### USF Course Descriptions

#### College and Department Codes

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<thead>
<tr>
<th>Code</th>
<th>Department</th>
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<tbody>
<tr>
<td>EDT</td>
<td>English Education and Speech Communication</td>
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<tr>
<td>EDU</td>
<td>Early Childhood Education</td>
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<td>EDV</td>
<td>Industrial/Technical Education</td>
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<td>EDW</td>
<td>Social Science Education</td>
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<td>EDX</td>
<td>Foreign Language Education</td>
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#### Engineering (EN)

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<td>ECH</td>
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<td>EGB</td>
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<td>EGR</td>
<td>Mechanical Engineering</td>
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<td>EGS</td>
<td>Industrial and Management Systems</td>
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<td>EGX</td>
<td>Civil and Environmental Engineering</td>
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#### Fine Arts (FA)

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#### Nursing (NU)

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<td>EOH</td>
<td>Environmental and Occupational Health</td>
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<tr>
<td>EPB</td>
<td>Epidemiology and Biostatistics</td>
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<tr>
<td>HPM</td>
<td>Health Policy and Management</td>
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<td>PHC</td>
<td>Public Health</td>
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#### Undergraduate Studies (UG)

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<td>COE</td>
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<td>HON</td>
<td>Honors Program</td>
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<tr>
<td>MIS</td>
<td>Military Science - Army ROTC</td>
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#### Business Administration (BA)

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#### Education (ED)

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<td>Psychological and Social Foundations</td>
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<td>Reading Education</td>
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<td>EDS</td>
<td>Special Education</td>
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#### ACG 2021 Principles of Financial Accounting (3) BA ACC
Study of basic accounting principles including the recording and reporting of financial activity. The preparation and interpretation of financial statements.

#### ACG 2071 Principles of Managerial Accounting (3) BA ACC
PR: ACG 2021. A study of the accountant's role in assisting management in the planning and controlling of business activities.

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

#### ACG 3103 Intermediate Financial Accounting I (3) BA ACC
PR: ACG 2021. Theory and methodology underlying financial reporting, including the FASB's conceptual framework, the accounting process, financial statements, accounting changes, present value applications, and current assets.

#### ACG 3113 Intermediate Financial Accounting II (3) BA ACC
PR: ACG 3103. Continuation of ACG 3103. Topics covered include property, plant and equipment, intangibles, current liabilities, long-term debt, stockholders' equity, earnings per share computations, and investments.

#### ACG 3341 Cost Accounting and Control I (3) BA ACC
PR: ACG 2071 or ACG 3103. Deals with cost accounting systems for different entities, cost behavior patterns, cost-volume-profit analysis, relevant information for decision making, and budget and standard costs for planning and control.

#### ACG 3401 Accounting Information Systems (3) BA ACC
PR: ACG 2021 and CGS 2100. Students who complete this course will not receive credit for ACG 4621. This course provides students with a basic understanding of well-controlled information systems in a variety of technological environments with added emphasis on placed on the collection, processing, and reporting of accounting information.
ACG 4123 Intermediate Financial Accounting III (3) BA ACC

ACG 4331 Cost Accounting And Control II (3) BA ACC
PR: ACG 3341. 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 influence of the international environment).

ACG 4501 Governmental/Not-For-Profit Accounting (3) BA ACC
PR: ACG 2021. Application of financial and managerial accounting, and auditing, principles and theory to both governmental and not-for-profit entities.

ACG 4621 Computer Control and Audit (3) BA ACC
PR: ISM 3113. Students who complete the course will not receive credit for ISM 4320 or ACG 3401. Study of information systems controls and auditing techniques emphasizing the effect both general and specific controls have on asset protection, data integrity, system effectiveness and efficiency in computerized business environments.

ACG 4632 Auditing I (3) BA ACC
PR: ACG 3113 and ACG 3401. This course provides a sound conceptual foundation of basic Auditing process from the perspective of the public accounting profession. Professional standards, ethics, legal responsibilities, and the utilization of technology are addressed.

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

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

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

ACG 4931 Selected Topics In Accounting (1-4) BA ACC
PR: CI. The course content will depend on student demand and instructor's interest.

ACG 4932 Honors Accounting Seminar (3) BA ACC
PR: Honors accounting student in final semester of bachelor's program. Use of case studies to explore the interaction of accounting and business topics that have been previously emphasized in separate courses.

ACG 5381 Advanced Financial Accounting IV (3) BA ACC
PR: ACG 4123 Accounting for business combinations, preparation of financial statements, home office/branch relationships, foreign operations and transactions, partnerships.

ACG 5575 Internal and Operational Auditing (3) BA ACC
PR: ACG 3113 and ACG 3401. CR: ACG 4632. The objective of Internal and Operational Auditing is to provide students with an opportunity to learn about the theory and practice of Internal and Operational Auditing and to apply relevant audit principles and techniques to selected audit problems.

ACG 5935 Selected Topics In Accounting (1-4) BA ACC
PR: CI. To allow advanced undergraduate students and graduate students to research and study contemporary and emerging topics in the field.

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

ADV 3000 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 Copywriting (3) AS COM
PR: ADV 3000 and ECO 1000. Study of laboratory experience in preparation of advertising copy for newspapers, magazines, radio, television, direct mail, outdoor displays, specialty items, and interactive electronic advertising.

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

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

ADV 3300 Advertising Media Strategy (3) AS COM
PR: ADV 3074, ADV 3000 and ECO 1000. Problems, techniques, strategy of media research, planning, budgeting and effective utilization in advertising.

ADV 3760 Retail Advertising Planning and Execution (3) AS COM
PR: ADV 3000, PR: ADV 3101 An analysis of retail advertising, including management decisions, processes, procedures, media planning, production techniques, and problems affecting the development of advertising to fulfill retail objectives.

ADV 4800 Advertising Campaigns (3) AS COM
PR: ADV 3101, ADV 3300, MMC 4420, ECO 1000, and MAR 3023. Advanced advertising course requiring planning and production of complete general advertising campaign, including research, production methods, budgeting, and media schedules.

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 academic credit under the supervision of a professional practitioner. Periodic written and oral reports to the faculty member coordinating the project will be required.

AFA 2000 Introduction to the Black Experience [In Africa and Its Diaspora] 6A FA (3) AS AFA
Fundamental perspectives on the nature and significance of the Black Experience in Africa and the 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 4200 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 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 on the African-American community.

AFA 4350 African American Community Research 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
The interactive, field experience course introduces students to active and applied research methodologies and the uses of this research in Black urban communities.

AFA 4900 Directed Readings (1-3) AS AFA
PR: CI. Independent readings in a particular area of African and Afro-American Studies, selected by student and instructor.

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

AFA 5935 Issues in African Studies (3) AS AFA
Variable topics course focusing on the history, culture, and lived experiences of Africans, African-Americans, and other peoples of African descent worldwide. Repeat up to 12 hours as topics vary.

AFH 3100 African History to 1850 HP AF (3) AS HTY
An outline survey of pre-colonial African history including a preface to the emergence of the first African states. This course is designed to help students understand and appreciate the diversity of African cultures and the complexity of African history.

AFH 3200 African History since 1850 HP AF (3) AS HTY
Survey of colonial and postcolonial history of Africa. Emphasis on the impact of European and other alien influences on the continent, emergence of independent African states, and post-
AFR 1101 The Air Force Today: Organization And Doctrine (1) UG AFR
Introduction to the Air Force in the contemporary world through a study of its total force structure and mission.

AFR 1120 The Air Force Today: Structure And Roles (1) UG AFR
A study of the strategic offensive and defensive forces, general purpose forces, and aerospace support forces that make up the Air Force of today.

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

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

AFR 2130 U.S. Air Power: Ascension To Prominence (1) UG AFR
CR: AFR 2000, AFR 2001 A study of air power from balloons and dirigibles through the jet age. Emphasis is on the employment of air power in WWII and WWII and how it affected the evolution of air power concepts and doctrine.

AFR 2150 U.S. Air Power: Key To Determinant (1) UG AFR
CR: AFR 2000, AFR 2001 A historical review of air power employment in military and nonmilitary operations in support of national objectives. Emphasis is on the period from post WWII to present.

AFR 3220 Air Force Leadership and Management - I (3) UG 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 (officier). The basic managerial processes involving 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) UG 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, organization, power, leadership, and management as 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 Forces In Contemporary American Society I (3) UG AFR
CR: AFR 2000, AFR 2001 A study of the Armed Forces as an integral element of society, with an emphasis on American civil-military relations and context in which U.S. defense policy is formulated and implemented. Special themes include: societal attitudes toward the military and the role of the professional military leader-manager in a democratic society.

AFR 4211 National Security Forces In Contemporary American Society II (3) UG AFR
CR: AFR 2000, AFR 2001 A continuation of the study of the Armed Forces in contemporary American society. Concentration is on the relationship for maintaining adequate national security forces; political, economic, and social constraints on the national defense structure; the impact of technological and international developments on strategic preparedness, the variables involved in the formulation and implementation of national security policy; and military justice and its relationship to civilian law.

AFS 2250 Culture and Society in Africa 6A AF (3) AS AFA
Topics include: African religion, value systems, art and the aesthetic; 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, philo- sophical, and practical 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 FA AF (3) AS AFA
PR: AFS 2250 or CI. Study tour. A study of traditional African society and culture, the relationship between life and the environment, and the impact of modernization on the culture and the environment.

AMH 1101 American History I HP (3) AS AHA
A history of the United States with attention given to relevant developments in the Western Hemisphere from European origins to 1815.

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

AMH 3110 American Colonial History to 1750 (4) AS AHA
A study of the evolution of American society from the Age of Reconnaissance to 1750. Attention is given to the transformation from colonies to provinces 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 Constitution-making, and the establishment of the federal system. Also examines the significance of loyalty, 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 1789-1826. Focuses on demographic trends, party systems, expansionism, Indian policies, labor, and ethno-cultural conflicts.

AMH 3160 The Age of Jackson (4) AS HTY
The United States from 1828-1850, with emphasis on social and political conflict. Consideration of evangelicalism, reform, labor movements, urbanization, and political activities of the antebellum era.

AMH 3170 The Civil War and Reconstruction (4) AS HTY
An examination of political, social, and economic climate of the 1860's that led to the American Civil War. The course does focus upon the war itself in its military, diplomatic, and political consequences through the end of the Reconstruction (1877).

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

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

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

AMH 3403 The South since 1865 (4) AS HTY
Southern history since the surrender at Appomattox. Topics covered include Reconstruction and the Populist revolt, race relations, demogagouy 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
A 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 1821 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 AF (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 the 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

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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 expansion. This course will examine the shifting relationship between American War and empire from the Revolution through Viet Nam.

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

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

AMH 3800 History of Canada (4) AS HTY
A study of Canadian experience from French origins through the British conquest to its present multi-racial character. Attention will also be given to the forces of nationalism, separatism, and regionality.

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 Naturalists, among them Whitman, Dickinson, Twain, James, Howells, Crane, Dreiser, Wharton, Robinson, Dunbar, and Johnson.

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

AML 3453 Historical Perspectives in Early American Literature HP (3) AS ENG
Will not be counted toward the English major. Examines American literature from the Colonial Period to the Civil War as a manifestation of political, social, and intellectual forces.

AML 3604 African American Literature 6A LW (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, James Weldon Johnson, Hughes, Richard Wright, Ralph Ellison, LeRoi Jones, and Nikki Giovanni.

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

AML 4121 Twentieth-Century American Novel (3) AS ENG
A study of major trends and influences in American prose fiction from 1900 to the present. Includes 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, Heilman, McCullers, O’Connor, Warren, Styne, Tate, Davidson, and Dickey.

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

AML 4330 Selected American Authors (3) AS ENG
The study of two or three related major authors in American literature, focusing on several major figures; 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.

AML 4624 Black Women Writers 6A LW (3) AS ENG
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 a context of a global community.

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

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

AMS 2212 Nineteenth-century American Culture HP (3) AS AMS
An examination of cultural patterns in America from 1776 to 1900 with an emphasis on the texture of everyday life.

AMS 2270 Twentieth-century American Culture HP (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 American society, popular music, American communities, vigilante tradition, jazz music, role of the family, American success myth, youth in America. Topic varies.

AMS 3051 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 materials dealing with selected American regions. Topic varies.

AMS 3230 America During the Twenties and Thirties (4) AS AMS
Selected interdisciplinary materials are used to examine the relationships among regionalism, nationalism and internationalism during the twenties and thirties. Emphasis is placed on the measure of cultural nationalism attained by the United States during this period.

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

AMS 3302 Architecture and the American Environment (3) AS AMS
By means of slides, lectures and discussion the 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 (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, gravestones, toys, and the material subcultures of women, African-Americans and communal societies.

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

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

AMS 4152 Film in American Culture (3) AS AMS
Surveys the contributions to American culture of major films, filmmakers, 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 4904 Major Ideas in American MW (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
AMS 4935 Senior Seminar in American Studies (4) AS AMS  
PR: Senior in American Studies or CI.  
AMS 4948 Seminar in American Studies (4) AS AMS  
PR: Senior in American Studies or CI.  
AMS 4940 Internship in American Studies (1-4) AS AMS  
A structured, out-of-class learning experience designed to provide an opportunity for students pursuing careers related to American Studies.  
ANG 5901 Directed Reading (1-4) AS ANG  
PR: CI, DPR. S/U Individual guidance in concentrated reading on a selected topic in Anthropology. Contract required prior to registration.  
ANT 1149 The Human Adventure (3) AS ANT  
Not for major credit. This course examines the anthropological evidence relevant to controversial questions concerning human origins, social practices, human and animal communication, and ancient societies.  
ANT 2000 Introduction to Anthropology SS AF (3) AS ANT  
The cross-cultural study of the human species in biological and social perspectives. Surveys the four major branches of anthropol- 
gy: physical anthropology (human biology), archaeology (the analysis of the prehistoric and historic remains of human cultures),  
anthropological linguistics (the analysis of language in its cultural context), and cultural anthropology (the study of peoples living in the world today, be they in tribal, peasant, or urban societies).  
ANT 2000 CulturAl Anthropology SS AF (3) AS ANt  
PR: AN 2000 or CI. Discussion of major methods of and orientations to the cross-cultural study of the world’s peoples. Representative case studies are used to demonstrate variations in human adapta-
tions and to encourage an appreciation of diverse values and lifestyles.  
ANT 2511 Biological Anthropology NS (3) AS ANT  
PR: AN 2000 or CI. Non-human primates, the fossil record and the biology of species are surveyed in order to understand the human ancestor as a product of biocultural phenomena. Anatomy, genetics, culture and evolution are emphasized.  
ANT 3005 The Anthropological Perspective AF (3) AS ANt  
For non-anthropology majors only. May not be counted for credit toward an anthropology major. Presents the basic concepts of anthropological evidence relevant to contemporary life. Aims at enabling the student to understand the anthropologist’s cross-
cultural view of the human species as adapting through biocultural means to life on this planet.  
ANT 3101 Archaeology SS (3) AS ANT  
PR: AN 2000 or CI. The cross-cultural study of mankind from its beginnings up to and including the historic period through the recovery, description, and analysis of the remains of past cultures and societies.  
ANT 3610 Anthropological Linguistics SS (3) AS ANT  
PR: AN 2000 or CI. The comparative study of language in its cultural context, especially emphasizing the role of language in the cultural interpretation of physical and social reality.  
ANT 4034 Theories of Culture (3) AS ANT  
PR: DPR. Senior standing with major in anthropology or equivalent.  
The major concepts that form the anthropological view of humanity are viewed in historical perspective. Basic ideas of the western philosophical tradition are analyzed from the Greeks to the 19th century when they were incorporated into the new discipline of anthropology. 20th century anthropological developments on these themes are considered.  
ANT 4103C Archaeological Science (4) AS ANT  
PR: AN 3010 or CI. This course focuses on the application of scientific methods of analysis to archaeological materials including bone, stone, pottery, and metal. Methods include absolute dating, remote sensing, optical and SEM microscopy, elemental and isotope analysis and laboratory procedures provide hands-on experience with a variety of archaeological materials and analytical methods.  
ANT 4146 European Archaeology (4) AS ANT  
PR: AN 3010 or CI. The archaeology of Europe, from the first Paleolithic inventions to the fall of Roman civilization. The course will focus on ancient material culture while emphasizing social and economic questions such as the emergence of modern humans, the adoption of agriculture, the development of complex societies, and the rise of civilization.  
ANT 4149 Fantastic Archaeology: Mysteries of the Human Past MW (3) AS ANT  
Mysteries of the human past, including the Lost Continent of Atlantis, Adolf Hitler, Astonishment, and the Myth of the Moon Dog, and the Shroud of Turin will be discussed in detail. The practice of archaeology and how we know about the past will also be presented, and skills in critical thinking will be emphasized.  
ANT 4153 North American Archaeology (3) AS ANT  
PR: AN 3100 or CI. An examination of the evidence regarding the human settlement of North America from its beginnings through the development of aboriginal culture to the period of European con- 
querrors. Emphasis on the comparative study of material culture at selected sites from all time periods. No field work is involved.  
ANT 4158 Florida Archaeology (4) AS ANT  
PR: AN 3100, DPR. Culture history and culture process over 10,000 years from the time of the first peoples in Florida (Paleo-Indians) through the elaborate Weeden Island and Safety Harbor burial and temple mound cultures to the Spanish entrada and consequences of European conquest. Review of temporal and spatial relationships within the entire eastern part of the country. May be offered as a summer (or other semester) field school, combined with Field Methods in Archaeology and Laboratory Methods in Archaeology.  
ANT 4162 South American Archaeology (3) AS ANT  
PR: AN 3100 or CI. Describes and analyzes the sequence of cultural development in prehistoric South America. Cultures such as the Inca, Chavin, Mochica, Wari, Chimú are included. Emphasis on the environmental setting and the relationship between cultural ecology and the growth of civilization.  
ANT 4163 Mesoamerican Archaeology (3) AS ANT  
PR: AN 3100 or CI. The chronological sequence from its beginnings through Protohistoric development is described and analyzed. Cultural groups such as the Maya, Teotihuacán, Zapotec, Toltec, and Otomi are included, with emphasis on the environmental setting and the relationship between cultural ecology and the growth of civilization.  
ANT 4172 Historical Archaeology 6A (3) AS ANT  
PR: AN 3100 or CI. A survey and analysis of archaeology focused on the prehistoric period. Laboratory research with data recovered from historic sites in addition to classwork.  
ANT 4180 Laboratory Methods in Archaeology (2-4) AS ANt  
PR: AN 3100. DPR. Data and materials recovered from archaeolog-
ical survey and excavation are processed in the laboratory, including artifacts cleaning, cataloging, identification, and analysis; 
soil flotation; reconstruction of graves; analysis of artifacts, mapping, etc. May be offered as part of a summer (or other semester) field session. May be combined with Florida Archaeology and Field 
Methods in Archaeology.  
ANT 4181 Museum Methods (4) AS ANt  
PR: AN 3100 and DPR. Design, preparation and installation of exhibits in the Department of Anthropology Teaching Exhibit Gallery. Emphasis on theory, research, design, and construction. Discus-
sion of museum-related issues such as administration and cura-
tion.  
ANT 4199 Environmental Archaeology (4) AS ANT  
PR: AN 3010 or CI. This course examines environmental con-
straints on ancient human societies, and how human activities have impacted the environment in the last several thousand years. Presentation of the methods used to reconstruct prehistoric envi-
ronments will be followed by case studies from Florida, Central and South America, Easter Island, the Mediterranean and the Near East.  
ANT 4231 FOLKLORE 6A (3) AS ANT  
PR: AN 2410 or CI. Focuses on cross-cultural methods and techniques regarding the collection, classification, and analysis of such materials as myths, jokes, games, and items of material culture. African (or African-derived), Oceanic and Native American societ-
ies are surveyed.  
ANT 4241 Magic and Religion 6A MW (3) AS ANT  
PR: AN 2410 or CI. The cross-cultural study of the social and cultural aspects of religion. Religious activities in traditional and modern societies will be discussed. Ritual behavior, religious practitioners and symbols of belief will be considered in light of their political, social, economic or ethnographic contexts.  
ANT 4285 Oral History (4) AS ANT  
PR: AN 2410 or CI. A survey of the history, methods, and current applications of oral history research, primarily in the anthropological study of culture, but with reference to related disciplines. Students will become familiar with oral history through intensive analysis of selected case studies as well as guided field projects.  
ANT 4302 Gender in Cross-Cultural Perspective MW (3) AS ANT  
PR: AN 2410 or CI. Focuses on various theories, models and beliefs about male-female behaviors and interactions in human cultures throughout history and in various societies in the world today.  
ANT 4302 North Americans (3) AS ANT  
PR: AN 2410 or CI. 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 
civilizations. May be offered as a summer (or other semester) course.
ANT 4316 Ethnic Diversity in the United States MW (3) AS
PR: ANT 2410 or CI. 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 4324 Mexico and Central America (3) AS
PR: ANT 2410 or CI. Focuses on the history, contemporary values and interpersonal relationships, and patterns of rural and urban life in Latin America and in Mexico.

ANT 4340 The Caribbean 6A MW (3) AS ANT
PR: ANT 2410 or CI. Main themes include: the depopulation of the aboriginal population and the resettlement of the area via slavery, imperialism, and integration; 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 (4) AS ANT
PR: ANT 2410 or CI.

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

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

ANT 4495 Methods in Cultural Research (3) AS ANT
PR: DPR. 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 studied. Research design models from the United States society, studied and supervised research in the local community is designed and carried out.

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

ANT 4587 Human Variation (3) AS ANT
PR: ANT 2511 or CI. An overview of evolution and biological variations of human races. Anatomical, morphological, and physiological variations in racial biology are explored.

ANT 4620 Language and Culture 6A (3) AS ANT
PR: ANT 3010 or CI. 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 on the nature and degree of fit between linguistics and other cultural systems.

ANT 4701 Applied Anthropology (3) AS ANT
PR: ANT 2410 or CI. A review of approaches applying the anthropological perspective to contemporary human problems. Particular emphasis placed on public policy issues. Discussion of the historical development of applied anthropology, problems of economic development of the Third World, and the ethics of applied research and intervention.

ANT 4850 Language and Social Identity 6A (3) AS ANT
PR: ANT 3610 or CI. Examines the role of language and other modes of communication in the social settings of speech 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 3100, DPR. Offered as all or part of a summer (or other semester) field session. May or may not be combined with Florida Archaeology and Language Methods in Archaeology. Students learn appropriate methods of archaeological survey, excavation, data and materials recovery, recording, and processing.

ANT 4901 Directed Reading (1-4) AS ANT
PR: Great credit is given for concentrated reading on a selected topic in anthropology. Contract required prior to registration.

ANT 4907 Individual Research (2-4) AS ANT
PR: DPR. SU only. Individual guidance in a selected research project. Contract required prior to registration.

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

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

ANT 4935 Rethinking Anthropology (3) AS ANT
PR: Senior standing with major in anthropology, or equivalent. DPR. This course strives to reexamine the traditional discipline of anthropology. Students reframe and reevaluate anthropology as a discipline and the integration of its branches and specialty fields. Students develop and articulate their current images of anthropology.

ANT 4936 Honors Thesis (3) AS ANT
PR: Admission to the honors program, completion of the honors seminar and DPR. SU only. The student under the supervision of a faculty member will formalize, conduct, analyze, and report in writing a research project which meets honors standards.

ANT 5915 Individual Research (2-4) AS ANT
PR: CI, DPR. Contract required prior to registration. SU. Individual guidance in selected research projects.

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

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

ARA 1120L Modern Arabic I Laboratory (1) AS MLL
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 MLL
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 MLL
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 2200 Modern Arabic III (4) AS MLL
PR: ARA 1121 or the equivalent. For language students who intend to attain basic proficiency.

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

ARA 4905 Directed Study (1-5) AS MLL
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 MLL
Departmental approval required. Course permits classes in Arabic not available in the regularly scheduled curriculum at departmental discretion.

ARC 4784 The City 6A MW (3) AR ARC
CR: AARC. The 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 513 Computer Technology (3) AR ARC
PR: CC Introduction to the application of computer technology in current architectural practice. The exploration of available software, programs, and computer services for word processing, information handling, computer-aided design, feasibility analysis, cost estimating, economic performance and life cycle cost analysis, project management (network programming and analysis), com-
computer graphics, computer aided design and drafting.

ARC 5218 The Building Arts (3) AR ARC
PR: CC Introduction to the man-made environment. The study and profession of architecture. The various facets of the process of shaping the built environment as it manifests itself in the different roles and specializations of the various disciplines involved, the process, and in the various academic courses that prepare the architect for practice.

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

ARC 5361 Architectural Design I (6) AR ARC
PR: CC First of two semester Design Fundamentals/Design Graphics sequence focusing on design abstractions and analysis of the factors influencing conceptual design. Emphasis is placed on ordering principles, pattern recognition, and figure-ground relationships. Development of craftsmanship, drawing as a means to design, and perceptual acuity are stressed.

ARC 5362 Architectural Design II (6) AR ARC
PR: ARC 5361, CC Second of 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 concepts. 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 5363 Architectural Design III (5) AR ARC
PR: ARC 5362, ARC 5216, ARC 5467, ARC 5587, ARC 5731, ARC 5689, CC Study of the various phases of the building delivery and design process, and of different approaches to ordering that process in a systematic fashion. The student will use a 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/magery, and building technology (awareness of structural organization, services networks, construction processes and materials). Aspects of human behavior as design determinants.

ARC 5364 Architectural Design IV (5) AR ARC
PR: ARC 5363, CC 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 of site relationships into the development of design solutions. Legal aspects of zoning, building codes, and regulations regarding access for handicapped persons, fire escape.

ARC 5365 Architectural Design V (5) AR ARC
PR: ARC 5256, ARC 5364, ARC 5467, ARC 5588, ARC 5689, ARC 5782, CC Investigation of the interaction between user requirements, environmental determinants, site and urban context conditions, technological factors, and design intentions in the development of design solutions for projects of medium scale and complexity. The analysis, design, and coordination of the various resulting systems, including structural, circulation, service networks, space zoning and use, environmental control systems at the interface between interior and exterior of a building. Representation of these relationships and systems in diagrams and models, and their manifestation in design and construction details.

ARC 5366 Architectural Design VI (5) AR ARC
PR: ARC 5365, CC 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 5467 Materials and Methods of Construction (4) AR ARC
PR: ARC 5470, CC Overview of properties of primary materials and construction systems which comprise building structure and enclosures. Space planning, interface and collection of elements and assemblies, relative to climate, assembly processes, costs, codes, and craftsmanship. Lab sections include field trips to manufacturing facilities, construction sites, and preparation of drawings and specifications.

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

ARC 5578 Structures I (3) AR ARC
PR: Calculus, Physics, and ARC 5760, CC Review of static and mechanical principles and reinforcing 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 5689 Environmental Technology (4) AR ARC
PR: Physics, ARC 5470, CC Comprehensive review of mechanical, electrical, and plumbing systems for buildings. Energy utilization, heating and cooling, water delivery and waste removal, fire protection, illumination, transportation systems, and acoustics. Lab exercises include computer simulations, illumination studies, thermal performance studies.

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

ARC 5732 Architectural History II (3) AR ARC
Overview of the built environment from the Renaissance to the present. Buildings and cities in their geographical, topographical, political, aesthetic, social, technological, and economic context. Study of various methodological approaches to the analysis of 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) AR ARC
CC. CI Exploration of the philosophic, economic, aesthetic, social, historical and moral imperatives used by modern architects and historians in their attempt to design the appropriate physical environment for a new social order. The course will investigate the writings and works of the proponents of the modern style of architecture and study the “New Architecture” as defined by those who broke tradition and expressed the new era using modern construction materials and techniques.

ARC 5932 History Abroad (3) AR ARC
PR: CC. Summer study abroad. Location and description varies from year to year.

ARC 5933 History Abroad (3) AR ARC
PR: CC. Summer study abroad. Location and description varies from year to year.

ARC 5934 Special Studies in Architecture (1-5) AR ARC
PR: CC Variable titles offered on topics of special interest.

ARCH 3044 Experiential Basis of Artistic Mind (3) FA 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) FA 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 4037 Senior Seminar in Art Education (2) FA ART
PR: Senior standing. CR. ARE 4940. Synthesis of teacher candidate’s courses in complete college program.

ARE 4112 Education Through Crafts (3) FA ART
An in-depth study of arts and craft media for children. Emphasis will be placed on innovative use of new materials and curriculum in school restructuring.

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

ARE 4440 Art Teaching Strategies II (3) FA ART
Media and the learning process will be explored through graphic arts, cinematography and video systems. Teaching strategies and media criticism for application at elementary and secondary levels.

ARE 4443 Crafts Workshop in Art Education (3) FA 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) FA ART
PR: ARE 3044. Explores the arts as infrastructure through identification, exploration, and experimentation with unique community spaces, populations, and new environments for learning in the arts.

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

ARE 4940 Internship: Art Education (1-12) FA ART
CR: ARE 4037. S/U only. One full semester of internship in a public or private school. In special programs where the internship experience is supervised for two or more semesters, students will be registered for credit which accumulates from 9 to 12 semester hours.

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

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

ARH 3001 Introduction To Art HP FA (4) FA ART
An expanded introductory treatment of basic concepts. For art majors and non-art majors.

ARH 3454C Contemporary Issues in Art HP FA MW (3) FA ART
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 4170 Greek And Roman Art (4) FA ART
A comprehensive study of Aegean, Mycenaean, Etruscan, Greek and Roman painting, sculpture and architecture.

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

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

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

ARH 4350 Baroque And Rococo Art (4) FA ART
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) FA ART
A comprehensive study of nineteenth century painting, sculpture and architecture in America and Europe. Gender/multicultural issues and methodologies in 19th century art are emphasized.

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

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

ARH 4520 African Art (4) FA ART
A comprehensive 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 4547 Buddhist Art (4) FA ART
PR: CPR. 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 processes. Changes in art as the religion comes in contact with pre-existing cultures, and modern artistic practice.

ARH 4554 Japanese Prints (4) FA ART
PR: CPR. The course examines one important aspect of Asian artistic production. "Japanese Prints" concentrates on the period from 1615 to the present and distinguishes schools, styles, artists, subjects, patronage patterns, and technical matters. The role of prints within society through changing times.

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

ARH 4710 History of Photography 6A MW (4) FA ART
PR: CPR. Comprehensive overview of the history of photography from the inception to the present day, with a special emphasis on the relationship of photography to the visual arts and popular culture.

ARH 4721 Graphicstudio/History of Media: Printmaking 6A (3) FA ART
The history of Western printmaking from the Middle Ages to contemporary times, with an emphasis on artmaking technology and research, cultural perspectives and theoretical/ critical analytical capabilities.

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

ARH 4790 Selected Topics In The History of Film (4) FA ART
In-depth investigation of a selected period, development, or school in the history of film art.

ARH 4796 Critical Studies In Art History 6A (4) FA ART
PR: CPR. Specialized intensive studies in art history. Specific subject matter varies. To be announced at each course offering.

ARH 4830 Art History: Lecture/discussion course designed to offer areas of expertise of visiting scholars or specific interests of resident faculty.

ARH 4857 Seminar In The History Of Art History (4) FA ART
PR: Four courses in Art History at the 4000 level. CPR. An examination of the origins of Art History as a discipline and changing nature of Art History from Vasari to the present.

ARH 5795 Methods of Art History (4) FA 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 5797 Gallery And Museum Internship (2-8) FA ART
Students are eligible after completing one semester in the program. S/U only. Registration by contract only. By working in Bay Area museums or galleries, students will become familiar with various museological operations. Internships vary owing to the work at hand in particular museums, but possible areas of work include registration, installation, conversation, writing of grants, or museum education.

ART 2201C Fabrications FA (4) FA ART
An introduction to basic visual art studio concepts. Topics include the nature of the art, the visual language of its form, modes of representation, and visual art theory. Studio projects supplemented by lecture and discussion. Emphasis on images of implied time and space.

ART 2203C Fabrications II FA (3) FA ART
PR: ART 2201C (for majors). No prerequisites for non-majors. This course will synthesize and expand on the groundwork laid in Fabrications I, which is prerequisite for majors, but not for non-majors. Fabrications II will focus on the significance of meaning and how it is constructed visually by researching 3 phases: I - the personal in images, We - images of cultural ideas, and They - images produced through collaboration.

ART 2222 Beginning Electronic Media (3) FA ART
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. Available to majors and non-majors.

ART 2301C Beginning Drawing (3) FA ART
Intermediate projects exploring the methods, media, and concepts of drawing.

ART 2400C Beginning Printmaking (3) FA ART
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, lithography and serigraphy (screen printing).

ART 2510C Beginning Painting (3) FA ART
Intermediate projects in painting with emphasis on the exploration of methods and media and the development of individual concepts.

ART 2701C Beginning Sculpture (3) FA ART
Intermediate projects with emphasis on contemporary theory and issues, the development of individual concepts and the exploration of materials, tools and processes.
ART 2930 Selected Topics in Art (2-4) FA ART
Open University offerings under this number may not be counted for degree credit for art majors. The content of this course will be determined by student demand and instructor interest.

ART 311C Intermediate Ceramics (3) FA ART
Intermediate techniques in ceramics and emphasis on the exploration of methods and media and the development of individual concepts.

ART 3222C Intermediate Electronic Media (3) FA ART
Majorly an Intermediate exploration of the issues and practices involved in the production of experimental computer art. The course focuses on an interdisciplinary approach to electronic media while developing individual creative growth.

ART 3302C Intermediate Drawing (3) FA ART
Artistic drawing skills and concepts introduced in Beginning Drawing with an emphasis on individual experimentation and the development of advanced critical and technical skills in the discipline. The course is repeatable up to 9 hours.

ART 3401C Intermediate Painting (3) FA ART
This course concentrates on developing intermediate skills in printmaking with particular emphasis on conceptual topics. The course is intended for majors. It is repeatable for credit up to 9 hours.

ART 3468C Digital Printmaking (4) FA ART
PR: ART 2301C. Investigation of Printmaking Media including: monoprinting, collagraph, relief printing and the dimensional print with emphasis on the development of individual concepts.

ART 3702C Intermediate Sculpture (3) FA ART
This course expands upon the principles and processes introduced in Beginning Sculpture, developing a higher level of technical competence and critical sophistication. Intermediate Sculpture is practiced utilizing various materials and techniques. The course is repeatable up to 9 hours.

ART 3710C Multiples, Molds, and Bronzecasting (3) FA ART
Continued studies and projects in sculpture with an emphasis on the nature of multiple images produced 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. The course may not be repeated for credit.

ART 3808C Site, Installation, and Performance (3) FA ART
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 assigned readings, discussions, critiques and demonstrations. The course may not be repeated for credit.

ART 3935 Studio Techniques: Selected Projects (2) FA ART
PR: CPR. Concentration in specialized technical data and process.

ART 3939 The Real World (2) FA ART
Restricted to studio majors. Offers students studio opportunities to analyze their experiences as art majors and explore options available to them upon completion of their degree.

ART 4111C Advanced Ceramics (3) FA ART
PR: ART 3110C. Continued problems in ceramics.

ART 4202C Advanced Electronic Media (3) FA ART
PR: ART 2222 or CPR. 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.

ART 4320C Advanced Drawing (3) FA ART
PR: ART 2301C Continued projects in drawing.

ART 4402C Advanced Printmaking (3) FA ART
PR: ART 2400C This course is designed as an advanced printmaking studio and emphasizes content and meaning in visual imagery. The student is encouraged to work in a specific printmaking medium (intaglio, relief, lithography or screen printing) and develop a cohesive series of images.

ART 4520C Advanced Painting (3) FA ART
PR: ART 2510C. Continued projects in painting.

ART 4702C Advanced Sculpture (3) FA ART
PR: ART 2701C. Continued problems in sculpture.

ART 4703 Sculpture III (4) FA ART
PR: ART 2702C or ART 2111C. Study of current 3-D issues in art with advanced self directed project to explore the development of a personal vocabulary in 3-D media.

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

ART 4900 Directed Reading (4) FA ART
PR: CPR. Registration by contract only. Course of reading and study in an area of special concern governed by student demand, instructor interest and/or department requirements. Registration is by contract only.

ART 4905 Directed Study (1-4) FA ART
PR: CI. Registration by contract only. Independent studies in the various areas of Visual Arts. Course of study and credits must be assigned prior to registration.

ART 4930 Selected Topics in Art (2-4) FA ART
Open University offerings under this number may not be counted for degree credit for art majors. The content of this course will be determined by student demand and instructor interest.

ART 4935 Senior Projects (3) FA ART
PR: Senior year student. Completion of all art preparation course work. CR: Studio Workshops and one Theme Studio. Restricted to majors. Required of all Art majors. Independent study with professor on an individual designed project to be completed before end of senior year. Project may include design for community and public art programs, installations, curatorial work, performance, a series of work developed within a particular studio discipline, etc.

ART 4970C Senior Thesis (3) FA ART
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.

ART 5125C Ceramics (4) FA ART
PR: ART 2111C, CPR. Advanced problems in the various ceramic techniques, including throwing and glaze calculation.

ART 5340C Drawing (4) FA ART
PR: ART 4320C, CI. Advanced problems in various drawing techniques. Emphasis on individual creative expression.

ART 5342C Lithography (4) FA ART
PR: ART 4402C. CI. Advanced problems in various lithographic techniques. Emphasis on individual creative expression.

ART 5472C Intaglio (4) FA ART
PR: ART 4402C, CI. Investigations into more complex intaglio processes including photographic and color printing procedures. Emphasis on personal conceptual development in graphic media.

ART 5535C Painting (4) FA ART
PR: ART 2520C, CPR. Advanced problems in the various painting techniques. Emphasis on individual creative expression.

ART 5730C Sculpture (4) FA ART
PR: ART 2702C, CPR. Advanced problems in the various techniques of sculpture. Emphasis on individual creative expression.

ART 5910 Research (1-4) FA ART
PR: CI. Registration by contract only.

ART 5936 Studio Techniques: Selected Projects (2) FA ART
PR: CPR. Concentration in specialized technical processes.

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.

ASH 3501 History of India (4) AS HTY
A study of the major themes of Indian history from the Indus culture to the present. Emphasis will be given to the Classical, Mogul and British periods as well as the modern independent sub-continent.

ASN 3012 Japan Today SS (3) AS INT
Area studies course 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 studies course 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 studies course 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 3106 The Pacific Century SS HP AF (3) AS INT
Explores the themes and trends which have affected the entire Asia-Pacific region. Textual material and videos trace the emergence of the modern nations of Northeast and Southeast Asia, focusing on the political and economic development of the past 150 years. (Open University - televised course.)

AST 2005 Astronomy of the Solar System NS (4) AS AST
Introduction to the Astronomy of the Solar System. No Physics background assumed. Topics covered include properties of light, stellar coordinates, timekeeping, eclipses, formation and dynamics of the solar system, properties of the sun and planets, space exploration of planets and the moon, life on other worlds. This course is complementary to but independent of AST 2006. Either may be taken before the other or taken by itself.
AST 2006 Stellar Astronomy and Cosmology NS (4) AS AST
Astronomy and Cosmology. Study of the universe. No Physics background assumed. Topics covered include properties of light, stellar coordinates, measurement of the physical properties of stars, formation, structure and evolution of stars, and planetary systems. Current and exciting phenomena. This course is complementarily to but independent of AST 2005. Either may be taken before the other or taken by itself.

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

AST 3933 Contemporary Thinking in Astronomy NS (3) AS AST
PR: Junior or Senior Standing or Consent of Instructor. A seminar designed to assist the student, with no science 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 3944 Archaeoastronomy (3) AS AST
PR: Jr. or Sr. Standing or Consent of Instructor. Astronomical concepts and observational techniques utilized by prehistoric/ancient peoples for detecting changes in seasons, constructing calendars, predicting eclipses, etc. Pictorial representation is given to Stonehenge and other 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. Topics include: use of sextant, constellations, celestial navigation with minimum equipment, spherical astronomy.

AST 3930 Selected Topics in Astronomy (1-4) AS AST
PR: Consent of Instructor. 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 consent of instructor. The two-body problem. Introduction to Hamiltonian systems and canonical variables, equilibrium solutions and stability, elements of perturbation theory.

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

BCH 3023 Introductory Biochemistry (3) AS CHM
CR: BCH 2200 or CHM 2211 and BCH 2100. Introduction to the chemistry and intermediary metabolism of biologically important substances. Lec.

BCH 3023L Basic Laboratory Biochemistry (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 3023. An 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. Lec.

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

BOT 3373C Vascular Plants: Form and Function (4) AS BIO
PR: BSC 2010, BSC 2010L, BSC 211, BSC 211L. Introduction to morphology, physiology and evolution of vascular plants, integrating form and function to understand diversity. Lec.-Lab.

BOT 413C Medical Botany (3) AS BIO
PR: BSC 2011, BSC 2011L, CHM 2210. Study of agents that are produced by plants and that are toxic or psychoactive in human beings or are useful as remedies.

BOT 4143C Field Botany (3) AS BIO
PR: BOT 3373C. Identification and classification of native and naturalized flowering plants of Florida including historical, climatic and floristic aspects of plant communities. Conducted largely in the field.

BOT 4223C Plant Anatomy (3) AS BIO
PR: BOT 3373C. Comparative studies of tissue and organ systems of fossil and present-day vascular plants. Functional and phylogeny aspects stressed. Lec.-Lab. Course offered every two years.

BOT 4434C Mycology (3) AS BIO
PR: BOT 3373C or MCB 3030C. A survey of the fungi with emphasis on their taxonomy, morphology, physiology and economic importance. Lec.-Lab.

BOT 4503 Plant Physiology (3) AS BIO
PR: BOT 3373C, PCB 3023, PCB 3043, or PCB 3063. Fundamental activities of plants, absorption, translocation, transpiration, metabolism, growth, and photosynthesis. This course is complementarily to but independent of BOT 4503L. Either may be taken before the other or taken by itself.

BOT 4503L Plant Physiology Laboratory (1) AS BIO
CR/PR: BOT 4503. Laboratory portion of Plant Physiology.

BOT 4810C Economic Botany (3) AS BIO
PR: BOT 3373C. Study of the uses of plants by man for food, fiber, and medicines.

BOT 5185C Marine Botany (4) AS BIO
PR: BOT 3373C, PCB 3043. A field course in marine plants with emphasis on ecology and functional morphology. Field work will stress the ecological aspects of plants in a sub-tropical marine environment in Florida. Lec.-Lab.

BSC 1005 Principles of Biology For Non-Majors NS (3) AS BIO
No credit for Biology majors. Lectures and demonstrations of selected biological principles, usually taught by television.

BSC 2101 Biology I - Cellular Processes NS (3) AS BIO
CR: BSC 2101L. PR/CR: CHM 2045. The course is designed for majors and has a laboratory associated with the lecture. An analysis of biological systems as they occur at the cellular and subcellular levels: cell structure and function, respiration, photosynthesis, mitosis and meiosis, genetics and gene expression.

BSC 2101L Biology I Cellular Processes Laboratory (1) AS BIO
CR: BSC 2101. Laboratory portion of Biology I Cellular Processes relating to cellular and subcellular structure and function. Mitosis, meiosis, and Mendelian genetics will be stressed.

BSC 2111 Biology II - Diversity NS (3) AS BIO
PR: BSC 2101 and BSC 2101L. An analysis of biological systems at the organismal level: evolution, speciation, history of life, and ecology.

BSC 2111L Biology II Diversity Laboratory (1) AS BIO
CR: BSC 2111. Laboratory portion of Biology II Diversity relating to organismal structure and function. Microscopy, as well as plant and animal development will be stressed.

BSC 2112 Biology of Aging NS (3) AS BIO
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 2125 Food: Personal and Global Perspectives NS (3) AS BIO
May be taken by biology majors for free elective credit. The application of basic biological principles to human nutritional problems; to learn how various cultures achieve adequate nutrition and how environmental changes impact both personal and global nutrition.

BSC 2100 Save The Planet: Environmental Sciences NS (3) AS BIO
Credit will be given for BSC 2030 or BSC 2050, but not both. An introduction to environmental sciences using mass communications and independent study. Emphasis will be placed on understanding basic principles of ecology relevant to problems and topics of the earth's environment. May be taken by majors for free elective credit.

