  (1) AS BIN
CR/PR: ZOO 5456 Laboratory portion of Ichthyology relating to evolution, systematics, structure, behavior, physiology and ecology of fishes.