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

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

BSC 2050L Environment Laboratory NS (1) AS BIO
Credit will be given for BSC 2030 or BSC 2050, but not both. The application of basic scientific principles to global environmental problems; how human activities impact the environment. May be taken by majors for free elective credit.

BSC 2033 Human Anatomy and Physiology I NS (3) AS BIO
PR: BSC 2100, BSC 2100L and BSC 211, BSC 211L. This course is the first half of a two-semester series introducing the structure and function of the human body's major organ systems. Cellular and cardiac physiology, nervous, endocrine, skeletal, and muscular systems will be covered. May be taken by Departmental majors for free elective credit only.

BSC 2094 Human Anatomy & Physiology II NS (3) AS BIO
PR: BSC 2093. PR: BSC 2093. This course is the second half of a two-semester series introducing the structure and function of the human body's major organ systems. The following body systems will be covered: circulatory, lymphatic, immune, respiratory, digestive, urinary, and reproductive. May be taken by Departmental
majors for free elective credit only.

BSC 2932 Selected Topics in Biology (1-3) AS BIO

Study of biological, economic, ethical, legal, political and social issues relating to current environmental problems.

BSC 4057 Environmental Issues MW (3) AS BIO

Study of the 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.

BSC 4402L Biological Research Methods (3) AS BIO

Pr: BSC 4931 or BSC 4932. Enrollment is limited to Biology Department Honors students. S/U only. A course to prepare Biology Honors students to work on their Honors theses.

BSC 4905 Independent Study (1-3) AS BIO

Pr: C/ credits only. May be taken by majors for free elective credit. Specialized individual study determined by the student's needs and interests. The written contract required by the Department of Biology specifies the regulations governing independent study.

BSC 4910 Undergraduate Research (1-4) AS BIO

Pr: C/ credits only. Individual investigation with faculty supervision. Written contract by Department is necessary prior to registration.

BSC 4931 Honors Seminar I (2) AS BIO

Enrollment is limited to Biology Department Honors students. A course in which the Biology Department Seminar in which students read publications related to the seminars, discuss the presentations and write critiques.

BSC 4932 Honors Seminar II (3) AS BIO

Enrollment is limited to Biology Department Honors students. A reading and discussion course involving areas of general interest in biology.

BSC 4932 Selected Topics in Biology (1-3) AS BIO

BSC 4970 Biology Honors Thesis (1-3) AS BIO

Pr: BSC 4932 and either BSC 4931 or BSC 4932. Enrollment is limited to Biology Department Honors students. S/U only. A thesis based on independent research carried out by the student.

BSC 5931 Selected Topics in Biology (1-3) AS BIO

BTE 4401 Special Teaching Methods: Business Education (4)

ED/ED

Pr: Successful completion of BE competencies. Methods, techniques, and materials for skill development.

BTE 4909 Directed Study: Business Education (1-3) ED/ED

Pr: Senior standing. To extend competency in teaching field.

BTE 4936 Senior Seminar in Business and Office Education (2) ED/ED


BTE 4951 Internship in Business Education (1-12) ED/ED

Cr: BTE 4936. S/U only. One full semester of internship in a public or private school. In special programs where the intern experience is distributed over two or more semesters, students will be registered for credit which accumulates from 3 to 12 semester hours.

BTE 4948 Field-Based Seminar in Business Education (3) ED/ED

S/U only. Supervised field experience and orientation to broad field business education. Specifically designed to be preparatory for the internship.

BTE 5171 Curriculum Construction: Business Education (3)

ED/ED

Curriculum scope, the process of planning and organizing instructional programs with emphasis on task analysis and process evaluation.

BUL 3320 Law And Business I (3) BA GBA

This course covers the nature of legal and societal institutions and environments, and major aspects of public, private, UCC and related business law.

BUL 3321 Law And Business II (3) BA GBA

Pr: BUL 3320. Legal problems in the market of goods, nature of property, sales of personal property, securing of credit granted, nature and use of negotiable instruments.

BUL 5331 Law and the Accountant (3) BA GBA

Pr: BUL 3320 or CJ. A comprehensive study of commercial law as it affects the practice of accounting.

CAP 5400 Digital Image Processing (3) EN ESB

Pr: EEL 4851C or GS Image formation, sources of image degrada-
tion, image enhancement techniques, edge detection operators and threshold selection, low-level processing algorithms for vision, image data compression.

CAP 5825 Introduction to Artificial Intelligence (3) EN ESB

Pr: EEL 4851C. Basic concepts, tools, and techniques used to produce and study intelligent behavior. Organizing knowledge, exploiting constraints, searching spaces, understanding natural languages, and problem solving strategies.

CAP 5862 Expert And Intelligent Systems (3) EN ESB

Pr: EEL 4851C Basic concepts, techniques and tools for the design and implementation of expert and intelligent systems. Knowledge representation, inference methods, knowledge acquisition meth-
ods, and some advanced concepts. Tools to facilitate construction of expert and intelligent systems.

CBH 4004 Comparative Psychology (3) AS PSY

Pr: PSY 3213 with a grade of C or better, or CJ. 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.

CCJ 3033 Crime and Justice in America SS (4) AS CJP

May be taken by both majors and non-majors for credit, subject to departmental approval for declared majors. This course is a non-
technical survey of the nature of crime in the United States and the ways in which our society seeks to deal with criminal offenders and victims of crime.

CCJ 3024 Survey of the Criminal Justice System SS (3) AS CJ

An introduction to the structure and operation of law enforcement, prosecution, the courts, and corrections. Also includes brief coverage of major reported crimes.

CCJ 3204 Substantive Criminal Law (3) AS CJP

Pr: CCJ 3024, CCJ 3610, CCJ 3621, POS 2041 or CJ. Examines the historical basis of the American criminal justice system, the substantive elements of the crime, and court procedures.

CCJ 3610 Theories of Criminal Behavior (3) AS CJP

Pr: CCJ 3024. Provides a basic understanding of the complex factors related to criminal behavior, and will examine crime causation on principal theoretical approaches to the explanation of crime.

CCJ 3621 Patterns of Criminal Behavior (3) AS CJ

Pr: Junior standing. Reviews the nature and extent of the crime problem. The course will concentrate on major patterns of offender behavior including crimes against the person, property crimes, violent crimes, economic/white collar offense, syndicated (orga-
nized) crimes, consensual crimes, female crime, political crime, and will examine crime causation.

CCJ 3701 Research Methods in Criminal Justice I (3) AS CJP

Pr: CCJ 3024 or CCJ 3610 or CJ. Introduces the student to some of the fundamentals of knowledge-generating processes in criminal justice.

CCJ 4109 Critical Issues in Policing (3) AS CJP

Pr: CCJ 3024 or CCJ 4110 or CJ. Focuses on some of the most critical issues in law enforcement today including: understanding and controlling police use of deadly force; police behavior; police prejudice and discrimination; violence-prone police officers; sub-
stance abuse by police officers; and administrative review of.___

CCJ 4110 American Law Enforcement Systems (3) AS CJP

Pr: CCJ 3024 or CCJ 3610 or CJ. Provides a comprehensive examination of the American law enforcement system at the federal, state, and local levels and an assessment of career opportunities within the community.

CCJ 4260 Environmental Law and Crime (3) AS CJP

Pr: CCJ 3024 or CJ. The course provides students with an introduc-
tion to issues in the area of environmental crime and environmental law.

CCJ 4273 Criminal Rights and Procedures (3) AS CJP

Pr: CCJ 3024 or CCJ 3610 or CJ. Emphasizes the Constitutional issues and rules that are applied and enforced by the courts while processing criminal cases.

CCJ 4282 Correctional Law (3) AS CJP

Pr: CCJ 3024 or CJ. The course provides students with an introduc-
tion to legal issues in the area of corrections, with an emphasis on civil and criminal liability for correctional staff and administrators and on convict's rights.

CCJ 4306 American Correctional Systems (3) AS CJP

Pr: CCJ 3024 or CCJ 3610 or CJ. Analysis of the different treatment philosophies and techniques currently in use in the field, with special attention to experimental and demonstration programs.

CCJ 4316 Correctional Administration (3) AS CJP

Pr: CCJ 3024 or CJ. The course provides students with an introduc-
tion to issues in correctional administration in both institutional and community corrections.

CCJ 4331 Alternatives to Incarceration (3) AS CJP

Pr: CCJ 3024 or CJS 3610 or CJ. This course exposes students to a variety of alternatives to imprisoning the offender, including probation, parole, diversion, and other community-based intervention and treatment approaches.

CCJ 4341 Intervention Techniques and Strategies (3) AS CJP

Pr: CCJ 3024 or CCJ 3610 or CJ. Introduces the student to theories
and methods underlying treatment modalities currently employed in the criminal justice system will be covered. (c) Students wishing to enroll in this course must complete a minimum of 4 CCJ courses and one or both of the major focus will be on law enforcement and correctional agencies.

CCJ 4501 Juvenile Justice System (3) AS CJP
PR: CCJ 3024 or CCJ 3610 or CI. Provides coverage of the juvenile and family court system, the administration of juvenile justice, and the juvenile court.

CCJ 4502 Police and Juvenile Delinquency (3) AS CJP
PR: CCJ 3024 or CI. Focuses on the unique aspects of law enforcement interaction with juveniles and their families. Issues which emerge when working with multi-cultural populations will be discussed. Police efforts at early detection, intervention, and diversion. Interaction with status offenders and children in need-of-assistance will be a topic of concern.

CCJ 4513 Juveniles' Rights and Procedures (3) AS CJP
PR: CCJ 4501 or CI. The course provides students with an introduction to the Juvenile Justice system, particularly with the issues on juveniles' rights as they relate to the juveniles in trouble who are processed through the beginning of the system as well as the rights and subsequent procedures that juveniles will encounter as they are processed further through the juvenile justice system or probably transferred to the adult criminal justice system.

CCJ 4540 Juvenile Correctional Alternatives (3) as CJP
PR: CCJ 4501 or CI. Focuses on juvenile correctional responses from detaining to the use of other facilities in the system attempts to handle status offenders and children in need of supervision will be covered. Diversion, detention, probation, and community-based non-secure facilities will be discussed.

CCJ 4550 Developmental Aspects of Juvenile Delinquency (3) AS CJP
PR: CCJ 3610 & CCJ 4501 or CI. Provides the student with a developmental/life course perspective of the processes, events, and factors which occur during childhood and adolescence and cause juvenile delinquency. This course focuses on the conditions which are critical in shaping the delinquents' behavior during their formative years.

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

CCJ 4652 Juvenile Substance Abuse (3) AS CJP
PR: CCJ 4501 or CI. Focuses on youth and drugs. It will cover such topics as the rates and patterns of the use of different drugs by youth with varying sociodemographic characteristics, the context and effects of use of various drugs, the drugs-crime connection, prevention, early intervention and treatment efforts, and drug use prevention.

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

CCJ 4801 Private Security Systems (3) AS CJP
PR: Junior standing plus CCJ4110. 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.

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

CCJ 4910 Directed Research (1-3) AS CJP
PR: CCJ 3024, CCJ 3610, CCJ 3621, CI. S/U only. (a) Students wishing to enroll must make arrangements with a faculty member during the semester prior to actually taking the course. (b) a minimum
to control settlement, soil stabilization and foundations subjected to dynamic loads. Computer applications to soil mechanics will be
covered.

CEG 4801 Geotechnical Design (2) EN GX
CR: CEG 4011. Design of geotechnical systems including bases, foundations, embankments, and dams.

CEG 4850 Capstone Geotechnical/Transportation Design
MW (3) EN GX
PR: CEG 4011, TTE 4011. A capstone geotechnical/transportation design experience for seniors in Civil and Environmental Engineering. Design of embankment and pavement bases. Comprehensive surface streets, open highway intersection and site design involving functional design, facility sizing, complete alignments and construction, pavement preparation, site layout and design, quantity summarization, bid tab preparation and specification preparation.

CEG 5115 Foundation Engineering (3) EN GX
PR: CR; CEG 4011 or CI. Design of shallow foundations, cantilevered and anchored retaining walls, piling, drilled piers and special foundations. Computer applications to geotechnical engineering are covered.

CEG 5205 Laboratory Testing for Geotechnical Engineers (3) EN GX
PR: CR: CEG 4011 or CI. Both routine and advanced forms of soil testing are covered. Emphasis is placed on procedures and application of results in 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 4721 User Interface Design (3) EN ESB
An examination of factors influencing the usability of a computer system. Topics include input and output devices, graphic and multimedia interfaces, formats for interaction/communication between computer and user, and evaluation of usability.

CES 3102 Structures I (3) EN GX
PR: EGN 3331. Analysis of simple structural systems, both determinate and indeterminate. Introduction to the use of energy methods in indeterminate structures.

CES 4000 Structures and The Urban Environment for Non-Engineers 6A MW (3) EN GX
This course reviews the best works of structural engineering to indicate how current technology and social context affects structural form, to familiarize students with relevant structural principles, and to introduce the concept of structural art.

CES 4141 Matrix Structural Analysis (3) EN GX

CGS 4161 Computer Aided Structural Design (3) EN GX
PR: CES 4141. Computer aided structural analysis and design using existing finite element program, static dynamic loading.

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

CGS 4618 Structural Design Steel (2) EN GX
PR: CES 4605. Design of structures made of steel.

CGS 4702 Concepts of Concrete Design (3) EN GX

CGS 4704 Structural Design-Concrete (2) EN GX

CGS 4720 Capstone Structural/Materials Designs (3) EN GX
PR: CES 4702. Capstone Structural Designs 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 4740 Capstone Structural/Geotechnical Design MW (3)

CJS 4742 Concepts of Structural Design (3) EN GX
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 beams.

CJS 4820C Timber and Masonry Design (3) EN GX
PR: CES 3102, CES 4702. Fundamentals of timber design including beams, columns, connections and formwork. Introduction to masonry design including design of beams, walls, columns, and pilasters.

CJS 5105C Advanced Mechanics of Materials I (3) EN GX
PR: EGN 3331, MAP 2302 Analytical study of the mechanical behavior of deformable solids and concepts of stress and strain transformation, special topics in beams, theory of elasticity, criteria of failure, beams on elastic foundation.

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

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

CGN 3021L Civil Engineering Laboratory (2) EN GX
PR: CES 3102, EGN 3353, EGN 3365. A laboratory experience in departmental facilities including the subject areas of structures, materials, fluids, transportation; soils, engineering mechanics, environmental engineering, and computer assisted data acquisition.

CGN 4122 Professional and Ethical Issues in Engineering MW (3) EN GX
Focus on engineering responsibilities in the technical aspects of preparing contracts and specifications. Objectives are to teach the student their legal and ethical responsibilities in the preparation of contracts and specifications and to make the student aware of legal problems in the preparation of contract documents. Emphasis of ethics in engineer-client agreements.

CGN 4851 Concrete Construction Materials (3) EN GX
PR: EGN 3365. Classification of concrete; production, placement, and curing; properties of cements; design and testing of concrete mixes to produce desired properties.

CGN 4905 Independent Study (1-5) EN GX
PR: CC. S/U only. Specialized independent study determined by the student and needs approval of the instructor.

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

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

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

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

CGS 2010 Computers in Mathematics Education (3) ED EDO
PR: CI. Admission to mathematics education program. Operation of computers. Basic and Logo languages. Examination and evaluation of software appropriate for teaching mathematics.

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

CGS 2062 Computers and Society (3) EN ESB
No credit for Engineering Majors. 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, programs and applications for students with little or no computing background.

CGS 2100 Computers In Business (3) BA QMB
A survey 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 2260 SC Mini-Computer Applications (3) EN ESB

CGS 3414 Problem Solving Using Pascal or C 6A (3) AS MTH
CR: MTH 3105. Introduction to Pascal or C with special emphasis on its applications to mathematics.

CGS 3462 SC Pascal Programming (3) EN ESB

CGS 3463 SC GPSS Simulation (3) EN ESB
PR: COP 2200. No credit for Engineering Majors. The development and execution of discrete event simulation models and real world systems using the GPSS language.
CGS 3464 SC Simscript Simulation (3) EN ESB

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

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

CHM 2200 Modern Chinese I Laboratory (1) AS MLL
CR: CHM 1120. SU 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 materials.

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

CHM 1121L Modern Chinese II Laboratory (1) AS MLL
CR: CHM 1121. SU 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 materials.

CHM 2200 Modern Chinese III (4) AS MLL
PR: CHM 1121 or the equivalent. For language students who intend to attain basic proficiency with the language.

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

CHM 4905 Directed Study (1-5) AS MLL
Departmental approval required. SU only. Permits study options in Modern Chinese not available in the regularly scheduled curriculum and at departmental discretion.

CHM 2021 Chemistry For Today NS (4) AS CHM
No credit for science majors. PR: High school chemistry and mathematics including algebra are recommended. An introduction to the principles and applications of modern chemistry including the properties of matter, structural view of matter and reactions, quantitative relations in chemical reactions, technological aspects and societal impact.

CHM 2030 Introduction to General, Organic and Biochemistry (4) AS CHM
No credit for science majors. First half of a two-semester sequence. Fundamental concepts of general, organic, and biological chemistry.

CHM 2045 General Chemistry I NS (3) AS CHM
PR: One year of high school chemistry and two years of high school mathematics including algebra; or, completion of CHM 2040 with 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.

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

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

CHM 2048L General Chemistry II Laboratory (1) AS CHM
PR: CHM 2045L. Laboratory portion of General Chemistry II. Continuation of chemistry laboratory.

CHM 2200 Organic Chemistry (4) AS CHM

CHM 2201 Organic Chemistry I (3) AS CHM
PR: CHM 2046. CHM 2046L. Fundamental principles of organic chemistry. Lecture.

CHM 2210L Organic Chemistry Laboratory I (2) AS CHM
PR: CHM 2200 or CHM 2210L. Laboratory portion of Organic Chemistry I. Introduction of organic laboratory principles and techniques.

CHM 2211 Organic Chemistry II (3) AS CHM
PR: CHM 2210 or equivalent. Continuation of organic chemistry. Lecture.

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

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

CHM 3120C Elementary Analytical Chemistry (4) AS CHM

CHM 3140C Elementary Physical Chemistry I (3) AS CHM
PR: CHM 2046, CHM 2046L, MAC 2281 or MAC 2311, PHY 2054, PHY 2054L. Introduction to thermodynamics. Properties of solutions with emphasis on biological applications.

CHM 3401C Elementary Physical Chemistry II (3) AS CHM
PR: CHM 3400. Reaction kinetics, enzyme kinetics, macromolecular systems, radiochemistry, molecular spectroscopy, and chemical bonding.

CHM 3402C Elementary Physical Chemistry Laboratory I (1) AS CHM
PR: CHM 3120C. CR: CHM 3400 and/or CHM 3401. A physical chemistry laboratory with emphasis on modern techniques and instruments. Lab.

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

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

CHM 4060 Use of the Chemical Literature I (3) AS CHM
Discussions and assignments using abstracts, bibliographies, indices, encyclopedias, journals, patent files, electronic databases, and other information sources to obtain chemical and technical material and including written and oral presentations. Career information and opportunities also discussed.

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

CHM 4130C Methods of Chemical Investigation I (4) AS CHM
PR: CHM 3120C, CHM 2211, CHM 2211L, CHM 4060, CHM 4410. Theory and applications of instrumental methods in chemical research, chemical synthesis and analysis; electrochemical and chromatographic techniques, separation methods, spectroscopy, statistical analysis of data, computer data handling, and individual projects.

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

CHM 4300 Biomolecules I (3) AS CHM
PR: CHM 2211. Nature, structure, elucidation, synthesis and (in selected cases) organic chemical mechanisms of biochemical involvement of the major classes of organic compounds found in living systems. Lec.

CHM 4410 Physical Chemistry I (3) AS CHM
PR: CHM 3120C and MAC 2282 or MAC 2312, and PHY 2054 or PHY2049. Thermodynamics, the states of matter, solutions. Lec.

CHM 4411 Physical Chemistry II (3) AS CHM
PR: CHM 3120C, and MAC 2282 or MAC 2312, and PHY 2054 or PHY 2049. Introduction to quantum mechanics and molecular spectroscopy. Lec.

CHM 4412 Physical Chemistry III (3) AS CHM

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

CHM 4906 Independent Study (1-3) AS CHM
PR: CI. SU only. Specialized independent study determined by the student’s needs and interests. The written contract required by the College of Arts and Sciences specifies the regulations governing independent study.

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

CHM 4970 Undergraduate Research (1-3) AS CHM
PR: CI. SU only.
CHM 5225 Intermediate Organic Chemistry (3) AS CHM
PR: CHM 221L, CHM 222L, or equivalent or CI or GS. This course will extend organic chemistry beyond the undergraduate level and will emphasize concepts of stereochemistry and reaction mechanism.

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

CHM 5425 Applications in Physical Chemistry (3) AS CHM
PR: CHM 4412 and CHM 4440 or CI or GS. Applications of chemical theory to chemical systems.

CHM 5452 Polymer Chemistry (3) AS CHM
PR: Either CHM 411L, CHM 421L, and CHM 3400 or CHM 4410 or graduate standing. Fundamentals of polymer synthesis, structure, properties, and characterization.

CHM 5621 Principles of Inorganic Chemistry (3) AS CHM
PR: CHM 4411. CHM 4610 or CI or GS. Chemical forces, reactivity, periodicity, and literature in inorganic chemistry; basic core course. Lec.

CHM 5931 Selected Topics in Chemistry (1-3) AS CHM
PR: CI. The following courses are representative offerings that are taught under this title: Natural Products, Stereochemistry, Reactive Intermediates, Photochemistry, Instrumental Electronics, Advanced Lab Techniques, Heterocyclic Chemistry, etc.

ChS 4300 Fundamentals of Clinical Chemistry (3) AS CHM
PR: BCH 3033. Theoretical and practical aspects of the analysis of various body fluids, with emphasis on the medical significance. Clinical chemistry majors must take CHS 4301 concurrently. Lec.

ChS 4301L Clinical Laboratory (1) AS CHM
PR: BCH 3033 and CI. CHM 3120C. CHS 4300 must be taken concurrently. Laboratory exercise in some of the most important clinical determinations. CHS 4300 must be taken concurrently. Lec.-Lab.

ChS 4302 Clinical Chemistry Practice (2-12) AS CHM
PR: CI. S.U. Only Laboratory practice in clinical chemistry laboratories in the Tampa Bay area.

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

CIS 4900 Independent Study in Computer Science (1-5) EN ESB
PR: CI. S.U. Only. Specialized independent study determined by the needs and interests of the student.

CIS 4910 Computer Science Project (2) EN ESB
Projects intended to develop individual interests and abilities in computer science involving either computer hardware or software aspects of a well defined proposal.

CIS 4930 Special Topics in Computer Science (1-4) EN ESB
PR: CI. Senior standing in the Computer Science Department.

CJT 4100 Criminal Investigation (3) AS CJP
PR: CJC 3024 or CCJ 3610 or CI. Covers the major components of criminal investigation, with special attention to the scientific aspects of criminal investigation and the management of major cases.

CLA 3103 Greek Civilization HP (3) AS CLA
Study of Greek Civilization from its beginning to the Roman period, with emphasis on social customs, political institutions, and daily life.

CLA 3123 Roman Civilization HP (3) AS CLA
Study of Ancient Roman Civilization with emphasis on social customs, political institutions, and daily life.

CLP 3003 Psychology of Adjustment SS (3) AS PSY
Not for major credit. Genetic, organic, and learned factors involved in the processes of personal adjustment: applications of mental health principles to everyday living.

CLP 4143 Abnormal Psychology (3) AS PSY
PR: PSY 3211 and a grade of C or better, psychology major or CI. Descriptions, theoretical explanations, research evidence, and treatment of maladaptive behavior.

CLP 4414 Behavior Modification (3) AS PSY
PR: PSY 3211 with a grade of C or better. Behavioral measurement, research designs, and interventions in treatment settings.

CLP 4640 Psychological Tests and Measurement (3) AS PSY
PR: PSY 3213 with a grade of C or better. Students may not receive credit for both CLP 4433 and EDF 4430. A consideration of the instruments for intellecual and personally assessment including their application, development, and potential abuses.

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

CLT 3101 Greek Literature in Translation 6A MW (3) AS CLA
Reading and discussion of major works in Greek literature. Special emphasis on the Iliad, the dramatists Aeschylus, Sophocles, Euripides and Aristophanes. Some attention is given to the social and political background of the works. All readings are in English.

CLT 3102 Roman Literature in Translation 6A MW (3) AS CLA
Reading and discussion of major works in Roman literature. Special emphasis is placed on the Aeneid, comedy and satire. Some attention is given to the political background of the works. All readings are in English.

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

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

COM 3014 Communication, Gender and Identity (3) AS SPE
Examines the communicative origins and implications of gender roles.

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

COM 3120 Introduction to Communication Theory in Organizations (3) AS SPE
PR: majors, COM 2000 or CI; non-majors, COM 3122 or COM 3110 or CI. A survey of communication concepts which impact upon organizational effectiveness.

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

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

COM 4020 Communicating Illness, Grief, and Loss 6A (3) AS SPE
PR: Junior/Senior standing or 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 cultures of illness.

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

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

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

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

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

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

COP 2000 Computer Science Laboratory (1) EN ESB

COP 2000L Introduction to Computer Science (3) EN ESB
CR: COP 2000L. Introduction to the concepts of algorithmic formulation of problems for computer solution and the general abstract
operations used in these formulations.

**COP 1210 SC Cobol Programming I (3) EN ESB**

**COP 2210 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 2200 SC Fortran Programming (3) EN ESB**
PR: CGS 2060. No credit for Engineering Majors Solution of scientifically oriented problems using the FORTRAN language. Particular emphasis is placed on file manipulation and system libraries.

**COP 2400 Computer Systems (3) EN ESB**

**COP 25 Programming Concepts (3) EN ESB**
PR: COP 2000L. An examination of modern programming language emphasizing programming concepts and design methodology.

**COP 3514 Program Design (3) EN ESP**
The class examines the concepts involved in program design and creation and serves as an introduction to programming in the C programming language.

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

**COP 4023 Comparison Of Programming Languages (3) EN ESB**
PR: EEL 4851C. A comparative study of procedural and nonprocedural computer languages, emphasizing the fundamental differences in information binding, string and data structures manipulation, control and I/O structures in different languages.

**COP 4123 Symbolic Computations in Mathematics 6A (3) AS MTH**
PR: MAS 3105 and MAP 2302 Students will write programs to solve problems in various areas of mathematics including calculus and linear algebra with symbolic programming systems such as Maple, Mathematica, or Macsyma.

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

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

**COT 4400 Analysis Of Algorithms (3) EN ESB**
PR: 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.

**CPO 4034 Politics of the Developing Areas SS AF (3) AS POL**
An analysis of the ideologies, governmental structures, and political processes of selected nations of the non-Western world.

**CPO 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 politics.

**CPO 4930 Comparative Government and Politics of Selected Countries SS AF (3) AS PG (3)**
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, it 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 as they have been used in the development of fiction and as they exist today.

**CRW 3112 Fiction I 6A (3) AS ENG**
PR: 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 3112 Fiction II 6A (3) AS ENG**
PR: CRW 3111. CRW 3112. A fiction workshop which provides individual and peer guidance and direction for student writing and which also attempts to encourage the development of critical skills.

**CRW 3311 Form and Technique of Poetry (3) AS ENG**
An examination of the various elements of poetry 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 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 rhyued 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 and direction for the student’s writing and which also attempts to encourage the development of critical skills.

**CRW 4120 Fiction III (3) AS ENG**
PR: CRW 3111, CRW 3112, CRW 3121. An advanced fiction workshop wherein works may be carried over from CRW 3121 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 wherein students are expected to create works exhibiting a firm knowledge of the principles explored in the preceding courses.

**CRW 4930 Selected Topics in Creative Writing (3) 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.

**CWR 4103 Water Resources Engineering (3) EN EGE**
PR: CRW 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 4202 Hydraulics (3) EN EGE**
PR: EGN 3353. Fundamental and applied aspects of pipe flow, free surface flow, and hydraulic structures.

**CWR 4810 Hydraulic Design (2) EN EGE**
PR: CWR 4103, CWR 4202. Design of hydraulic systems, including drainage, water supply, and flood control.

**CWR 4812 Capstone Water Resources Design MW (3) EN EGE**
PR: CWR 4202, CWR 4103. 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, including drainage, water supply, and flood control.

**DAA 2100 Fundamentals Of Modern Dance (2) FA DAN**
A studio class for students with a serious interest in concert modern dance. Emphasis on correct alignment, development of strength, rhythmic and dynamic activity as well as spatial and locomotor patterns that underlie work in more advanced contemporary dance.

**DAA 2112 Modern Dance I (2) FA DAN**
PR: Admission by placement audition. A studio class for students with a serious interest in concert modern dance. Emphasis on correct alignment, development of strength, rhythmic and dynamic activity as well as spatial and locomotor patterns that underlie work in more advanced contemporary dance.

**DAA 2200 Fundamentals Of Ballet (2) FA 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).

**DAA 2205 Ballet I (2) FA DAN**
PR: Admission by placement audition. 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).
DAA 2500 Fundamentals Of Jazz Dance (2) FA DAN
A basic movement course in Jazz Dance involving dance vocabulary, alignment, styles and simple rhythmic movement patterns.

DAA 2504 Jazz Dance (2) FA DAN
PR: Admission by placement audition. DAA 3204 or DAA 2104. A technique course 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 on a strong rhythmic base.

DAA 2505 Theatre Dance Styles (2) FA DAN
PR: DAA 2100 or DAA 2200 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, waltz, tap dancing, etc.

DAA 2570 Jazz Theatre Dance (3) FA DAN
PR: Admission by placement audition and DAA 3502. Continuation of DAA 3502. Further emphasis on projection, phrasing, rhythmic patterns, and dynamics. Solo and ensemble studies leading to performance.

DAA 3108 Modern Dance II (3) FA DAN
PR: Admission by placement audition. Study of principles of modern dance techniques. Practical work in exercises and movement phrases, utilizing changing rhythms and dynamics. Concert and performance attendance required.

DAA 3109 Modern Dance III (3-4) FA DAN
PR: Admission by placement audition. Continuation of DAA 2104. Further emphasis on style and phrasing. Work on projecting mood and quality by dancing and rehearsing in more advanced choreography, leading to performance.

DAA 3204 Ballet Variations (1) FA 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). Semilateral is covered. Almost totally practical work in class with a few outside projects. Concert and performance attendance required.

DAA 3394 World Dance Topics (1) FA DAN
Students will experience fundamental knowledge of dance representing various world cultures. In addition to a dance/movement component, instruction will be made to historical, spiritual, religious, ethnological and environmental indigenous aspects of people involved in dance as a cultural experience. May be repeated up to 4 credits.

DAA 3614 Choreography I (2) FA DAN
PR: DAA 2611 or CI. DAA 2104 or above. Study and execution of basic principles of composition. Preparation of studies in theme and variations, breath phases and metric phrases.

DAA 3615 Choreography II (2) FA DAN
PR: DAA 3614 or CI. Preparation of studies in rhythm, dynamics, form and motivation.

DAA 3624 Dance Improvisation (2) FA 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.

DAA 3654 Repertory (1) FA DAN
PR: Admission by audition or CC. The development and performance of solo and/or group dances.

DAA 3686 Performance (1) FA DAN
PR: Admission by audition or CC. Open to all university students proficient in dance techniques and concurrently enrolled on Technique. Rehearsal and performance of works presented by the department.

DAA 3800 Movement Analysis (2) FA DAN
Specialized study in movement theories, body alignment, and movement patterns focusing on the scientific and analytical basis of movement in dance with consideration for developmental process, creative expression, and performance.

DAA 4206 Ballet IV (4) FA DAN
PR: Admission by placement audition or CI. Perfecting the execution of barre work. Intensification of centre work. More stress on aesthetic qualities of movement and phrasing. Students expected to be proficient in pointe work. Outside projects, concerts, and performances are required.

DAA 4617 Choreography IV (2) FA DAN
PR: DAA 4702. The course will prepare students based on free form, minimal art, and chance methods. Leck-, lab., reading.

DAA 4702 Choreography III (2) FA DAN
PR: DAA 3615 or CI. CR: DAA 3105 or above. Work directed toward duets and group dances. The students will submit choreographic ideas for instructor's approval, then proceed with rehearsals. Leck-, lab., reading. Rehearsal hours to be arranged.

DAA 4790 Senior Project (1) FA DAN
PR: Senior Major, CI, CC. Creation of an original group work and solo within the senior's major concentration-ballet or modern. To be done and presented with the concurrence of a faculty advisor.

DAA 4920 Dance Studies (1-4) FA DAN
PR: CI and CC. Dance major will complete an individual study to extended competency in technique and performance of Dance through participation in special workshops.

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

DAE 4390 Dance Pedagogy: Theory And Practice (3) FA 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 school curricula, Pre-K and Elementary Methods.

DAE 4397 Special Studies Dance Education (3) FA DAN
PR: CI and CC. CR: DAA 4436. 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.

DAA 4936 Senior Seminar in Dance Education (2) FA DAN
CR: DAA 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) FA DAN
CR: DAA 4936, S/U only. One full semester of internship in a public or private school. In special programs where the intern experience is distributed over two or more semesters, students will be registered for credit which accumulates from 9 to 12 semester hours.

DAA 2100 Introduction To Dance 6A FA (3) FA DAN
For majors and non-dance majors, a study of the art and language of dance through lectures, discussions, concert attendance, and studio practice. Designed to develop awareness and insight of this art form through discussion, observation, writing, and movement experience.

DAA 2160 Entry Seminar (2) FA DAN
This is a study of dance-related career opportunities through lectures, assigned reading and video viewing. This course will aid majors and non-majors in understanding dance as an aesthetic art form through discussion and critical evaluation.

DAA 2610 Music For Dance (2) FA DAN
PR: DAA 2610 or CI. Development of musical skills in movement studies. Continued study of the inter-relationship of music and dance through movement experiences, observations, video, and writing.

DAA 3420 Introduction to Laban Movement Analysis (3) FA DAN
Laban Movement Analysis is a system which enables one to see, describe and learn movement in a clear, efficient and objective manner. Space, shape, dynamics and human development patterns are categories which are studied by means of lecture, improvisational movement and reading materials.

DAA 3584 Practicum In Dance Production (1-2) FA 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 at least 2 credits for graduation accumulated in two different semesters. 40 hour lab required.

DAA 4134 Dance History Though the 19th Century 6A XLR (3) FA 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.

DAA 4135 20th Century Dance XMW (3) FA 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 4140 Dance Senior Seminar (2) FA DAN
PR: Senior major 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 examination of various aspects of dance. Prerequisite: permission of the instructor. Lecture/laboratory.

DAN 4784 Specialized Study in Movement Theory and Body Alignment (2) FA DAN
Analysis of scientific basis of movement for the dancer through the study of body alignment and movement theories related to dance techniques. Prerequisite: permission of the instructor. Lecture/Laboratory.

DAN 4905 Directed Reading (2) FA DAN
PR: CI and CC. A contract with all necessary signatures is required for registration. Selection of topic and materials must be agreed upon and appropriate credit must be assigned prior to registration.

DAN 4941 Directed Study (1-5) FA DAN
PR: CI, CC. Independent studies in the various areas of Dance. Course of study may be used to fulfill Junior Project. Must receive approval prior to registration.

DAN 4930 Selected Topics In Dance (1-5) FA DAN
PR: CI and CC. The content of the course will be governed by student and instructor interest.

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 4401 Special Teaching Methods: Distributive Education (4) ED EDV
Methods, techniques, and materials for skill development.

DEC 4936 Senior Seminar in Distributive and Marketing Education (2) ED EDV

DEC 4940 Internship: Distributive and Marketing Education (1-12) ED EDV
CR: DEC 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.

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

DEP 2004 The Life Cycle (3) AS GEY
An examination of individuals and the physical, cognitive, personality, and social changes which occur throughout the entire life span.

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

DEP 4005 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.

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

ECH 3023 Introduction to Process Engineering (3) EN ECH

ECH 3264C Transport Processes I (3) EN ECH
PR: ECH 3023. Design, sizing, and selection of fluid flow and heat transfer equipment to satisfy safety and process demands. Lecture/laboratory.

ECH 3702 Instrument Systems I (4) EN ECH
PR: EGN 3373. Application of discrete logic operations for sensor interfacing and process control situations in Chemical & Mechanical Engineering. Use of programmable logic controllers in process control. Introduction to the use of personal computer I/O interface cards of control application.

ECH 4123C Phase and Chemical Equilibria (3) EN ECH
PR: For majors, ECH 3023; for non-majors ECH 3022 or CHM 4410. Correlation of thermodynamic properties of real systems and solutions. Description of multicomponent, multiphase systems in equilibrium. Applications to separation processes and reactor design. Lecture/laboratory.

ECH 4244L Chemical Engineering Laboratory II (2) EN ECH

ECH 4256C Transport Processes II (3) EN ECH
PR: ECH 3264C, ECH 4123C. Design, sizing, and selection of mass transfer equipment. Absorption, distillation, extraction, humidification. Lecture/laboratory.

ECH 4323C Automatic Control I (4) EN ECH

ECH 4414 Reacting Systems (3) EN ECH
PR: CHM 4412, ECH 4256C, ECH 4244L. Equilibrium and rate phenomena in reacting systems. Description of homogeneous chemical reactors for design and control. Lecture/laboratory.

ECH 4605 Strategies of Process Engineering (3) EN ECH

ECH 4615 Plant Design and Optimization MW (3) 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 4930 Special Topics in Chemical Engineering I (1-4) EN ECH
PR: CI.

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

ECH 5285 Transport Phenomena (3) EN ECH
PR: Senior or GS in Engineering Basic descriptive equations of fluid, heat, and mass transport. Description and solution to intermediate problems, including unsteady state and multidimensional systems. Estimation of transport and convective coefficients.

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

ECH 5740 Theory and Properties of Bioprocesses (4) EN ECH
PR: Senior standing in engineering or CI. Open to majors and non-majors with CI. Introduction to biotechnology, including applied microbiology, enzyme technology, biomass production, bioreactor design, and transport processes in biosystems.

ECH 5742 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.

ECH 5746 Introduction to Biomedical Engineering (3) EN ECH
PR: Senior or graduate standing in engineering or CI. Open to non-engineering students with CI. Introduction to biomedical engineering, including transport phenomena in biomedical systems, biomaterials, biomedical instrumentation, prosthetic devices, and clinical engineering.

ECH 5747C Selected Topics in Chemical Engineering Biotechnology (1-3) EN ECH
PR: Senior standing in engineering or CI. Open to majors and non-majors with CI. Selected topics in chemical engineering biotechnology, including fermentation, recombinant DNA technology, food engineering, and fermentation.

ECH 5748 Selected Topics in Biomedical Engineering (1-3) EN ECH
PR: Senior or GS in Engineering may be taken by non-engineering students with CI. Selected topics in biomedical engineering, including biomedical engineering, biomedical materials, biomechanical instrumentation, and statistical methods.

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 5910 Directed Research in Bioengineering (1-3) EN ECH PR: CI. Directed research in an area of biomedical engineering or engineering biotechnology.

ECH 5930 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) BA ECN No credit after completing ECO 2023/ECO 2023. Survey of Economic principles and issues. Scarcity, choice, markets, prices, the monetarist research system, unemployment, inflation, international trade and finance.

ECO 2013 Economic Principles (Macroeconomics) SS (3) BA ECN Introduction to the theory of income determination with emphasis on monetary and fiscal policies. Objectives of full employment, price stability, economic growth, balance of payments stability.

ECO 2023 Economic Principles (Microeconomics) SS (3) BA ECN PR: ECO 2013. Introduction to the theory of price determination. How an economy decides what to produce, how to produce and how to distribute goods and services.

ECO 2935 Selected Topics in Economics (1-3) BA ECN PR: CI. Not available for credit to upper-level students admitted to the College of Business. Topics selected by department.

ECO 3100 Managerial Economics (3) BA ECN PR: ECO 2023. Application of microeconomic theory to problems in business decision making with a special focus on price determination.

ECO 3101 Intermediate Price Theory (3) BA ECN PR: ECO 2023. The price system and allocation of scarce resources between competing uses.

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

ECO 3850 American Economic History (3) BA ECN PR: ECO 2023. Growth and evolution of American economic institutions from Colonial times to the present.

ECO 3703 International Economics MW (3) BA ECN PR: ECO 3101 with a grade of “C” or better. Role of international trade in the U.S. economy. Gains from trade, balance of payments, exchange rate determination, balance of payments stability and international commercial policy.

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

ECO 4201 Advanced Macroeconomic Theory (3) BA ECN An advanced survey of special topics in macroeconomics. Develops and contrasts the neoclassical growth, endogenous growth, real business cycle and new Keynesian models. Relevant empirical studies are presented.

ECO 4303 History Of Economic Thought (3) BA ECN PR: ECO 3101 with a grade of “C” or better. Development of economic thought from Plato to Marshall.

ECO 4323 Radical Political Economy MW (3) BA ECN PR: ECO 1000 or ECO 3103 or CI. The radical (left) and Marxist schools of thought in economics. Application of radical theory to problems of advanced capitalist and socialist societies.

ECO 4401 Introduction to Mathematical Economics (3) BA ECN PR: ECO 2013, QMB 3200, and MAC 2233 or MAC 2230 or CI. Mathematical models of optimizing behavior and economic equilibrium.

ECO 4421 Introduction to Econometrics (3) BA ECN PR: QMB 3200 with a grade of “B” or better. Survey of basic econometric techniques. Regression analysis employed to estimate consumption, investment, demand, cost, and production functions. Examines problems of auto-correlation, heteroscedasticity, multicollinearity, and specification errors.


ECO 4713 International Monetary Relations (3) BA ECN PR: ECO 3203 Advanced analysis of international macroeconomic relationships. Foreign exchange market, international monetary system balance of payments.

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

ECO 4905 Independent Study (1-3) BA ECN PR: CI. SU only. Specialized independent study determined by the student’s needs and interests.

ECO 4914 Independent Research (1-3) BA ECN PR: CI. Individual study contract with instructor and department chairperson required. The research project will be mutually determined by the student and instructor.

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

ECP 2001 Survey of Micro and Macroeconomics (3) BA ECN A condensed introductory course in microeconomics and macroeconomics, intended for pre-business students. This course and ECO 2023 cannot both be taken for credit.

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

ECP 3303 Labor Economics (3) BA ECN PR: ECO 3101 with a grade of “C” or better. Determinants of wage and employment levels; occupation, industrial and geographical wage differentials, union and public policy effects on labor markets; the economics of discrimination; inflation and unemployment.


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

ECP 3613 Economics of the Urban Environment (3) BA ECN PR: ECO 1000 or ECO 2023 or CI. Economic analysis of cities and urban social problems. Poverty, discrimination, housing, transportation, pollution, crime and fiscal considerations.

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

ECP 4451 Law and Economics (3) BA ECN PR: ECO 2023 with a grade of “C” or better. Advanced analysis of the economic impact of tort, criminal, property and contract law as well as in the formation and adjudication of law.

ECP 4505 Economics of Crime (3) BA ECN PR: ECO 2323. Application of economic theory to the analyses of criminal behavior, crime prevention, law enforcement, sanctions and corrections.

ECS 3013 Economic Development (3) BA ECN

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

EDE 4301 Teaching Methods in the Elementary School (3) ED EDE PR: EDE 4941 and EDG 4620. Techniques and strategies appropriate for the instruction of children in educational settings.

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

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

EDE 4940 Internship: Elementary Education (10-12) ED EDE PR: EDG 4936. EDE 4936, EDE 4941 and EDE 4946. SU only. Teacher candidate is required to demonstrate professional competencies during one semester of full day internship in a public or private
elementary school.
EDE 4941 Child Development Internship Level I (3) 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 weekly seminar.

EDE 4942 Child Development 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) EDF EDC Introductory survey course required for admission into the College of Education, 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 models for different instructional goals, analysis of teacher behavior, micro-teaching.

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

EDF 3542 Philosophy of Education MW (4) ED EDF
PR: Upper level standing. A study of philosophy of education with an emphasis on aspects that are relevant to an understanding of the issues and problems of American education.

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

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

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 classroom.

EDF 4430 Measurement For Teachers (3) ED EDQ
PR: EDF 3117. 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 4905 Independent Study: Educational Foundations (1-4) EDF
PR: DPR. S/U only. Specialized independent study determined by the student's needs and interests.

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

EDF 5136 Adolescence (4) ED EDF
Study of the educational, intellectual, personality, physical, social and vocational factors in adolescence and their importance for school personnel.

EDF 5285 Programmed Instruction and Teaching Machines (3) ED EDF
Principles for programming in several academic subjects.

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

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

EDG 4620 Curriculum and Instruction (3) ED EDC
An introduction to the field of curriculum and instruction. Emphasis is placed on principles of curriculum development and use of instructional strategies. Students will develop, implement, and evaluate a variety of lesson plans. Begins with a study of the development of drama as it relates to human development, the course includes basic strategies when using pantomime, voice improvisation, theatre games, and role playing and story dramatization.

EDG 4909 Directed Studies (1-4) ED EDC
PR: Senior standing. Offered only as a scheduled class. Department permit required. To extend competency in teaching field.

EED 4000 Introduction to Early Childhood Education (3) ED EDDU
An overview of early childhood education with emphasis on its historical development, current theories, and practices.

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

ECC 4203 Programs for Young Children (3) ED EDU
PR: Admission to College of Education. Early Childhood majors only. Describing students’ unique needs and social foundations of early childhood education, establishing professional beliefs regarding teaching young children, and developing an appropriate learning environment.

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

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

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

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

ECC 4408 Child, Family & Teacher Relations (3) ED EDU
PR: Admission to College of Education, EDF 4111. Early Childhood majors only. Focuses on developing an understanding of traditional and non-traditional families, structural and lifestyle variations and parenting in diverse cultures and at-risk families. Implications from these understandings will guide development of a parent involvement plan that includes effective ways to communicate with parents, conference with parents, and plan parent meetings and family events.

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

ECC 4905 Independent Study: Early Childhood Education (1-4) EDEDU PR: S/U only. Early Childhood majors only. Specialized independent study determined by the student’s needs and interests.

ECC 4909 Directed Study: Early Childhood Education (1-3) ED EDU
PR: Senior standing. To extend knowledge in teaching field.
ECE 4936 Senior Seminar in Elementary Childhood Education (2) ED EDE
PR: Senior standing; CR: ECE 4940. Synthesis of teacher candidate’s courses in complete college program.

ECE 4940 Internship: Early Childhood (10) ED EDE
CR: ECE 4936 only. Teacher candidate is required to demonstrate professional competencies during one semester of full-day internship in a public or private elementary school.

ECE 4941 Field Experience I (3) ED EDE
PR: Admission to College of Education, EDF 4111. Early Childhood majors only. Field placement with three and four year olds where teacher candidates have opportunities to apply knowledge and skills in authentic situations and become objective observers of young children’s development. Weekly seminars are conducted in conjunction with the field experience which provide teacher candidates an opportunity for reflection on their understandings.

ECE 4942 Field Experience II (3) ED EDE
PR: Admission to College of Education, EDF 4111. Early Childhood majors only. Field placement in kindergarten or primary grade where teacher candidates have opportunities to apply knowledge and skills in authentic situations. Emphasis on developing deeper understanding of children’s development and implications of development for program planning for both typical and atypical children.

ECE 4943 Field Experience III (3) ED EDE
PR: Admission to College of Education, EDF 4111. Early Childhood majors only. Field placement in kindergarten or primary grade where teacher candidates have opportunities to apply knowledge and skills in authentic situations. Focus on developing deeper understanding of growth and development and relationship to curriculum planning with emphasis on self-evaluation of knowledge, skills, and dispositions essential for teaching.

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

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

EED 4941 Undergraduate Supervised Practicum in Behavior Disorders (1-6) EDS
PR: EEX 4011. S/U only. DPR. Supervised field experience in assessment, classroom management, and clinical teaching with children who have emotional and behavioral disabilities.

EEL 3100 Computer Network Monitoring and Analysis (3) EN EGE

EEL 4122 Digital Electronics (3) EN EGE
PR: EGN 3373. A course in the physical principles of electronic devices with emphasis on semi-conductor electronics. Includes the analysis and design of amplifiers and switching circuits.

EEL 4302 Fields and Waves I (3) EN EGE
PR: MAP 2302, PHY 2049, PHY 2049L. A basic introduction to electromagnetic field theory, including static and dynamic electromagnetic fields.

EEL 4102 Linear Systems Analysis (3) EN EGE
PR: EEL 3100. Provides further study in the analysis of linear networks and systems. Includes time and frequency domain points of view, Laplace, Fourier and superposition integrals.

EEL 4163 Computer Aided Design and Analysis (2) EN EGE
PR: EEL 3302. EEL 4705. The emphasis is upon applications and how to use the major CADA programs as effective tools to solve a wide variety of engineering problems. The coverage includes solid state design, systems analysis, digital logic, and transfer function solutions.

EEL 4305 Electronics II (3) EN EGE
PR: EEL 3302. Provides further study in electronic circuits. Includes feedback, frequency response techniques in amplifier design.

EEL 4351C Semiconductor Devices (3) EN EGE
PR: EEL 3302. An introduction to the fundamentals of semiconductor materials and semiconductor device operation.

EEL 4411 Fields and Waves II (3) EN EGE
PR: MAP 2302, PHY 2049, PHY 2049L. A basic introduction to electromagnetic field theory, including static and dynamic electromagnetic fields.

EEL 451I Communication Engineering (2) EN EGE
PR: EEL 4512. Analog telephone network, digitalization. Digital transmission and multiplexing. Digital switching, space division switching, time-division switching, space-time switching, analog environment, broadcasting and recording (audio and video), television systems, cable and satellite TV.

EEL 4512C Introduction to Communication Systems (3) EN EGE
PR: EEL 3100. Signals and Fourier transforms in communication systems; measure of information in signals. AM, FM, and PM modulation and demodulation systems. Sampling, quantization and PAM. Data communication lines, modems, repeaters, timing circuits, and interfaces. Local networks.

EEL 4567 Electro-Optics (3) EN EGE
PR: EEL 3301L, EEL 3302L, EEL 3410. An introduction to the field of electro-optics, including visible and infra-red sources and detectors, radiometry, optical and electronic components, and fiber optics.

EEL 4568 Linear Control Systems (3) EN EGE
PR: EEL 3100. Introduction to analysis and design of linear feedback control systems. Covers block diagram, flow charts, Bode, Nyquist, and root locus techniques.

EEL 4705 Logic Design (3) EN ESB
PR: EGN 3373, CR: EEL 4705L, for CS & E students CR or PR: COP 2002. Binary number systems; truth functions; Boolean algebra; canonical forms; minimization of combinational logic circuits; synchronous logic circuits in computers.

EEL 4705L Logic Laboratory (1) EN ESB
CR: EEL 4705.

EEL 4743L Microprocessor Laboratory (1) EN ESB
CR: EEL 4744. Laboratory for microprocessor use and evaluation.

EEL 4744 Microprocessor Principles and Applications (3) EN ESB

EEL 4748 Microprocessor-Based System Design and Application (3) EN EGE
PR: EEL 4744, EEL 4743L. Study of techniques for design of microprocessor-based systems used in various applications. Includes a project on development of an experimental application system.

EEL 4756 Signal and Image Processing (3) EN ESB
Sampling and quantization of signals and images; frequency-domain representations; transforms; filtering, convolution, and correlation; raster scanning and interlacing; color images; fast methods and parallelism; multi-rate processing, information signals.

EEL 4781C Distributed Processing and Computer Networks (3) EN ESB
PR: COP 4600, CDA 4100. Design and analysis of distributed processing systems. Covers communication hardware and software, network operating systems, and reliability enhancement techniques.

EEL 4811C Data Base Systems (3) EN ESB
PR: COP 2002. COP 2000L Fundamentals of data organization for purposes of program efficiency, clarity and simplicity will be addressed.

EEL 4811C Data Base Systems (3) EN ESB
PR: EEL 4851C. Fundamentals of data base management systems. CODASYL, network, hierarchical, and relational data base systems are analyzed, and typical applications are presented.

EEL 4905 Independent Study (1-6) EN EGE
PR: CI. S/U only. Specialized independent study determined by the students’ needs and interests.

EEL 4906 Design Project MW (2) EN EGE
PR: Senior standing. Required of all electrical seniors. An individual or team project involving the design of an electrical component system.

EEL 4935 Special Electrical Topics I (1-4) EN EGE
EEL 4936 Special Electrical Topics II (1-4) EN EGE
EEL 4937 Special Electrical Topics III (1-4) EN EGE

EEL 5250 Power System Analysis (3) EN EGE
Analysis technique for AC power systems.

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

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

EEL 5357 Analog CMOS/LSI Design (3) EN EGE
PR: EEL 4305 or GS Design of analog circuits for CMOS/LSI design. Op amps, comparators, D to A and A to D converters. Switched
capacitor filters. Analog simulation.

EEL 4823 Physics of Microelectronics (3) EN EGE
PR: EEL 3410 or GS Quantum mechanics with emphasis on electronic properties in atoms, molecules, and crystals; quantum statistics; energy band theory; crystal structures; defect chemistry; semiconductor properties.

EEL 5437 Microwave Engineering (3) EN EGE
PR: EEL 4411, EEL 4102, or GS Introduction to passive and active components, devices, and circuits, including transmission lines and wave guides, employed in microwave integrated circuits and systems.

EEL 5462 Antenna Theory (3) EN EGE
PR: EEL 4411 or GS Antenna theory beginning with fundamental parameters and continuing with mathematical concepts, elemental antennas and arrays.

EEL 5572C Local and Metropolitan Area Networks (3) EN EGE
PR: EEL 6534 or EEL 4512 or GS Basics of data communication exchange of digital information over communication media; Basics of LAN/MANs and its components: media topologies, access methods, etc.; LAN/MAN architectures and protocols—IEEE 802.x/LAN Standards; High speed LANs such as FDDI, IEEE 802.6 MAN, etc.; Internetworking; LAN/MAN Design and selection.

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

EEL 5754C Microprocessor Based Digital Signal Processing (3) EN EGE
PR: EEL 4705 or CC, Arithmetic systems, processing structures, efficient algorithms. DSP hardware, TI, NEC and other DSP microprocessors, multiprocessing hardware and software. System development: Application to telecommunications and voice processing.

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

EEL 5935 Special Electrical Topics I (1-3) EN EGE
EEL 5936 Special Electrical Topics II (1-3) EN EGE
EEL 5937 Special Electrical Topics III (1-3) EN EGE

EEX 4011 Foundations of Special Education (3) ED EDS
DPR: Characteristics and needs of children who have learning disabilities, emotional disabilities, hearing impairments, mental retardation, physical handicaps, speech impairments, visual limitations, and who are gifted and talented.

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

EEX 4221 Educational Assessment of Exceptional Students (3) ED EDS
PR: EEX 3214 and EEX 4011. Taken concurrently with EED 4941, ELD 4941, or EMR 4941 and EEX 4846. DPR. Introduction to assessment of exceptional students through formal and informal techniques. Emphasis placed on the interpretation of information for educational programming and individualization of instruction.

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

EEX 4504 Behavior Management for Special Needs and at Risk Students (3) ED EDS
PR: EEX 4011. Taken concurrently with EED 4941, ELD 4941, or EMR 4941. Techniques to prevent, analyze, and manage challenging and disruptive classroom behavior as well as teaching social skills.

EEX 4742 Narrative Perspectives on Exceptionality: Cultural and Ethical Issues 6A Lw (3) ED EDS
DPR. This course is designed to use literature as a way to interpret the lives of individuals with disabilities and those who play an educational role in their lives. The course also addresses cultural and ethnic diversity so as to better analyze the role of ethics and values in decisions made pertaining to individuals with disabilities.

EEX 4846 Clinical Teaching in Special Education (3) ED EDS
PR: EEX 4011. Taken concurrently with EED 4941, ELD 4941, or EMR 4941 and EEX 4221. DPR. Effective teaching principles, instructional management procedures, and specialized teaching techniques for exceptional students.

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

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

EEX 4938 Senior Seminar in Exceptional Student Education (2) ED EDS

EEX 4940 Internship: Exceptional Student Education (1-10) ED EDS
CR: EEX 4936. S/U only. One full semester of internship in an accredited public or private school.

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

EEX 5792 Working With Families: A Pluralistic Perspective (3) ED EDS
PR: Introductory course in special education, GS, Spring Semester. The impact of the socio/cultural environment on the education of at-risk children in schools with disabilities, family/systems theory, principles of multi-cultural education, strategies for working effectively with families of school-age children, diverse cultures and family structures represented in school populations today.

EGL 5565 Nature and Nature of the Gifted (3) ED EDS
Fall This course survey examines the characteristics and educational needs of children and youth who are gifted, including those from special populations. Emphasis is on giftedness as defined historically, nationally, and culturally. The course also explores changing views of intelligence and talent development related to policy and practice in gifted education as well as the processes of identification and programming.

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

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

EGN 2092 History of Electrotechnology HP (3) EN EGB
PR: EGN 2049 or EGN 2054. Highlights of the history of electrotechnology and its relation to the development of civilization. The contributions of Democritus, Franklin, Fourier, Maxwell, Edison, von Neumann, etc. in the context of the development of western civilization. The impact of communications, electronics, and computers in the twentieth century.

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

EGN 3000 Foundations of Engineering (1) EN EGB
CR: EGN 3000L. Introduction to the profession of engineering. Exposure to the different disciplines of engineering incorporate examples of tools and techniques used in design and presentation. EGN 3000L Foundations of Engineering Laboratory (2) EN EGB CR: EGN 3000. Introduction to the profession of engineering. Exposure to the different disciplines of engineering incorporate examples of tools and techniques used in design and presentation. Laboratory excercises will include computer tools, engineering design, and presentation skills.

EGN 3311 Statics (3) EN EGB

EGN 3321 Dynamics (3) EN EGB

EGN 3331 Mechanics of Materials (3) EN EGB
PR: EGN 3311. Stress, strain, Hooke’s Law; torsion, beam, column analysis, combined stresses; inelastic effects, limit design. Lec.
EGN 331L Mechanics of Materials Laboratory (1) EN EGB
EGN 3343 Thermodynamics I (3) EN EGB
EGN 3353 Basic Fluid Mechanics (3) EN EGB
EGN 3365 Materials Engineering I (3) EN EGB
PR: CHM 2454L, EGN 331L. Structure and property relationships in engineering materials, i.e., metal, ceramic and polymer systems. Environmental effects are also treated.
EGN 3373 Introduction to Electrical Systems I (3) EN EGB
EGN 3374 Introduction to Electrical Systems II (3) EN EGB
PR: EGN 3373. Continuation of EGN 3373.
EGN 3375 Introduction to Electrical Systems III (3) EN EGB
PR: EGN 3373. Continuation of EGN 3373.
EGN 3383 Statics and Dynamics (3) EN PR:
PR: EGN 3321, EGN 4450, PHY 2049. Dynamic analysis of electrical, mechanical, hydraulic and thermal systems; LaPlace transforms; numerical method; use of computers in dynamic systems.
EGN 3443 Engineering Statistics I (3) EN EGB
PR: MAC 2282. Introduction to the basic concepts of statistical analysis with special emphasis on engineering applications.
EGN 3613C Engineering Economy I (3) EN EGB
A study in analyzing the economic limitations imposed on engineering projects using basic models which consider the time value of money.
EGN 4366 Materials Engineering II (3) EN EGB
PR: EGN 3365. Applications and structure property relationships of commonly used engineering materials. Steel, nonferrous alloys and their welding, heat treatment and processing. Introduction to ceramic and polymeric materials.
EGN 4430 Numerical Methods of Analysis (2) EN EGB
EGN 4430 Introduction to Linear Systems (2) EN EGB
PR: MAC 2282. Study and application of matrix algebra, differential equations and calculus of finite differences.
EGN 4831 Technology and Society MW (3) EN EGB
Non-technical survey of engineering activities: utilities, nuclear power, genetics, space, etc. Students conduct individual in-depth study of environmental/ethical problem.
EGN 4905 Independent Study (1-5) EN EGB
PR: CI. Special independent study determined by the students' needs and interests.
EGN 4930 Special Topics in Engineering (1-3) EN EGB
PR: CI. New technical topics of interest to engineering students.
EGN 5421 Engineering Applications for Vector Analysis (3) EN EGB
Vector methods in electromagnetism and fluid mechanics. Vector operators, line and flux integrals, potential and transport theorems, applications.
EGN 5422 Engineering Applications of Partial Differential Equations (3) EN EGB
EGN 5423 Natural Networks and Mathematical Communication (3) EN EGB
EGN 5424 Engineering Applications of Complex Analysis (3) EN EGB
Analytic functions, conformal mapping, residue theory, Laurent series, transforms. Applications to various problems in engineering and physics.
EGN 5425 Engineering Applications of Advanced Matrix Computations (3) EN EGB
Survey of theoretical and software for matrix computations: factorization methods, least squares and pseudoinverses, eigenvector algorithms. Special matrices and representations for control system and finite element application.
EGS 1113 Introduction to Design Graphics (3) EN EGB
The student learns how to graphically represent technical designs using sketches, traditional drawing tools, and AutoCAD. The lab emphasizes computers running AutoCad R14.
EIA 3192 Technology Education and Society (4) ED EDV
Introduction to programs, facilities and opportunities in teaching Technology Education. Includes historical, current and futuristic implications of technology in society.
EIA 4360 Special Teaching Methods: Technology Education (3) ED EDV
Equips Technology Education instructors with professional competencies for classroom and laboratory settings. Includes the selection of appropriate methods, planning, and delivery of instruction, along with supervision of students in laboratory areas.
EIA 4362C Work Analysis (3) EN EGB
PR: EGN 3613C, EGN 3443; CR: AGC 3074. Operation analysis and workspace design, work measurement, standard data, ergonomics, and labor costing.
EIA 4313C Human Factors (3) EN EGS
Design of man-machine systems, by taking into consideration both human and machine capabilities and limitations.
EIA 4333 Production Control (3) EN EGS
PR: ESI 4312C. Planning and control of production systems. Includes: forecasting and inventory control models, scheduling and sequencing, MRP, CPM/PERT, and resource requirements.
EIA 4394C Facilities Design I (3) EN EGS
PR: EIN 4312C, EIN 4411. Design and modification of industrial production and material handling facilities. Basic analysis techniques, use of computer programs, automated warehousing.
EIA 4365 Facilities Design II MW (3) EN EGS
PR: EIN-4364. CAD/CAD, complete design of a plant facility. Course to use computers and software geared toward plant design and operation. A team of students is to be responsible for the complete project.
EIA 4411 Manufacturing Processes (3) EN EGS
PR: EGN 3365. The study of basic manufacturing processes and precision assembly. CAD/CAM including NC programming.
EIA 4601L Automation and Robotics (3) EN EGS
PR: EIN-4411. Introduction to the practices and concepts of automation as applied to material handling, inventory storage, material transfer, industrial processes and quality control.
EIA 4933 Special Topics in Industrial Engineering (1-6) EN EGS
Special topics related to economic analysis, optimization, human factors, manufacturing and automation aspect of industrial systems. Repeatable up to 5 credit hours.
EIA 4945 Work Physiology and Biomechanics (3) EN EGS
PR: CC, majors only. Human physiological limitations encountered in design, analysis and evaluation of man-machine systems.
EIA 5322 Principles of Engineering Management (3) EN EGS
Introduction to the fundamentals of planning, organizing and leadership as needed by engineers, scientists, and other professionals considering managerial positions.
EIA 5357 Engineering Value Analysis (3) EN EGS
PR: EIN 6219 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.
EIV 4210 Program Management: Industrial-Technical Education (4) ED EDV
Planning, organizing, motivating and controlling the learning environment in Industrial-Technical Education classroom and laboratory. Program standards for OSHA, program review, record keeping, and budgeting will be examined.
EIV 4360 Special Teaching Methods: Industrial-Technical Education (4) ED EDV
PR: EIV 4635 or CI.
EIV 4360 Special Teaching Methods: Industrial-Technical Education (4) ED EDV
Instructional techniques in industrial-technical education. Vocational Industrial Clubs of America activities may be included.
EIV 5315 Program Management: Diversified Cooperative Training (3) ED EDV
Organization, coordination, and budgeting of adult, cooperative, and special educational programs.
ELD 4011 Introduction to Specific Learning Disabilities (3) ED EDS
PR: EEX 4011 or DPPR. Characteristics, needs and abilities of children with SLDD. Emphasis is on theories, issues, trends, and philosophy of problems for such children.
ELD 4905 Independent Study: Specific Learning Disabilities (1-3 ED EDS
PR: DPR. S/U only. Specialized independent study determined by student’s needs and interests.

ELD 4909 Directed Study: Specific Learning Disabilities (1-3 EDS
PR: Senior standing. To extend competency in teaching field.

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

ELR 3301L Laboratory 1 (1) EN EGE
PR: EGN 3373.

ELR 3302L Laboratory 2 (1) EN EGE
PR: ELR 3301L and EEL 3302L. CR: EEL 4305.

ELR 4306L Laboratory 4 (1) EN EGE
PR: ELR 3301L CR: EEL 4411.

EMA 4324 Corrosion of Engineering Materials I (3) EN EGX
PR: EGN 3365L. Principles of electrochemical corrosion and the representation of corrosion processes by polarization diagrams. Origin and prevention of the localized forms of corrosion and approaches to corrosion control.

EMA 5326 Corrosion Control (3) EN EGX
Provide understanding of corrosion fundamentals. Introduce design for corrosion protection, detection, protection, and control. Acquire research project experience.

EME 2040 Introduction to Computers in Education (3) ED EDK
Introduction to microcomputer technology and its function in the classroom to augment the teaching and learning processes. Objectives include the use and evaluation of educational software. Classroom use of computers, instructional computing research, general applications software (word processors, database managers, etc.), and disk operating systems.

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

EML 3641 Computational Methods (3) EN EGR
PR: EGN 2210, EGN 4450. Techniques to solve engineering problems using numerical methods and digital computers. Topics include root solving, linear equations, numerical integration, curve fitting, and curve fitting. Elements of design.

EML 3626 Kinematics and Dynamics of Machinery (3) EN EGR

EML 3303 Mechanical Engineering Lab I (3) EN EGR

EML 3500 Machine Analysis and Design I (3) EN EGR
PR: EGN 3311, EGN 3365. Stress and deflection analysis of machine parts, variable loads, endurance limits, fastenings, bearings, power transmission, consideration of pressure and vacuum vessels, elements of design.

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

EML 4031 Visual Basic for Engineers and Scientists (3) EN EGR
PR: EGN 2210. Introduces students to the powerful graphical interface language of Visual Basic. Illustrates the use of the language in engineering and science applications.

EML 412C Thermal Systems and Electronics (3) EN EGR
PR: EGN 3343. Power and refrigeration cycles; fuels and combustion; internal combustion engine cycles; co-generation; nuclear energy; methods of economic analysis.

EML 4142C Heat Transfer I (3) EN EGR
PR: EML 3701, EML 3041. Conduction, convection and radiant heat transfer; thermal properties of materials; role of fluid flow in convective heat transfer; design and selection of heat exchangers.

EML 422C Vibrations (3) EN EGR

EML 4302 Mechanical Engineering Laboratory II (3) EN EGR
PR: EML 3303, EML 4142C. Continuation of EML 3303 with emphasis on material and energy balances, stress analysis and vibrations. Lec.-Lab. The Team-Project-Time Approach.

EML 4312 Mechanical Controls (3) EN EGR

EML 4414 Heat Power Engineering (3) EN EGR
PR: EML 4106C. The study of large, thermo-electric power conversion for utility systems. Combustion of hydrocarbon fuels, furnace, steam generator and auxiliary equipment design. Topics include control of air emissions, design and performance of combined cycle facilities.

EML 4419C Propulsion I (3) EN EGR
PR: EML 3701, EML 3500 or CI. Introduction to the design of propulsion systems. Basic analysis of internal combustion, jet and rocket engines. Application to ground and air transportation. Advanced propulsion systems. Special topics for class discussion.

EML 4501 Machine Design (3) EN EGR
PR: EML 3500, EML 3262. Continuation of EML 3500. Antifreiction bearings, journal bearings, power transmission, shafting.

EML 4551 Capstone Design 1 (MW) (3) EN EGR
PR: EML 4501. Comprehensive design or feasibility project requiring application of previously acquired engineering knowledge; use of ANSYS and CAD.

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

EML 4562 Introduction to Composite Materials (3) EN EGR
PR: EML 3500 and EGN 4450. The course introduces manufacturing types and applications of advanced composites. Students study micromechanical and macromechanical behavior of a lamina and analyze and design a laminated structure made of advanced composite materials.

EML 4601 Air Conditioning Design (3) EN EGR

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

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

EML 5245 Tribology (3) EN EGR
PR: EML 4501 Introduction to friction, lubrication and wear. Contact of real surfaces, mechanics of friction, surface failures, boundary lubrication fluid properties, thin film lubrication, thick film lubrication, bearing and lubricant selection.

EML 5325 Mechanical Manufacturing Processes (3) EN EGR
PR: CI. Description of mechanical material cutting, forming and fabrication methods, as used in modern industrial manufacturing processes.

EML 5422 Internal Combustion Engines (3) EN EGR
PR: EML 4106 or CI. This course is for the application of thermodynamics, chemistry, dynamics of machinery, electronics and fluid mechanics. Topics covered are: introduction of engines, fuels and combustion, numerical modeling, ignition, fuel systems, balance of reciprocating mechanisms and emission control of exhaust pollutants.

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

EML 5931 Special Topics IV (1-4) EN EGR

EMR 4011 Introduction to Mental Retardation (3) ED EDS
PR: EEX 4011. DPR. Introduction to the classification, diagnosis, characteristics, and treatment of children with mental retardation.

EMR 4230 Educating the Severely/Profoundly Handicapped (3) ED EDS
PR: EMR 3011 or DPR. Emphasis on educational methods and
ENV 4432 Water Systems Design (2) EN EGX
PR: EGN 3353. A design oriented course which utilizes the theory obtained in the Unit Operations course to design both industrial and domestic water treatment and water transport systems. It emphasizes the design procedures normally used in engineering practice.

ENV 4505 Environmental Unit Operations (3) EN EGX
PR: ENV 4400, EGN 3353. CR: ENV 3001. The theory and the design of unit operations normally practiced in the practice of environmental engineering, such as agitation and mixing of liquids, filtration, leaching, gas absorption, sedimentation and clarification, drying, and evaporation.

ENV 4503 Environmental Unit Processes (3) EN EGX
PR: ECH 3023, EGN 3353, ENV 3001. The theory and design of unit processes normally used in environmental engineering such as coagulation of colloidal materials, water stabilization, water softening and neutralization, ion exchange, adsorption and oxidation processes for removal of iron and magnesium.

ENV 4891 Capstone Environmental Design (MW) (3) EN EGX
PR: ENV 3001, ENV 4004, ENV 4417, ENV 4552. A capstone environmental 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 wastewater collection systems. The course emphasizes the design procedure normally used in engineering practice.

EVE 5105 Air Resource Management (3) EN EGX
PR: CI. Air pollution impacts on quality, modeling, regulatory approaches, source strategic controls, and surveillance.

ENV 5346 Solid And Hazardous Waste Control (3) EN EGX
PR: CI. Introduction to solid and hazardous waste management, regulations, waste perceptions, waste types, waste technologies, and waste collection. Disposal techniques, facility siting, volume reduction, landfill design, incineration and heat recovery, contaminant generation and transport, and remedial action.

ENV 5614 Environmental Risk Analysis (3) EN EGX
PR: CI. Study of comprehensive application of risk analysis techniques for environmental control and protection purposes.

ENV 3004 Introduction to Entomology (3) AS BIO
PR: BSC 2010 and BSC 2011. An introduction to general aspects of insect morphology, development, and classification. The identification of local forms will be emphasized. Lec.-lab.

ENY 5506 Aquatic Entomology (3) AS BIO
PR: ENY 3004 or CI. Taxonomy, development, and ecology of aquatic insects with emphasis on local forms. Lec.-lab.

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

EHP 5321 Educational Strategies for Physically and Multihandicapped Students (3) ED EDS
PR: EPH 5051. Educational management of students with cerebral palsy, mental disabilities and multi-handicapped conditions including rehabilitation and other community services.

ESI 4161C Computers in Industrial Engineering (3) EN EGB

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

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

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

ESI 4313 Probabilistic O. R. (3) EN EGB

ESI 4503 Industrial Systems Simulation (3) EN EGS
PR: ESI 4313. A study of the development and analysis of computer simulation models: Monte Carlo, time-slice, and next-event. Introduction to special purpose simulation languages.

ESI 4505 Independent Study (1-5) EN EGS
PR: CI. SU only. Specialized independent study determined by the student's needs and interests.

ESI 4911 Senior Project (2) EN EGS
PR: EIN 4384, CR: EIN 4333. ESI 4523. Analysis and design of systems in a directed project format. Individual or group work consisting of project proposal, project activities, and final report. Student projects are directed by faculty, with chairman's approval.

ESI 5105 Statistical Methods For Engineering Managers (3) ENEG
Not open to students who have had EGN 3443. Study of statistical methods applied to engineering management problems involving estimation, regression and prediction under conditions of uncertainty.

ESI 5236 Reliability Engineering (3) EN EGS
PR: ESI 5219 or equiv., 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 EGS
Not open to students who have had ESI 4315. ESI 5219 or equiv., majors only Linear programming, non-linear programming, queuing, inventory, network analysis.

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

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

ETG 4831 Special Topics in Technology I (1-5) EN ESB
PR: CC. No credit for Engineering Majors
ETG 4832 Special Topics in Technology II (1-5) EN ESB
PR: CC. No credit for Engineering Majors
ETI 4666 Principles of Industrial Operations II (3) EN ESB
PR: CC. No credit for Engineering Majors Application of techniques developed to the operation of an industrial firm through special projects.

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

EUV 2012 Ancient History II HP (3) AS HTY
An introductory survey of ancient history. EUH 2012 deals with Rome through the Regal, Republican, and Imperial periods, from the beginnings of civilization in Italy to the division of the Roman Empire, A.D. 395.

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

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

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

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

EUV 3142 Renaissance and Reformation (4) AS HTY
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.

EUV 3181 Medieval Culture (4) AS HTY
A survey of thought, culture, and art in the Middle Ages. Medieval attitudes as manifested in literature, art, philosophy, education, and religion; with emphasis upon Medieval man's changing perception of himself and his world.

EUV 3185 Viking History (4) AS HTY
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 America.

EUV 3186 Medieval Society (4) AS HTY
A study of the daily life and attitudes of the medieval nobleman, peasant, townsman, and the agrarian-urban economy and society which affected their lives.

EUV 3189 Medieval Politics (4) AS HTY
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.
EUV 3202 History of 17th and 18th Century Europe (4) AS HTY
A history of Europe from the beginning of the Thirty Years' War to the outbreak of the French Revolution. Political and intellectual developments will be assessed in the light of society and the economy.

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

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

EUV 3401 Classical Greece (4) AS HTY
A study of ancient Greece focusing on the brilliant period following the Persian War. Key wars include the formation of the Persian Empire and the rise of Alexander the Great, with the decline culminating in the conquest of Greece by Philip II of Macedon in 338 B.C.

EUV 3402 Age of Alexander (4) AS HTY
A study focusing on the career of Alexander the Great and the Greek and Macedonian conquest of the Persian Empire. Also treated are the great Hellenistic kingdoms to follow.

EUV 3412 Roman Republic (4) AS HTY
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 changes provide the framework for the treatment.

EUV 3413 Roman Empire (4) AS HTY
A study of the Roman Empire from the assassination of Julius Caesar in 44 B.C. to the death of the emperor Constantine in A.D. 337. Emphasis is on the government of a vast Mediterranean empire including much of the Near East and Europe.

EUV 3461 German History to 1870 (4) AS HTY
A political, social, and cultural approach to the history of Germany from 1500 to 1870, with emphasis on the Protestant Reformation, the rise of Brandenburg-Prussian, and the unification under Bismarck.

EUV 3462 German History 1870 to the Present (4) AS HTY
A political, social, and cultural approach to the history of the German Empire from 1870 through the 1970s. The nation's two attempts to try for world power status are highlighted, as well as the Weimar Republic, rise of Nazi Germany, and embattled democracy.

EUV 3501 British History to 1688 (4) AS HTY
A study of major developments in British history from the 15th century to 1688.

EUV 3502 British History 1688 to Present (4) AS HTY
A study of the major themes of British history since the Glorious Revolution, including social, political, and economic developments leading to the creation of the modern democratic welfare state.

EUV 3574 History of Imperial Russia, 1689-1917 (4) AS HTY
A study of social, political, economic, cultural, and military activities in the Russian Empire, including a focus on the relationships between Peter the Great and Nicholas II. Topics include the expansion and modernization of the Empire, the culture of the Imperial court, the importance of religion and the role of women, the role of the West, and the collapse of the Romanov dynasty.

EUV 3576 History of the Soviet Union, 1917-1991 (4) AS HTY
A study of Soviet society under communism from the Revolution to the collapse of the USSR. Topics include the origins and development of revolutionary socialism, the Bolshhevik 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.

EUS 3000 Europe 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.

EUS 3022 Russia SS HP 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.

EVR 2001 Introduction to Environmental Science (3) AS ESP
CR: EVR 2001L. 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.

EVR 2001L Environmental Science Lab (1) AS ESP
CR: EVR 2001. 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.

EVR 2861 Introduction to Environmental Policy (3) AS ESP
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 relating to environmental issues at the local, national, and international level.

EVR 4027 Wetland Environments MW (3) AS ESP
PR: PCB 3043 or CI. Study of the general properties and ecology of wetlands, examination of the distribution and functions of wetlands, and consideration of wetland conservation and policies.

EVR 4900 Directed Readings (1-6) AS ESP
To provide advanced students with interdisciplinary research experience in areas of specific interest.

EVR 4905 Independent Study (1-8) AS ESP
To provide advanced students with the opportunity for independent study in areas of specific interest.

EVR 4910 Environmental Science and Policy Project (3) AS ESP
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.

EVR 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 policy.

EVR 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.

EVR 4940 Environmental Science Internship (3) AS ESP
Open to seniors only. S/U only. The purpose of this course is to promote the student's understanding and application of environmental science and policy within a practical organizational context. Contract and report required.

EVT 4065 History and Principles of Vocational Education (4) EDEDV
An overview of current policies and principles in vocational education including their historical, sociological, and philosophical bases. Required for majors and non-majors.

EVT 4084C Professional Development in Industrial Technical Education (1-3) ED EDV
Designed for the ITE teacher in forming plans of professional development. Competencies include the development of a personal education philosophy, attributes in creating harmonious school community relationships, and desirable staff and teacher associations.

EVT 4115 Curriculum Construction: Industrial-Technical Education (4) ED EDV
Design, development, implementation and evaluation of effective curricular materials in industrial, technical and health related occupations. Includes individualized and self-paced materials. Open to majors and non-majors.

EVT 4263 Organization And Administration Of Student Vocational Organizations (1-4) ED EDV
Includes the organization and administration of the local student vocational organization in industrial, health occupations, business and distributive education.

EVT 4365 Basic Teaching Methods in Vocational Education (4) ED EDV
Examines the role of the vocational instructor in the teaching learning process; looks at factors that promote and inhibit learning.Reviews a wide variety of instructional approaches, techniques and methodology, and the inclusion of techniques for situations.

EVT 4367 Assessing Student Skill in Industrial Technical Education (4) ED EDV
Techniques for assessing student's mastery of skills in industrial/technical education. Focuses on specific competencies including developing and administering performance tests, monitoring student progress, and others. Open to majors and non-majors.

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

EVT 4651 Equity in Schools and the Workplace 6A MW (3) ED EDV
Issues related to gender equity in schools and the workplace. Includes legal, ethical, psychological, sociological, and economic
EVT 4905 Independent Study: Industrial-Technical Education (1-4) ED EDV
S/U only. Specialized independent study determined by the student's needs and interests.

EVT 4909 Directed Study: Industrial-Technical Education (1-3) EDEVD
To extend competency in teaching field.

EVT 4936 Senior Seminar in Industrial-Technical Education (2) ED EDV
CR: EVT 4936. S/U only. One full semester of internship in a public or private school. In special programs where the internship experience is distributed over two or more semesters, students will be registered for credit which accumulates from 9-12 semester hours.

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

EXP 5369 Preparation and Development for Teaching (4) ED EDV
The development of selected instructional materials, use of new educational media, performance evaluation instruments, and counseling techniques.

EXP 4204C Perception (3) AS PSY
CR: 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
CR: PSY 3213 with a grade of C or better or CI. A survey of motivational processes and mechanisms from a physiological and psychological viewpoints.

EXP 4404 Psychology of Learning (3) AS PSY
CR: 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 4523C Cognitive Psychology (3) AS PSY
CR: 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.

EX 4540 Psychology of Language (3) AS PSY
Historical survey of relations between psychology and linguistics leading to the emergence of psycholinguistics as a field of study. Current status of theory and research in the field.

FIL 2001 Film: The Language Of Vision 6A FA (4) FA ART
open to both majors and non-majors. Exploration of the history of creative filmmaking from its beginnings to the present time.

FIL 3004 The Film as Mass Communication I: Syntax (3) AS COM
CR: FIL 3004 or DPR. The language, conventions, elements, and patterns of the film medium as related to current models of effective mass communication and new theories of non-verbal communication.

FIL 3201C Beginning Film (3) FA ART
Intermediate problems in film with emphasis on the exploration of materials and media and the development of individual concepts.

FIL 3400 The Film as Mass Communication II: Rhetoric and Stylistics (3) AS COM
CR: FIL 3004 or DPR. A continuation of FIL 3004 to include the effective arrangements of scenes and sequences in motion picture literature and techniques.

FIL 3510 World Cinema (4) FA ART
Offers international perspectives through an examination of films from around the world. Each week narrative films from acclaimed directors will be screened, read about and discussed.

FIL 4202C Advanced Film (3) FA ART
CR: FIL 3510C. More advanced projects in filmmaking to further develop works both technically and conceptually.

FIL 4404 Social History of the Film, 1945 to the Present (3) AS COM
CR: MMC 2100 and MMC 3602 or DPR. The development of the film from 1945 to the present.

FIL 5205C Cinematography (4) FA ART
CR: PSG 420C. Advanced studio work using black and white, color, and sound as technical and aesthetic factors in visual, artistic productions.

FIN 2104 Personal Finance (3) BA 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.

FIN 2106 Introduction to Investments (3) BA 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. Emphasis on the fundamentals of the security markets in the U.S. and the risks and returns of alternative investment media. Designed for non-business administration students.

FIN 2835 Selected Topics in Finance (1-6) BA FIN
CR: CI. Not available for credit to upper level students who have been admitted to the College of Business Administration. Topics to be selected by department chair.

FIN 3233 Money and Banking (3) BA FIN
CR: ECO 2013. Examines the structure and operations of our monetary system, commercial banking, central banking, money, and capital markets, and provides an introduction to monetary theory and policy.

FIN 3403 Principles of Finance (3) BA FIN
CR: ACG 2071 or CI and ECO 2023. Study of the processes, decision structures, risks, and institutional arrangements concerned with the use and acquisition of funds by a firm. Emphasis on the management of the asset and liability structure of the firm under certain and risky situations. The financial decision process will include and recognize the international as well as domestic aspects of financial management.

FIN 3604 International Finance (3) BA FIN

FIN 4245 Federal Reserve System and Monetary Policy (3) BA FIN
CR: FIN 3233 or CI. An analysis of the Federal Reserve System, with special emphasis on monetary theory and the formulation and administration of monetary policy.

FIN 4303 Financial Institutions and Markets (3) BA FIN
CR: FIN 3403. A study of the institutions and their roles in the capital market includes the savings allocation, investment, and financial decision making processes.

FIN 4324 Bank Management (3) BA FIN
CR: FIN 3403 and FIN 3233. Application of traditional finance concepts to the management of commercial banks with emphasis on decision making and problem solving techniques to major problem areas in banking.

FIN 4412 Working Capital Management (3) BA FIN
CR: FIN 3403. This course is designed to provide the student with an understanding of short-term financial management. Topics to be covered include cash management, credit and collection policy, inventory decisions, and sources of short-term financing.

FIN 4414 Advanced Corporation Finance (3) BA FIN
CR: FIN 4504. An examination of the financial policies of corporations, with special reference to dividend policy, financial structure, and working capital management.

FIN 4443 Financial Policies and Strategies (3) BA FIN
CR: FIN 4414. A senior seminar for majors in Finance. Primarily a case course examining financial policies and the application of financial analysis to alternative strategies.

FIN 4504 Principles of Investments (3) BA FIN
CR: ECO 2013 and FIN 3403. Survey of the risks and returns of investment media in relation to the investment objectives of individual and institutional investors. Includes an examination of the capital markets, information flows, and analytical techniques in terms of their impact upon the valuation process.

FIN 4514 Advanced Investment Analysis and Management (3) BA FIN
CR: FIN 4504. A comprehensive survey of security analysis and
portfolio management. The course will utilize a quantitative approach to investment selection and management.

FIN 4905 Independent Study (1-3) BA FIN
PR: CI. S/U only. Specialized independent study determined by the students' needs and interests.

FIN 4915 Independent Research (1-3) BA FIN
PR: CI. Individual study contract with instructor and department chairperson. The research project will be mutually determined by the student and instructor.

FIN 4954 Selected Topics in Finance (1-3) BA FIN
PR: CI. Topics to be selected by instructor and department chairperson in pertinent Finance issues.

FLE 4314 Foreign Language Teaching in the Elementary School
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 culture in the K-5 classroom.

FLE 4315 Teaching students with Limited English Proficiency (3) ED EDX
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 Foreign Language Teaching in the Secondary School (3) ED EDX
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 instruction. 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 EDX
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 as well as class meetings.

FLE 4376 Senior Seminar in Foreign Language Education (2) EDEDX

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

FOL 3100 General Foreign Language I (1-4) AS MLL
A general purpose course that may be used for transfer of credit, credit by examination, and similar matters; may also be used for formal courses in less commonly taught languages or in professional translation.

FOL 4101 General Foreign Language I (1-3) AS MLL
A general purpose course that may be used for transfer of credit, credit by examination, and similar matters; may also be used for formal courses in less commonly taught languages or for workshops in professional interpreting.

FOL 4905 Directed Study (1-3) AS MLL
Departmental approval required.

FOL 5906 Directed Study (1-3) AS MLL
PR: FOL 4101 or equivalent.

FRE 1040 French For Reading (3) AS MLL
Designed to provide a reading ability in French that will support research in other disciplines. Primarily for graduate students.

FRE 1120 Beginning French I (4) AS MLL
CR: FRE 1120L. The first course in the study of elementary French. Emphasis on the development of basic skills in comprehension, speaking and reading.

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

FRE 1121 Beginning French II (4) AS MLL
PR: FRE 1120 or equivalent. CR: FRE 1121L. A continuation of FRE 1120.

FRE 1121L Beginning French II Laboratory (1) AS MLL
CR: FRE 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.

FRE 1170 Overseas Study-Elem. French (4) AS MLL
Departmental approval required. Elementary-level French taught in France. In lieu of FRE 1120 and FRE 1121.

FRE 2200 French III (3) AS MLL
PR: FRE 1121 or equivalent. A review of the basic structure of the French language.

FRE 2201 French IV (3) AS MLL
PR: FRE 2200 or equivalent. Readings in French on the intermediate level.

FRE 2240 Conversation II (3) AS MLL
PR: FRE 2241 or equivalent proficiency. Conversation practice with concentration on current idiomatic usage.

FRE 2241 Conversation I (3) AS MLL
PR: FRE 1121. For development of basic conversational skills.

FRE 2270 Overseas Study-intr. French (1-6) AS MLL
PR: Two semesters of university-level French or equivalent proficiency. Departmental approval required.

FRE 3220 Reading in French Literature and Culture (3) AS MLL
PR: FRE 2201 or equivalent. This course is designed to build reading skills in French while giving students a broad background in French culture.

FRE 3420 Composition I (3) AS MLL
PR: FRE 2200 and/or FRE 2201. A fundamental composition course for students who have completed FRE 2200 and/or 2201.

FRE 3440 French For Business (3) AS MLL
PR: FRE 2200 or equivalent. An introduction to the French language in ordinary business transactions.

FRE 3470 Overseas Study (1-6) AS MLL
Departmental approval required. An intensive study-travel project in France.

FRE 3500 French Civilization (3) AS MLL
Readings and discussion on the cultural history of France.

FRE 4421 Composition II (3) AS MLL
Continuation of French composition. This course is designed to follow FRE 3420.

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

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

FRE 4905 Directed Study (1-3) AS MLL
Departmental approval required.

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

FRE 5425 Advanced Written Expression (3) AS MLL
PR: FRE 4421, or equivalent. Course is designed to give advanced training in free composition in French.

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

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

FRT 3140 French Literary Masterpieces in English Translation 6A LW (3) AS MLL
A survey of the major literary works of France, tracing not only literary but intellectual and cultural history from the Middle Ages to the present.

FRT 4100 The French Novel 6A MW LW (3) AS MLL
PR: FRE 3230, FRE 3420 or CI. Study of the most representative novels from the 17th - 20th centuries in France, examining literary movements, ideas, and techniques.

FRT 4101 Introduction to French Drama and Poetry 6A MW (3) AS MLL
PR: FRE 3230. 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, Eliard, Apollinaire, Char, and others. Course content may vary from year to year.

FRT 4122 Classical Prose and Poetry (3) AS MLL
PR: FRW 4101 Emphasis on Malherbe, Descartes, Pascal, La Fontaine, and Boileau.

FRW 5226 20th Century Poetry and Theatre (3) AS MLL
PR: FRW 4101 Valery, Claudel, Anouilh, Motherland, Sartre, Ionesco.
FRW 5286 The 20th Century Novel (3) AS MLL
PR: FRW 4100. Proust, Gide, Mauriac, Malraux, Camus, Robbe-Grillet.

FRW 5314 Classical Drama (3) AS MLL
PR: FRW 4101 Cornelle, Moliere, and Racine.

FRW 5418 Literature of the Middle Ages (3) AS MLL
PR: FRW 4100 or FRW 4101. Major genres, including epics, Arthurian romances, drama and lyric poetry. Reading in modern French translation.

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

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

FRW 5528 Pre-Romanticism (3) AS MLL

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

FRW 5556 Naturalism and Realism (3) AS MLL
PR: FRW 4100 or FRW 4101. A detailed study of realism and naturalism with emphasis on Flaubert, Zola, les Goncourt, Maupassant, and the influence of their work on later studies of human nature.

FRW 5634 Selected Topics (1-3) AS MLL
PR: Upper-level or graduate standing. Study of an author, movement or theme.

GEA 2000 Global Geography SS HA AP (4) AS GPY
Comparative and analytical analysis of representative regions of the world with emphasis on cultural, political, economic, environmental, and physical characteristics.

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

GEA 3300 Geography of Middle America (4) AS GPY

GEA 3405 Geography of Latin America 6A (4) AS GPY

GEA 3500 Geography of Europe 6A (4) AS GPY

GEA 3554 Geography of the USSR (4) AS GPY

GEA 3600 Geography of Africa (4) AS GPY

GEA 3703 Geography of Asia (4) AS GPY

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

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

GEB 4890 Business Policy MW (3) BA GBA
PR: Senior standing and FIN 3403, MAN 3025, MAR 3023. The course is designed to provide a unified research opportunity to tie together concepts, principles, and skills learned separately in other, more specialized courses in Business Administration.

GEB 4905 Independent Study (1-3) BA GBA
PR: CI. S/U only. Specialized independent study determined by the student's needs and interests.

GEB 4915 Independent Research (1-4) BA GBA
PR: CI. Individual study contract with instructor and departmental chairperson required. The research project will be mutually determined by the student and instructor.

GEB 4935 Selected Topics in Business Administration (1-4) BA GBA
The content and organization of this course will vary according to the current interests of the faculty and needs of students.

GEO 1930 Geography of Current Events SS (4) AS GPY
Application of basic geographic principles to the analysis of contemporary events in various parts of the world.

GEO 2041C Map Interpretation (4) AS GPY
Analysis and synthesis of various types of maps and map projec-
tions.

GEO 2371 Introduction to Earth Systems Science NS (3) AS GPY
For non-majors only. The application of basic earth systems science analysis to environmental problems in the impact of human activities on the surface of the earth at local and global scales.

GEO 3013 Introduction to Physical Geography NS (3) AS GPY
CR: GEO 3013L. Principles of physical geography; maps, earth-sun relationships; meteorological, hydrological, pedological, aeolian, and glacial processes; and resultant landforms.

GEO 3013L Introduction to Physical Geography Lab (1) AS GPY
Laboratory portion of introduction to physical geography (GEO 3013).

GEO 3164C Quantitative Methods (4) AS GPY
PR: 12 credit hours in Geography or CI. Statistical analysis in geographic research.

GEO 3180 Digital Thematic Mapping (4) AS GPY
An introduction to the concepts underlying modern, computer-based mapping and to the collection and storage of digital spatial data.

GEO 3402 Human Geography (4) AS GPY
Systematic treatment of human activities on earth; population, settlement, agriculture, industry, trade, transportation, and political aspects are among those considered.

GEO 3602 Urban Geography (4) AS GPY
PR: GEO 3402 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: 12 credit hours in Geography or CI. Selected topics in geographic techniques and methodologies and their application.

GEO 4131C Remote Sensing of the Environment (4) AS GPY
PR: GEO 3140C and GEO 3164C, or CI. Analysis of satellite images and aerial photographs and an introduction to the remote sensing of the environment.

GEO 4151C Geographic Information Systems (4) AS GPY
PR: GEO 3140C and GEO 3164C, or CI.

GEO 4201C Advanced Physical Geography (4) AS GPY
PR: GEO 3013 or CI. Intensive study of a topic selected from physical geography.

GEO 4210 Process Geomorphology (4) AS GPY
PR: GEO 3013 or GLY 2010 or CI. Origin, evolution, and distribution of the landforms of North America.

GEO 4280C Hydrology (4) AS GPY
PR: GEO 3013 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 4300 Biogeography (4) AS GPY
PR: GEO 3013 and GEO 3164C, or CI. Analysis of the present and past distribution of species at an intermediate to large scale.

GEO 4360C Natural Hazards (4) AS GPY
PR: GEO 3164 or CI. 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 3402 or CI. Theories that explain human relationships of culture and nature, from ancient times to the present.

GEO 4470 Political Geography MW (4) AS GPY
PR: GEO 3402 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 3402 or CI. The spatial organization of economic production, consumption, and exchange systems.

GEO 4504 Advanced Urban Geography MW (4) AS GPY
PR: GEO 3402, 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 3402 and GEO 3164 or CI. General concepts related to the movement of goods and people, with particular emphasis on spatial principles and urban problems and planning.

GEO 4900 Directed Reading (1-4) AS GPY
PR: 20 hours in geography and CI prior to registration.

GEO 4910 Individual Research (1-4) AS GPY
PR: 20 hours in geography and CI prior to registration.

GEO 5134C Advanced Remote Sensing (3) AS GPY
PR: GS in Geography or CI. GEO 4124C. Study of digital image processing techniques. Topics include filtering techniques, geometric correction, radiometric normalization, and classification algorithms with emphasis on developing.

GEO 5157 Advanced Geographic Information Systems (3) AS GPY
PR: GS in Geography or CI. Spatial problem solving utilizing GIS mapping and statistical methods. The course is designed to give students hands-on experience in using computerized techniques from a wide range of geography.
GEO 5177 GIS for Non-Majors (3) AS GPY
An introduction to the concepts underlying digital thematic mapping and geographical information systems (GIS) for non-geography majors and non-geography graduate students.

GEO 5215 Advances in Geomorphology (3) AS GPY
PR: GEO 4372 or CI. Advanced examination of geomorphic processes and landforms with an emphasis on Florida.

GEO 5263 Advances in Soils (3) AS GPY
PR: GEO 4372 or CI. Examination of how earth systems influence soil formation and variation. Details analysis of soils climosequences, biosequences, toposequences, lithosequences, chronosequences, and anthrosequences.

GEO 5289 Hydrology Systems (3) AS GPY
PR: GEO 4372 or CI. A systematic approach to hydrology using the drainage basin as the fundamental unit of analysis is used to explore form and process, while modeling streamflows.

GEO 5347 Advances in Natural Hazards (3) AS GPY
PR: GEO 4372 or CI. Analysis of natural hazards integrating principles of physical, social, economic, political, and technical forces that affect extreme geophysical events.

GEO 5754 Advanced Political Geography (3) AS GPY
PR: GEO 4470 or CI. Advanced investigation of geopolitical issues including: the human construction of territoriality, ethnic relations, the making of nations and states, the geopolitics of localities, and environmental making.

GEO 5545 Advanced Economic Geography (3) AS GPY
PR: GEO 4502 or CI. An intensive examination of selected issues in economic geography including, regional development and decline; spatial labor market trends; business locational analysis; and comparative economic policy.

GEO 5605 Contemporary Urban Issues (3) AS GPY
PR: GEO 3602, GEO 4504, or CI. Advanced survey of urban issues such as: industrial restructuring and urban development, inner-city ethnic relations, the geopolitics of urban governance, and urban culture.

GEO 5704 Advanced Transportation Geography (3) AS GPY
PR: GEO 4114, GEO 4700, or CI. Review of transportation issues and analysis, focusing on modeling and planning for flows of goods and people. Provides a hands-on approach to use of GIS for such analysis.

GER 1120 Beginning German I (4) AS MLL
CR: GER 1120L Development of basic skills in listening and reading comprehension, speaking and writing of German.

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

GER 1121 Beginning German II (4) AS MLL
PR: GER 1120 or equivalent. CR: GER 1121L. Continued development of basic skills in listening and reading comprehension, speaking and writing of German.

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

GER 2200 German III (3) AS MLL
PR: GER 1121 or equivalent. A review of the basic structure of spoken and written German. May be taken concurrently with GER 2201.

GER 2201 German IV (3) AS MLL
PR: GER 1121 or equivalent. Readings in German on the intermediate level. May be taken concurrently with GER 2200.

GER 2240 Conversation I (3) AS MLL
PR: GER 1121. For development of basic conversational skills.

GER 3420 Composition I (3) AS MLL
A fundamental course for students who have completed GER 2200 or GER 2201.

GER 3500 German Civilization (3) AS MLL
PR: GER 2200 or GER 2201. Readings in German on the cultural history of Germany.

GER 4410 Conversation II (3) AS MLL
Free conversation based on the current German idiom.

GER 4421 Composition II (3) AS MLL
A comprehensive course for students who have completed GER 3500 or GER 2201.

GET 3100 German Literature in English Translation MW (3) AS MLL
Analysis and interpretation of selected major works of German literature, to be read in English, with regard to their thought content and relevance to out thoughts and actions.

GEW 4100 Survey of German Literature I (4) AS MLL
Old German and High German Literature in modern German translation; the literature of Humanism and Baroque, the classical period.

GEW 4101 Survey of German Literature II (4) AS MLL
The romantic period, 19th and 20th centuries.

GEW 4900 Directed Study (1-3) AS MLL
Departmental approval required.

GEW 4930 Selected Topics (1-3) AS MLL
PR: GEW 4574, or permission of instructor.

GEW 4575 Twentieth Century Literature to 1945 (3) AS MLL
A study of major styles in German literature from 1900 to WW II with emphasis on Hauptmann, Schnitzler, Hofmannsthal, George Rilke, Kracauer, Mann, Heym, Trakl, Thomas Mann, Kafka, Benn, Brecht.

GEW 5489 20th Century Literature: 1945 to Present (3) AS MLL
Study of major trends in German literature since WW II with emphasis on Borchert, Frisch, Durrenmatt, Boll, Uwe, Johnson, Grass, Aichinger, Eich Enzensberger, Bachmann.

GEW 5515 The Enlightenment (3) AS MLL
Selected dramas and critical writings by Lessing, Wieland, Kant.

GEW 5545 Romanticism (3) AS MLL
Selected works by Grillparzer, Goethe, Grabe, Buchner, Hebbel, Heine, Immeman, Stifter, Keller, Meyer, Storm, Raabe, Hulshoff, and Morike.

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

GEY 2000 Introduction to Gerontology SS (3) AS GEY
This course is designed to be an introduction to the study of aging. The aging process is viewed from a multi-disciplinary perspective including the biological, psychological, and sociological aspects of aging.

GEY 3323 Community Services for Older Adults (3) AS GEY
This class is designed to examine organizations that provide community services to older adults and professionals, including innovative programs. Students will learn how to provide referrals to existing services as well as ways to develop new programs to address unmet needs of the elderly.

GEY 3601 Physical Changes and Aging (3) AS GEY
A survey of normal and pathological physical changes occurring from middle age through older age. Course emphasis will be on basic age-related changes and their implications for behavior in older age.

GEY 3625 Sociocultural Aspects of Aging 6A SS AF (3) AS GEY
Consideration of human aging in a broad sociocultural context. Course emphasis will be on historical, philosophic, and demographic aspects of aging, theories of social gerontology, attitudes toward aging and the aged, cross-cultural perspectives on aging, the sociology of retirement, and aging in the community.

GEY 4322 Gerontological Case Management (3) AS GEY
This course examines the role and function of case management in meeting the care needs of the older adult. All aspects of case management practice are covered, including the elements of the case management process as well as ethical and legal issues.

GEY 4327 Long-Term Care Administration I (3) AS GEY
PR: GEY 3000. A survey of Long Term Care (LTC) environments. Explored are such issues as definitions of LTC, physiological conditions of LTC use, the institutional setting, the sociopsychological context, and methods of evaluation and intervention.

GEY 4328 Long-Term Care Administration II (3) AS GEY
PR: GEY 4327. AGC 2221, each with a grade of C or better. Administration of long-term care institutions from a group dynamics perspective. Emphasis on informed problem solving and decision-making via analysis of the psychosocial and sociocultural environment in the nursing home community. Course objective is to create efficient and humane living and working conditions in nursing homes.

GEY 4329 Long-Term Care Administration III (3) AS GEY
PR: GEY 4328, AGC 2221, 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.

GEY 4340 Housing for the Elderly (3) AS GEY
Major issues and aspects of conventional and planned housing for the elderly. Several field trips will be taken.

GEY 4360 Gerontological Counseling (3) AS GEY
An introduction to the major mental health problems of the elderly. Current approaches to counseling the elderly in community and institutional settings are discussed.
GEY 4401 Research Methods in Gerontology (3) AS GEY
PR: STA 2122 or equivalent with a grade of C or better. Restricted to Gerontology majors, others by departmental permission. Methods and techniques of social research in gerontology. Design of gerontological studies, collection and analysis of data, interpretation of results, and preparation of reports.

GEY 4612 Psychology of Aging (3) AS GEY
A comprehensive overview of psychological aspects of aging. Topics will include age-related changes in sensation/perception, cognition, and personality, as well as application to late-life psychology.

GEY 4635 Business Management in an Aging Society (3) AS GEY
This course provides interested students with an interdisciplinary perspective that addresses both business management and the impact of our aging society on business.

GEY 4641 Death and Dying (3) AS GEY
A broad overview of the basic concepts and psychosocial issues relating to the meaning of loss and death, the process of death, and the experience of grieving. Health care practices are considered along with community resources.

GEY 4647 Ethical and Legal Issues in Aging (3) AS GEY
A consideration of major ethical and legal issues in aging and their implications for policies, priorities, and services.

GEY 4904 Directed Readings (1-3) AS GEY
PR: CI. A reading program in topics in gerontology conducted under the supervision of a faculty member.

GEY 4935 Special Topics in Gerontology (3) AS GEY
Courses on topics such as preirement, mental health, human services organization, nursing home administration, the elderwoman, and elder abuse will be offered.

GEY 4945 Field Placement (1-3) AS GEY
PR: CI. Subject to availability of internship sites approved by the Department of Gerontology. Internships in an agency or community setting. A full-time assignment to an agency or organization, engaged in planning or administering programs for older people if in the 6A program (6 hours), or to a nursing home if in the BS program (6 hours).

GEY 5620 Sociological Aspects of Aging (3) AS GEY
Examinations within a sociological frame of reference, the interrelationships between the aged (or aging) and the structure and function of the social system and its major institutionalized subsystems.

GEY 5630 Economics and Aging (3) AS GEY
Examine basic economic systems as they impact the aged. Emphasis is on applied aspects of economic planning, pensions, insurance, social security and other support systems.

GEY 5642 Perspectives on Death and Dying (3) AS GEY
Study of the various psychological, medical, legal, and religious problems caused by dying and death, and how individuals and groups have dealt with these issues.

GLY 2010 Dynamic Earth: Introduction to Physical Geology NS (3) AS GLY
Required for geology majors; open to non-majors. Study of minerals, rocks, and dynamic processes of the earth. Introduction to the origin of earth's materials, landforms, and structures.

GLY 2010L Dynamic Earth Laboratory (1) AS GLY
Required for geology majors; open to non-majors. Laboratory study of earth materials, landforms, geologic structures, topographic and geologic maps. Lec-lab-field trips.

GLY 2030 Environmental Geology NS (3) AS GLY
May substitute for 2010 for geology majors. A first course in geology emphasizing environmental aspects of the earth's crust, such as earthquakes, depletion of the earth's resources, water-supply problems, and geologic aspects of land use and planning.

GLY 2038 Earth and Environmental Systems NS (3) AS GLY
No credit for students who have taken GLY 2010 or GLY 2030. This course examines the geology of the earth and the environment, using the earth systems approach that looks at interactions between the lithosphere, hydrosphere, atmosphere, and biosphere. Student will learn general principles of geology, travel worldwide on the internet, and participate in discussions on topics ranging from the scientific method to the latest geological discoveries.

GLY 2040 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, including the dinosaurs, evolution of the primates, and the environmental future of the planet. (For both non-science and science majors.)

GLY 2050 Science, Earth and Life NS (3) AS GLY
PR: A course in geology. Required for Geology majors; open to non-majors. Study of the physical and biological history of the earth including evolution of the major groups of organisms, plate tectonics, and interpretation of ancient environments.

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 230T Selected Topics in Geology (1-3) AS GLY
Does not count toward the geology major. Topical courses in geology of general interest.

GLY 3200 Mineralogy (4) AS GLY
PR: GLY 2010, one year of chemistry, or CI. Principles of crystal chemistry, crystallography and mineralogy with emphasis on common rock-forming minerals. Lec-lab.

GLY 3400C Structural Geology (4) AS GLY
PR: 12 hours of geology and MAC 2147 or equivalent or CI. Study of the origin and development of structural features of the earth's crust. Applications of principles of geology, physics, and mathematics to understanding relationships of strata and interpreting structural features. Study of regional tectonics and major structural provinces. Lec-lab.

GLY 3554C The Earth's Surface (4) AS GLY
PR: Four (4) hours of Geology courses, including GLY 2015L, BSC 2010, PHY 2053. Not satisfactory/unsatisfactory for geology majors, may be taken S/U by others. Principles of weathering, erosion, production and transport of sediment on the earth's surface and the resulting geomorphology. Modern sedimentary environments and concept of sedimentary basins. Applications of paleoecology to the invertebrate paleontology of the bulk of the fossil record.

GLY 3800 The Fluid Earth (4) AS GLY
PR: 4 hours of Geology, including GLY 2015L: MAC 2311 and MAC 2312 or equivalent; PHY 2048 and PHY 2048L. Not available as S/U for geology majors; S/U available for others. Physical, chemical and biological processes affecting fluids of the lithosphere, oceans and atmosphere. Water as a geologic medium and global entity. A systems approach.

GLY 3850 Geology For Engineers (3) AS GLY
PR: Junior standing in College of Engineering or CI. No credit toward the geology major, or for those with credit for GLY 2010. An examination of geologic materials and processes designed for engineering students, classification and properties of earth materials, surface processes, site investigation techniques, applications of geology to the solution of engineering problems.

GLY 4045 Moons, Planets, and Meteorites: An Introduction to Planetary Science NS (3) AS GLY
PR: CI. Solar system, History of the Earth, Meteoroid 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 4310 Petrology (4) AS GLY
PR: GLY 3200, CI. The formation of igneous and metamorphic rocks in varying tectonic environments. Emphasis is placed on the identification of igneous and metamorphic rocks in hand specimens and thin sections. Lec-lab.

GLY 4552 Depositional Systems (4) AS GLY
PR: GLY 4552C. Study of modern sedimentary environments and their relationships to one another in order to understand environments preserved in the rock record. Physical, chemical, and biological processes of terrestrial, transitional and marine sedimentary environments will be examined in light of their eventual preservation in the stratigraphic record.

GLY 4552C Sedimentary Geology and Geochemistry (4) AS GLY
PR: GLY 2010, GLY 3200, and one year of chemistry. A lecture and laboratory class that integrates knowledge of the lithosphere, atmosphere, biosphere, hydrosphere, and cryosphere to study the sedimentary environment of the rock record to solve problems in sedimentary geology.

GLY 4700 Geomorphology (4) AS GLY
PR: Senior or advanced junior standing or CI. Origin, evolution and distribution of landforms and soils. Dynamics of the earth's surface. Lec-lab-field trips.
GLY 4730 Marine Geology (3) AS GLY
PR: 12 hours of oceanography or CI. General survey of the geology of the ocean floor from beaches to ocean trenches including sediments, processes, tectonics and history.

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 Geologic Field Studies (1-3) AS GLY
PR: 1 geology course. Lectures and field trips 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 trip.

GLY 4805 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, lifting and hominid evolution, and mining and politics. Does not count for GLY major credit.

GLY 4822 Introduction to Hydrogeology (4) AS GLY
PR: Y 250 or standing, one year each physics and calculus or CI. Ground-water flow systems, ground-water geology, introduction to mathematical models of ground-water flow. Lec.-lab.-field trips.

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

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 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 4970 Undergraduate Honors Thesis (3) AS GLY
Open to seniors 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 4982 Geologic Field Excursion (2) AS GLY
PR: Senior standing in junior 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. Destinations vary by year. 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 problems. Emphasis on sampling plans, nature of geologic distributions, and application of analyses of variance to solving geologic problems. Lec.

GLY 5932 Selected Topics in Geology (1-4) AS GLY
PR: Senior or advanced junior standing. Each topic is a course under the direction of a faculty member. All areas of geology included.

GRE 1120 Beginning Classical Greek I (4) AS CLA
An introductory course in classical Greek grammar with appropriate readings.

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

GRE 2040 New Testament Greek I (4) AS REL

GRE 2041 New Testament Greek II (4) AS REL

GRE 2200 Intermediate Classical Greek (4) AS MLL
PR: GRE 1121 or equivalent. Readings in Greek at an intermediate level.

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

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

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

GRK 1121L Modern Greek II Laboratory (1) AS MLL
CR: GRK 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.

GRK 2200 Modern Greek III (4) AS MLL
PR: GRK 1121 or its equivalent. For language students who intend to attain basic proficiency.

GRK 2201 Modern Greek IV (4) AS MLL
PR: GRK 2200 or its equivalent. Continuation of GRK 2200. Practice of writing, speaking and listening skills for language students who intend to attain basic proficiency.

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

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

GRK 4995 Directed Reading (1-4) AS CLA
Departmental approval required.

GRW 5905 Directed Reading (1-4) AS CLA
Departmental approval required.

GRW 5934 Selected Topics (4) AS CLA
Available to majors and non-majors. Study of an author, movement or theme.

HAF 4120 Introduction to Public Health (3) PH CFH
A survey of policies and programs in public/community health with emphasis on specific needs and problems of Florida.

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

HBR 1120L Modern Hebrew I Laboratory (1) AS MLL
CR: HBR1120. 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.

HBR 1121 Modern Hebrew II (4) AS MLL
PR: HBR 1120 or its equivalent; CR: HBR1121L. A continuation of HBR 1120. An intensive study of basic skills; pronunciation, listening 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 MLL
CR: HBR 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.

HBR 2200 Modern Hebrew III (4) AS MLL
PR: HBR 1121 or its equivalent. For language students who intend to attain basic proficiency.

HBR 4905 Directed Study (1-5) AS MLL
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.

HIS 330 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.

HIS 330B War and Society MW (3) AS HTY
An examination of the ways in which societies have organized themselves for war and how societies are changed by war. Also explores gendered expectations in war, and the changing conduct of war.
HIS 3474 Science and Civilization (4) AS HTY
An analytical study of the interrelationship of science and society in modern history emphasizing the institutional forms, value structures, and social relations in science as they have developed from the scientific revolution to the present.

HIS 3930 Special Topics (2-4) AS HTY
This course is designed to emphasize a selected historical problem or issue that is meaningful and challenging to the student. A variety of instructional approaches will be taken to the material. Topics will change each semester.

HIS 3938 Issues in History MW (3) AS HTY
This course provides an introduction to the disciplines of history by examining a specific historical issue and its relation to at least one of the following dimensions: gender, race and ethnicity, and technological change.

HIS 4104 Theory of History (4) AS HTY
Required of all history majors. Recommended to be taken during the senior year. An analysis of the foundations of historical knowledge and historical methodology. Includes a survey of historical thinking and writing from ancient times to the present.

HIS 4900 Directed Reading (1-4) AS HTY
PR: CI. Arrangement with instructor prior to registration. Readings in special topics.

HIS 4920 Colloquium in History (2-4) AS HTY
Reading and discussion of selected topics in the various fields of history. The subject and scope of inquiry will be determined by the instructor for each section.

HIS 4936 Pro-Seminar in History MW (4) AS HTY
PR: CI. Required of all history majors. Advanced topics in the various fields of history. Emphasis on discussion of assigned readings and on research and writing of a major paper.

HLP 2081 Personal Wellness: A Lifetime Commitment (3) ED EDE
An examination of the bases for adopting a positive health lifestyle with a major emphasis on diet, weight management, physical fitness, stress management, and substance-abuse management.

HLP 4722 Health and Physical Education for the Child (2) ED EDE
This course helps elementary majors understand the health, psychomotor, growth and developmental needs of children so that they may be prepared to conduct safe and healthy learning experiences. They also learn the role of the classroom teacher in the total school health program by providing health services, healthy environments and health instruction.

HSC 2100 Contemporary Health Science SS (3) PH CFH
A comprehensive approach to health concerns and problems in contemporary society, including methods of assessing individual health needs.

HSC 2400 First Aid (2) ED EDP
Meets the American Red Cross certification requirements in standard and advanced first aid.

HSC 3301 Health, Safety, Nutrition and Motor Skills for the Young Child (3) ED EDP
Provide students with the knowledge to teach developmentally appropriate motor activities; to provide continuous health services, create and maintain a healthy learning environment; and sequence appropriate health instruction for pre-K through 3rd grade students.

HSC 4541 Human Structure and Function (3) PH CFH
PR: Fundamentals of Biology/Lab or CI. Major concepts of the structure and function of the human body systems and methods by which these concepts may be taught.

HSC 4554 Survey of Human Diseases (3) PH CFH
PR: Fund. of Biology with Lab or CI. An overview of the nature, types, causes, and mechanisms of diseases of the major body systems.

HSC 4933 Special Topics in Public Health (1-6) PH PHC
PR: CI. Content will be governed by student demand and instructor interest.

HSC 5319 Problems of School Age Population (3) PH CFH
Study of health problems and needs of school age children, including a health status screening laboratory.

HUM 2024 The Arts FA (3) AS HUM
An analysis of selected works of literature, music, film, and visual art, representing artists of diverse periods, cultures, genders, and races. Especially recommended for students who later take 4000-level Humanities courses.

HUM 2211 Studies in Culture: The Classical Through Medieval Periods HP (3) AS HUM
A survey of literature and the arts of ancient Greece, Rome, and medieval Europe. Issues to be examined may include the dialogue between local traditions and cosmopolitan cultures, the relationship of the individual to society, and the bases for moral values.

HUM 2243 Studies in Culture: The Renaissance Through the Twentieth Century HP (3) AS HUM
A historical survey of the visual arts, literature, music and thought of Europe from the Renaissance through the Twentieth century. Issues to be examined may include the relationship between science and the arts and the consequences of the growing contacts and the impact of technological change.

HUM 2420 Arts and Music of the African People (3) AS AFA
An examination of the visual arts, painting, sculpture, architecture and music of Sub-Saharan Africa; their meaning and impact on the arts and music of the Western World.

HUM 2930 Selected 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 3251 Studies in Culture: The Twentieth Century HP (3) AS HUM
Analyses of selected works of twentieth century art, including films, paintings, music, and literature, in the context of major political, social, and economic events, such as war, depression, totalitarianism, and technological change.

HUM 3271 Eastern and Western Culture from Antiquity to 1400 AF (3) AS HUM
A comparative treatment of music, visual arts, theatre, literature, and philosophy in the East and West, proceeding chronologically from Ancient times through the Middle Ages, emphasizing Europe and China.

HUM 3273 Eastern and Western Culture Since 1400 AF (3) AS HUM
A comparative treatment of music, visual arts, theatre, literature, and philosophy in the East and West, proceeding chronologically from the Renaissance through the present, emphasizing Europe, the United States, and India.

HUM 3930 Selected Topics in Humanities (1-4) AS HUM
Courses offered under this number will always be interdisciplinary, treating more than one art media and relating them historically or in some other way. The interdisciplinary emphasis on literature and the arts, placing them in some larger context of culture or ideas, distinguished HUM courses related courses offered in other departments of the university. Topics will vary; course may be repeated for credit with change of content.

HUM 4402 Humanities in India (4) AS HUM
PR: Sophomore standing or CI. Examples from the arts and letters of India and the relationship of these arts to the Hindu and Buddhist philosophy-religions.

HUM 4404 Humanities in China (4) AS HUM
PR: Sophomore standing or CI. Examples from the arts and letters of China; their relationship to Taoism, Confucianism and other Chinese philosophies; Western influences on twentieth century Chinese arts and letters.

HUM 4405 Humanities in Japan (4) AS HUM
PR: Sophomore standing or CI. Examples from the arts and letters of Japan; their relationship to Zen Buddhism and other Japanese philosophy-religions; Western influences on twentieth century Japanese arts and letters.

HUM 4432 The Culture of Ancient Rome (4) AS HUM
PR: Sophomore standing or CI. A study of the poetry, drama, philosophy, historical writing, painting, sculpture and architecture of ancient Rome, including such authors as Virgil, Livy, and Cicero, the monuments of Rome, Pompeii, and Herculanum.

HUM 4433 Ancient Greek Culture (4) AS HUM
PR: Sophomore standing 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 4434 Early Medieval Culture (4) AS HUM
PR: Sophomore standing 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 4436 High Medieval Culture (4) AS HUM
PR: Sophomore standing or CI. A study of the culture of Western Europe from the 11th to 14th centuries. Readings will include poetry and religious works; examples of painting, architecture, sculpture and music will be studied.

HUM 4437 Italian Renaissance Culture (4) AS HUM
PR: Sophomore standing or CI. A study of the painting, literature, music, sculpture and architecture of early modern Italy (1300-1600), emphasizing humanism, the revival of antiquity, the tension between
sacred and secular, and artists such as Michelangelo, Titian, Rembrandt.

HUM 4438 Northern Renaissance Culture (4) AS HUM
PR: Sophomore standing 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: Sophomore standing 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, Gentilleschi, Voltaire, Bach, and Mozart.

HUM 4442 Arts and Letters of the Romantic Period (4) AS HUM
PR: Sophomore standing or CI. A study of 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: Sophomore standing 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: Sophomore standing 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: Sophomore standing 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: Sophomore standing 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: Sophomore standing or CI. Study of selected works, tracing the course of expansion in the production and enjoyment of works of art, and interaction between the idealistic and pragmatic concerns for development of the arts in the 20th century.

HUM 4462 Ancient Latin American Culture (4) AS HUM
PR: Sophomore standing or CI. Analysis of selected Latin American works of art in their cultural context, with emphasis on major arts of the Pre-Columbian period.

HUM 4464 Latin American Culture Since 1492 (4) AS HUM
PR: Sophomore standing or CI. Analysis of selected Latin American works of art in their cultural context, with emphasis on major arts of the post-Columbian and contemporary periods.

HUM 4905 Directed Study (1-4) AS HUM
PR: CI. Specialized individual study determined by the student's needs and interests

HUM 4905BIS Humanities, Independent Study (15) AS BIS
SU only.

HUM 4930 Selected Topics in Humanities (1-4) AS HUM
PR: Sophomore standing 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 1920's. Topics will vary.

HUM 4931 Seminar in Humanities 6A (4) AS HUM
PR: Humanities major or CI. Senior standing. Discussion of interdisciplinary humanities. Includes essay.

HUM 4938 Major Issues in the Humanities MW (3) AS HUM
The study of an important topical issue in the Humanities. Materials representing diverse views relating to that issue will be read, and works of art in different media that have relevance to the debate will be studied. Available to majors and non-majors.

HUM 4939BIS Humanities, Seminar (15) AS BIS
PR: HUM 4905 or CI. SU only.

HUM 4940 Internship in Humanities (1-4) AS HUM
A structured, out-of-class learning experience providing firsthand, practical training in Humanities-related professional careers in the community.

HUM 4941 Study on Location (1-4) AS HUM
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.

HUN 2201 Nutrition (3) NU NUR
PR: Course work in chemistry and biology or permission of faculty. Open to majors and non-majors. The study of fundamental principles of normal nutrition as they relate to human life and growth from conception through senescence, interpretation of current nutrition information, and application of nutrition knowledge in the establishment of good eating habits.

HUS 3001 Introduction to Human Services (3) AS GEY
An introduction to the field of human services. Study of the professionals and agencies involved in providing human services. Analysis of the values and ethics of various professional associations.

HUS 4020 The Life Cycle (4) AS GEY
An examination of individuals and the physiological and psychosocial changes which occur during infancy, childhood, adolescence, young adulthood, middle age and old age.

HUS 4150 Interviewing (3) AS CI
The principles and techniques of interviewing. Use of interviewing in information gathering, research and helping relationships and developing skills in communication across cultural, social and age barriers.

IDH 2009 Discovery: People, Processes and Problems (3) UG HON
PR: Admission to Honors Program. An appreciation of the research process in multiple disciplines culminating in the production of a topics paper of a research proposal.

IDH 2010 Acquisition Of Knowledge (3) UG HON
PR: Admission into the Honors Program. An appreciation of the problems of how human understanding proceeds through observation, such as perception, classification, and inference, among others, as well as the open philosophic questions behind these operations.

IDH 3350 Arts/Humanities Honors (3) UG HON
PR: IDH 2010. An introduction to western arts and letters from the perspectives of three period's terms (classicism, romanticism, and modernism), the relationship of ideas to art, the similarities among the arts of a given period, and important differences between the arts of different periods.

IDH 3350 Natural Sciences Honors (3) UG 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.

IDH 3400 Social and Behavioral Sciences Honors (3) UG HON
PR: IDH 10. Introduction to the concerns of the Social and Behavioral Sciences, methods of inquiry, discovery, and validation of knowledge. A survey of the way various disciplines examine the question of how society is organized.

IDH 3800 Seminar In Applied Ethics (3) UG HON
PR: IDH 10. This course explores ethical issues related to selected topics such as Ethics of Technology, Ethics in Business, Bio-Medical Ethics, Personal Ethics Development.

IDH 4000 Honors Program Seminar: Major Works/Majors Issues (4) UG HON
PR: IDH 10. This course explores major works and major issues in a variety of disciplines. Each section will be devoted to content in a different academic area.

IDH 4200 Geographical Perspectives Honors (3) UG HON
PR: IDH 10. 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.

IDH 4970 Honors Thesis (3) UG 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 2130 Biology for Learning Communities (3) IAS
This course is an introduction to major concepts of biology, focusing on evolution as the unifying concept in the field.

IDS 2664 Social Science Perspectives I (3) IAS
Provides an overview of the evolution and global expansion of Western Civilization. Examines global problems of economic growth and development; geographical relations among nations and states, food supply and hunger, and environmental change.

IDS 2665 Social Science Perspectives II (3) IAS
Approaches the study of human behavior and society using the lens of societies 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 2866 Historical Perspectives I (3) 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 2867 Historical Perspectives II (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 2931 Selected Topics HP (2-5) 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 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 2935 Selected Topics V FA (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 2936 Selected Topics VI AF (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 moral/ethical dilemmas. Available to majors or non-majors.

IDS 3662 Arts Connections FA (3) FA 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 have formed the basis of their creative research. Influences of diversity, new technologies and community and public arts will be explored. This course will introduce students to the role the arts play in shaping their perceptions of the world as well as reflecting the underlying values and paradigms that form our culture(s).

IDS 3996 Writing Culture: Images of Culture in the Modern World (3) AS IAS
Offers multiple perspectives on the visions, theories, and practices of the modern culture through the use of various literary genres. Encourages the cultural realities of social stratification, relational networks, fragmentation, discontinuity, diversity, poverty, and anomie, energy, and potential of modern living.

IDS 3997 Cooperative Education (0) UG COE
60 hours of academic credit, acceptance 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 4930 Selected Topics (1-4) AS IAS
Course content determined by students’ and instructor’s interests and needs.

IDS 4932 Honors Program Seminar (3) UG HON
PR: Admission to St. Petersburg Campus Honors Program. An intensive reading and research seminar focusing on interdisciplinary investigation of broad topics in the humanities and social and natural sciences. Topics will vary, but all possess an interdisciplinary format. Restricted to St. Petersburg Campus Honors Program students.

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

IDS 4950 Honors Project Program (3) UG HON
Enrollment is limited to St. Petersburg Honors Program students who have completed at least one Honor’s Program Seminar. Seminar Honors Project program consisting of an original creative work in literary, visual or performing arts, or in a community-oriented endeavor of substance and originality. Either a project or an Honors Thesis will fulfill the requirements for graduation as St. Petersburg Campus Honors Program students.

IDS 4955 Internal Community Research (1-2) AS CEL
PR: CEL Program approval. Repeatable up to 8 credit hours. To provide students with an internal community research experience.

IDS 4956 Internal Community Internship (1-4) AS CEL
PR: CEL Program approval. To provide students with an internal community internship experience. Repeatable up to 8 credits.

IDS 4970 Honors Program Thesis (3) UG HON
Enrollment is limited to St. Petersburg Campus Honors Program students who have completed at least one Honors Program Seminar. The Honors Thesis is designed as a senior thesis for St. Petersburg Campus Honors Program students. Those students will have completed at least one Honors Seminar prior to beginning the thesis. Either a thesis or Honors Project will fulfill the requirements for graduation as St. Petersburg Honors Program students.

IDS 4990 BIS Inter-Area Studies (30) AS BIS
PR: ISS 4908, ISS 4929, ISS 4909, ISG 4939, HUM 4909, HUM 4939.
S/U only.

INP 2101 Applied Psychology SS (3) AS PSY
The application of psychological principles and the functions of psychologist in education, government, industry, and clinical practice.

INP 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, supervision, and decision-making.

INR 1015 World Perspective SS AF (3) AS INT
An interdisciplinary study of the international system, 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 which stresses methods and analysis. A major portion will focus on the roles which different disciplines play in interpreting the international scene.

INR 3018 World Ideologies 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) 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 3054 International Human Rights MW (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 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-governamental 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 transfer) as they relate to contemporary international politics.

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 study of social and political life 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 4089 Conflict In The World MW (3) AS INT
PR: Junior/Senior standing. An interdisciplinary course examining theories of conflict, conflict resolution processes and strategies, and the concept of Early Warning Systems related to the outbreak of conflict.

INR 4250 The Political Economy of the Southern Nations SS AF (3) AS INT
A multidisciplinary study of the efforts of the nations in the South (Africa, Asia, Latin America and the Middle East) to improve their status through economic and political development.

INR 4254 Africa in World Affairs MW (3) AS POL
An examination of Africa’s place and role in world affairs, including the relations of African states with the major world powers, the U.N. and its agencies.

INR 4334 Defense Policy (3) AS POL
Analytic institutional factors contributing to formulation of defense policy and the impact of such policy on international relations.

INR 4403 International Law SS (3) AS POL
Examines essential components of the international legal system; recognizes the role of international law in world politics; and the role of international courts in settling legal disputes.

INR 4502 International Organizations SS AF (3) AS POL
Study of the operations and structure of international organizations and their effect on the global political, economic, and social development.

INR 4900 Directed Readings (1-3) AS INT
PR: CI. A supervised program of intensive reading of interdisciplinary material. Must be the student's major field.

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 demand and instructor's interest.

INR 4936 Senior Seminar MW (3) AS INT
PR: International Studies major and senior standing. An advanced seminar examining topics in international politics.

INR 4943 Internship in International Studies (3-6) AS INT
PR: Senior status. S/U only. For majors only. The purpose of the course is to provide the student with opportunities to apply academic knowledge in a professional setting.

INR 5085 Issues in International Relations (3) AS POL
Sr./GS explores specific topics and provides the student with an opportunity for in-depth study of historical and contemporary problems in international politics.

ISC 1004 Integrated Natural Sciences I: Science that Matters NS (3) AS CHM
Discussion of integrative concepts in biology, chemistry, geology, and physics based on major knowledge strands of the Florida and National Science Education Standards. This course deals with the development of higher order (critical thinking) skills through active learning strategies.

ISC 1005 Integrated Natural Sciences II: Science that Matters NS (3) AS CHM
Discussion of integrative concepts in biology, chemistry, geology, and physics based on major knowledge strands of the Florida and National Science Education Standards. This course deals with the development of higher order (critical thinking) skills through active learning strategies.

ISC 4909 BIS Natural Sciences, Independent Study (15) AS BIS
S/U only.

ISC 4930 Selected Topics in Interdisciplinary Science (1-4) AS IAS
Interdisciplinary studies with cell and molecular biology perspective. Course content dependent on student demand and instructor's interest.

ISC 4939 BIS Natural Sciences, Seminar (15) AS BIS
PR: BIS ISC 4909 or CI. S/U only.

ISM 3203 Introduction to Business Application Development (3) BA QMB
PR: ISM 3011 with a grade of "C" or better. Introduction to concepts and principles of business application development. Students will gain a basic understanding of systems development methodologies and the process of implementing software solutions.

ISM 3232 Advanced Business Application Development (3) BA QMB
PR: ISM 3230 with a grade of "C" or better. Students will gain a basic understanding of systems development methodologies and the process of implementing software solutions.

ISM 3411 Management Science Production/Operations Management Applications (3) BA QMB
PR: MAC 2323 and 2325. Emphasis is placed on the application of linear programming, transportation, and network analysis techniques to production and operations management problems.

ISM 4113 Advanced Systems Analysis and Design (3) BA QMB
PR: ISM 3230, ISM 3113, ISM 4212, with a grade of "C" or better. This course provides a foundation in the design and implementation of business systems. Students will be introduced to the concepts, techniques, and tools used in systems development.

ISM 4212 Database Design and Administration (3) BA QMB
PR: ISM 3113, ISM 3230. Principles of database design and management for mainframe, micro, and client/server environments, including data modeling, physical and logical design, and recovery and database tuning.

ISM 4220 Business Data Communications (3) BA QMB
PR: ISM 3113 with a grade of "C" or better. Emphasis is placed on the use of communication protocols, transmission standards, and security in the design and implementation of business data communication systems.

ISM 4233 Information System Interface Design (3) BA QMB
PR: ISM 3113, ISM 4212, with a grade of "C" or better. Students will be introduced to the design and implementation of systems that integrate and interface with other applications, including the use of user interface standards and guidelines.

ISM 4240 Distributed Operating Systems (3) BA QMB
PR: ISM 3230 with a grade of "C" or better. This course provides an introduction to distributed operating systems fundamentals, including distributed systems architecture, file and process management, network protocols, and resource allocation.

ISM 4249 Senior Seminar in Information Systems (3) BA QMB
PR: ISM 3113, ISM 4300, with a grade of "C" or better. Seminar covering advanced topics in information systems management, design, and analysis. Applications of these procedures to actual or hypothetical problems.

ISM 4300 Managing Information Resources (3) BA QMB
PR: ISM 3113, ISM 4212. Current issues in information systems management focusing on organizational policies, procedures, and standards for information resources.

ISM 4320 Information Systems Controls (3) BA QMB
PR: MIS Major or CI. Students who complete this course will not
receive credit for ACG 4621. A study of information systems control and applications in system design and system management.

ISM 4400 Decision Support Systems Applications-Computer Assisted Decision Making (3) BA QMB
PR: FIN 3403, QMB 3200, and ISM 3113, with a grade of “C” or better, MIS major or CC. This course is designed to familiarize students with the opportunities and challenges associated with electronic commerce, to explore the underlying technologies used in implementing electronic commerce systems, and to develop the practical skills needed to design and develop electronic commerce Web pages.

ISM 4480 Electronic Commerce Systems (3) BA QMB
PR: ISM 3011 with a grade of “C” or better, MIS major or CC. This course is designed to familiarize students with the opportunities and challenges associated with electronic commerce, to explore the underlying technologies used in implementing electronic commerce systems, and to develop the practical skills needed to design and develop electronic commerce Web pages.

ISM 4905 Independent Study (1-6) BA QMB
S/U only Independent study as directed by designated faculty.

ISM 4930 Selected Topics in MIS (1-3) BA QMB
Selected topics in MIS.

ISM 4950 Independent Research (1-6) BA QMB
PR: CI. Individual study contract with instructor and department chairperson required. The research project will be mutually determined by the student and instructor.

ISS 1101 Knowledge and Society SS (3) AS ISS
Course introduces students to issues concerning the relationship between knowledge and society. Among the issues addressed are competing accounts of knowledge, the relationship between knowledge and other forms of human experience and different aspects of social life such as religion, morality, aesthetics, politics, and gender.

ISS 1102 Self and Society SS (3) AS ISS
Course introduces students to issues concerning the relationship between the self (or individual) and society. Among the topics that may be addressed are the idea of human nature, how human nature is shaped by social and cultural factors, the moral obligations between individuals and society, and how our understanding of the self is shaped by gender and culture.

ISS 1103 Nature and Culture SS (3) AS ISS
This course examines competing ideas and theories concerning the relationship between nature and culture. Among the issues and questions examined are the relationship between nature and our awareness of it, to what extent is nature transformable; should “nature” dictate the shape of social institutions; how does technology affect our society and environment.

ISS 3010 Introduction to the Social Sciences (3) AS ISS
Integrates the range of social science fields into a global interdisciplinary perspective. Views social institutions and issues from perspectives of changing paradigms.

ISS 3930 Selected Topics in the Social Sciences (1-4) AS ISS
Interdisciplinary studies of varying topics, with course content dependent on student demand and instructor interest.

ISS 4151 Native American Women (3) AS ISS
An interdisciplinary examination of lives of Native American Women, past and present. Topics may include: history, education, politics, economics, family, etc. Open to all majors.

ISS 4162 The City and Urbanization (3) AS ISS
An interdisciplinary perspective will be used to analyze the emergence of the city, urban revolution and metropolis. Urban planning and governance and human ecology perspective will be examined in looking at how urban areas deal with social and physical problem.

ISS 4164 Urban Social Issues: An Interdisciplinary Approach (3) AS ISS
This course is designed to examine current metropolitan issues from an interdisciplinary perspective. Topic selection will be within the broad framework of technological changes, economic conditions, political ideologies, human ecology, and their impact on changing social patterns.

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

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

ISS 4935 Seminar in the Social Sciences MW (3) AS ISS
PR: Senior standing and ISS 3101 or CI. The seminar which caps the interdisciplinary major. Wends personal curiosity with the application of theoretical models to research on salient social issues.

ISS 4939BIS Social Sciences, Seminar (15) AS BIS
PR: BIS ISS 4905 or CI. S/U only

ISS 5934 Selected Topics (1-3) AS AFA
PR: CI plus senior standing or graduate status. Interdisciplinary studies with course content dependent on student demand and instructor’s interest.

ITA 1120T Italian I (4) AS MLL
CR: ITA 1120L. The first course in the study of elementary Italian. Emphasis is on the development of basic skills in comprehension, speaking, and reading.

ITA 1120L Beginning Italian Laboratory (1) AS MLL
CR: ITA 1120. A laboratory designed to offer additional practice using various instructional technologies and media.

ITA 1121 Beginning Italian II (4) AS MLL
CR: ITA 1121T. The second course in the study of elementary Italian. Emphasis is on the development of basic skills in comprehension, speaking, and reading.

ITA 1121L Beginning Italian II Laboratory (1) AS MLL
CR: ITA 1121. S/U only. Orientation and concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. A laboratory designed to offer additional practice using various instructional technologies and media.

ITA 2200 Intermediate Italian I (3) AS MLL
PR: ITA 1121 or equivalent. Readings in Italian on the elementary level. A review of the basic structure of spoken and written Italian.

ITA 2240 Italian Conversation I (4) AS MLL
To develop fluency and correctness in spoken Italian. Intensive study for conversational skill based particularly upon the current Italian idiom. Syntax is intensified and the vocabulary and idiomatic expressions expanded.

ITA 2241 Italian Conversation II (4) AS MLL
To assist students who have already made a start in speaking Italian, who have not had the advantages of travel or who have non-Italian speaking parents, to improve their skill in speaking Italian. Current events, literary discussions, free conversation, prepared speeches. Differences of media, syntactical signal.

ITA 3420 Composition (3) AS MLL
A fundamental composition course for students who have completed ITA 2200.

ITA 3470 Overseas Study (1-6) AS MLL
Prior approval and early registration required. An intensive study-travel project in Italy.

ITW 4100 Survey of Italian Literature I (4) AS MLL
A survey of Italian literature from the earliest monuments through the classicism of the 18th century.

ITW 4101 Survey of Italian Literature II (4) AS MLL
A survey of Italian literature beginning with the Classicism of the 18th century and continuing to present.

ITW 4905 Directed Study (1-3) AS MLL
Departmental approval required. Selected topics in Italian literature.

JOU 2100 Beginning Reporting (3) AS COM
PR: MMC 2100 and MMC 3602. Basic instruction in news judgment, sources of news, news gathering, and news writing techniques. Typing ability is required.

JOU 2200 News Editing I (3) AS COM
PR: ECO 1000, JOU 2100, and SYG 2010. Evaluating news and its display; editing and rewriting copy for the mass media, with emphasis on the daily newspaper, news magazine, headlines, makeup; ethical problems.

JOU 3101 Advanced Reporting (3) AS COM
PR: POS 2041, JOU 2100, or RTV 3304 (RTV majors only). JOU 2200 (may be taken concurrently), and PHI 1103. Reporting and writing the more complex and specialized story, techniques of investigative and analytical reporting, including ethical and legal considerations.

JOU 3300 Magazine Article and Feature Writing (3) AS COM
PR: CRW 2100 and JOU 2100. Planning, researching, writing, and marketing articles for general and special interest magazines and newspaper magazine supplements; experiences in developing article idea; inductive analysis of contemporary magazine articles.

JOU 3306 Critical Writing: Editorials, Reviews, Columns (3) AS COM
PR: JOU 3101 and JOU 2200. Interpretive and opinion writing for the mass media. Analysis and discussion of current events as a basis for critical thinking and writing; evaluation of editorial pages of leading newspapers. Study of journalistic techniques involved in personal columns.

JOU 3940 Reporting Practicum (1) AS COM
PR: JOU 3101 and CI. For non-editorial sequence majors. S/U only. Practical experience outside the classroom where the student works for academic credit under the supervision of a professional practitioner. Periodic written and oral reports to the faculty member.

JOU 4104 Public Affairs Reporting (3) AS COM
PR: JOU 3101 or RTV 3304 (RTV majors only), POS 2041 and POS 3142 or POS 2112. Covering city council meetings, courthouse, city hall, courts, society, and other special assignments. Emphasis is on coverage of major governmental units of all levels of government,
including examination and interpretation of public documents and
unpublished sources.

JOU 4206 Newspaper Design and Typography (3) AS COM
PR: JOU 2200 or DPR. Theoretical and practical applications of
newspaper design, problems in newspaper layout, the research of
newspaper typography and design and its application; redesign of
temporary newspapers.

JOU 4941 Editing Practicum (1) AS COM
PR: Senior standing. JOU 2200 and CF. For news-editorial sequence
majors: S/U option. Practical experience outside the classroom where
the student works for academic credit under the supervision of a
professional practitioner. Periodic written and oral reports to the
faculty member coordinating the study.

JOU 4944 Magazine Practicum (1) AS COM
PR: Senior standing and CF. For magazine sequence majors. S/U only.
Practical experience outside the classroom where the student
works for academic credit under the supervision of a professional
practitioner. Periodic written and oral reports to the faculty member
coordinating the study.

JOU 5105 Newswriting and Editing (3) AS COM
PR: GS in Mass Communications or CF. Introduction to the basics of
gathering, writing, and editing the news, with an emphasis on
practical assignments done under professional conditions and
standards. Discussions, readings emphasize the larger context and
implications of news.

JOU 5305 Explorations in Newswriting (3) AS COM
PR: CC. Students work to develop writing styles, reporting on and
creating stories about significant issues, events, and ideas. the
course explores the notion that narrative-style journalism can be
analytical, the thought effectively bring readers into stories and giving
them a bigger stake in the news. the focus is on going beyond traditional
practices of reporting and writing news stories.

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

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

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

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

JPN 2200 Modern Japanese III (3) AS MLL
PR: JPN 1121 or equivalent. Continuing study to attain basic
proficiency in Japanese.

JPN 2201 Modern Japanese IV (3) AS MLL
PR: JPN 2200 or equivalent. Continuation of JPN 2200.

JPN 4905 Directed Study (1-5) AS MLL
Departmental approval required. S/U only. Permits study options in
Japanese not available in regularly scheduled curriculum at depart-
mental discretion.

JPN 4930 Selected Topics (1-5) AS MLL
Departmental approval required. Course permits study options in
Japanese not available in the regularly scheduled curriculum at depart-
mental discretion.

LAE 4314 Language Arts in Childhood Education (3) ED EDE
PR: Admission to the College of Education; coordinated and
integrated language arts curriculum and guiding the development of
language experiences in children in elementary school. Explores the
content, organization, and instruction of oral language development.

LAE 4323 Methods of Teaching English: Middle School (3) ED EDT
Must be taken one or two semesters prior to internship. Recommended to be taken with LAE 4464. Whole language methods of
integrating reading, writing, speaking, listening, viewing, and critical
thinking activities into a literature-based program for middle school
students.

LAE 4414 Literature in Childhood Education 6A LW (3) ED EDE
Jr./Sr. Standing The selection, evaluation and use of fiction,
nonfiction and poetry for instructional, informational, and recreational
purposes in Childhood Education.

LAE 4464 Adolescent Literature for Middle and Secondary Students 6A LW (3) ED EDT
PR: English Education majors or CF. Recommended to be taken with
LAE 4323 two semesters prior to internship. A study of the types of
literature read by adolescents with an emphasis upon the criteria
for the choice of good books and knowledge of available books and
teaching materials.

LAE 4530 Methods of Teaching English: Practicum (3) ED EDT
PR: Senior standing or consent of Program. Required concurrently with LAE 4325 or LAE 4642. Taken one semester, spring or fall, prior to internship.

LAE 4642 Methods of Teaching English: High School (3) ED EDT
PR: LAE 4646. Must be taken one semester prior to internship concurrently with LAE 4530. Whole language methods of integrating
reading, writing, speaking, listening, viewing, and critical thinking
activities into a literature-based program for high school students.

LAE 4936 Senior Seminar in English Education (2) ED EDT
PR: Senior standing. Required concurrently with internship. Synthe-
sis of teacher candidate’s courses in complete college program.

LAE 4940 Internship: English Education (1-12) ED EDT
S/U only. One full semester of internship in a public or private school.
Intern takes Senior Seminar in English Education concurrently. In
special programs where the internship experience is distributed over
two or more semesters, student will be registered for credit which
accumulates from 9 to 12 semester hours.

LAE 5932 Selected Topics in the Teaching of English (3) ED EDT
PR: Certification in English and/or Mass Communications and ap-
proval 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 accord with the particular goals and will be approved by
the student’s graduate advisor.

LAH 2020 Latin American Civilization HP AF (3) AS HTY
An introduction to selected issues, events, and people in Latin American
history from 1492 to the present. Focus on Argentina, Brazil, Chile, Cuba, and Mexico. Intended for students in any discipline; no prerequisites. An entry-level course for Latin Ameri-
can studies.

LAH 2734 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.

LAH 3130 Colonial Latin America (4) AS HTY
Placing emphasis on indigenous people this course examines pre-
Columbian culture and the interaction between native peoples and
Europeans in the wake of the encounter.

LAH 3200 Modern Latin America (4) AS HTY
A study of the emergence of the Latin American states. The course
will examine developments in Latin America during the nineteenth
and twentieth centuries. Special attention is given to the Third World
colonial character of the region.

LAH 3430 History of Mexico (4) AS HTY
Mexican history from pre-Columbian cultures to the twentieth
century. Emphasis falls on the colonial political economy, social
development, the wars of independence, development of the 19th
century Mexican state and the Mexican revolution.

LAH 3478 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.

LAH 3480 History of Cuba (4) AS HTY
Cuban history from pre-Columbian cultures to the Cuban Revolution.
Emphasis on colonization, the sugar economy, the struggles for independance, 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
two countries of a region. Each course combines some measure of
political, economic, historical, religious, geographic, anthropologi-
cal, 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 (3) AS FILM AF (3) AS INT
This course will use film, video, selected readings, and lectures to
teach the interested student about Latin America.

LAT 1102 Beginning Latin I (4) AS CLA
An introductory course in Latin grammar with appropriate readings.

LAT 1121 Beginning Latin II (4) AS CLA
PR: LAT 1120 or equivalent. An introductory course in Latin grammar
LIS 5268 Microcomputer Applications Library and Information Centers (3) AS LIS
Microcomputer hardware and software for libraries and their applications in library/information settings. Projects using major applications for budgets, databases, and telecommunications are undertaken.

LIS 5315 Instructional Graphics (3) AS LIS
Theoretical aspects, planning and production of instructional graphic material. The Theory of graphic communications. Interpreting needs for instructional materials appropriate for given behavioral objectives.

LIS 5333 TV in Schools and Libraries (3) AS LIS
Small format video tape recordings and the utilization of open and closed broadcasts in schools and libraries.

LIS 5404 Foundations of Library and Information Science (3) AS LIS
Introduction to the study of library and information science, history, organization, specialized literature; outstanding leaders; current trends, issues, and problems; the place of the information agency in society with its contributions to that society.

LIS 5397 Selected Topics in Library Studies (1-5) AS LIS
Covers a variety of topics in instruction, collection development, reference services, technical services, and administration.

LIT 2000 Introduction to Literature 6A HP (3) AS ENGLiterature of the short story and novel as literary forms; approached from an historical perspective though not restricted to any historical period.

LIT 2021 Current Short Fiction (3) AS ENGLiterature of the short story and novel as literary forms; approached from an historical perspective though not restricted to any historical period.

LIT 2040 Introduction to Drama 6A HP (3) AS ENGLiterature of the short story and novel as literary forms; approached from an historical perspective though not restricted to any historical period.

LIT 2831 Selected Topics in English Studies (3) AS ENGLiterature of the short story and novel as literary forms; approached from an historical perspective though not restricted to any historical period.

LIT 3022 Modern Short Fiction (3) AS ENGLiterature of the short story and novel as literary forms; approached from an historical perspective though not restricted to any historical period.

LIT 3073 Contemporary Literature 6A LW (3) AS ENGLiterature of the short story and novel as literary forms; approached from an historical perspective though not restricted to any historical period.

LIT 5101 Literature of the Western World Through the Renaissance 6A (3) AS ENGLiterature of the short story and novel as literary forms; approached from an historical perspective though not restricted to any historical period.

LIT 5102 Literature of the Western World Since the Renaissance 6A (3) AS ENGLiterature of the short story and novel as literary forms; approached from an historical perspective though not restricted to any historical period.

LIT 3103 Great Literature of the World 6A MW LW (3) AS ENGLiterature of the short story and novel as literary forms; approached from an historical perspective though not restricted to any historical period.
as Dostoevsky, Flaubert, Kafka, Hesse, Camus, and Solzhenitsyn.

LIT 315, 325, Modern Literature 6A MW LW (3) AS ENG
Examine 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 help relate the present to the recent past. Designed for non-majors, but majors may take it by special arrangement.

LIT 3301 Cultural Studies and the Popular Arts 6A MW LW (3) AS ENG
A study of twentieth century culture as it is represented in the film, fiction, and other cultural artifacts of many different nationalities. Focuses on values/ethics, race, ethnicity and gender; thinking and writing skills.

LIT 3374 The Bible As Literature MW (3) AS ENG
May be counted once toward the English major. However, can be taken twice. Fall semester is Old Testament and Spring semester is New Testament. Either can count toward the major. Major emphasis on literary types, literary personalities of the Old and New Testaments, and Biblical archetypes of British and American literary classics. Fall Semester, Old Testament; Spring Semester, New Testament. Focuses on values/ethics, race, ethnicity and gender; thinking and writing skills.

LIT 3383 The Image of Women in Literature 6A MW LW (3) AS ENG
A study that seeks to trace the prongs of contemporary views about women to analyze major Eastern/Western literary portrayals of women, to examine ideas about women’s roles, and to compare/contrast cultural/racial images of women.

LIT 3410 Religious and Existential Themes (3) AS ENG
Theological and philosophical ideas and symbols in the writings of Dostoevsky, Nietzsche, Mann, Joyce, Eliot, Camus, Sartre, among others.

LIT 3451 Literature and the Occult 6A MW LW (3) AS ENG
Will allow students toward the English major. An introduction to the occult tradition as a major ingredient in English, Continental, American, and Multicultural literature; analysis of the origins, classification, and ideas of the various magic arts from classical times through the present. Focuses on values/ethics, race/ethnicity and gender; thinking and writing skills.

LIT 3700 Survey of Poetry (3) AS ENG
A chronological sampling of the major poems written in English from the Middle Ages to the present. Recommended as the first course in the poetry option.

LIT 4386 British and American Literature by Women 6A MW LW (3) AS ENG
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. Open to majors and minors. Writing intensive.

LIT 4804 Literature and Cultural Study MW (3) AS ENG
The study of literary texts as cultural artifacts and the problematic of that. Literary texts as historical, social, political, psychological, philosophical, religious, etc. documents (or as any one of those). Topics and works vary.

LIT 4930 Selected Topics in English Studies (3) AS ENG
The content of the course will be governed by student demand and instructor interest. It will examine in depth a recurring literary theme or the work of a small group of writers. Special courses in writing may also be offered under this title.

LNW 2660 Vergil (4) AS CLA
PR: LAT 1121 or equivalent. Readings in Vergil’s Aeneid. Study of the tradition, techniques, and artistry of Roman epic poetry. Available to majors and non-majors.

LNW 4381 Livy (4) AS CLA
PR: Basic knowledge of Latin. Readings in the ideas and artistry of this Roman historian.

LNW 4500 Cicero and Roman Philosophy (4) AS CLA
PR: Basic knowledge of Latin. Readings in the philosophic writings of Cicero. Short essay with a consideration of eclecticism in thought.

LNW 4501 Seneca and Roman Philosophy (4) AS CLA
PR: Basic knowledge of Latin. Readings in the philosophic writings of Lucius Annaeus Seneca, together with an examination of Stoic, Epicurean, and Eclectic thought.

LNW 4634 Catullus (4) AS CLA
PR: Basic knowledge of Latin. Readings in Catullus. Study of techniques and tradition in Roman lyric poetry.

LNW 4644 Cicero (4) AS CLA
PR: Basic knowledge of Latin. Readings in the epistles of Cicero.

LNW 4654 Horace (4) AS CLA
PR: Basic knowledge of Latin. Readings in the Odes and Epodes of the Roman’s Epoche’s tradition.

LNW 4670 Ovid (4) AS CLA
PR: LAT 1121 or equivalent. Readings in Ovid’s Metamorphoses.

Study of Ovid’s technique, style, and artistry.

LNW 4800 Directed Reading 1A (4) AS CLA
Departmental approval required.

LNW 4930 Selected Topics (4) AS CLA
Study of an author, movement, or theme.

LNW 5900 Directed Reading II (4) AS CLA
Departmental approval required. S/U.

LNW 5934 Selected Topics (4) AS CLA
Study of an author, movement, or theme.

MAA 4211 Intermediate Analysis I 6A (4) AS MTH
PR: MAS 4301 Sequences, series, metric spaces, continuity, differentiation.

MAA 4212 Intermediate Analysis II 6A (3) AS MTH
PR: MAA 4211 Riemann-Stieltjes integration, uniform convergence, and related topics.

MAA 4402 Complex Variables 6A (3) AS MTH
PR: MAS 4301 or C.I. No credit for students with credit in MAA 5404. Complex numbers, Cauchy-Riemann equations, analytic and conformal functions, power series, Cauchy Theorem, Cauchy Integral Formula, residue theory.

MAA 5306 Real Analysis I (3) AS MTH

MAA 5405 Applied Complex Analysis (3) AS MTH
PR: C.I. Complex numbers, analytic and harmonic functions. Series. Contour integrals, residue theory. Conformal mappings. (A survey course emphasizing applications to different fields of mathematics, physics, and engineering.)

MAC 1114 College Trigonometry 6A (2) AS MTH
PR: Two years of high school algebra. No credit for students with credit in MAC 2147. Angles, Trigonometric functions, properties and graphs of trigonometric functions, right triangles, laws of sines and cosines, polar coordinates.

MAC 2230 Business Calculus 6A QM (4) AS MTH
PR: Three years of high school mathematics including two years of algebra or MGF 1105. No credit for math majors or students with credit in MAC 2233, 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, finance and economics.

MAC 2233 Life Sciences Calculus I 6A QM (4) AS MTH
PR: Three years of high school mathematics including two years of algebra or MGF 1105. No credit for math majors or students with credit in MAC 2281 or MAC 2311. Differentiation and integration of algebraic functions with applications, exponential and logarithmic functions. MAC 2233-MAC 2234 are primarily for students from Biological Sciences, Medical and Business.

MAC 2234 Life Sciences Calculus II 6A QM (4) AS MTH
PR: MAC 2233. 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 (3) AS MTH
PR: Two years of high school algebra, and a semester of trigonometry or MAC 2147. No credit for students with credit in MAC 2233 or MAC 2311. A year of high school geometry is recommended. Differentiation, limits, differentials, extremes, indefinite integral.

MAC 2282 Engineering Calculus II 6A QM (3) AS MTH
PR: MAC 2281 or C.C. No credit for students with credit in MAC 2234 or MAC 2312. Definite integral, trigonometric functions, log, exponential, series, applications.

MAC 2283 Engineering Calculus III 6A (3) AS MTH
PR: MAC 2282 or C.C. No credit for students with credit in MAC 2313. Techniques of integration, numerical methods, analytic geometry, polar coordinates, Vector algebra, applications.

MAC 2311 Calculus I 6A QM (4) AS MTH
PR: Two years of high school algebra, and a semester of trigonometry or MAC 2147. No credit for students with credit in MAC 2233 or MAC 2281. A year of high school geometry is recommended. Limits, derivatives, applications.

MAC 2312 Calculus II 6A QM (4) AS MTH
PR: MAC 2311 with a grade of “C” or better or CC. No credit for students with credit in MAC 2334 or MAC 2282. Antiderivatives, the definite integral, applications, series, log, exponential and trig functions.

MAC 2313 Calculus III 6A (4) AS MTH
PR: MAC 2312 with a grade of “C” or better or CC. No credit for students with credit in MAC 2283. Integration, polar coordinates, cylindrical and spherical coordinates, vectors, dot products, vector derivatives, and vector integrals.

MAD 3100 Discrete Mathematics 6A (3) AS MTH
PR: MAC 2281 or MAC 2311. An introduction to some of the aspects
of discrete mathematics that are fundamental to digital computing. These topics include sets, numbers, algorithms, Boolean algebra, computer arithmetic, elementary combinatorics and an introduction to graph theory.

MAD 4401 Numerical Analysis 6A (4) AS MTH
PR: MAS 3105 and ability to program a digital computer. Interpolation and quadrature, finite differences, numerical solution of algebraic and transcendental equations, numerical solution of differential equations, computer techniques.

MAD 4504 Theory of Computation (3) AS MTH
PR: MGF 3301 or MAD 3100. Mathematical aspects of alphabets and languages, Chomsky's hierarchy, Grammars, Regular languages, grammars and finite states machines. Context-free languages and grammars. Turing machines and languages. Decidability. Inductive definition of functions and basic computable functions. Introduction to computational complexity.

MAD 5101 LISP: Programming With Algebraic Applications (3) AS MTH
PR: MIF 3306 or MAD 6510 or MAS 3311 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: CI Brief introduction to classical graph theory (4-color theorem, etc.), directed graphs, connected digraphs, condensations, incidence matrices, Polya’s Theorem, networks.

MAE 4310 Teaching Elementary School Mathematics I (3) ED EDE
PR: Admission to College of Education and two college level mathematics courses. Methods for teaching number ideas, computational skills, problem-solving, and mathematical reasoning.

MAE 4320 Teaching Mathematics in the Middle Grades (3) ED EDO
PR: 18 semester hours of mathematics or DPR. Admission to Mathematics Education program. 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 Mathematics II (2) ED EDE
PR: MAE 4310. Methods for teaching informal geometry, measurement, probability and statistics.

MAE 4330 Teaching Senior High School Mathematics (3) ED EDO
PR: MAE 4320 and admission to teacher education program in mathematics. Techniques and materials of instruction in mathematics. Students are expected to observe 20 hours in high schools.

MAE 4515 Reading the Language of Mathematics (2) ED EDO
Consideration of issues related to the communication of mathematics, including reading and writing mathematics and solving verbal problems.

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: MAE 4320 and MAE 4652 This course prepares secondary mathematics education majors to be proficient with hand-held technologies such as: graphing calculators, symbolic manipulators, calculator based laboratory systems and hand held geometric drawing tools.

MAE 4909 Directed Study: Mathematics Education (1-3) ED EDO
PR: Senior Standing. To extend competency in teaching field.

MAE 4936 Senior Seminar in Mathematics Education (2) ED EDO
PR: Senior Standing; CR: MAE 4940. Synthesis of teacher candidate’s courses in complete college program.

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

MAE 5875 Abstract Algebra for Teachers (3) AS MTH
PR: MAS 3105 and MAC 3401. Theory and problems of abstract algebra for Mathematics majors. Groups, fields, vector spaces as they relate to high school algebra and geometry.

MAE 5877 Mathematical Analysis For Teachers (3) AS MTH
PR: MAC 2311 and Bachelor’s degree or CC. No credit for Mathematics majors. Limits, continuity, derivatives, differentials.

MAN 3025 Principles of Management (3) BA MAN
Study of the fundamentals of management. It treats topics in organizational theory, organizational behavior, and interpersonal relations which are relevant to effective management performance.

MAN 3240 Organizational Behavior Analysis (3) BA MAN
PR: MAN 3025. The course covers research literature relevant to organizational functioning including behavioral effects of power and authority, formal organization, structural variation, leadership, motivation, and communication.

MAN 3301 Human Resource Management (3) BA MAN
To develop a broad exposure to new approaches, techniques, and future trends in the management of personnel. A study of the major functions in personnel including job analysis, manpower planning, selection, performance evaluation, training, and wage and salary administration.

MAN 3401 Industrial Relations (3) BA MAN
Conceptualization of the administrative problems arising from unionization. Emphasis on the relationship between management and employee representatives in private and public employment.

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

MAN 4129 Theory and Practice of Management Skills (3) BA MAN
This course involves the transference of management theories into practice. It requires the active involvement of students in developing and practicing the skills needed to be a successful manager.

MAN 4280 Organizational Development and Change (3) BA MAN
PR: MAN 3240 or 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) BA MAN
PR: MAN 3240. The analysis and measurement of factors which influence organizational effectiveness and the quality of work life. Data based cases will be used by students to assess managerial and supervisory skills and to measure organizational functioning and work design.

MAN 4402 Employment Laws (3) BA MAN
Federal and state regulation of the employment relationship, including wage and hour laws; EEO; affirmative action programs; employee benefits, insurance, workers’ compensation, safety, health, employees’ personal rights, collective bargaining legislation.

MAN 4430 Seminar in Negotiations and Administration of Labor Agreements (3) BA MAN
Case studies in contract negotiation, administration, grievance settlement, and arbitration. Assumes familiarity with industrial relations system.

MAN 4504 Operations Management: A Systems Approach (3) BA QMB
PR: ISM 3431 or equivalent. Studies the problems of "operations" in all types of enterprises in both the public and private sectors. Emphasis is placed on the application of various decision science methodologies to problem situations.

MAN 4507 Operation Production Systems (3) BA QMB
PR: MAN 4504 or CI. Study of closed loop production planning and control systems. Master production planning, inventory management, materials requirements planning, capacity, management, production activity. Relationship to organizational effectiveness.

MAN 4600 International Management (3) BA MAN
PR: MAN 3025. Senior Standing or CI. A study of the role and importance of the international/multinational firms in the global environment. Impact of the political, regulatory, and economic dimensions will be considered from the manager’s perspective.

MAN 4802 Entrepreneurship and Small Business Management (3) BA MAN
PR: ACG 2021, ACG 2071, MAR 3023, or CI. Study of the factors involved in starting and managing a small- to medium-sized business. Emphasis on conduct of pre-business feasibility study, start-up of business, success management of the firm, and options for succession or termination.

MAN 4804 Small Business Management Counselling (3) BA MAN
PR: MAN 4802 or CI. Field application in small business settings by (a) analyzing an on-going small business and developing recommendations for making improvements; or (b) conducting a feasibility study for a new enterprise and developing a strategy for implementation if favorable.
MAN 4905 Independent Study (1-3) BA MAN
PR: CI, SU if on a specialized independent study determined by the students needs and interests.
MAN 4930 Selected Topics in Management (1-3) BA MAN
PR: CI. Topics to be selected by instructor and department chairperson required. The research project will be mutually determined by the student and instructor.
MAN 4931 Independent Research (1-4) BA MAN
PR: CI. Individual study contract with instructor and department chairperson required. The research project will be mutually determined by the student and instructor.
MAP 2302 Differential Equations 6A (3) AS MTH
PR: MAC 2283 or MAC 2313. First order linear and nonlinear differential equations, higher order linear equations, applications.
MAP 3517 Ordinary Differential Equations II (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 methods, matrix methods for linear systems of ordinary differential equations, and topics from calculus of variations, control theory, and solutions of differential equations.
MAR 2931 Selected Topics in Marketing (1-4) BA MKT
PR: CI. Not available for credit to upper-level students who have been admitted to the College of Business. Topics to be selected by department chairman.
MAR 3023 Basic Marketing (3) BA MKT
PR: ACG 2021, ECO 2013, ECO 2023, or CI. 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) BA MKT
PR: MAR 3023 or CI. A study of the stages of the professional selling process, and the role of sales in today’s marketing environment. Emphasis on learning adaptive selling techniques and developing effective interpersonal communications skills. Sales careers are examined.
MAR 3613 Marketing Research (3) BA MKT
PR: QMB 3200, 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, and the use in marketing decision making.
MAR 3823 Marketing Management (3) BA MKT
PR: MAR 3023 or CI. Applications of the marketing function at an intermediate level. Emphasis upon 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) BA 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 buyer behavior.
MAR 4213 Logistics and Physical Distribution Management (3) BA MKT
PR: MAR 3023 or CI. A study of logistics in the marketing of goods and services. Includes a description and analysis of the logistics environment as well as components of the physical distribution system with emphasis on information flows and the application of quantitative techniques used in establishing and controlling customer service levels.
MAR 4231 Retailing Management (3) BA MKT
PR: MAR 3023 or CI. A comprehensive study of the retailing structure, institutions, and environment. Includes pertinent management theories and practices in analyzing, organizing, planning and controlling retail operations, both large and small.
MAR 4333 Promotion Management (3) BA MKT
PR: MAR 3023 or CI. A study of the role of promotion in the marketing program of the firm, including the promotional tools available to the marketing manager and the various types of decisions made in the promotional area. Decision making process in development of a promotional program is emphasized.
MAR 4403 Sales Management (3) BA MKT
PR: MAR 3023 or CI. A study of sales management and strategy as a subset of 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) BA MKT
PR: MAR 3023. A study of the marketing of goods and services to the industrial and institutional sectors. Includes characteristics of the markets and channels of distribution, sales, management, research and promotional practices, marketing policies and strategies.
MAR 4503 Buyer Behavior (3) BA MKT
PR: MAR 3023. A study of the basic concepts of buyer behavior, including pre- and post-purchase behavior, information processing relating to the functional areas of marketing and the buyer’s decision-making process. Managerial applications in marketing are emphasized.
MAR 4824 Marketing Management Problems (3) BA MKT
PR: Senior Standing, MAR 3823, MAR 3613, and two other 4000 level marketing courses, or CI. The integration of marketing knowledge applied to decision roles in managing the total marketing effort of firms, and coordination with other major functional areas on specific problems.
MAR 4903 Independent Research (1-3) BA MKT
PR: CI. Individual study contract with instructor and department chairperson required. The research project will be mutually determined by the student and instructor.
MAR 4905 Independent Study (1-3) BA MKT
PR: CI. SU only. Specialized independent study determined by the student’s needs and interests.
MAR 4933 Selected Topics in Marketing (1-3) BA MKT
PR: CI. Topics to be selected by instructor and department chairperson.
MAS 1100 Consecutive Number Theory and Linear Algebra (3) AS MTH
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 residue polynomials over the integers, systems of linear equations, matrices and determinants.
MAS 3105 Linear Algebra 6A (3) AS MTH
PR: MGF 3301, CR: MAC 2283 or MAC 2313. Linear systems, matrix algebra, vector spaces, inner independence, inner product spaces, Gram-Schmidt algorithm, linear transformations and matrix representations, determinants, eigenvalues, diagonalization, quadratic forms.
MAS 4124 Numerical Linear Algebra 6A (3) AS MTH
PR: MAS 3105. This course will consider efficient and stable numerical methods for dealing with matrix computations such as the solution of systems, calculation eigenvalues and vectors, least squares, and so on.
MAS 4156 Vector Calculus 6A (3) AS MTH
PR: MAS 3105 and MAC 2308. Study of implicit and inverse function theorems, parameterized surfaces, submanifolds or Euclidean space, exterior calculus of differential forms, differentiation of vector fields, line and surface integrals, Stokes’ Theorem, elementary continuous groups.
MAS 4214 Elementary Number Theory 6A (3) AS MTH
PR: MAC 2312. 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; homomorphisms and isomorphisms.
MAS 5107 Advanced Linear Algebra (3) AS MTH
MAS 5215 Number Theory (3) AS MTH
PR: MAS 3105 and MAD 4301, or CI. Fundamental theorem of arithmetic, modular arithmetic, Chinese remainder theorem, Mersenne primes, perfect numbers, Euler-Fermat theorem, pseudoprimes, primitive roots, 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 5311 or Consent of MAS 5311. Finitely generated modules over a principal ideal domain, basic field theory, finite fields, Galois theory.

MAT 2930 Selected Topics in Mathematics 6A (1-4) AS MTH
PR: CI. The course content will depend on the interest of faculty members and student demand.

MAT 2936 Technology Seminar 6A (1) AS MTH
S/U only. A two hour/week technology seminar to acquaint students majoring in mathematics, physics, and other sciences with the computer tools necessary in scientific communication and documentation preparation.

MAT 4906 Independent Study 6A (1-4) AS MTH
PR: CI. 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 4908 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 Special Topics in Mathematics 6A (1-4) AS MTH
PR: CI. Each course covers a single topic outside the usual curriculum.

MCB 3030C General Microbiology (4) AS BIO

MCS 4115 Determinative Bacteriology (5) AS BIO
PR: MCB 3030C. Survey of bacterial classification; detailed examinations of bacteria important to man in agriculture, in industry and as pathogens. Lec-lab.

MCB 4404 Microbial Physiology and Genetics (4) AS BIO
PR: MCB 3030C and CR/PR: BCH 3023. A study of the physiological, metabolic, and genetic phenomena pertinent to understanding the growth, development, ecology, regulation, and reproduction of microorganisms. The course emphasizes the interdependence of physiological and genetic approaches to microbiology. Lec.

MCB 4404L Microbial Physiology and Genetics Laboratory (1) AS BIO
CR/PR: MCB 4404C. Laboratory portion of Microbial Physiology and Genetics relating to biochemical characteristics and metabolic capabilities of bacteria.

MCB 4502C Virology (3) AS BIO
PR: MCB 3030C. 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.

MCB 4910 Microbiology Undergraduate Research (1-4) AS BIO
PR: CI and completion of Department contract before registration. For B.S. Microbiology majors only. S/U only. Individual investigation with faculty supervision.

MCB 4934 Seminar in Microbiology (1) AS BIO
PR: Senior or advanced junior standing. S/U only. Biology majors may take for elective credit.

MCB 5206 Public Health and Pathogenic Microbiology (3) AS BIO
PR: MCB 3030C. A comprehensive survey of pathogenic microbes responsible for disease in man and other animals and the impact of these infectious agents on the public health. These pathogens will be studied with respect to their morphology, cultivation, mechanisms of pathogenicity, laboratory diagnosis, and epidemiology.

MCB 5815 Medical Mycology (3) AS BIO
PR: MCB 3030C A modern biological survey of the medically important fungi and their role in disease (molds and yeasts) important to microbiologists and environmental scientists.

MET 4002 Climatology (4) AS GPY
PR: GEO 3013 or CI. An introductory survey of climatology. A qualitative study of the dynamics of the earth's atmosphere. Surface and upper level atmosphere linkages in the mid latitudes will be examined. Discussion of the regional climatic patterns and anomalies throughout the world.

MET 401C Meteorology (4) AS GPY
PR: GEO 3013 or CI. The earth's atmosphere and its processes, weather forecasting and analysis, instrumentation.

MGF 1105 College Algebra 6A (3) AS MTH
PR: Two years of high school algebra. Concepts of the real number system, functions, graphs, and complex numbers. Analytic skills for solving linear, quadratic, polynomial, exponential, and logarithmic equations. Mathematical modeling of real life applications.

MGF 1106 Finite Mathematics (3) AS GPY
PR: Two years of high school algebra. Concepts and analytical skills in areas of logic, linear equations, linear programming, mathematics of finance, permutations and combinations, probability, and descriptive statistics.

MGF 1107 Mathematics for Liberal Arts 6A (3) AS MTH
This terminal course is intended to present topics which demonstrate the beauty and utility of mathematics to the general student population. Among the topics which might be included are: Financial Mathematics, Linear and Exponential Growth, Numbers and Number Systems, Elementary Number Theory, Voting Techniques, Graph Theory, and the History of Mathematics.

MGF 1108 Selected Topics in Liberal Arts Mathematics 6A (3) AS MTH
Topics selected by the instructor to show the beauty and the utility of mathematics to the general student population. Topics in this course are similar to those in MGF 106 or MGF 1107.

MGF 1116 Mathematical Experience 6A (3) AS MTH
PR: Two years of high school algebra. Introduction to some important and interesting basic ideas in mathematics with an emphasis on a mathematical way of thinking. Concepts such as definitions, axioms and proofs are explained. Topics from number theory, combinatorics, algebra and geometry are used. Some topics are presented in their historical context and their impact on their development of mathematics is discussed.

MGF 1147 College Algebra and Trigonometry 6A (4) AS MTH
PR: Two years of high school algebra. No credit for MAC 2147 for students with credit in MAC 2233 or MGF 1105. Real numbers and their properties, algebraic expression, equations and inequalities, functions, polynomials, exponential and logarithmic functions. Angles, trigonometric functions, properties and graphs of trigonometric functions, right triangles, laws of sines and cosines, polar coordinates.

MGF 2131 Chaos and Fractals 6A (3) AS MTH
PR: High school algebra and trigonometry. Computer experiments in the behavior of functions under iteration: periodicity, attractors, stability, complex numbers, Cantor set, fractional dimension, sensitive dependence.

MGF 3301 Bridge to Abstract Mathematics 6A (3) AS MTH
PR: MAC 2311 or MAC 2281. Techniques and logic of the construction of proofs. Topics will be selected from propositional logic, set theory, relations and functions, equivalence relations, Boolean algebra, cardinality, and limits.

MHF 4403 The Early History of Mathematics 6A MW (3) AS MTH
PR: MAC 2312 and upper-level standing. A study of the history and development of mathematics and its cultural impact from the formation of number systems to the Renaissance.

MHF 5306 Mathematical Logic and Foundations I (3) AS MTH
PR: MAC 4301 or CI. Two-course sequence covering predicate calculus and classical model theory: transfinite set theory and the system ZFC; recursion theory and decidability.

MHF 5405 History of Modern Mathematics (3) AS MTH
PR: MAC 2313. Traces the development of mathematical ideas in Western culture. Special emphasis is placed on those concepts which led to the Calculus. This course is open to majors and non-majors alike.

MHS 4062 Human Relations Skills in Counseling (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.

MIS 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.

MIS 1000 Organization of the Army and ROTC (1) (UG) MIS
Make your first new peer group at college committed to performing well and enjoying the experience. Increase self-confidence through team study and activities in basic drill, physical fitness, rappelling, first aid, and making presentation. Learn fundamentals of leadership.

MIS 1400C Fundamentals of Leadership Development (1) UG MIS
 emphasized.

MIS 4062 Human Relations Skills in Counseling (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.

MIS 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.

MIS 1000 Organization of the Army and ROTC (1) (UG) MIS
Make your first new peer group at college committed to performing well and enjoying the experience. Increase self-confidence through team study and activities in basic drill, physical fitness, rappelling, first aid, and making presentation. Learn fundamentals of leadership.

MIS 1400C Fundamentals of Leadership Development (1) UG MIS
Reinforce self-confidence through participation in physically and mentally challenging exercises. Develop communication skills. Re-
MTG 5256 Differential Geometry (3) AS MTH 
PR: MAA 4211, MAS 3105. Exterior calculus, differentiable manifolds, integration of differential forms, surfaces in 3-space, covariant derivative, curvature, matrix groups.

MTG 5316 Topology I (3) AS MTH 

MTG 5317 Topology II (3) AS MTH 
PR: MTG 5316. The fundamental group; elements of homotopy theory and homology theory.

MUC 2221 Composition (3) FA MUS 

MUC 3401 Electronic Music-Analog Synthesis I (3) FA MUS 
PR: MUC 2301 and CPR. 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) FA MUS 
PR: MUC 2301 and CPR. 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) FA MUS 
PR: MUC 3401 or MUC 3402 and CPR. Computer assisted composition for conventional instruments; composition for tape medium with computer controlled analog synthesizers; digital direct synthesis; digital systems design and construction.

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

MUC 3601 Contemporary Techniques Of Composition (3) FA MUS 
PR: CPR. Instruction in the use of major Twentieth-Century compositional techniques; tonal unordered set. and serial composition and the use of indeterminacy in composition and performance.

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

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

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

MUC 4501 Seminar In New Musical Systems (3) FA MUS 
PR: CI. CPR. Experimental sound sources and ensemble groupings; creation of new instruments; unfamiliar sonic materials and unique musical contexts for music.

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

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

MUE 2450 Beginning Woodwind Techniques (1) FA MUS 
PR: Sophomore standing, non-woodwind major. CPR. The course introduces the fundamentals of woodwind instrument pedagogy. In addition basic techniques of woodwind performance are taught through the study of clarinet and flute.

MUE 2460 Beginning Brass Techniques (1) FA MUS 
PR: Sophomore standing, non-brass major. CPR. The course introduces the fundamentals of brass wind instrument pedagogy. In addition, basic techniques of brass performance are taught through the study of trombone and trumpet.

MUE 3421 Choral Materials Practicum (1) FA MUS 
PR: CPR. 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 Band Materials Practicum (1) FA MUS 
PR: CPR. A study of band materials in a laboratory setting appropriate to elementary and secondary school music programs. Course content will change each semester.

MUE 3423 Orchestra Materials Practicum (1) FA MUS 
PR: CPR. A study of orchestra materials, in a laboratory setting, appropriate to elementary and secondary school music programs. Course content will change each semester.

MUE 3451 Advanced Woodwind Techniques (1) FA MUS 
PR: Sophomore standing, woodwind instrument major or MUE 2450. CPR. The course develops knowledge and skills dealing with advanced principles of teaching and performing on woodwind instruments.

MUE 3461 Advanced Brass Techniques (1) FA MUS 
PR: Sophomore standing, brass instrument major or MUE 2460. CPR. The course develops knowledge and skills dealing with advanced principles of teaching and performing on brass instruments.

MUE 4210 Music For The Child (3) FA MUS 
PR: Admission to the College of Education. CPR. Music 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 Music In The Elementary School (3) FA MUS 
PR: CPR. A study of principles, techniques, materials, and activities as they relate to a comprehensive music curriculum in Grades K-6.

MUE 4321 Foundations Of Choral Music (2) FA MUS 
PR: Major status or CPR. This course deals with the development of knowledge and skills needed to effectively organize and teach a choral music program for elementary and intermediate grade level students. Include school observation and participation component.

MUE 4330 Classroom Music In The Secondary School (3) FA MUS 
PR: CPR. Development and implementation of methods and techniques for teaching music to the student not participating in secondary school music performing groups.

MUE 4331 Choral Methods In The Secondary School (3) FA MUS 

MUE 4332 Instrumental Music In The Secondary School (3) FA MUS 

MUE 4352 Foundations Of Instrumental Music (2) FA MUS 
PR: CPR. MUE 2450, MUE 2460, MVP 1211. Junior standing. Introduction to the foundation of instrumental music instruction in the elementary and middle school.

MUE 4480 Marching Band Techniques (2) FA MUS 
PR: Junior standing. CPR. This course is required of instrumental music education majors. It will provide the student with the needed skills in creating for and teaching the public school marching band.

MUE 4909 Directed Study: Music Education (1-3) FA MUS 
PR: Senior standing. CPR. To extend competency in teaching field. Offered only as a scheduled class.

MUE 4936 Senior Seminar in Music (2) FA MUS 
CR: MUE 4940. CPR. Synthesis of teacher candidate’s courses in complete college program. Required concurrently with internship.

MUE 4940 Internship: Music Education (1-12) FA MUS 
CR: MUE 4936, SU & CR. One full semester of internship in a public or private school. In special programs where the intern experience is distributed over two or more semesters, students will be registered for credit which accumulates from 9-12 semester hours.

MUG 3104 Basic Conducting (2) FA MUS 
PR: CPR. The study and practical application of basic conducting techniques. Development of skills related to the conducting of choirs and bands.

MUG 4302 Instrumental Conducting (2) FA 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.

MUB 2010 History Of Popular Music (2) FA MUS 
Popular music in the U.S. from 1820 to present. Units on the big band
era, country and western, jazz, Black music, and the rock scene beginning in 1880. May be used for University General Distribution Requirements and may be used to satisfy part of the 6 hours in
College Requirement for Fine Arts majors in Art, Dance, Theatre and as a music elective.

**MUH 2051 Folk And Traditional Music Of World Cultures FA AF (3) FA MUS**
A comparative survey of the stylistic traits and functions of the folk and traditional music, both sacred and secular, of diverse Western and non-Western cultures. For non-majors, may be taken by majors as an elective with departmental approval.

**MUH 2632 Music In The United States FA (3) FA MUS**
Designed for majors and non-majors. This course will use live performances, videotapes, and recordings to illustrate music practiced in America from Colonial to present times. Included in the course will be study of the contributions of various ethnic/minority groups, and discussions of the relevant social issues connected with these contributions.

**MUH 3016 Survey Of Jazz FA (3) FA MUS**
For non-music majors. Not repeatable. A study of the evolution of America’s “classical” music: Jazz. In addition to presenting an overview of the most prominent artists and literature, the course will focus on the cultural dynamics involved in the development of jazz from 1890 to the present.

**MUH 3300 Music History/Medieval And Renaissance (2) FA MUS**
PR: CPR. Required of music majors; a study of the historical development of musical styles of the Medieval and Renaissance periods and of the music of those periods.

**MUH 3301 Music History/Baroque And Classic MW (3) FA MUS**
PR: MUL 2111 or CPR. Required of music majors; open to non-majors with CPR. A study of the historical development of musical styles of the Baroque and Classic periods and of the music of those periods.

**MUH 3302 Music History/Baroque And 20th Century MW (3) FA MUS**
PR: MUL 2111 or CPR. Required of music majors; open to non-majors with CPR. A study of the historical development of musical styles of the Romantic and Twentieth Century eras and of the music of those periods.

**MUH 4056 Intercultural Music In The Twentieth Century MW (3) FA MUS**
PR: MUH 2051 or MUL 2111 or CPR. An in-depth investigation of composers born after 1880, from all parts of the world, who have attempted to integrate elements from two or more cultures into their compositions.

**MUH 4801 History Of Jazz (3) FA MUS**
PR: MUL 1112 or CPR. An in-depth study of the historical development of Jazz, including the representative musical literature and sociological implications.

**MUL 2011 The Enchantment Of Music FA (3) FA MUS**
Open only to music majors. A study of the art of music and its materials, designed to develop an understanding of basic principles of music and a technique for listening to music.

**MUL 2111 Introduction To Music Literature 6A HP FA (3) FA MUS**
PR: MUL 1112 or CPR. A survey of representative music exemplars of the past and present emphasis on the study of styles and form. Required for music majors.

**MUL 3001 Issues In Music FA AF (2-3) FA MUS**
Open only to non-music majors. Lectures and live performances by artist faculty of significant works from the literature for the piano; analysis and illustration in performance of the abstract and aesthetic elements in music which vitally concern the artist-performer.

**MUL 3012 Music In Your Life FA (3) FA MUS**
Open only to non-music majors. A study in the art of music and its materials, designed to develop an understanding of basic principles of music and a technique for listening to music.

**MUN 1110 University Marching Band (1-3) FA MUS**
This course provides performance experiences with the Marching Band. The course is open to any major area.

**MUN 3143 Wind Ensemble (1) FA MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for large combinations of voices, string, woodwind, brass, or percussion instruments.

**MUN 3213 University Orchestra (1) FA MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for large combinations of voices, string, woodwind, brass, or percussion instruments.

**MUN 3313 University Singers (1) FA MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for large combinations of voices, string, woodwind, brass, or percussion instruments.

**MUN 3343 Chamber Singers (1) FA MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for large combinations of voices, string, woodwind, brass, or percussion instruments.

**MUN 3383 University-Community Chorus (1) FA MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for large combinations of voices, string, woodwind, brass, or percussion instruments.

**MUN 3411 String Quartet (1) FA MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for small combinations of voices, string, woodwind, brass, or percussion instruments, and piano.

**MUN 3420 Saxophone Ensemble (1) FA MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for small combinations of voices, string, woodwind, brass, or percussion instruments, and piano.

**MUN 3421 Flute Choir (1) FA MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for small combinations of voices, string, woodwind, brass, or percussion instruments, and piano.

**MUN 3432 Woodwind Quintet (1) FA MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for small combinations of voices, string, woodwind, brass, or percussion instruments, and piano.

**MUN 3433 Brass Choir (1) FA MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for small combinations of voices, string, woodwind, brass, or percussion instruments, and piano.

**MUN 3443 Percussion Ensemble (1) FA MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for small combinations of voices, string, woodwind, brass, or percussion instruments, and piano.

**MUN 3444 Marimba Ensemble (1) FA MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for small combinations of voices, string, woodwind, brass, or percussion instruments, and piano.

**MUN 3473 Collegium Musicum (1) FA MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for small combinations of voices, string, woodwind, brass, or percussion instruments, and piano.

**MUN 3483 Classical Guitar Ensemble (1) FA MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for small combinations of voices, string, woodwind, brass, or percussion instruments, and piano.

**MUN 3713 Jazz Ensemble (1) FA MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for large combinations of voices, string, woodwind, brass, or percussion instruments.

**MUN 3714 Jazz Chamber Ensemble (1) FA MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for large combinations of voices, string, woodwind, brass, or percussion instruments.
proficiency in their performance media, study and performance of music for all combinations of voices, string, windwood, brass, or percussion instruments, and piano.

MUO 3503 Opera Workshop (1) FA MUS
PR: DPR. Open to all university students with the necessary proficiency in their performing media and performance of music for large combinations of voices, string, windwood, brass, or percussion instruments.

MUS 2010 Recital Attendance (0) FA MUS
SU only. This course is required whenever a student registers for applied music. The requirement for the successful completion of the course is attendance at ten (10) department-approved recitals/concerts throughout the semester.

MUS 2201 Language Diction For Singers (1) FA MUS
Required of voice performance majors. Specialized study in Language Diction for Singers. Specific language varies, to be arranged at each course offering.

MUO 4500 Directed Reading (1-3) FA MUS
PR: CPR. 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.

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

MUS 4930 Selected Topics In Music (1-4) FA MUS
PR: CPR. The content of the course will be governed by student demand and instructor interest.

MUS 4931 Selected Studio Topics In Music (1-4) FA MUS
PR: CPR. The content of the study will be governed by individual student demand and instructor interest with an emphasis on individual instruction.

MUO 4535 Music Senior Seminar (1) FA MUS
PR: CPR. S/U only. To aid majors to understand, appraise and perfect their own art through critical and aesthetic judgments of their colleagues.

MUS 5905 Directed Study (1-4) FA MUS
PR: CPR. Independent studies in the various areas of music; course of study and credits must be assigned prior to registration.

MUT 1001 Rudiments Of Music (2) FA MUS
Open to non-music majors; development of skills in hearing and performing music and in basic notation. Will not count as degree credit for music majors.

MUT 1111 Music Theory I (3) FA MUS
PR: CPR. Required of music majors; development of skills in perceiving and writing music through the use of aural and visual analysis and examples from all historical periods of music literature.

MUT 1112 Music Theory II (3) FA MUS
PR: CPR. Required of music majors; development of skills in perceiving and writing music through the use of aural and visual analysis and examples from all historical periods of music literature.

MUT 1241 Aural Theory I (1) FA MUS
PR: CPR. 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 1242 Aural Theory II (1) FA MUS
PR: CPR. 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 2116 Music Theory I (3) FA MUS
PR: MUT 1112, CPR. Required of music majors, continuation of MUT 1111 and 1112.

MUT 2117 Music Theory II (3) FA MUS
PR: MUT 1112, CPR. Required of music majors, continuation of MUT 1111 and 1112.

MUT 2246 Advanced Aural Theory I (1) FA MUS
PR: MUT 2242. To be taken concurrently with MUT 2116, MUT 2117, MUT 2121. 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 2247 Advanced Aural Theory II (1) FA MUS
PR: MUT 2242. To be taken concurrently with MUT 2116, MUT 2117, CPR. 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 2641 Jazz Theory And Improvisation (1) FA MUS
PR: MUT 1112 and/or CPR. A study of jazz improvisational techniques and related jazz theory.

MUT 2642 Jazz Theory And Improvisation II (2) FA MUS
PR: MUT 2641 or CPR. A study of jazz improvisational techniques and related jazz theory.

MUT 3353 Jazz Composition And Arranging I (3) FA MUS
PR: MUT 1112 and CPR. A studio course study of the impressive solos of the major innovators in jazz. Oriented toward the continuing development of students' solos 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) FA MUS
PR: MUT 3663 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 4311 Orchestration I (2) FA MUS
PR: CPR. Intensive study and practice in scoring music for various combinations of instruments including symphony orchestra, band, and smaller ensembles of string, windwood, brass, and percussion instruments.

MUT 4312 Orchestration II (2) FA MUS
PR: CPR. Intensive study and practice in scoring music for various combinations of instruments, including symphony orchestra, band, and smaller ensembles of string, windwood, brass, and percussion instruments.

MUT 4411 Sixteenth Century Practice (3) FA MUS
PR: MUT 2117, CPR. A study of the music of the 16th century from a theoretical standpoint: development of skills in perceiving and writing music in the style of the period through the use of aural and visual analysis.

MUT 4421 Eighteenth Century Practice (3) FA MUS
PR: MUT 2117, CPR. 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) FA 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 1211 Applied Trumpet (1) FA MUS
PR: CPR. 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.

MUT 1212 Applied French Horn (1) FA MUS
PR: CPR. 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.

MUT 1213 Applied Trombone (1) FA MUS
PR: CPR. 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.

MUT 1214 Applied Euphonium (1) FA MUS
PR: CPR. 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.

MUT 1215 Applied Tuba (1) FA MUS
PR: CPR. 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.

MUT 1216 Applied Baritone (1) FA MUS
PR: CPR. 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.

MUT 1311 Trumpet Principal (2) FA MUS
PR: CPR. 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.
MV8 1312 French Horn Principal (2) FA MUS
PR: CPR. 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.

MV8 1313 Trombone Principal (2) FA MUS
PR: CPR. 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.

MV8 1314 Euphonium Principal (2) FA MUS
PR: CPR. 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.

MV8 1315 Tuba Principal (2) FA MUS
PR: CPR. 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.

MV8 1411 Trumpet Major (3) FA MUS
PR: CPR. 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.

MV8 1412 French Horn Major (3) FA MUS
PR: CPR. 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.

MV8 1413 Trombone Major (3) FA MUS
PR: CPR. 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.

MV8 1414 Euphonium Major (3) FA MUS
PR: CPR. 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.

MV8 1415 Tuba Major (3) FA MUS
PR: CPR. 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.

MV8 2321 Trumpet Principal (2) FA MUS
PR: CPR. 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.

MV8 2322 French Horn Principal (2) FA MUS
PR: CPR. 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.

MV8 2323 Trombone Principal (2) FA MUS
PR: CPR. 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.

MV8 2324 Euphonium Principal (2) FA MUS
PR: CPR. 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.

MV8 2325 Tuba Principal (2) FA MUS
PR: CPR. 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.

MV8 2421 Trumpet Major (3) FA MUS
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MV8 2422 French Horn Major (3) FA MUS
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MV8 2423 Trombone Major (3) FA MUS
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MV8 2424 Euphonium Major (3) FA MUS
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MV8 2425 Tuba Major (3) FA MUS
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MV8 3331 Trumpet Principal (2) FA MUS
PR: CPR. 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.

MV8 3332 French Horn Principal (2) FA MUS
PR: CPR. 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.

MV8 3333 Trombone Principal (2) FA MUS
PR: CPR. 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.

MV8 3334 Euphonium Principal (2) FA MUS
PR: CPR. 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.

MV8 3335 Tuba Principal (2) FA MUS
PR: CPR. 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.

MV8 3431 Trumpet Major (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MV8 3432 French Horn Major (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MV8 3433 Trombone Major (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MV8 3434 Euphonium Major (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MV8 3435 Tuba Major (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MV8 4341 Trumpet Principal (2) FA MUS
PR: CPR. 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.

MV8 4342 French Horn Principal (2) FA MUS
PR: CPR. 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.

MV8 4343 Trombone Principal (2) FA MUS
PR: CPR. 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.

MV8 4344 Euphonium Principal (2) FA MUS
PR: CPR. 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.

MV8 4345 Tuba Principal (2) FA MUS
PR: CPR. 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.

MV8 4441 Trumpet Major (3) FA MUS
PR: CPR. Necessary competency at senior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.
MVB 4442 French Horn Major (3) FA MUS
PR: CPR. Necessary competency at senior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVB 4443 Trombone Major (3) FA MUS
PR: CPR. Necessary competency at senior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVB 4444 Euphonium Major (3) FA MUS
PR: CPR. Necessary competency at senior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVB 4445 Tuba Major (3) FA MUS
PR: CPR. Necessary competency at senior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVB 5251 Applied Trumpet (2) FA MUS
PR: CPR. 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.

MVB 5252 Applied French Horn (2) FA MUS
PR: CPR. 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.

MVB 5253 Applied Trombone (2) FA MUS
PR: CPR. 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.

MVB 5254 Applied Euphonium (2) FA MUS
PR: CPR. 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.

MVB 5255 Applied Tuba (2) FA MUS
PR: CPR. 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.

MVB 1210 Applied Jazz Piano (1) FA MUS
PR: CPR. Course is open by audition only. One-half hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

MVB 1213 Applied Jazz Guitar (1) FA MUS
PR: CPR. Course is open by audition only. One-half hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

MVB 1214 Applied Jazz Bass (1) FA MUS
PR: CPR. Course is open by audition only. One-half hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

MVB 1219 Jazz Percussion (1) FA MUS
PR: CPR. Course is open by audition only. One-half hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

MVB 1310 Applied Jazz Piano Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 1313 Jazz Guitar Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 1314 Jazz Bass Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 1319 Applied Jazz Percussion Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 1410 Applied Jazz Piano Major (3) FA MUS
PR: CPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 1413 Jazz Guitar Major (3) FA MUS
PR: CPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 1414 Jazz Bass Major (3) FA MUS
PR: CPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 2320 Applied Jazz Piano Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 2323 Jazz Guitar Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 2324 Jazz Bass Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 2329 Applied Jazz Percussion Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 2420 Applied Jazz Piano Major (3) FA MUS
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVB 2423 Jazz Guitar Major (3) FA MUS
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVB 2424 Jazz Bass Major (3) FA MUS
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVB 3329 Applied Jazz Percussion Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 3333 Jazz Guitar Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 3334 Jazz Bass Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 3339 Applied Jazz Percussion Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 3430 Applied Jazz Piano Major (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVB 3433 Jazz Guitar Major (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVB 3434 Jazz Bass Major (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVB 3439 Applied Jazz Percussion (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.
faculty jury examination. Required of all applied music majors.

MVK 1313 Organ Principal (2) FA MUS
PR: CPR. 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) FA MUS
PR: CPR. 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 1413 Organ Major (3) FA MUS
PR: CPR. 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) FA 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) FA MUS
PR: CPR. 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 I (2) FA MUS
PR: CPR. Class is elementary piano and music fundamentals designed for students with limited keyboard experience. Primary emphasis is placed on sight-reading, accompanying, transposition, harmonization, basic technique, and appropriate literature.

MVK 2321 Piano Principal (2) FA MUS
PR: CPR. 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 2423 Organ Principal (2) FA MUS
PR: CPR. 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 2821 Intermediate Piano (2) FA MUS
PR: CPR. 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 3311 Music Majors, Level V (2) FA MUS
PR: CPR. 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) FA MUS
PR: CPR. 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 3333 Organ Principal (2) FA MUS
PR: CPR. 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) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVK 3433 Organ Major (3) FA MUS
PR: CPR. 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) FA MUS
PR: CPR. 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 4343 Organ Principal (2) FA MUS
PR: CPR. 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) FA MUS
PR: CPR. Necessary competency at senior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

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

MVK 4641 Piano Pedagogy I (4) FA MUS
PR: CPR. 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) FA MUS
PR: DFR. 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.

MVK 5253 Applied Organ (2) FA MUS
PR: DFR. 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) FA MUS
PR: CPR. 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) FA MUS
PR: CPR. 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) FA MUS
PR: CPR. Required of all applied music majors. Open to a limited number of nonmusic majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVP 2421 Percussion Major (3) FA MUS
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVP 3331 Percussion Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of nonmusic majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVP 3431 Percussion Major (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVP 4341 Percussion Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of nonmusic majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVP 4441 Percussion Major (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVP 5251 Applied Percussion, Secondary (2) FA MUS
PR: DFR. Necessary competency determined by faculty jury audition. Required registration in major performance ensemble. Required of all applied music majors. Private and class instruction.

MVS 1211 Applied Violin (1) FA MUS
PR: CPR. Course is open by audition only. One-half hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

MVS 1212 Applied Viola (1) FA MUS
PR: CPR. Course is open by audition only. One-half hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

MVS 1213 Applied Violoncello (1) FA MUS
PR: CPR. Course is open by audition only. One-half hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

MVS 1214 Applied Double Bass (1) FA MUS
PR: CPR. 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 1215 Applied Harp (1) FA MUS
PR: CPR. 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 1216 Applied Classical Guitar (1) FA MUS
PR: CPR. 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 1311 Violin Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of nonmusic majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 1312 Viola Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of nonmusic majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 1313 Violoncello Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of nonmusic majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 1314 Double Bass Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of nonmusic majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 1315 Harp Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of nonmusic majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 1316 Classical Guitar Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of nonmusic majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 1411 Violin Major (3) FA MUS
PR: CPR. Required of all applied music majors. Open to a limited number of nonmusic majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 1412 Viola Major (3) FA MUS
PR: CPR. Required of all applied music majors. Open to a limited number of nonmusic majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 1413 Cello Major (3) FA MUS
PR: CPR. Required of all applied music majors. Open to a limited number of nonmusic majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 1414 Double Bass Major (3) FA MUS
PR: CPR. Required of all applied music majors. Open to a limited number of nonmusic majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 1415 Harp Major (3) FA MUS
PR: CPR. 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 1416 Classical Guitar Major (3) FA MUS
PR: CPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 2321 Violin Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 2322 Viola Principal (2) FA MUS
PR: CPR. 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 2323 Violoncello Principal (2) FA MUS
PR: CPR. 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 2324 Double Bass Principal (2) FA MUS
PR: CPR. 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 2325 Harp Principal (2) FA MUS
PR: CPR. 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 2326 Classical Guitar Principal (2) FA MUS
PR: CPR. 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 2421 Violin Major (3) FA MUS
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVS 2422 Viola Major (3) FA MUS
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVS 2423 Cello Major (3) FA MUS
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVS 2424 Double Bass Major (3) FA MUS
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVS 2425 Harp Major (3) FA MUS
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVS 2426 Classical Guitar Major (3) FA MUS
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVS 3331 Violin Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 3332 Viola Principal (2) FA MUS
PR: CPR. 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) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 3334 Double Bass Principal (2) FA MUS
PR: CPR. 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 3335 Harp Principal (2) FA MUS
PR: CPR. 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 3336 Classical Guitar Principal (2) FA MUS
PR: CPR. 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 3341 Violin Principal (2) FA MUS
PR: CPR. 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 3342 Viola Principal (2) FA MUS
PR: CPR. 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 3343 Cello Major (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVS 3344 Double Bass Major (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVS 3345 Harp Major (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVS 3346 Classical Guitar Major (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVS 3347 Violin Major (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVS 3348 Double Bass Major (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.
faculty jury examination. Required of all applied music majors. 

Private and class instruction.

MVS 4445 Harp Major (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVS 4446 Classical Guitar Major (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVS 5251 Applied Violin (2) FA 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.

MVS 5252 Applied Viola (2) FA 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.

MVS 5253 Applied Cello (2) FA 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.

MVS 5254 Applied Double Bass (2) FA 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.

MVS 5255 Applied Harp (2) FA 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.

MVS 5256 Applied Classical Guitar (2) FA 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.

MVT 101 Applied Voice (1) FA MUS
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.

MVT 1311 Voice Principle (2) FA MUS
PR: CPR. 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.

MVT 1411 Voice Major (3) FA MUS
PR: CPR. 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.

MVT 2321 Voice Principal (2) FA MUS
PR: CPR. 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.

MVT 3431 Voice Major (3) FA MUS
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVT 4341 Voice Principal (2) FA MUS
PR: CPR. 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.

MVT 4441 Voice Major (3) FA MUS
PR: CPR. Necessary competency at senior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVT 5251 Applied Voice (2) FA MUS
PR: CPR. 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.

MVT 1211 Applied Flute (1) FA MUS
PR: CPR. 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.

MVT 1212 Applied Oboe (1) FA MUS
PR: CPR. 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.

MVT 1213 Applied Clarinet (1) FA MUS
PR: CPR. 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.

MVT 1214 Applied Bassoon (1) FA MUS
PR: CPR. 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.

MVT 1215 Applied Saxophone (1) FA MUS
PR: CPR. 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.

MVT 1311 Flute Principal (2) FA MUS
PR: CPR. 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.

MVT 1312 Oboe Principal (2) FA MUS
PR: CPR. 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.

MVT 1313 Clarinet Principal (2) FA MUS
PR: CPR. 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.

MVT 1314 Bassoon Principal (2) FA MUS
PR: CPR. 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.

MVT 1315 Saxophone Principal (2) FA MUS
PR: CPR. 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.

MVT 1411 Flute Major (3) FA MUS
PR: CPR. 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.

MVT 1412 Oboe Major (3) FA MUS
PR: CPR. 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.

MVT 1413 Clarinet Major (3) FA MUS
PR: CPR. 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.

MVT 1414 Bassoon Major (3) FA MUS
PR: CPR. 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.

MVT 1415 Saxophone Major (3) FA MUS
PR: CPR. 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.
courses are NOT available on S/U basis. Private and class instruction.

MVW 2321 Flute Principal (2) FA MUS
PR: CPR. 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 2322 Oboe Principal (2) FA MUS
PR: CPR. 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 2323 Clarinet Principal (2) FA MUS
PR: CPR. 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 2324 Bassoon Principal (2) FA MUS
PR: CPR. 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 2325 Saxophone Principal (2) FA MUS
PR: CPR. 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 2421 Flute Major (3) FA MUS
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVW 2422 Oboe Major (3) FA MUS
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVW 2423 Clarinet Major (3) FA MUS
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVW 2424 Bassoon Major (3) FA MUS
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVW 2425 Saxophone Major (3) FA MUS
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVW 3331 Flute Principal (2) FA MUS
PR: CPR. 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) FA MUS
PR: CPR. 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) FA MUS
PR: CPR. 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) FA MUS
PR: CPR. 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) FA MUS
PR: CPR. 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) FA MUS
PR: CPR. 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) FA MUS
PR: CPR. 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) FA MUS
PR: CPR. 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) FA MUS
PR: CPR. 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) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVW 4342 Oboe Principal (2) FA MUS
PR: CPR. 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) FA MUS
PR: CPR. 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) FA MUS
PR: CPR. 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) FA MUS
PR: CPR. 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) FA MUS
PR: CPR. 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) FA MUS
PR: CPR. 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) FA MUS
PR: CPR. 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) FA MUS
PR: CPR. 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) FA MUS
PR: CPR. 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) FA MUS
PR: CPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

MVW 5252 Applied Oboe (2) FA MUS
PR: CPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

MVW 5253 Applied Clarinet (2) FA MUS
PR: CPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

MVW 5254 Applied Bassoon (2) FA MUS
PR: CPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

MVW 5255 Applied Saxophone (2) FA MUS
PR: CPR. 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.

NUR 2935 Selected Topics In Nursing (1-3) NU NUR
PR: Consent. Freshman or sophomore standing. Open to non-majors. Content will depend upon student demand and faculty interest and may focus on any area relevant to health care. May involve class,
semesters, and/or observational field experiences (non-clinical).

NUR 3064C Health Assessment Across The Life Span (3) NU NUR
PR: Admission to nursing major or Cl. Focuses on history taking, physical appraisal skills basic to biopsychosocial assessment across all life spans. Emphasizes assessment phase of the diagnostic reasoning process to identify alterations in functional health patterns.

NUR 3113 Culture of Nursing (2) NU NUR
PR: Admission to nursing major or Cl. Introduction to evolving role of the professional nurse. Examines historical context of nursing's development, nursing's theoretical progression, and wellness-focused practice as a culture.

NUR 3114 Introduction to Clinical Judgment (3) NU NUR
PR: Concurrent with NUR 3114L. Admission to nursing major. Focuses on the basic concepts of health, functional health patterns and communication. Critical thinking is used to analyze the effects of changes in health status and nursing implications.

NUR 3114L Introduction to Clinical Practice (2) NU NUR
PR: Concurrent with NUR 3114. Admission to nursing major. Includes laboratory, clinical experiences, and selected psychomotor skills. Beginning application of clinical judgment in implementing therapeutic nursing interventions for adults.

NUR 3145 Pharmacology in Nursing Practice (2) NU NUR
PR: Admission to nursing major or Cl. Examines pharmacotherapeutics, pharmacokinetics, pharmacodynamics, adverse reactions and contraindications; therapeutic indications according to functional health patterns; and nursing implications.

NUR 3215 Adult Health I (3) NU NUR
PR: NUR 3114, NUR 3114L, NUR 3064C. Concurrent with NUR 3215L. Nursing Majors. Examines adults with alterations in health maintenance, nutritional/metabolic, elimination, and sexuality/reproductive functional health care patterns. Critical thinking is used to analyze effects of changes in health status.

NUR 3215L Clinical Practice in Adult Health I (3) NU NUR

NUR 3284C Gerontological Nursing (2) NU NUR
PR: NUR 3113, NUR 3114, NUR 3114L, NUR 3064C. Nursing Majors. Focuses on theories of aging and human development; assessment of functional health patterns; and planning health promotion and disease prevention activities with older adults. Critical thinking is used to analyze the effects of interventions on individuals and groups.

NUR 3529 Ethical Legal Aspects in Nursing and Health Care (3) NU NUR
PR: NUR 3113 or Cl. Nursing Majors. Introduction to contemporary bioethical and legal issues confronting health care providers in a variety of settings. Focuses on identification of ethical principles and legal principles underlying the decision-making process in nursing and health care.

NUR 4041 Transcultural Nursing (2) NU NUR
PR: NUR 3113 or Cl. Nursing Majors. Emphasizes the cultural congruency between nursing care and health care needs of culturally diverse groups. Focuses on the development and delivery of culturally appropriate health care.

NUR 4045 Nursing Inquiry (2) NU NUR
PR: NUR 3113, Nursing Majors or Cl. An exploration of the research process. Emphasis on identification of researchable nursing problems and evaluation of research that is applicable to nursing practice.

NUR 4194 An Interdisciplinary Perspective in HIV Disease (3) MW LW (3) NU NUR
PR: Concurrent with NUR 4194L. Explores an interdisciplinary perspective on HIV disease. Topics include the etiology,.spectrum, and treatment of HIV disease; international perspectives; issues of race, gender, and ethnicity; values, ethics, and their influences on responses to HIV; and how these changes are shaping the epidemic.

NUR 4216 Adult Health II (3) NU NUR
PR: NUR 3829, NUR 3145, NUR 3215, NUR 3215L, NUR 3284C. Concurrent with NUR 4216L. Nursing Majors. Focuses on adults with health problems related to activity/exercise and cognitive/perceptual health patterns. Critical thinking is used to analyze the effects of changes in health status.

NUR 4216L Clinical Practice in Adult Health II (3) NU NUR

NUR 4245 Wellness: Health Promotion and Maintenance in Nursing (2) NU NUR
Open to non-nursing majors. Introduction to concepts of wellness and health promotion. Concepts of wellness include nutrition, exercise, rest, activity, spiritual factors and their relationship to wellness and health promotion and application to nursing practice.

NUR 4385C Specialized Techniques In Child Health Assessment (3) NU NUR
Designed to teach the reliable administration and interpretation of the NCAST II and the HOME instruments. Inter-observer reliability will be achieved through observation of parent-child interaction.

NUR 4525 Psychiatric/Mental Health (2) NU NUR
PR: NUR 4616, NUR 4616L, NUR 4636, NUR 4636L. Concurrent with NUR 4525L. Nursing Majors. Focuses on clinical intervention using critical thinking and communication skills with clients who require comprehensive psychiatric nursing care. Opportunities are offered to apply knowledge of psychopathology and psychopharmacologic therapies.

NUR 4616 Family Health (4) NU NUR

NUR 4616L Clinical Practice In Family Health (3) NU NUR
PR: NUR 4216, NUR 4216L, NUR 4041. Concurrent with NUR 4616. Nursing Majors. Includes therapeutic interventions for childbearing and childbearing families within a variety of settings.

NUR 4636 Community Health (2) NU NUR
PR: NUR 4216, NUR 4216L, NUR 4041. Concurrent with NUR 4636L. Nursing Majors and admission to the major for RN or BS students. Focuses on theories/concepts essential to community health nursing, emphasizing illness prevention and health promotion of individuals, families, communities. Roles of community health nurses and environments that affect health are explored.

NUR 4636L Clinical Practice In Community Health (2) NU NUR
PR: NUR 4216, NUR 4216L, NUR 4041. Concurrent with NUR 4636. Nursing Majors and admission to major for RN or BS students. Provides opportunities to engage in community health nursing practice to promote health and prevent illness with individuals, families, and communities.

NUR 4639 Nursin Nursing Interventions into the Acute Effects of Drug and Alcohol Abuse (2) NU NUR
Focuses on the assessment and treatment of individuals and families who are in the acute phases of addiction. Emphasis will be placed on treatment outcomes for designated populations with consideration for cultural, socioeconomic, political and ethical/legal factors.

NUR 4644 Nursing Interventions into the Rehabilitation of Clients who Abuse Substance (2) NU NUR
Focuses on models of treatment and interventions for clients experiencing addiction. Emphasis will be placed on treatment outcomes for designated populations with consideration for cultural, socioeconomic, political and ethical/legal factors.

NUR 4645 Substance Abuse Across the Lifespan (2) NU NUR
This course introduces the student to concepts of substance abuse and theories of addiction. The applicability of theories and concepts to clinical assessment, diagnosis and intervention with the client experiencing substance abuse is explored.

NUR 4765C Rehabilitation Across the Life Span (2) NU NUR
PR: NUR 4616, 4616L, 4636, 4636L. Nursing Major or Cl. Basic concepts of rehabilitation related to human responses. Analysis of changes in health status and rehabilitation implications.

NUR 4766 Critical Care (2) NU NUR
PR: NUR 4616, NUR 4616L, NUR 4636, NUR 4636L. Nursing Majors or Cl. Basic concepts of critical care nursing. Focusing on selected health problems to analyze the effects of changes in health status.
NUR 4792 Sexually Transmitted Diseases And HIV Infection (2) NU NUR
Open to students and caregivers in health related fields. Examines prevalent sexually transmitted diseases and HIV infection from a nursing perspective. Emphasis is on epidemiological principles, immunology, treatment, prevention, and ethical/legal considerations.

NUR 4838 Leadership/Management (3) NU NUR
PR: NUR 4616, 4616L, 4636, 4636L Nursing Majors and admission to major for RN to BS students. Examines health care delivery systems and explores principles of leadership/management and ethical/legal issues within the systems. Skills of leaders and managers are implemented in nursing practice with individuals and groups.

NUR 4905C Independent Study (1-5) NU NUR
PR: Permission of faculty. Open to majors and non-majors. Individual or group investigation of problems relevant to the health of individuals or groups. Project requirements individually planned with faculty preceptor.

NUR 4935 Selected Topics In Nursing (2-8) NU NUR
PR: Junior or senior standing or permission of faculty. Content will depend upon student demand and faculty interest and may focus on any area relevant to nursing practice. May involve class, seminar, and/or clinical laboratory.

NUR 4948L Preceptorship (3) NU NUR
PR: NUR 4525, NUR 4525L, 4616, 4616L, NUR 4636, NUR 4636L Nursing Majors. Individualized, supervised practice collaboratively planned by students, faculty and agency personnel.

OCE 2001 Introduction to Oceanography NS (3) AS MSC
Overview of biological, chemical, geological, and physical oceanography. Also listed under Geology.

OCE 4930 Selected Topics in Marine Science (1-4) AS MSC
Selected topics in the marine sciences including marine biology, marine chemistry, marine geology and geophysics, physical oceanography, and interdisciplinary topics relating to marine environments.

ORI 2000 Introduction to Communication As Performance (3) AS SPE
Designed to develop proficiency in the understanding and oral communication of literary and other written materials.

ORI 3950 Communication As Performance Lab (1-3) AS SPE
PR: ORI 2000 or CI. The study, rehearsal, and performance of literature for Readers Theatre and Chamber Theatre productions.

ORI 4120 Performance of Poetry (3) AS SPE
PR: ORI 2000 or CI. Critical appreciation of lyric and narrative poetry and communication of that appreciation to audience. Study of poetic theory and prosodic techniques.

ORI 4310 Group Performance of Literature (3) AS SPE
PR: ORI 2000 or CI. Designed to introduce the student to and give experience in various forms of group approaches to performance.

ORI 4931 Performance of Video AS SPE
PR: ORI 2000. CR: ORI 3950. This course features adaptation, direction, and performance of literature for video productions.

P 5930 Topics in Performance Genres (3) AS SPE
Variable topics course.

PAD 3003 Introduction to Public Administration SS (3) AS PAD
Examination of organizational behavior and change, policy process, public management, financial administration, and personnel management from the perspective of public and social delivery.

PAD 4204 Public Financial Administration (3) AS PAD
Analysis of problems in the growth and development of public budgetary theory and Federal budgetary innovations.

PAD 5035 Issues in Public Administration and Public Policy (3) AS PAD
S, G&S only Selected issues and topics in Public Administration and Public Policy.

PAD 5533 Concepts and Issues in Public Planning (3) AS PAD
PR: UR 4050 or UR 6056, GS or Sr Analysis of basic concepts, issues, and strategies of planning, policy determination, collection of information, and decision-making.

PAD 5605 Administrative Law (3) AS PAD
An examination of the constitutional and statutory bases and limitations of the administrative process, administrative adjudication, rule making, and the judicial review of such actions.

PAD 5700 Research Methods in Public Administration (3) AS PAD
This course provides the student with the fundamental skills and knowledge of how research is designed, implemented, analyzed, and utilized in public sector agencies. Available to majors and non-majors.

PAD 5807 Administration of Urban Affairs (3) AS PAD
GS or Sr Analysis of the role of the administrator at the municipal level, the division of functions, policy formation, alternative govern-
PCB 5615C Evolutionary Genetics (3) AS BIO
PR: PCB 3 Study of factors such as mutation, natural selection, and genetic drift that modify the genetic structure of populations.

PCB 5845C Principles of Neuroscience (4) AS BIO
PR: PCB 4723 Study of the mammalian brain's structure and function, with an emphasis on the neuroanatomy, neuropharmacology, and neurophysiology of the human brain. Topics include brain imaging, dementia, and mechanisms of learning/memory. Brain research techniques are also discussed, as are basic neuropathological diseases that result in abnormal brain function.

PEL 1121 Golf I (2) ED JD
S/U only. Introductory experience in the sport of golf. Fundamental skills, information, strategy, and participation.

PEL 1341 Tennis I (2) ED JD
S/U only. Introductory experiences in the sport of tennis. Basic skills, playing strategies, lecture, demonstration, and participation.

PEL 2122 Golf II (2) ED JD
S/U only. Continuation of PEL 1121. Emphasis on course play and refinement of strokes.

PEL 2321 Volleyball (2) ED JD
S/U only. Review and refinement of fundamental skills, presentation and practice of the various offensive strategies.

PEL 2342 Tennis II (2) ED JD
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 JD
S/U only. Development and refinement of the skills and strategies of racquetball with opportunity for competition and tournament play.

PEM 2441 Strength and Aerobic Development (2) ED JD
S/U only. Strength development activities combined with aerobic training for individual improvement.

PEM 2131 Weight Training (2) ED JD
S/U only. Knowledge and techniques necessary for increasing muscle function. Assessment of status and development of a personal program.

PEM 2141 Jogging (2) ED JD
S/U only. Introduction to the knowledge and techniques necessary for increasing cardiorespiratory efficiency. Assessment of status and development of a personal program.

PEM 2441 Karate (3) ED JD
S/U only. Introductory experiences in the sport of Karate. Fundamental skills, strategy, information, and participation.

PEM 2930 Selected Topics (1-2) ED JD
S/U only. DFR. Activities offered are selected to reflect student need and faculty interest.

PEN 1121 Swimming I (2) ED JD
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 JD
PR: PEN 2122 or equivalent. S/U only. Knowledge and skills necessary for saving the lives of others in the event of aquatic emergency. ARC certification offered.

PEN 2122 Swimming II (2) ED JD
PR: PEN 1121 or equivalent. S/U only. Continuation of PEN 1121. Special emphasis on development of endurance and efficient stroking.

PEN 2136 Skin & Scuba Diving (2) ED JD
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.

PEP 3940 Practicum in Health Promotion/Wellness (4) ED EDP
PR: Completion of Semesters I and II and admission to the College of Education. S/U only. Practical experience as a professional in a community or worksite health promotion or wellness program.

PEP 3951 Communication Skills For Wellness Leaders (3) ED EDP
PR: Completion of Semester I and II in Wellness Leadership track or DPR. Designed to develop knowledge and skills in communication and counseling that is specific to wellness and health promotion.

PEQ 3101 Aquatics (2) ED EDP
PR: Red Cross beginning swimmer's skills or equivalent. Includes analysis of swimming skills, teaching methodology, conducting class activities, and organizing and conducting aquatic programs.

PEQ 3102 Aquatic Exercise (2) ED EDP
An instructor training course in aquatic exercise. Focuses on teaching aerobic, strength, flexibility, and weight control exercises performed in swimming pools. Open to non-majors.

PET 2910 Personal/Professional Development Seminar (3) EDP
PR: Majors only. Identification of personal and professional knowl-
edge, skills, and attitudes necessary for successful professional practice of physical education and wellness leadership. Introduction to career opportunities and the historical, philosophical, and socio-
logical foundations of the profession. Development of a personal-
professional development plan. Field work required.

PET 2622C Care and Prevention of Physical Injuries (3) ED EDP
PR: S/U only. Principles and techniques of conditioning athletes for competition; prevention and care of injuries in physical education and athletic activities.

PET 3031 Motor Development and Assessment (3) ED EDP
Study of the assessment, evaluation, and motor development performance of children and adolescents and application of principles of motor skills acquisition in physical education instruction. Open to non-majors.

PET 3080 Survey of Wellness Program (3) ED EDP
An analysis of various types of wellness programs in the public and private sector including community-based programs, commercial health and fitness enterprises, government-based programs, corporate-based programs, and hospital health and fitness centers.

PET 3252 Issues in Sport Media (3) ED EDP
A study of organized sport as a pervasive part of contemporary society. By increasing understanding of some of the issues and controversies based in the structure of sport and society, individuals will be able to understand and make informed decisions for themselves and others.

PET 3310 Kinesiology (3) ED EDP
A study of the structure and function of the skeletal and muscular systems and of mechanical principles related to psycho-motor performance.

PET 3351 Exercise Physiology I (3) ED EDP
A study of the effects of physical activity on the body. Topics include acute and chronic adaptation of the cardiovascular, muscular, metabolic, hormonal, and energy systems to exercise. Open to non-
majors.

PET 3421 Curriculum and Instruction in Physical Education (3) EDP
Development of knowledge and skills related to the instruction process of physical education. Preparation of materials and planning instruction.

PET 3422 Instructional Design and Content: Movement Experiences (3) ED EDP
PR: CC. This course develops a variety of motor skills and includes the study of systems for analyzing movement. It prepares students to plan and conduct movement experiences in a wide variety of educational settings.

PET 3441 Instructional Design and Content: Middle School Physical Education (3) EDP
The development of physical education content and instructional practices for middle school students. The focus is upon matching appropriate content and learning experiences to the unique needs of the pre- and early adolescent learner.

PET 3617C Orthopaedic Physical Assessment I (Upper Extremity) (3) ED EDP
PR: CC. The study and practice of techniques used when assessing athletic injuries to the upper extremity, head, and spine. Fall.

PET 3618C Orthopaedic Physical Assessment II (Lower Extremity) (3) ED EDP
PR: CC. The study and practice of techniques used when assessing athletic injuries to the lower extremity, hip, pelvis and gait. Spring.

PET 3621C Prevention of Athletic Injuries (3) ED EDP
PR: CC. Advanced principles in the selection, fabrication and application of protective equipment, tape, splints, casts, braces and other orthotic devices commonly used in athletic training and sports medicine settings. Theory and practice in risk management and injuries related to environmental factors. Fall.

PET 3624C Emergency Management of Athletic Trauma (3) EDP
PR: CC. Theory and practice of basic emergency management techniques dealing with trauma resulting from injuries and illnesses suffered by an athletic population. Spring.

PET 3630C Techniques in Therapeutic Exercise (3) ED EDP
Theory and practical applications of therapeutic exercise and movement science. Includes techniques in Feldenkrais movement patterns, aquatic exercise, lifting protocols, plyometric training, isokinetic testing, stabilization training, and a variety of common exercise equipment. Summer.

PET 3640 Adapted Physical Education (3) ED EDP
A study of characteristics, programming needs and teaching of physical education for students with disabilities.
PET 3660 Athletic Training Administration and Policy (3) ED EDP
PR: CC. Analysis and application of organizational skills and administrative structure of the athletic training profession, including current theory about budget management, medical record keeping, duty casting, facility design and maintenance, legal aspects of sports medicine, athletic physical examinations, medical ethics, current educational concepts, and administrative policy. Fall.

PET 3670L Clinical Instruction in Athletic Training I (3) ED EDP
PR: CC. Observation and performance of basic athletic training skills under the direct supervision of an NATABOC certified/state licensed athletic trainer. This course provides students with the opportunity to develop competence in a variety of introductory athletic training skills. Clinical experiences are obtained in the university’s sports medicine facilities and will be accompanied by a one-hour seminar each week. Fall.

PET 3671L Clinical Instruction in Athletic Training II (3) ED EDP
PR: PET 3670C, CC. Continuation of clinical experience utilizing new skills under the direction of an NATABOC certified/state licensed athletic trainer. This course provides students with the opportunity to develop competence in a variety of introductory and mid-level athletic training skills. Clinical experiences are obtained in the university’s sports medicine facilities and/or approved affiliates and will be accompanied by a one-hour seminar each week. Spring.

PET 4131 Trends and Tasks - Elementary Physical Education (1-3) ED EDP
PR: PET 3130, Topics (1-3) Topics. Topics are offered to reflect student need and faculty interest.

PET 3943 Physical Education Internship: Middle School (4) ED EDP
A part-time internship in middle school physical education. Focus on the relationship of physical education to the needs of the pre- and early adolescent learner, the organization and purpose of the middle school program, and application appropriate content and methodologies.

PET 4141 Trends and Tasks- Elementary Physical Education (3) ED EDP
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) ED EDP
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 4304 Principles and Issues in Coaching (3) ED EDP
The application of principles from philosophy, psychology, sociology, and physiology to competitive athletics and coaching.

PET 4353 Exercise Physiology II (3) ED EDP
PR: PET 3352. A study of Exercise Physiology focusing on the adult. Includes specific populations such as the obese, heart patients, arthritics, elderly, and high performance athletes. Open to non-majors.

PET 4384 Health-Fitness Appraisal & Exercise Prescription (3) ED EDP
PR: PET 3352. Techniques in conducting health-fitness test and exercise prescription for adults. Includes cardiovascular strength, flexibility, body composition, health risk testing, exercise prescribing, and monitoring. Open to non-majors.

PET 4401 Organization & Administration of Physical Education Programs (3) ED EDP
A study of organizational and administrative procedures for physical education programs in elementary and secondary schools. Includes scheduling, budget, facilities, extra-curricular programs, and the selection and supervision of staff.

PET 4404 Organization & Administration of Wellness Programs (3) ED EDP
Design and implementation of various types of wellness programs with emphasis on assessment and evaluation, management, staffing, participant adherence, program design, budgeting, legal liability, and marketing.

PET 4402 Instructional Design and Content: Physical Education Elementary (3) ED EDP
This is the second of a three-course sequence in which students study movement forms and instructional processes suitable for elementary age students.

PET 4433 Instructional Design and Content: Physical Education Elementary (3) ED EDP
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
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 4443 Instructional Design and Content: Physical Education Secondary II (3) ED EDP
In this course, students are prepared to plan, conduct, and evaluate complex movement experiences in games, dance, gymnastics and physical fitness appropriate for students.

PET 4627 Management of Athletic Injuries (3) ED EDP
PR: CC. Advanced theory of pathology in injury, management of tissue and bone healing environments, disease, internal illness and injury and other general medical conditions. Issues related to radiology and pharmacology are also discussed. Summer.

PET 4632C Therapeutic Modalities (3) ED EDP
PR: CC. This course provides an introduction to the theoretical and practical applications of modalities for the prevention, management and rehabilitation of physical activity individuals. Conometrics pertaining to the use of pharmacology, thermotherapy, cryotherapy, electrical stimulation, hydrotherapy, fluidotherapy, ultrasound, bio-feedback and manual techniques will be emphasized. Fall.

PET 4633C Therapeutic Rehabilitation (3) ED EDP
PR: CC. Theories and applications methods of comprehensive therapeutic treatment and rehabilitation programs for injuries commonly sustained by the physically active.

PET 4672L Clinical Practicum in Athletic Training I (3) ED EDP
Continuation of clinical experience utilizing new skills under the direction of an NATABOC certified/state licensed athletic trainer accompanied by a one-hour seminar each week. This course provides students with the opportunity to develop competence in a variety of mid-level and advanced athletic training skills. Students may be assigned to a USF athletic team and/or one or more off-campus clinical affiliations. Students at this level will develop instruction skills by acting as peer-supervisors for level I and II students. Fall.

PET 4673L Clinical Practice in Athletic Training II (3) ED EDP
Continuation of clinical experience utilizing new skills under the direction of an NATABOC certified/state licensed athletic trainer accompanied by a one-hour seminar each week. This course provides students with the opportunity to develop competence in a variety of mid-level and advanced athletic training skills. Students may be assigned to a USF athletic team and/or one or more off-campus clinical affiliations. Students at this level will develop instruction skills by acting as peer-supervisors for level I, II and III students. Spring.

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

PET 4933 Seminar in Sports Medicine (3) ED EDP
The advanced study and discussion of specialized topics and contemporary issues related to the field of athletic training. Emphasis is on the roles and responsibilities of medical and allied health professionals comprising the sports medicine team. Spring.

PET 4935 Case Studies in Athletic Health Care (3) ED EDP
PR: CC. Capstone course intended to provide a unifying opportunity to utilize concepts, principles and skills learned from other athletic training courses. Spring.

PET 4942 Physical Education Internship: Elementary (4) ED EDP
S/U only. A part-time internship in elementary school physical education. Focus on the nature of the total elementary school curriculum, characteristics of students, and application of appropriate content and instructional competencies.

PET 4944 Physical Education Internship: Secondary (4) ED EDP
S/U only. A part-time internship in high school level physical education with focus on the relationship of physical education to the needs of the early adolescent and the implementation of appropriate content and methodology.

PET 4946 Associate Teaching Physical Education: Elementary (12) ED EDP
S/U only. 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 Associate Teaching Physical Education: Secondary (12) ED EDP S/U 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 school students.

PET 4947C Athletic Training Practicum (2) ED EDP PR: PET 4622, admission to the Physical Education program. DPR: A ten-week training room practicum on skills in preventive strapping and rehabilitation techniques, followed by a five-week practicum with local high schools or professional teams.

PGY 2110C Color Photography (3) AS COM PR: PXY 3520 or CI. Laboratory required. Development of knowledge and skills in color photography for publication and presentation. Emphasis is on the use of transparency and negative color materials in their application to the media.

PGY 2401C Beginning Photography (3) FA 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 3000 Photography in American Culture (3) AS AMS A survey of photography as an art and a craft in America since the mid-nineteenth century. Attention is given to technological innovation, leading personalities, major movements, and memorable icons. Open to majors and non-majors.

PGY 3010 Photojournalism I (3) AS COM PR: PXY 3520 and MMIC 3652. Laboratory required. Camera operation, darkroom techniques, picture composition, editing, ethics, history, and laws in connection with photojournalism.

PGY 3620 Photojournalism II (3) AS COM PR: PXY 3610. Laboratory required. Advanced process and practice of photography for publication. Content includes advanced camera and laboratory techniques, publication requirements and theory of photochemical color separation used in magazine and newspaper. Emphasis is placed on student production.

PGY 4410C Advanced Photography (3) FA ART PR: PXY 2401C. Continued problems in photography.

PGY 4420C Photography (4) FA ART PR: CI. Advanced work in photography and related media leading to development of personal/expressive statements.

PHI 2000 Introduction to Philosophy 6A HP (3) AS PHI An introduction to selected philosophical problems and traditions. PHI 3062 History of Philosophy. Ancient and Medieval (3) AS PHI A survey of Western philosophy from the pre-Socratics to the end of the Middle Ages.

PHI 3420 History of Philosophy: Modern (3) AS PHI A survey of Western philosophy from the end of the Middle Ages to the nineteenth century.

PHI 4440 Continental Philosophy (3) AS PHI Approaches of important developments in post-Enlightenment European philosophy.

PHI 4600 Contemporary Philosophy 6A MW (3) AS PHI Selected schools of twentieth century thought such as idealism, positivism, pragmatism, realism, and existentialism.

PHI 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.

PHI 4820 Chinese Philosophy (3) AS PHI A survey of Confucianism, Taoism and other aspects of Chinese thought. The course is available to both majors and non-majors and does not have laboratory sections associated with it.

PHI 1103 Critical Thinking SS (3) AS PHI Methods of thinking that lead to reliable conclusions, with emphasis on concrete cases in ordinary thinking and the sciences.

PHI 2100 Introduction to Formal Logic 6A QM (3) AS PHI An elementary study of propositional and syllogistic logic with some attention to basic problems of logical theory.

PHI 2600 Ethical Theory (3) AS PHI A study of ethical theories, concepts, problems and methods.

PHI 2631 Ethics and Business SS (3) AS PHI An application of traditional ethical theories to contemporary problems in business.

PHI 3404 Scientific Method (3) AS PHI A study of scientific inference, including the hypothetico-deductive method, experimentation, and selected topics in the philosophy of science.

PHI 3630 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 3633 Biomedical Ethics (3) AS PHI This course will focus on ethical issues arising from advances in medical practice, delivery of health care, and scientific research.

PHI 3636 Professional Ethics (3) AS PHI An examination of the ethical problems that professionals will face in the complex, global society of the next few decades: confidentiality, divided loyalty, racism/sexistm, etc.

PHI 3640 Environmental Ethics SS (3) AS PHI A study of alternative theories of environmental ethics, including the application of these theories to contemporary environmental problems, such as pollution, resource depletion, species extinction, and land use.

PHI 3700 Philosophy of Religion 6A SS (3) AS PHI Analysis of religious experience and activity and examination of principal religious ideas in light of modern philosophy.

PHI 3905 Directed Study (1-4) AS PHI PR: CI. Approval slip from instructor required. Individual study directed by a faculty member.

PHI 3930 Selected Topics (1-4) AS PHI PR: CI. Selected topics according to the needs of the 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 exploration of human knowledge, its scope and limits, and an evaluation of evidence, criteria of truth, the nature of belief, conditions for meaningfulness, theories of perception, and a study of memory and sense perception in the four major fields of nature, personality, language, and aesthetics.

PHI 4320 Philosophy of Mind 6A MW (3) AS PHI A study of historical and current issues in philosophy of mind, including the nature and status of mind, mind/body dualism, the relationship of mind and body, the problems of other minds, the physical basis for intelligence, etc.

PHI 4632 Feminist Ethics MW (3) AS PHI A study of the various approaches to ethical reasoning taken by feminist ethical writers such as Wallstonecuff, Mill, Gilligan, Daly, and others. May also be taken for credit in Women's Studies.

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—meta-ontological theories, consequentialist theories, rights-based theories, virtue theories.

PHI 4800 Aesthetics 6A MW (3) AS PHI A study of traditional and contemporary aesthetic theories with emphasis on creative process, the nature of the art work, the aesthetic response, expressiveness, form and content, as well as art and morality.

PHI 4905 Directed Study (1-4) AS PHI PR: CI. Approval slip from instructor required. Individual study directed by a faculty member.

PHI 4930 Selected Topics (1-3) AS PHI PR: CI. Approval slip from instructor required. Selected topics according to the needs of the senior students.

PHI 5135 Symbolic Logic (3) AS PHI PR: PHI 2100 or CI. Study of topics such as the following: Metatheory of propositional and predicate logic, related metatheoretical results, alternative logic.

PHI 5225 Philosophy of Language (3) AS PHI PR: Eight hours of philosophy, major in linguistics, or CI. An examination of semantically, syntactical, and functional theories of language, with special attention given to the problems of meaning, linguistic reference, syntactical form, and the relations between scientific languages and ordinary linguistic usage. Seminar format.

PHI 5513 Research (1-4) AS PHI PR: CI. Approval slip from instructor required. Individual research supervised by a faculty member.

PHI 5934 Selected Topics (1-3) AS PHI PR: CI. Approval slip from instructor required. Selected topics according to the needs of the student.

PHI 3020 Philosophies of Love and Sex (3) AS PHI Discussion of Philosophies of Love/Sex of Plato, Aristotle, Epicurus, Aquinas, Hume, Kant, Schopenhauer, Russell, Sartre, Marx, etc.

PHI 3101 Social Philosophy SS (3) AS PHI An analysis of rival theories of social order and their philosophical foundations.

PHI 3400 Introduction to Philosophy of Law (3) AS PHI A study of the fundamental concepts of law from a philosophic standpoint including crime, justice, punishment, free speech, insan-
PHM 4120 Major Black Thinkers MW (3) AS AFA
Survey of major themes and issues in African/African-American intellectual and political thought with an emphasis on theories of nationalism. Works of individuals such as Martin Delany, Booker T. Washington, W.E.B. DuBois, Marcus Garvey, Malcolm X, and Angela Davis are considered.

PHM 4322 Ancient and Medieval Political Philosophy MW (3) AS PHI
A survey of Political philosophy from 6 B.C. until 1600 A.D., including an examination of the ethical, metaphysical, and epistemological bases of these philosophies.

PHM 4331 Modern Political Philosophy 6A MW (3) AS PHI
A survey of political philosophy from 1800 A.D. until 1900 A.D., including an examination of the ethical, metaphysical, and epistemological bases of these philosophies.

PHM 4340 Contemporary Political Philosophy 6A MW (3) AS PHI
A survey of political philosophy in the twentieth century, including an examination of the ethical, metaphysical and epistemological bases of these philosophies.

PHM 5129 Topics in Feminist Philosophy (3) AS PHI
A study of feminist philosophical approaches to epistemology, aesthetics or political philosophy. May also be taken for credit in Women's Studies.

PHP 3786 Existentialism 6A HP (3) AS PHI
A study of the religious and atheistic existentialists and the bearing of their views on religion, ethics, metaphysics, and theory of knowledge. May be taken for the core for History of Western Philosophy.

PHP 4000 Plato 6A MW (3) AS PHI
The examination of Plato will include the dialogues Protagoras, Georgias, Meno, Republic, etc.

PHP 4010 Aristotle 6A MW (3) AS PHI
Study of Aristotle's philosophy.

PHP 4410 Kant (3) AS PHI
Lecture and discussion of Kant's philosophy, especially the Critique of Pure Reason.

PHP 4740 The Rationalists 6A MW (3) AS PHI
A careful study of the epistemologies of Descartes, Spinoza, Leibniz, and Malebranche.

PHP 4745 The Empiricists 6A (3) AS PHI
A careful study of epistemologies of Locke, Berkeley, Hume, and Thomas Reid.

PHP 4784 Analytical Philosophy 6A (3) AS PHI
A study of the method devoted to clarifying philosophical problems through analysis of the language in which these problems are stated.

PHP 4788 Philosophy of Marxism 6A MW (3) AS PHI

PHY 2020 Conceptual Physics NS (3) AS PHY
A course in Physics for Mathematics Students. A qualitative, non-mathematical investigation of physics, emphasizing its influence on life today.

PHY 2038 Energy and Humanity NS (3) AS PHY
Social, economic, and political aspects of energy. Includes energy conservation, environmental impact, energy-source alternatives, changing lifestyles, and personal use of solar energy. The relevant basic laws of physics and the scientific method are emphasized. Field trips and audiovisual presentations play important roles.

PHY 2048 General Physics (3) AS PHY
PR: MAC 2281 or MAC 2311. Must be taken concurrently with lab and, if dropped, then dropped simultaneously. May not receive credit for both the PHY 2053 and PHY 2048 courses. First semester of a two semester sequence of calculus-based general physics (mechanics, wave motion, sound, thermodynamics, geometrical and physical optics, electricity, and magnetism) for physics majors and engineering students.

PHY 2048L General Physics Laboratory (1) AS PHY
PR: MAC 2281 or MAC 2311. Must be taken concurrently with lecture and, if dropped, then dropped simultaneously. May not receive credit for both the PHY 2053L and PHY 2048L courses. First semester of a two-semester sequence of general physics (mechanics, wave motion, sound, thermodynamics, geometrical and physical optics, electricity, and magnetism) and laboratory for physics majors and engineering students.

PHY 2049 General Physics (3) AS PHY
PR: MAC 2282 or MAC 2312, PHY 2048, PHY 2048L. Must be taken concurrently with lab and, if dropped, then dropped simultaneously. May not receive credit for both the PHY 2054 and PHY 2049 courses. Second semester of general physics and laboratory for physics majors and engineering students.

PHY 2048L General Physics Laboratory (1) AS PHY
PR: MAC 2282 or MAC 2312, PHY 2048, PHY 2048L. Must be taken concurrently with lecture and, if dropped, then dropped simultaneously. May not receive credit for both the PHY 2054L and PHY 2049L courses. Second semester of general physics and laboratory for physics majors and engineering students.

PHY 2053 General Physics (3) AS PHY
PR: MGF 1105 and MAC 1144, or MAC 2147. Must be taken concurrently with lab and, if dropped, then dropped simultaneously. May not receive credit for both the PHY 2053L and PHY 2049L courses. First semester of a two semester sequence of non-calculus-based general physics (mechanics, heat, wave motion, sound, electricity, magnetism, optics, modern physics) for science students.

PHY 2053L General Physics Laboratory (1) AS PHY
PR: PHY 2053. Must be taken concurrently with lecture and, if dropped, then dropped simultaneously. May not receive credit for both the PHY 2053L and PHY 2049L courses. Second semester of general physics for science students.

PHY 3101 Modern Physics (3) AS PHY
PR: PHY 2049 or CR. PHZ 3101. PR: 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. Schrodinger wave equation. Introduction to solid state physics.

PHY 3221 Mechanics I (3) AS PHY
PR: PHY 2048 or PHZ 3101. 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 3323C Electricity and Magnetism I (4) AS PHY
PR: PHY 2049, PHY 3221, MAC 2283 or MAC 2313. Electrostatic fields and potentials, dielectrics, classical conductivity, RC circuits, Fourier and finite element methods. Laboratory. First semester of sequence PHY 3323C, PHY 3424C.

PHY 3424 Optics (4) AS PHY
PR: PHZ 3101 or PHY 2049; CR: MAC 2283 or MAC 2313. Reflection, refraction, dispersion, interference, diffraction, polarization, and laboratory.

PHY 3822L Intermediate Laboratory (2) AS PHY
PR: PHY 3101 or PHY 2049 or equivalent. Ph 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 3222, CR: MAP 2302. Continuation of PHY 3222. Coupled oscillators and normal modes; moving coordinate systems; Lagrange’s and Hamilton’s equations; inertia tensor; general rotation and rigid bodies.

PHY 4324C Electricity and Magnetism II (4) AS PHY
PR: PHY 3323C, PHY 4222; CR: MAP 2302. Continuation of PHY 3323C. Introduction to special relativity, magnetic fields and potentials, magnetic materials, RL and RLC circuits, Maxwell’s equations and applications. Laboratory.

PHY 4523 Statistical Physics (3) AS PHY

PHY 4604 Introduction to Quantum Mechanics (3) AS PHY
PR: PHY 3101, or CI. Basic concepts of quantum mechanics with applications in atomic, nuclear, and condensed matter physics.

PHY 464C Introduction to Electronics and Test Instrumentation (4) AS PHY
PR: General Physics or CI. Not for major credit. Introduces the fundamentals of analog and digital electronics used in measurements and instrumentation. Weekly labs give hands-on experience in breadboarding electronic circuits and use test instrumentation.
PHY 4823L Advanced Laboratory (2) AS PHY PR: PHY 3822L. Experimental work primarily related to modern physics. Emphasis on experimental techniques used in current research.

PHY 4903 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 instructor. Credit hours and other contractual terms, are to be determined by student/instructor agreement.

PHY 4930 Physics 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.

PHY 4936 Selected Topics in Physics (1-4) AS PHY PR: Senior or advanced junior standing and CC. Each topic is a course in directed study and under the supervision of a faculty member.

PHY 5720C Electronics for Research (3) AS PHY PR: CI. A rigorous introduction to the fundamentals of analog and digital electronics. Theoretical circuit analysis and weekly labs introduce practical use of diodes, transistors, analog and digital ICs, breadboarding techniques and electronic test instrumentation. Spring Semester.

PHY 5937 Selected Topics in Physics (1-4) AS PHY PR: Senior or advanced standing and CC. Each topic is a course in directed study under the supervision of a faculty member.

PHY 2101 Mathematical Analysis of Problems in Mechanics and Electricity (2) AS PHY PR: PHY 2053 and PHY 2054, MAC 2283 or MAC 2313. Designed for students who have not had the general physics sequence using calculus. Review of mechanics and electricity emphasizing problems which involve the use of calculus.

PHY 2102 Problems in General Physics I (1) AS PHY CR: PHY 2053. A course designed to help students develop problem-solving skills for PHY 2053.

PHY 2103 Problems in General Physics II (1) AS PHY CR: PHY 2054. A course designed to help students develop problem-solving skills for PHY 2054.

PHY 5115 Methods of Theoretical Physics I (3) AS PHY PR: MAP 2302 or CI. Applications of mathematical techniques to classical and modern physics. Vector spaces including Hilbert space, orthogonal functions, generalized functions, Fourier analysis, transformation calculi and variational techniques of their administrative processes.

PHY 5116 Methods of Theoretical Physics II (3) AS PHY PR: MAP 2302 or CI. Applications of mathematical techniques to classical and modern physics. Selected topics in complex analysis, differential and integral equations, numerical methods and probability theory.

PHY 5304 Nuclear Physics (3) AS PHY PR: PHY 4804 or CI. Spring Semester. Nuclear forces, nuclear structure, decay, nuclear reactions, and high energy physics.

PHY 5405 Solid State Physics I (3) AS PHY PR: PHY 3101, MAP 2302. CI. Crystal structure, x-ray and electron diffraction, mechanical and thermal properties of solids, electrical and magnetic properties of metals, band theory of metals, insulators, and semiconductors. First semester of sequence PHY 5405, PHY 6426.

PHY 5505 Plasma Physics I (3) AS PHY PR: PHY 4324 or CI. Fall Semester. Introduction to Boltzmann, magnetohydrodynamic and orbit approaches to plasmas. Longitudinal and electromagnetic waves in plasmas. Collisions and radiation instabilities.

POL 1120 Beginning Polish I (4) AS MLL CR: POL 1120L. This course features all four major skills: listening, reading, speaking, and writing. Grammar exercises, dictation, readings and vocabulary-building are central in this first course. Knowledge of Russian can help. S/U available.

POL 1120L Beginning Polish I Laboratory (1) AS MLL CR: POL 1120L. 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.

POL 1121 Beginning Polish II (4) AS MLL PR: POL 1120 or equivalent. CR: POL 1121L. This course continues the four basic skills of POL 1120, with continued emphasis on structures, dialogues, readings, dictation, and vocabulary-building. Knowledge of Russian can help. S/U available.

POL 1121L Beginning Polish II Laboratory (1) AS MLL CR: POL 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.

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

POR 1120 Beginning Portuguese I (4) AS MLL CR: POR 1120L. Development of basic skills in listening and reading comprehension, speaking and writing of Brazilian Portuguese.

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

POR 1121 Beginning Portuguese II (4) AS MLL PR: POR 1120 or equivalent. CR: POR 1121L. Continued development of basic skills in listening and reading comprehension, speaking and writing of Brazilian Portuguese.

POR 1121L Beginning Portuguese II Laboratory (1) AS MLL CR: POR 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.

POR 2200 Intermediate Portuguese I (3) AS MLL POR 2200 builds upon the four language skills (speaking, comprehension, reading, and writing) introduced in POR 1120 and POR 1121.

POR 2201 Intermediate Portuguese II (3) AS MLL For language students who intend to attain basic proficiency.

POR 3440 Portuguese for Business and International Trade (3) AS MLL PR: POR 1120 or equivalent. An introduction to Brazilian Portuguese as used in carrying on ordinary business transactions.

POS 2041 American National Government (3) AS POL Analysis of basic principles and procedures of the American governmental system with emphasis on current issues and trends.

POS 2080 The American Political Tradition SS HP (3) AS POL This course is an introductory survey of the historical developments and changes in American political institutions, processes, and thought.

POS 2112 State and Local Government and Politics (3) AS POL Analysis of the structure and function of state and local governments, of the social and political influences that shape them, and of the dynamics of their administrative processes.

POS 3142 Introduction to Urban Politics and Government (3) AS POL Governmental and political structures and processes as they function in urban areas, with special focus on municipalities and locally based public services.

POS 3145 Governing Metropolitan Areas (3) AS POL Examines governmental units and interactions in metropolitan areas, proposals for changes in governance, and policy areas of area-wide concern, such as human services.

POS 3173 Southern Politics (3) AS POL Examines elections in the South, and the role of interest groups and the state and federal government in facilitating change.

POS 3182 Florida Politics and Government (3) AS POL A study of Florida political culture, political parties and elections, the legislative, executive, and judicial systems, and policy patterns.

POS 3273 Practical Politics (3) AS POL PR: POS 2041 or POS 3453 or CI. Coordinated scholarly and practical activity through class and supervised field work in local political parties and elections campaigns.

POS 3283 Judicial Process and Politics (3) AS POL The organization, development, and functioning of American court systems and the causes and consequences of judicial behavior from an empirical perspective.

POS 3453 Political Parties and Interest Groups (3) AS POL Analysis and understanding of role, functions, structure, and communication of such, and their impact on American governmental institutions.

POS 3651 Introduction to Law and Politics (3) AS POL Nature of law, legal process, relationship to political life of constitutional law, administrative law, the judicial process, and private law.
PO 3697 Environmental Law (3) AS POL
This course focuses on the major issues involving environmental law. Specially, the course provides a survey and analysis of statutes, both state and federal, regulating water, air, soil pollution, and resource conservation and recovery. The course will also address topics pertaining to the problems of implementation, interpretation, enforcement, and development of environmental laws.

PO 3713 Empirical Political Analysis (3) AS POL
Forums on empirical political inquiry: systematic data collection and quantitative analysis techniques. Laboratory exercises using the computer are required.

PO 3931 Selected Topics (3) AS POL
Selected topics in political science with course content based upon student demand and instructor's interest.

PO 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.

PO 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.

PO 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 comparison.

PO 4614 Constitutional Law I (3) AS POL
PR: POS 2041. Leading social problems, principle institutions, and the scope of powers. Analysis of Supreme Court decisions, scholarly commentaries, and the writings of leading public figures.

PO 4624 Constitutional Law II (3) AS POL
PR: POS 2041. Analysis of Supreme Court decisions and scholarly commentaries on the constitutional rights of individuals.

PO 4693 Women and Law I (3) AS WST
Introduction to issues concerning the legal aspects of sex and sex-based discrimination as embodied in statutory and case law, focusing on constitutional and family law and reproductive freedom issues. May also be taken for credit in Women's Studies.

PO 4694 Women and Law II 6A MW (3) AS WST
PR: POS 4693 or CI. Legal position of women in American society and remedies available to challenge current laws and practices, with specific emphasis on employment and education issues as they relate to both women and men. May also be taken for credit in Women's Studies.

PO 4905 Independent Study (1-3) AS POL
PR: 3.0 average in Political Science and CI. S/U only. Specialized study determined by the student's needs and interests.

PO 4910 Individual Research (1-3) AS POL
PR: 3.0 average in Political Science and CI. Investigation of some aspect of political science culminating in the preparation of an original research paper.

PO 4936 Senior Seminar (3) AS POL
PR: Senior standing and CI. An opportunity to work with others in a seminar format, exploring specialized topics.

PO 4941 Field Work (3-15) AS POL
PR: 3.0 average in Political Science and CI. Opportunity for students to obtain practical experience as aides to agencies of government and political parties.

PO 4970 Honor Thesis (3) AS POL
PR: Admision to Honor option. Writing of honor thesis under direction of faculty members.

PO 5094 Issues in American National and State Government (3) AS POL
Selected topics of study in American government.

PO 5155 Issues in Urban Government and Politics (3) AS POL
Selected topics and issues in Urban Government and politics.

PO 5003 Introduction to Political Theory (3) AS POL
Examines various kinds of political science for understanding political life: normative theory, empirical theory, historicism theory, analytical theory, and critical theory.

PO 5013 Classical Political Theory (3) AS POL
Analysis of the views of Plato, Aristotle, Cicero, St. Thomas, and other leading pre-modern political philosophers.

PO 4054 Modern Political Theory (3) AS POL
Analysis of basic political ideas of Machiavelli, Hobbes, Locke, Rousseau, Burke, and other modern philosophers.

PO 4064 Contemporary Political Thought (3) AS POL
Examines various political views and political phenomena in the nineteenth and twentieth centuries. Diverse theoretical types and salient political phenomena will be presented.

PO 4109 Politics and Literature 6A LW (3) AS POL
Critical examination of the connections between politics and literature.

PO 4204 American Political Thought (3) AS POL
Examines political writings in the U.S. and responses to critical periods in history, beginning with the Founding Fathers, and culminating in recent contributions and understanding contemporary political problems and solutions.

PO 4961 The Politics of Identity, Difference and Inequality MW (3) AS POL
PR: POT 3003. An analysis of how relationships of social identity and difference become the basis of social, political and economic inequality in modern society. It incorporates both contemporary and classical discussions of inequality.

PO 4936 Selected Topics in Political Theory (3) AS POL
Selected topics or thinkers in political theory.

PO 5626 Issues in Political Philosophy and Law (3) AS POL
PR: Graduate or senior standing and CD. Selected topics in political philosophy and law.

PPE 4004 Personality (3) AS PSY
PR: PSY 3213 with a grade of C or better or CI. Methods and findings of personality theories and the evaluation of constitutional, biosocial, and psychological determinants of personality.

PSB 4013C Physiological Psychology (3) AS PSY
PR: PSY 3213 with a grade of C or better or CI. Gross neural and physiological components of behavior. Structure and function of the central nervous system and theory of brain functions.

PSY 2012 An Introduction to Contemporary Psychology SS (3) AS PSY
A broad survey of psychology for both majors and non-majors with special emphasis on the more applied areas of psychology (e.g., social psychology, abnormal psychology, personality, and developmental psychology).

PSY 3044 Experimental Psychology SS (3) AS PSY
PR: PSY 2012, psychology major or CI. Designed as an in-depth examination of the basic principles and concepts of psychological science. Extensive coverage will be given to the areas of learning, perception, physiological psychology, and cognition.

PSY 3213 Research Methods in Psychology (4) AS PSY
PR: PSY 2012 with a grade of C or better, or CI. This course considers the logic of experimental design, concept of control and the analysis of experimentally obtained data. The laboratory section provides experience applying the concepts discussed in lecture. Two lectures plus two-hour lab. May be taken concurrently with PSY 3214.

PSY 4205 Experimental Design and Analysis (3) AS PSY
PR: PSY 3213 with grade of C or better or CI. Detailed coverage of those research designs and statistical techniques having the greatest utility for research problems in psychology. Emphasis on topics from analysis of variance.

PSY 4510 Supervised Practicum and Field Experience in Applied Behavior Analysis (1-6) AS PSY
Does not count toward major credit (S/U only). Field experience in Behavior Analysis in applied settings. Under the supervision of Certified Behavior Analysts, students design, implement, and evaluate behavior analysis services. Includes both field practicum and didactic components. May be repeated for a maximum of 6 hours.

PSY 4604 History and Systems of Psychology (3) AS PSY
PR: PSY 3213 with a grade of C or better or CI. The historical roots of modern psychological theories, investigation of the various schools of psychology such as behaviorism, Gestalt psychology, psychoanalysis, and phenomenological psychology.

PSY 4913 Directed Study (1-3) AS PSY
PR: CI. S/U only. A maximum of 3 credits of either PSY 4913 or PSY 4911 may count toward the major. The student plans and conducts an individual research project or program of directed readings under the supervision of a faculty member.

PSY 4931 Selected Topics: Seminar (3) AS PSY
PR: Upper-level psychological major and CI. Graduate-type seminar designed to provide the advanced undergraduate student with an in-depth understanding of a selected sub-area within psychology.

PSY 4932 Honors Seminar (3) AS PSY
PR: Admission to honors program in psychology and CI. May not count for major credit. The student, under supervision of a faculty member, will formalize, conduct, analyze, and report in writing a research project in psychology.
PSY 4970 Honors Thesis (1-3) AS PSY
PR: Admission to honors program in psychology and CI. A maximum of 3 credits of either PSY 4913 or PSY 4950 may count toward the major. The student under supervision of a faculty member will formalize, conduct, analyze, and report in writing a research project in psychology.

PUP 4002 Public Policy (3) AS POL
Examines the formation and implementation of public policy in areas such as the economy, health, etc.

PUP 4203 Environmental Politics and Policy (3) AS POL
Examines the politics of environmental issues, formation and implemen-
tation of environmental policy.

PUP 4323 Women and Politics (BMW) (3) AS WST
An analysis of the impact of gender on power and influence in American society, and women’s changing role in the political process. May also be taken for credit in Government.

PUP 5607 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.

PUR 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 society; ethical standards of practice, and relationships of the practice to the public media; public relations problems; public relations techniques.

PUR 4000 Written Communication for Public Relations (3) AS COM
PR: JOU 2100 and PUR 3000. Techniques for creating effective written public relations communications to achieve organizational goals, including news releases, proposal letters, broadcast scripts, and other formal exercises based on case study scenarios.

PUR 4401 Public Relations: Issues, Practices and Problems (3) AS COM
PR: PUR 3000. The theory of public relations practice and its application to the real world: the role of the public relations practi-
tioner 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 develop-
ment of strategies to deal with them successfully and responsibly.

Communication techniques and trends.

PUR 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.

PUR 4801 Advanced Public Relations (3) AS COM
PR: PUR 4401, PUR 4100, and MMC 4420. As final course in Public Relations sequence, it involves intensive study of counseling and problem-solving techniques used in professional practice. Analysis of recent public relations theory and trends; and preparation for final exams and graduation exercises in the program. Extensive reading in the literature of contemporary practice.

QMB 2100 Business And Economic Statistics I 6A QM (3) BA QMB
PR: MAC 2233. Description of sample data; calculation of probabili-
ties, frequency functions of random variables, the binomial and normal distributions; sampling theory and estimation; test of hypoth-
eses; elements of Bayesian decision theory.
QMB 3200 Business And Economic Statistics II (3) BA QMB
PR: MAC 2233, QMB 2100. Theory and use of statistical inference. Point and interval estimations; criteria for choosing estimators and decision rules; hypotheses tests; analysis of variance; correlation; multiple regression; and nonparametric methods.

QMB 4600 Quantitative Approach for Business Decisions (3) BA QMB
PR: ISM 3431. The use of systematic approaches and management science tools for decision making and problem solving in an organizational setting. Emphasis is on quantitative approaches for decision making, analysis, choice and implementation.

RCS 3030 Rehabilitation Counseling Issues in Alcoholism and Other Addictions (3) AS REH

RCS 5035 Rehabilitation Counseling: Concepts and Applica-
tions (3) AS REH
PR: Introduction to the profession of Rehabilitation Counseling and current issues in the field. Coverage includes rehabilitation history, legislation, case management and related services for Americans with disabilities.

RCS 5080 Medical Aspects of Disability (3) AS REH
PR: RCS 5700 or CR A survey of medical conditions and disabilities encountered by rehabilitation and mental health counselors. Exam-
ines the relationship of client handicaps, physical and mental, to psychological and counseling problems and current research and professional practices. Effective counseling and treatment techniques are reviewed.

RCS 5404 Foundations of Mental Health Counseling (3) AS REH
PR: CC A skill-building course on the utilization of one’s self in mental health counseling relationships. Includes study of the origin, history, professional functions and current issues in the discipline of mental health counseling.

RCS 5406 Human Growth and Development (3) AS REH
PR: RCS 5700, RCS 5404. Majors only. Human development theory as applied in psychotherapy and case management rehabilitation, mental health, and addiction settings.

RCS 5480 Substance Abuse I (3) AS REH

RCS 5700 Legal, Ethical, Professional Standards and Issues in Counseling (3) AS REH
PR: CC An overview of all aspects of professional functioning including history, roles, organizational structures, ethics, standards and credentialing. Contemporary and developing issues in the field of professional counseling will also be addressed.

RCS 5802 Practicum I (1) AS REH
PR: Majors Only. Must be taken concurrently with RCS 5406. S/U. Supervised experience and practice in counseling in various settings in counseling settings for a minimum of 120 hours.

RCS 5905 Directed Studies (1-4) AS REH
PR: CI Supervised rehabilitation studies under the direction of a faculty member.

REA 1105 Advanced Reading (3) AS ENG
Will not be counted toward the English major. Designed to help students develop maximum reading efficiency. The course includes extensive instruction and laboratory practice in the improvement of adequate rates of reading, vocabulary, and comprehensive skills. An independent study approach is also available for students who prefer to assume responsibility for their own progress.

REA 1605 Learning Strategies Within Academic Disciplines (2) AS ENG
Will not be counted toward the English major. To provide within any academic discipline the necessary learning strategies needed for success related to academic coursework. Practice of learning strategies will be within the framework of the student’s coursework, providing direct transfer to academic area material.

REA 2505 Vocabulary (3) AS ENG
Will not be counted toward the English major. A practical course in rapid vocabulary improvement for students in all areas. Stress is on words in context.

RED 4310 Early Literacy Learning (3) ED EDE
PR: Admission to College of Education. Prepares preservice teachers to understand the foundations of literacy and the learning principles and instructional strategies necessary to provide literacy instruction to emergent, novice, and transitional readers and writers.

RED 4511 Literacy in the Intermediate and Middle Grades (3) EDEDR
PR: RED 4310. Prepares preservice teachers to facilitate literacy learning for students who are beyond the primary grades. Students will develop an understanding of instructional strategies and mate-
rials appropriate for remedial, multicultural, and mainstream stu-
dents ways to promote literacy development across the curriculum, and theories of reading disabilities.

REE 3043 Real Estate Decision Making (3) BA FIN
PR: FIN 3403. Acquaints students with the range of knowledge required to engage in real estate decision-making in the United States. Integrates the institutional framework within which decision-making is made, the elements of financial analysis, deal structuring, and marketing, and the pricing, financing and allocation of real property in the real estate markets.

REE 4303 Real Estate Investment Analysis (3) BA FIN
PR: FIN 4504. A comprehensive study of the determinants of the market and financial feasibility of the real estate investment decision. The development of market and site analyses, theories of urban development patterns, and the role of taxation will be studied along with the application of analytical techniques for decision making.

REL 2210 Hebrew Bible/Old Testament (4) AS REL
An introduction to the critical study of the Hebrew Scriptures against the background of the Near East, with attention to the history and religion of the Hebrew people.

REL 2240 Introduction to the New Testament (3) AS REL
An introduction to the critical study of the New Testament in context of Christian beginnings in the first century A.D.

REL 2300 Introduction to World Religions 6A HP (4) AS REL
A cross-cultural exploration of the major religions of the world
through lectures, films, and the reading of key religious texts. Religions covered include Judaism, Christianity, Islam, Taoism, Confucianism, Hinduism, and Buddhism.

REL 2306 Contemporary World Religions HP (4) AS REL
This course will explore the unity and diversity of religious traditions in a contemporary global context in order to understand the mutual interactions between religions and cultures. Emphasis will be placed on the role of religions in shaping human values which can either create or resolve social conflicts, and the impact these values can have on issues of race, ethnicity and religious diversity in a multicultural world.

REL 3000 Ancient Religions in Context (4) AS REL
Study of the religions in their cultural setting of the peoples of the Ancient Middle East and Mediterranean areas.

REL 3003 Introduction to Religion (3) AS REL
This course examines the phenomenon of religion to answer the question: Religion, what is it? Religious thought (mythology and theology) and religious behavior (ritual and morality) are closely examined from a variety of methodological perspectives.

REL 3111 The Religious Quest in Contemporary Films 6A SS HP (4) AS REL
This course will trace contemporary films such as Gandhi, Malcolm X, the Long Walk Home, the Color Purple, the Leap of Faith, the Chosen, and Grand Canyon, to explore the personal and social dimensions of religion in modern secular societies, with an emphasis on issues of race, gender, and human rights.

REL 3114 Comedy, Tragedy, and Religion 6A MW (3) AS REL
Examines the visions of life in comedy and tragedy, and relates both to Judaism, Christianity, and Zen Buddhism.

REL 3120 Religion and America (3) AS REL
To examine the movement from state church to pluralism in American religious institutions, the religious roots of non-Protestant immigration; the Jewish factor; the effect of home missions and social concerns programs upon American life; political entanglements and the concept of church/state separation.

REL 3131 New Religions in America (3) AS REL
A course designed to allow the student to survey the wide spectrum of contemporary sects and cults in America and learn what motivates their development.

REL 3132 Witchcraft and Paganism in America (3) AS REL
A study of contemporary witchcraft and paganism, including theories, methods, history, myths and symbols, beliefs, rituals and practices, believers, recruitment, socialization, and organizations.

REL 3140 Religion, Culture, and Society (3) AS REL
Introductory scholarly survey of religion in its complex relationship to culture and society, including definitions and theories of religion, research methods, becoming religious, social organization, and interconnections with other social institutions. Open to non-majors.

REL 3145 Women and Religion 6A (3) AS REL
Analyzes the role of women in religious life as compared to men in the Judeo-Christian tradition. Contemporary issues of feminist theology, and the controversies surrounding them.

REL 3152 Life and Death 6A MW (3) AS REL
An exploration of ideas about life after death and its relations to this life in Judaism, Christianity, Islam, Hinduism, and Buddhism.

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 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 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 (3) AS REL
This course is framed within the academic study of religion, and it attempts to connect itself with contemporary thought in the Middle East. It treats as Islam the normative statements of the Qur'an and related traditions, and as Judaism the authoritative statements of the Torah, oral and written.

REL 3310 World Religions (3) AS REL
A comparison of the ideas, the literature and institutions of the major religions of the world including Judaism, Christianity, Islam from the Near East and Hinduism, Taoism, Confucianism, and Buddhism from the Far East and Buddhism from the Far East. This course includes an examination of the East and Western beliefs and Eastern beliefs.

REL 3330 The Religions of India AF (3) AS REL
All religions of the world came to India and all became Indian. What is this 'Indianliness' which stems from Hinduism, Buddhism, Jainism and Sikhism, but extended itself to include Judaism, Christianity, Islam, Zoroastrianism and Baha'i. Readings from classical texts and modern literature.

REL 3362 Introduction to Islam 6A HP AF (3) AS REL
This course introduces the basic elements of Islamic belief and practice, placing the rise of Islam in its historical context in the Middle East, and stressing issues of diversity (including ethnicity and gender).

REL 3387 Islam in the Modern World 6A HP AF (3) AS REL
Examines the major developments in Islamic thought since the 13th century, with emphasis on the 19th and 20th century Islamic resurgence. Issues of diversity, gender, and social values will be examined.

REL 3375 Issues in Caribbean Religions MW (3) AS REL
This course concentrates on major social and cultural issues in Caribbean religions mainly in Cuba, Haiti, Jamaica, and Trinidad, with emphasis on African-derived religions and Western and Eastern religious encounters.

REL 3380 Native American Religions (3) AS REL
Introduction to and survey of Native American Religions. A variety of multiplicity of perspectives, including anthropological, historical, social psychological, sociological, and philosophical.

REL 3420 Contemporary Religious Thought (3) AS REL
An examination of the central ideas of recent religious thinkers; such as the works of Martin Luther King, Jr. Elle Wiesel, Thich Nhat Hahn, Dorothy Day, Dorothee Soelle, Howard Thurman, Thomas Merton and others.

REL 3465 Religion and the Meaning of Life 6A MW (3) AS REL
What is the meaning of life? An exploration of answers to this question in Eastern and Western religions, and in humanistic philosophies of life.

REL 3501 History of Christianity 6A HP (4) AS REL
Historical development of Christianity, its ideas and institutions, from the first century to the rise of religious modernism in the 19th century.

REL 3561 Roman Catholicism 6A MW (3) AS REL
An examination of the history, doctrine, and ethics of the Roman Catholic Church.

REL 3600 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 3602 Classics of Judaism 6A MW (3) AS REL
PR: One course in Religious Studies. How to read the principal documents of Judaism beyond the Old Testament, particularly the Mishnah, Talmuds, and Midrash.

REL 3611 History of Judaism (3) AS REL
A study of the evolution of the religion of ancient Israel from the Exodus to the end of the second century of our era, seen against the background of its historical, geographical, political, social and spiritual setting.

REL 3613 Modern Judaism 6A MW LW (3) AS REL
History of Jewish life in the West since 1789, emphasizing Jewish beliefs, practices, and institutions.

REL 3801 History of Writing (2) AS REL
Study, in reasonable detail, of the history and evolution of writing within its societal context. We will stress the development of writing in Mesopotamia, Egypt, and the Mediterranean World, looking at the transition from oral to written literature and its impact on religion.

REL 3900 Directed Readings (1-4) AS REL
PR: CI. Individual guidance in concentrated reading on a selected topic.

REL 3936 Selected Topics (1-4) AS REL
Course contents depend on students' needs.

REL 4113 The Hero and the Heroine 6A MW (3) AS REL
A study of the way in which embedded religious models help to fashion the representation of an heroic protagonist. The focus of the course will be on the relationship between the hero and the "other," as differentiated by race, gender, ethnicity, or merely inner being.

REL 4133 Mormonism in America MW (3) AS REL
A study of Mormonism in America as an example of a new religion. Includes the study of history, myths and symbols, beliefs, rituals and practices, believers, recruitment, socialization, and organizations.

REL 4160 Egyptian Religions (3) AS REL
Study of the Ancient Egyptian religion as reflected in the art and architecture, language, literature, and culture (alternate years) of both kingdoms.

REL 4161 Religion, Technology and Society (3) AS REL
An examination 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 approaches to 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 violence and non-violence.

REL 4177 Comparative Religious Ethics 6A MW LW (4) AS REL
A comparative study of religious ethics emphasizing how 20th century social activists, such as Gandhi and M. L. King Jr. and eco-feminists such as Rosemary Ruether and Joanna Macy, have drawn upon and transformed traditional religious stories and spiritual practices in order to create a cross-cultural and inter-religious ethic for a multi-cultural world.

REL 4193 Comparative Mysticism (4) AS REL
A course designed to acquaint the student with the nature of mystical experience, and some of the varieties of mystical experience recorded in the writings of the mystics, East and West.

REL 4221 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 formation(s) of the Children of Israel in their Ancient Near Eastern context.

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 4333 Hinduism (4) AS REL
The philosophy of the sages, the complex rituals of the Brahmins; the art of its temples; the psychology and physiology of yoga; the social rigidity of the caste system; the esoteric science of meditation; the asceticism of Mahatma Gandhi—all of these are Hinduism, and more. Close readings of classical texts, philosophic systems and medieval poems.

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. Buddhism 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 4526 Reason in Religion: Talmudic Logic MW (3) AS REL
A study of the traditions of thought and 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 argument.

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.

REL 4930 Selected Topics (3) AS REL
Course contents depend on student demand and instructor’s interest and may range over the whole field of Ancient Religions. Offerings on a semi-regular basis include the Bible as History 3.

REL 4971 Selected Topics in Religion (3) AS REL
PR: Majors and minors only or CI. A course required for Religious Studies majors and minors, whose prior religious studies have prepared them for a cooperative creative and/or research effort in the area of religion.

REL 4936 Selected Topics (1-4) AS REL
PR: Junior standing. Individual investigations with faculty supervision.

REL 4939 The Development of Religious Studies (3) AS REL
Course designed for senior majors and minors in religious studies. Discussion of key figures and methodological advances in the development of the field from the 18th century to present, with readings in the development of religious studies methods and media.

RMI 3011 Principles of Insurance (3) BA FIN
Analysis of insurable risks of both business and individuals. An examination of the characteristics of those areas of risk and uncertainty where the mechanism of insurance is effective as an alternative. The concept, contracts, and institutions involved in insurance are examined in relationship to the socio-economic environment.

RMI 4115 Life, Health, And Disability Insurance (3) BA FIN
PR: OMB 3200, RMI 3011. The course will analyze the use of life, health, and disability insurance contracts as a method of dealing with the risks of death, sickness, and disability. It will include an analysis of the cost determinants of the various types of coverage.

RMI 4210 Property Insurance (3) BA FIN
PR: RMI 3011. Course dealing with recognition of personal and business property risks, and coverage which may be used in dealing with these risks. Emphasis on the underwriting and social problems associated with these coverages. Topics include commercial and residential fire insurance, inland marine and transporation coverages, and multiperil contracts. Not limited to Finance majors.

RMI 4220 Casualty Insurance (3) BA FIN
PR: RMI 3011. Course dealing with recognition of personal and business casualty risks and coverages which may be used in dealing with these risks. Evaluates the underwriting and social problems associated with these coverages. Topics include workers’ compensation, public liability, auto liability, suretyship and crime insurances. Not limited to Finance majors.

RTC 2100 Writing For Radio and TV COM
PR: ENC 3310 or CRW 2100 and RTO 3001. The art and practice of scriptwriting for radio and television.

RTC 3301 Introduction to Telecommunications (3) AS COM
PR: MMC 3602 and MMC 2100. A survey of the organization, structure, and function of the broadcasting industry.

RTC 3301 Broadcast News (4) AS COM
PR: MMC 3602 and MMC 2100. Methods in gathering, writing, and editing newscasts for radio and television.

RTC 3941 Radio Practicum (1) AS COM
PR: RTC 3001 and CI. For telecommunications sequence majors. S/U only. Practical experience outside the classroom where the student works for an academic credit or as a professional practitioner. Periodic written and oral reports to the faculty member coordinating the study.

RTC 4220 TV Production and Direction (3) AS COM
PR: RTC 3001 and RTC 3304. A basic course in the techniques of producing and directing TV programs.

RTC 4304 TV News (3) AS COM
PR: RTC 3001 and RTC 3304. Advanced television reporting, integrating broadcast news writing, ENG production and television performance.

RTC 4320 Electronic Field Production (3) AS COM
PR: RTC 3001 and RTC 3304. Advanced producing, scripting, shooting, editing for radio and television, and news production. Introduction to computer editing and graphics.

RTC 4500 Telecommunications Programming (3) AS COM
PR: RTC 3001 and RTC 3304. Program concepts, resources, costs, selection, and scheduling. Analysis of programming in terms of structures, appeals and strengths.

RTC 4700 Telecommunications Law and Policy (3) AS COM
PR: RTC 3001 and RTC 3304. Electronic telecommunication law, regulation, media law, copyright law, intellectual property, public policy, and social issues. An introduction to the legal rules that govern the electronic media.

RTC 4942 TV Practicum (1) AS COM
PR: RTC 4220 and CI. For telecommunications sequence majors. S/U only. Practical experience outside the classroom where the student works for academic credit under the supervision of a professional practitioner. Periodic written and oral reports to the faculty member coordinating the study.

RUS 1120 Beginning Russian I Laboratory (1) AS MLL
CR: RUS 1120L. The first course in the study of elementary Russian. Emphasis on the development of basic skills in comprehension, speaking and reading.

RUS 1121 Beginning Russian II (4) AS MLL
PR: RUS 1120 or CI. CR: RUS 1121L. The second course in the study of elementary Russian. Emphasis on the development of basic skills in comprehension, speaking and reading.

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

RUS 2200 Russian III (4) AS MLL
PR: First year Russian or equivalent. Review and development of basic skills in conversation, composition, and reading.

RUS 2201 Russian IV (4) AS MLL
PR: RUS 2200 or equivalent. Review and development of basic skills in conversation, composition, and reading.

RUS 2270 Overseas Study (1-6) AS MLL
PR: Intensive study of the Russian language in Russia involving at least 20 hours per week of classroom instruction and cultural excursions conducted in Russian around Moscow and other parts of Russia.

RUS 3240 Conversation I (4) AS MLL
PR: Second year Russian or equivalent. Development of basic conversational skills.

RUS 3470 Overseas Study (1-6) AS MLL
Must be enrolled in the USF Summer Study in Moscow program. Two years Russian required. Intensive Russian at Moscow Linguistic University with excursions in Moscow and Russia. Students from other institutions eligible.

RUS 3500 Russian Civilization 6A MW (3) AS MLL
A survey of the cultural history of Russia.

RUS 4241 Conversation II (4) AS MLL
PR: Previous course in series or equivalent. Development of conversational skills.

RUS 4402 Advanced Russian Conversation & Composition I (4) AS MLL
PR: RUS 4241 or CI. Third year Russian.

RUS 4403 Advanced Russian Conversation & Composition II (4) AS MLL
PR: RUS 4241 or CI. Third year Russian.

RUS 4470 Advanced Overseas Study (1-6) AS MLL
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 MLL
Study of an author, movement or theme.

RUS 4905 Directed Study (1-3) AS MLL
Departmental approval required.

RUT 3110 Russian Classics in English 6A MW LW (3) AS MLL
Masterpieces of 19th century Russian literature in English, the major works of Pushkin, Lermontov, Gogol, Turgenev, Dostoevsky, Tolstoy, and Chekhov. Elective for all students in all departments.

RUT 3111 Twentieth-Century Russian Literature in English 6A MW LW (3) AS MLL
Masterpieces of 20th century Soviet literature in English. The major works of Bely, Yesha, Babel, Zamatin, Bulgakov, Pasternak, and Solzhenitsyn. Elective for all students in all departments.

SCE 4237 Science, Technology, Society Interaction 6A MW (5) EDEDN
Achieve a historical and philosophical understanding of (1) the nature of the scientific enterprise: interaction of science, technology, and society (STS), (2) how to teach STS including the use of computers and related technologies, and (3) intricacies of sample STS topics.

SCE 4305 Communication Skills in the Science Classroom (2) EDEDN
Reading and communication skills important in understanding scientific literacy and communicating findings to others.

SCE 4310 Teaching Elementary School Science (3) ED EDE
PR: Admission to College of Education and completion of General Distribution Requirements in the Natural Science area. Techniques and materials for teaching science in elementary school.

SCE 4320 Teaching Methods in Middle Grade Science (3) ED EDE
PR: Completion of 25 semester hours of Science or CC. Not designed for high school certification purposes. Survey techniques and materials unique to science, grades 5-9.

SCE 4330 Teaching Methods in the Secondary School - Sciences (3) ED EDE
PR: Completion of 26 hours in approved science areas, EDG 4620 or CC, and S. Techniques and materials of instruction in secondary school sciences.

SCE 4936 Senior Seminar in Science Education (2) ED EDE

SCE 4940 Internship: Science Education (1-12) ED EDE
CR: SCE 4936. One full semester of internship in a public or private school.

SCE 5937 Selected Topics in Science Education (1-4) ED EDE

SDS 4940 Introduction to Student Personnel Work in Higher Education (2) ED EDE
PR: DPR. Study of student personnel services in institutions of higher education. Identification of the needs of students and of the ways to respond to meet these needs. Survey of service units on a campus in terms of structure, organization, funding, etc.

SLS 1101 The University Experience (2) ED EDE
PR: Freshman only. An extended introduction to USF. Topics include purposes of higher education, structure and functions of USF, career planning, selecting a major, study skills, managing time, academic advising, computer resources, and decision-making.

SLS 2401 Career Development Process (2) ED EDE
Students will study vocational choice theories and participate in career decision processes. Development of self-awareness and knowledge of career opportunities and requirements necessary for decision making. Available to lower level majors or non-majors.

SOP 3742 Psychology of Women SS (3) AS WST
An examination of theories of female personality in historical perspective. Current research on sex differences, socialization, sexuality, psychology of reproduction. Emerging roles of women as related to social change and developmental tasks of the life cycle.

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 that is affected by others.

SOP 4714C 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) AS SOK
PR: All pre-core courses. Restricted to 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, and families.

SOW 3102 Human Behavior And The Social Environment II (4) AS SOK
PR: SOW 3101, SOW 3401, SOW 4341. Restricted to 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 individuals, groups, organizations and communities.

SOW 3203 The American Social Welfare System SS (3) AS 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 3205 Introduction to Social Work (3) AS
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 3401 Research and Statistics For Social Work (4) AS SOK
PR: All pre-core courses. Restricted to 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 (4) AS SOK
PR: All pre-core courses, SOW 3101, SOW 3401, SOW 4341. Restricted to Social Work majors, others by School permission. An advanced policy course takes 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) AS SOK
PR: All pre-core courses, SOW 3101, SOW 3401, SOW 4341. Restricted to Social Work majors, others by School permission. First practice course emphasizing development of skills and interventive methods 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) AS SOK
PR: All pre-core courses, SOW 3101, SOW 3401, SOW 4341; must be taken as PR. CR: SOW 4233, and SOW 3102. Restricted to Social Work majors, others by School permission. Second practice course
emphasizing intervention at the community and organizational level. Based upon theoretical and practical content of SOW 4341. Course includes both didactic and experiential learning components.

SOW 4510 Integrative Seminar (3) AS SOK
PR: SOW 3302, SOW 3303, SOW 3310, SOW 3401, SOW 4341, SOW 3102, SOW 4333 and SOW 4510L. Restricted to Social Work majors in senior year. Integrates content and theory from core classes with practice experiences students are having in field placement.

SOW 4561L Field Placement (6) AS SOK
PR: SOW 3302, SOW 3303, SOW 3310, SOW 3401, SOW 4341, SOW 3102, SOW 4522, SOW 4333, SOW 4343, CR: SOW 4322 and SOW 4510. 60 clock hours per semester.

SOW 4522 Senior Seminar: Multicultural America (3) AS SOK
PR: SOW 3302, SOW 3303, SOW 3310, SOW 4341. The course focuses on the students' understanding of multicultural and intergenerational issues.

SOW 4800 Directed Readings (1-9) AS SOK
PR: Completion of four social work courses including SOW 3401, upper level standing, and School permission. Content dependent upon student interest and ability. A contract will be jointly developed by student and instructor specifying nature of work to be completed.

SOW 4810 Directed Research (1-6) AS SOK
PR: Completion of four social work courses including SOW 3401, 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) AS SOK
Restricted to Social Work majors; others by School permission.

SOW 5303C Selected Topics in Social Work (1-4) AS SOK
PR: CC 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 area.

SPA 3002 Introduction to Disorders of Speech and Language SS (3) AS 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 Intro to Language Development and Disorders (3) AS 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 delays or disorders of language.

SPA 3011 Introduction to Speech Science (3) AS 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) AS CSD
PR: Junior standing, SOW 3101, SPA 3112, SPA 3310. Introduction to the field of hearing including: physics of sound, auditory anatomy and physiology, and psychophysics of hearing.

SPA 3101 Anatomy and Physiology of the Speech and Hearing Mechanism (3) AS CSD
PR: Junior standing. The neurological and anatomical basis of communication disorders. Comparisons of normal and pathological organic structures and their functional dynamics.

SPA 3112 Applied Phonetics in Communication Disorders (3) AS CSD
PR: Junior standing. Introduction to phonetic analysis of normal and disordered speech, including extensive training in transcription using the International Phonetic Alphabet.

SPA 3310 Introduction to Disorders of Hearing (3) AS CSD
PR: SPA 3030 and SPA 3101. The etiology, pathology, and management of disorders of the outer ear, middle ear, inner ear, retrocochlear, and central auditory systems.

SPA 3312C Basic American Sign Language (4) AS CSD
PR: DPR. Introduction to American Sign Language (ASL) as used in the deaf community. General discussion of ASL structure and introduction to various manual communication systems and philosophies. Emphasis on building a basic vocabulary. One hour of laboratory course work is included. Open to all majors.

SPA 3653 Overview of Language Learning in Deaf Children (3) AS CSD
PR: Admission to ISI Program. CR: SPA 3653L. This course is restricted to majors only. Overview of language development of deaf children from infancy through young adulthood, including various theories of language development in the deaf and communicative/language of the deaf assessment techniques, and interpreting skills relating to learning processes.

SPA 3653L Overview of Language Learning in Deaf Children Lab (1) AS CSD
PR: Admission to ISI 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 for 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 3660 Introduction to Interpreting in Public Schools (3) AS CSD
PR: Admission to ISI Program. CR: SPA 3660L. This course is designed for ISI majors but may be elected by non-majors. This course introduces the overview of the roles and responsibilities of interpreters for the deaf working in public school classes grades K - 12 and the overview of historical and current public school practices in educational interpreting in the U.S.

SPA 3660L Introduction to Interpreting in Public Schools Lab (1) AS CSD
PR: Admission to ISI Program. CR: SPA 3660. The lab assists students in assessing and improving their interpreting and transliterating skills through videotapes of simulated interpreting assignments.

SPA 3673 Introduction to Auditory Functions (3) AS CSD
PR: Admission to ISI Program. This course is restricted to majors. An overview of hearing science and speech science relating to the educational environment. This course opens the student to the variables extent in oral-aural communication among children who have hearing impairment. It addresses techniques and methods of hearing assessment and amplification of sound as well as the interpreter's role in audiological evaluation and speech language therapy.

SPA 4000 Communication Disorders in the Public Schools (3) AS CSD
PR: DPR. (Non-major course only). An examination of the speech, language and hearing problems affecting school-age children and the classroom teacher's role in the detection, prevention and amelioration of communication disorders.

SPA 4050 Introduction to the Clinical Process MW (3) AS CSD
PR: SPA 3004 and SPA 3310. Observation and participation in speech-language pathology and audiology practicum in the University clinical laboratory. Ethical issues, multicultural concerns, and creativity are stressed through clinical and practical projects.

SPA 4201 Phonological Development and Disorders (3) AS CSD
PR: SPA 3004, SPA 3011. An examination of normal and deviant articulatory and phonological acquisition and behavior. Presentation of major theoretical orientations and the therapeutic principles based upon them.

SPA 4210 Vocal Disorders (3) AS CSD
PR: SPA 3011 and SPA 3310. A comprehensive study of the medical and physical aspects of voice disorders. Differential diagnosis, principles of therapeutic intervention, and procedures for children and adults will be stressed.

SPA 4222 Fluency Disorders (3) AS CSD
PR: SPA 4201. A comprehensive study of disfluent speech behavior: Differential diagnosis, principles of therapeutic intervention, and procedures for children and adults will be studied. Major theories and models of the development and origin of stuttering are also presented.

SPA 4331 Fundamentals of Fingerspelling (2) AS CSD
PR: DPR. A concentrated study of technique in fingerspelling emphasizing clarity and rhythm in expression as well as receptive understanding.

SPA 4335 Sign Language Codes (3) AS CSD
PR: DPR. A review of the sign systems (SEE I, SEE II, L.O.V.E., and Signed English) used to code messages through the use of sign. The student will have the opportunity to practice one of the sign systems.

SPA 4555 Counseling of Communicatively Handicapped and Family (3) AS CSD
PR: SPA 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 4813C Intermediate American Sign Language (4) AS CSD
PR: SPA 3612D. 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, structure and idiomatic usage. One hour of laboratory course work is included.

SPA 4814C Advanced American Sign Language (4) AS CSD
PR: SPA 4813C, DPR. A continuation of the study of American Sign Language (ASL) at the advanced skill level. Added emphasis on idioms, body language, and facial expression as an integral part of ASL. An hour of laboratory course work is included.

SPA 4615L American Sign Language Laboratory (1) AS CSD
A laboratory course designed to offer students practice with the material presented in the ASL course work through video and audio tapes.

SPA 4817 Structure of Sign Language (3) AS CSD
PR: SPA 4383 and SPA 4615L. A comprehensive introduction to the linguistic structure of American Sign Language (ASL). Topics include phonetics and phonemes; phonological processes; the identification, structure and distribution of morphemes, principles of syndactyl solutions; detailed examination of the major syntactic structures of ASL; and the place of phonology, morphology, and syntax in terms of the larger context of grammar.

SPA 4662 Interpreting in Public Schools I (3) AS CSD
PR: Admission to a SI Program. CR: SPA 4386. This course is restricted to majors only. This course provides practical application of interpreting the subjects taught in the public school classes. Discussion includes class goals, instructional style, interpreter roles and ethics, language or mode choice, and analysis of the classroom environment for accountability and appropriateness for interpreting.

SPA 4863 Interpreting in Public Schools II (3) AS CSD
PR: SPA 4386, SPA 4385L, CR: SPA 4662L. This course is restricted to majors only. This course provides advanced techniques for interpreting instructional/non-instructional activities and the development of communication modes and languages used by deaf children. Includes interpreting practices and understanding teaching methods.

SPA 4663L Interpreting in Public Schools Lab (1) AS CSD
CR: SPA 4662. This course is restricted to majors only. This course provides advanced assessment of interpreting skills and interpreting the integration of targeted school classes and activities. Selection criteria for using a particular sign system or language will be assessed and discussed in individualized meetings.

SPA 4885 Practicum: Interpreting in Schools (1-8) AS CSD
This course is restricted to majors with supervised interpreting session 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 4930 Selected Topics (1-6) AS CSD
PR: DPR. Intensive study of topics in Speech-Language Pathology, Audiology, and/or Aural Rehabilitation conducted under the supervision of a faculty member.

SPA 5162 Audiology Instrumentation (2) AS CSD
PR: DPR. Calibration, usage, and specific applications of specialized instruments available for dealing with the identification and measurement of hearing disorders.

SPA 5150 Advanced Speech Science (3) AS CSD
PR: SPA 3011 or equiv., SPA 5150L, and DPR. Advanced study of the acoustics, production, and perception of normal and disordered speech.

SPA 5150L Speech Science Instrumentation (2) AS CSD
PR: DPR or SPA 3011 or equivalent. This course offers experience in the use of speech recording, monitoring and analyzing equipment for the evaluation of normal and disordered voice and speech characteristics.

SPA 5303 Advanced Hearing Science (3) AS CSD
PR: DPR. The study of the physiological acoustics of the auditory periphery, the 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) AS CSD
PR: DPR. The study of behavioral and evocative clinical tests designed to assess the functions of the peripheral and the central auditory system. Tests that incorporate nonspeech stimuli and those that utilize speech stimuli will be included.

SPA 5328 Aural Rehabilitation: Adults (3) AS CSD
PR: DPR. This course is designed to provide information about and strategies for aural rehabilitation intervention with hearing-impaired adults. Topics covered include: speech reading, auditory training, hearing and assistive listening devices.

SPA 5403 Communication Disorders: Language (3) AS CSD
PR: DPR. Examination of research and clinical literature presenting major theoretical orientations pertaining to the etiology, evaluation, and treatment of those factors that hinder or interrupt normal language acquisition or function.

SPA 5608 Audiology-Learning in the School-Age Years (3) AS CSD
PR: SPA 4201 and DPR. Metalinguistic and metacognitive development are linked to the instructional demands of classroom and clinical discourse; observational tools are applied to evaluation and intervention planning.

SPA 5506 Speech-Language Pathology and Audiology Practicum (1-8) AS CSD
PR: DPR. Participation in speech-language pathology and audiology practicum in the University Communication Disorders Center and selected field settings.

SPA 5552 Diagnostic Principles and Practices (2) AS CSD
PR: Admission to the graduate program or DPR. The administration, evaluation, and reporting of diagnostic tests and procedures used in assessment of speech and language disorders.

SPC 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 2600 Public Speaking SS (3) AS SPE
The nature and basic principles of human communication; emphasis on improving speaking and listening skills common to all forms of oral communication through a variety of experience in public discourse.

SPC 3212 Communication Theory (3) AS SPE
PR: Junior standing 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
This course surveys the foundations and historical evolution of major concepts, issues, theorists, and approaches to the study of rhetoric from Plato to recent contemporary theorists.

SPC 3301 Interpersonal Communication SS (3) AS SPE
A study of interpersonal communication in informally structured settings with emphasis on the understanding, description, and analysis of human communication modes or language will be assessed and discussed in individualized meetings.

SPC 3425 Group Communication (3) AS SPE
PR: Junior standing or CI. A study of theory and research in group communication. Group discussion and group communication exercises to increase awareness of the dynamics of human communication in small group settings.

SPC 3513 Argumentation and Debate (3) AS SPE
PR: Junior standing or CI. Study of principles of argumentation as applied in oral discourse, analysis of evidence and modes of reasoning, practice in debate preparation and delivery.

SPC 3602 Advanced Public Speaking (3) AS SPE
PR: SPC 2600 or CI. Study and application of communication strategies in speaking extemporaneously and from manuscript. The course includes study of selected public addresses as aids to increased understanding of speaking skills.

SPC 3651 Rhetoric of the Sixties HP (3) AS SPE
Survey of the rhetorics associated with the civil rights movement, the Great Society, the anti-Vietnam War movement, the counterculture, the black power movement, and the women’s movement.

SPC 3653 Popular Forms of Public Communication (3) AS SPE
PR: Junior standing or CI. Analysis of public communication with emphasis on various presentations and public events.

SPC 3659 Rhetorical Analysis HP (3) AS SPE
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 (3) AS SPE
Examination of communication and cultural diversity within the United States. Cultural groups include racial and ethnic (e.g., African American, Latina/o, Asian American), social class, age and generation, religious (e.g., Jewish) and gender.
SPC 4201 Oral Tradition MW (3) AS SPE

Study of oral forms, genres, and transformations, in traditional and literate societies from folkloric and psychological traditions and from contemporary communication and cultural studies perspectives.

SPC 4395 Communicating Emotions 6A (3) AS SPE
PR: Junior/Senior standing or CI. Study of emotional experience, what emotions mean to us, how we talk about them, and the ways group and cultural membership influence them. Focus on attachment and loss in romantic, family, and group relationships.

SPC 4310 Relationships on Film (3) AS SPE
Examination of the ways in which cinema inscribes conceptions and meanings of romance, love, intimacy and sexuality. Focus on systems of interpretation fostered by cinema representations of intimacy, sexuality, emotional, subjectivity, and betrayal.

SPC 4431 Family Communication (3) AS SPE
Examines the processes and functions of communication in the development of families. 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 3681. 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 3681. Open to non-majors with 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 study of media artifacts.

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 community service in a volunteer organization.

SPC 4900 Directed Study (1-3) AS SPE
PR: Senior standing, minimum GPA 2.5, 15 hours of core requirements and 9 elective hours completed, and CI. Maximum 6 hours.

SPC 4903 Honors Readings (3) AS SPE
PR: Admission to Communication Honors Program. Focused readings directed toward preparation of a proposal for an undergraduate honors thesis.

SPC 4905 Undergraduate Research (1-3) AS SPE
PR: Senior standing, minimum GPA 2.5, 15 hours of core requirements and 9 elective hours completed, and CI. Maximum 6 hours. 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 CI. Variable topics.

SPC 4932 Senior Seminar in Communication (3) AS SPE
PR: Senior standing, minimum GPA 3.0, 15 hours of core requirements and 9 elective hours completed, and CI. Exploration of selected topics of current significance 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.

SPC 5930 Topics in Discourse (3) AS SPE
Variable topics course.

SPN 1120 Beginning Spanish I (4) AS MLL
CR: SPN 1120L Not open to native or near-native speakers of Spanish. Development of basic skills in listening and reading comprehension, speaking and writing of Spanish.

SPN 1120L Beginning Spanish I Laboratory (1) AS MLL
CR: SPN 1120. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. Not open to native or near-native speakers of Spanish. S/U only. A laboratory designed to offer additional practice using various instructional technologies and media.

SPN 1121 Beginning Spanish II (4) AS MLL
PR: SPN 1120 or equivalent. CR: SPN 1121L. Not open to native or near-native speakers of Spanish. Continued development of basic skills in listening and reading comprehension, speaking and writing of Spanish.

SPN 1121L Beginning Spanish II Laboratory (1) AS MLL
CR: SPN 1121. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. Not open to native or near-native speakers of Spanish. S/U only. A laboratory designed to offer additional practice using various instructional technologies and media.

SPN 1130 Accelerated Spanish For Near-Native Speakers and Others (1-6) AS MLL
PR: CI. Accelerated course for near-native speakers and others with some knowledge of Spanish capable of making rapid progress.

SPN 2200 Spanish III (3) AS MLL
PR: SPN 1121L or equivalent. May NOT be taken concurrently with SPN 2201. Not open to native or near-native speakers of Spanish. Continued development of basic skills in listening and reading comprehension, speaking and writing of Spanish.

SPN 2201 Spanish IV (4) AS MLL
PR: SPN 2200 or equivalent. May NOT be taken concurrently with SPN 2200. Not open to native or near-native speakers of Spanish. Continued development of basic skills in listening and reading comprehension, speaking and writing of Spanish.

SPN 2240 Conversation I (3) AS MLL
PR: SPN 1121. Not open to native or near-native speakers of Spanish. For development of basic conversational skills.

SPN 2241 Conversation II (3) AS MLL
PR: SPN 2240 or equivalent. Not open to native or near-native speakers of Spanish. To improve fluency in spoken Spanish.

SPN 2270 Overseas Study (1-6) AS MLL
PR: SPN 1121. Prior departmental approval and early registration are required. An intensive study-travel program in a Spanish-speaking country.

SPN 3300 Composition (3) AS MLL
PR: SPN 2200-SPN 2201. Not open to native or near-native speakers of Spanish. A study of syntax, grammar and writing.

SPN 3340 Advanced Spanish for Native Speakers I (3) AS MLL
PR: Native and near-native oral/aural proficiency. May not count as Spanish major elective. Course for native and near-native speakers of Spanish due to home environment and/or residence in a Spanish speaking country, but without formal training in the language. Emphasis on grammatical and affective aspects, such as texts and discussions in Spanish. This is primarily a discussion course, open to all majors and minors.

SPN 3341 Advanced Spanish for Native Speakers II (3) AS MLL
PR: SPN 3340. May not count as Spanish major elective. Continuation of SPN 3340. Course for native and near-native speakers of Spanish due to home environment and/or residence in a Spanish speaking country, but without formal training in the language. Emphasis on grammatical and affective aspects, such as texts and discussions in Spanish. This is primarily a discussion course, open to all majors and minors.

SPN 3440 Spanish For Business (3) AS MLL
PR: SPN 2201 or equivalent. An introduction to the Spanish language as used in undertaking ordinary business transactions.

SPN 3441 Advanced Spanish for Business Writing (3) AS MLL
PR: SPN 3440 or equivalent. Open to Spanish and Business majors and others (SPN 3440). Advanced business communication in Spanish through discussion, reading, and writing of representative texts from Spain, Mexico, and the Spanish speaking Caribbean. Emphasis on business forms and composition of proposals, reports, records, and the language of advertisement. Texts and discussions in Spanish. This is a discussion course, open to Spanish and Business majors and minors.

SPN 3500 Spanish Civilization (3) AS MLL
PR: SPN 1121. The culture and civilization of Spain.

SPN 3520 Spanish American Civilization (3) AS MLL
Readings and discussions on the culture and civilization of Spanish America. For majors and non-majors.

SPN 4301 Expository Writing (3) AS MLL
PR: SPN 3300. Not open to native or near-native speakers of Spanish. Practical training in contemporary Spanish structure, usage and stylistic devices.

SPN 4410 Advanced Conversation (3) AS MLL
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 4423 Advanced Overseas Study (1-6) AS MLL

SPN 4700 Spanish Linguistics (3) AS MLL
PR: SPN 3510 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 MLL
PR: SPN 3520 or graduate standing. Advanced readings and discussions dealing with Spanish American civilization and culture, including a study of social, artistic and political
SPN 5857 Modern Spanish Civilization (3) AS MLL
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 trends and their implications.

SPS 2524 Women Writers of Latin America AF (3) AS MLL
Literature of Latin-American women (in translation). Topics related to race and ethnicity, values and ethics, social, economic, and political issues. Readings will include oral histories, interviews, diaries and memoirs, poetry, short stories, and novels.

SPW 3030 Introduction to Hispanic Literature (3) AS MLL
PR: SPW 2201 or equivalent. Prose fiction, drama, poetry, and essay; literary analysis.

SPW 4100 Survey of Spanish Literature (1) AS MLL
PR: SPW 3030 or equivalent. A study of Spanish literature from its origins through the 19th century.

SPW 4131 Survey of Spanish-American Literature (3) AS MLL
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 4930 Directed Study (1-3) AS MLL
Departmental approval required.

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

SPW 5335 Spanish American Literature (3) AS MLL
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 MLL
PR: SPW 4131 Major writers of all genres. Emphasis on modern writers.

SPW 5387 Spanish American Prose (3) AS MLL
PR: SPW 4131 Emphasis on the gauchito theme and contemporary prose fiction.

SPW 5388 Golden Age Poetry and Drama (3) AS MLL
PR: SPW 4100 Lope de Vega, Alarcón, Tirso, Calderón, and others.

SPW 5465 Medieval Literature (3) AS MLL
PR: SPW 4100 or equiv. Course gives an 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 MLL

SPW 5605 Cervantes (3) AS MLL
Cervantes' masterpiece Don Quijote de la Mancha.

SPW 5725 Generation of 1898 (3) AS MLL
PR: SPW 4101. The major figures of the period and their main followers.

SPW 5726 Vanguard Literature 1918 and 1936 (3) AS MLL

SPW 5934 Selected Topics (3) AS MLL
PR: Upper-level or GS Study of an author, movement, or theme.

SSE 4313 Teaching Elementary Grades Social Studies (3) ED EDE
PR: Admission to College of Education or CI. This course is designed to study techniques and strategies employed by 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. 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 examined.

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 material that achieve concrete outcomes. Theoretical foundations of social studies are also studied. Field work is required.

SSE 4334 Teaching Secondary Grades Social Science (3) ED EDW
PR: SSE 4333. This course is a continuation of SSE 4333 with further development of the instructional techniques and strategies and the information, skills, and modes of reasoning unique to the social sciences with an emphasis on the secondary school environment.

The teaching profession, school settings, legal, and classroom management issues are also studied. Fieldwork in a high school is required.

SSE 4380 Global And Multicultural Perspectives in Education MW (3) ED EDW
PR: EDG 2604 and EDG 4620, or DPR. Examination of the major issues surrounding global and multicultural perspectives in education. Available to non-education majors.

SSE 4640 Communication Skills in the Social Sciences (2) ED EDW
PR: CC. S/U only. This course emphasizes preparation for instruction and demonstration of instructional techniques in social sciences covered in SSE 4333 and SSE 4334 with an emphasis on students developing their communication, presentation, and organizational skills.

SSE 4670 Economics USA: Principles of Economics for Teachers (3) ED EDW
S/U only. A television course focusing on content and teaching methodology related to micro/macroeconomic principles.

SSE 4936 Senior Seminar in Social Science Education (2) ED EDW
PR: Senior standing; CR: SSE 4940. Synthesis of teacher candidate's courses and preparation for the professional interview and application process.

SSE 5930 Internship: Social Science Education (1-12) ED EDW
CR: SSE 4936. S/U only. One full semester of internship in a public or private school. In special programs where the intern experience is distributed over two or more semesters, students will be registered for credit which accumulates from 9 to 12 Semester hours.

SSE 5944 Economic Decision-Making for Teachers (3) ED EDW
PR: Admission to College of Education or DPR. Provides teachers (K-12) with content related to the operation of businesses in 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 content to K-12 instructional programs.

STA 2022 Basic Statistics 6A QM (3) AS MTH
No credit for Mathematics majors. Basic philosophy of statistical thinking. Acquisition of data. Techniques for organizing and presenting statistical data. Sample mean, variance and standard deviation. Statistical decisions—estimation and hypothesis testing. Design of experiments, linear association and prediction. Statistical software: MINITAB.

STA 2023 Introductory Statistics 1 6A QM (4) AS MTH
PR: Two years of high school algebra. Students who successfully complete this course may not also receive credit for QMB 2100 or STA 2122. No credit for Mathematics Majors. Descriptive statistics, basic probability principles, discrete and continuous probability distributions; binomial, Poisson, uniform, normal, t, chi-square and F, point estimation, confidence limits, hypothesis testing, correlation analysis and linear regression. Emphasis on applications to social sciences, life sciences, physical sciences, engineering and business.

STA 2122 Social Science Statistics 6A QM (3) AS ISS
Descriptive and inferential statistics - through ANOVA, correlation-regression, chi-square and non-parametrics. The course presents statistics with the view that numbers are a limited, but important aspect of understanding the world. Draws concepts and hypothesis from a wide range of disciplines.

STA 3024 Introductory Statistics II 6A 3 AS MTH
PR: STA 2023 or CC. Factorials, ANCOV; multiple curvilinear regression; response surfaces; Latin squares, Split Plots, incomplete designs; distribution free methods.

STA 4321 Introduction to Statistics 6A (3) AS MTH

STA 4442 Introduction to Probability 6A (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.

STA 5165 Computational Statistics I 1 (3) AS MTH
PR: STA 4321 and CGI 3422, or CI Statistical analysis of data by means of statistics package programs. Regression, ANOVA, discriminant analysis, and analysis of categorical data. Emphasis is on the relation between statistical theory, numerical methods, and analysis of real life data.

STA 5228 Sampling Techniques (3) AS MTH
PR: STA 4321 or CI. Sampling versus total enumeration. Planning of a survey. Statistical sampling methods and their analysis; simple,
stratified, systematic cluster, and double and multistage sampling. Use of audit information in sampling. Ratio and regression estimates. Case study.

STA 5326 Mathematical Statistics (3) AS MTH
PR: STA 5446 Sample distribution theory, point & interval estimation, reliability theory, statistical decision theory, and hypothesis testing.

STA 5446 Probability Theory I (3) AS MTH
PR: STA 4442 and MAA 4212 or CI. Axioms of probability, random variables in Euclidean spaces, moments and moment generating functions, modes of convergence, limit theory for sums of independent random variables.

STA 5526 Non-Parametric Statistics (3) AS MTH
PR: STA 5326 or CC. Theory and methods of non-parametric statistical inference, order statistics, tolerance regions and their applications.

SUR 2101C Engineering Land Surveying (3) EN EGX
Principles of land surveying for engineering practice. Traverses, levels, boundary surveys, route surveys, coordinate geometry, and mapping.

SYA 3010 Classical Theory (3) AS SOC
PR: SYG 2000 or CI. The analysis of the philosophical foundations, central principles, and historical development of Sociological theory. Required for Sociology majors and minors.

SYA 3015 Contemporary Theory (3) AS SOC
PR: SYA 3010 and SYG 2000 or CI. An examination of recent trends in sociological theory. Emphasis is on theories examining symbolic interactions, lived experience, popular culture, and social structures.

SYA 3300 Research Methods (3) AS SOC
PR: SYG 2000 and STA 2122 or equivalent, or CI. 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 (3) AS SOC
PR: SYG2000 or CI. An introduction to qualitative research, focusing on the examination of human relationships and behaviors, organizations, and the larger culture through research techniques such as interviews, participant observation, life histories, and narratives.

SYA 3700 Sociology of Sexualities (3) AS SOC
This course explores how sexualities are socially constructed. How do we give meanings to sexualities? Who is involved in this process, and how? What institutions participate, and how? Finally, what role do we play, as individuals?

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. 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 4920 Topics in Sociology (3) AS SOC
PR: SYG 2000 or CI. Selected specialized topics in Sociology. Topics such as AIDS in society, drugs in society, problems in education, sociology of childhood, public life, family violence, sexualities, sociology of technology will vary by semester and by section. See class schedule for specific contents each semester.

SYA 4935 Senior Seminar MW (3) AS SOC
PR: Senior or graduate standing in Sociology plus CI. S/U only. 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.

SYA 4949 Sociological Internship (1-8) AS SOC
PR: Senior or graduate standing in Sociology plus CI. S/U only. 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 other Social Sciences Gen. Ed. coursework or CI. Examines the applicability of sociological concepts to peasant life around the world, and explores the roles played by “western” societies in creating and sustaining the conditions under which peasants live.

SYD 3700 Racial and Ethnic Relations SS HP (3) AS SOC
PR: SYG 2000 or CI. Comparative study of social relations, social tensions, attitudes, and modes of adjustment in various areas of the world.

SYD 4020 Global Population (3) AS SOC
PR: SYG 2000 or CI. Upper level standing. Sociological determinants of fertility, mortality and migration; theories of population change.

SYD 4410 Urban Sociology (3) AS SOC
PR: SYG 2000 or CI. Upper-level standing. The social structure of the community in modern industrial societies. Analysis of community change.

SYD 4800 Gender and Society (3) AS SOC
HIST 3370 & MTH 3344 or permission of the instructor. An introduction to sociological theories of gender and gender identity, and gender roles and inequalities. The analysis of gender differences, interpersonal relationships, and institutional participation.

SYG 2000 Introduction to Sociology SS (3) AS SOC
An introduction to sociological perspectives and methods and the basic areas of sociological interests such as socialization, gender, race and ethnic relations, deviance, social control, and social stratification. Required for Sociology majors and minors.

SYG 2010 Contemporary Social Problems SS (3) AS SOC
The analysis of social causes and dimensions of major public issues such as crime, the environment, inequality, gender, employment, and substance abuse.

SYG 2412 Marriage (3) AS SOC
Does not count for sociology major credit. Study of pre-marital relations. Social, cultural, and personal factors related to success and failure in mate selection and marriage. Does not count for sociology major credit.

SYG 3235 Latina Lives (3) AS SOC
An exploration of the experiences of Latinas in the United States. Uncover the complexities of sociological theories as oppression, migration, work, family, activism, spirituality, and sexuality through short stories, poetry, and scholarly research.

SYO 3120 Sociology of Families (3) AS SOC
With a goal to understand American families in the present, this course will examine variations in family types by social class, race, ethnicity, and historical era. Exploration of current controversies about how families should be organized and about what they should do.

SYO 3200 Sociology of Religion (3) AS SOC
PR: SYG 2000 or CI. An examination of the meanings of religion 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 religion.

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 Stratification (3) AS SOC
Introduction to one of the most common features of modern society, social inequality. A survey of perspectives to explain the causes of inequality and reasons for its persistence.

SYO 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 (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.

SYP 3000 Social Psychology SS (3) AS SOC
PR: PSY 2012 or SYG 2000 or CI. An exploration of the social forces that help shape individual perceptions, behaviors, and personality. The study of ways individuals develop identity and self-worth.

SYP 3582 Family Violence (3) AS SOC
Option to non-majors. 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.

SYP 4420 Consumer Culture MW LW (3) AS SOC
PR: SYG 2000 or CI. The exploration of how Americans’ purchasing behavior connects to larger historical shifts in our economy, including disenchanted, alienation, inequality, and the rise of the credit card society.

SYP 4510 Sociological Aspects of Deviance (3) AS SOC
The examination of the social construction of deviance: how deviance is defined, implications of deviance designations. Application of theories of deviance to questions such as motivations of deviants and implications of criminal justice processing of deviants.
SYP 4530 Sociology of Juvenile Delinquency (3) AS SOC
PR: SYG 2000 or CI. Sociological issues in defining delinquency; the nature of adolescence and delinquency; sociological theories of the causes of delinquency; types and consequences of social control applied to delinquents.

SYP 4840 Leisure in Society (3) AS SOC
PR: SYG 2000 or CI. Sociological examination of leisure in the United States and other countries. Topics include changing leisure time patterns, relationships between leisure and work, personality, fami-

SYP 4860 Sport in Society (3) AS SOC
PR: SYG 2000 or CI. An examination of the broad issues concerning sport in both a historical and contemporary perspective. Sport will be viewed in relation to social institutions, economic considerations, mass media, and the sport group as a micro-social system.

TAX 4001 Concepts of Federal Income Taxation (3) BA ACC
PR: ACG 2101. Major concepts used in taxation of income by federal government including enactment of tax laws, basic tax research, preparation of basic tax returns and exploration of tax policy issues.

TAX 5015 Federal Taxation of Business Entities (3) BA ACC
PR: TAX 4001 Tax issues encountered by small businesses. Includes tax planning, capital formation and preservation, tax compliance and tax alternatives.

THE 2020 Introduction to Theatre (3) FA TAR
An introduction to the art of theatre as part of the larger context of the nature of art. The approach will be both chronological and multi-cultural. Required of all theatre majors.

THE 2305 Script Analysis (3) FA TAR
PR: TPP 3920. This course teaches theatre students the techniques of dramaturgical text analysis. An introduction to the theories and re-

THE 3090C Modern Theatre Practice 6A (4) FA TAR
Initial readings and exercises in theatre; play analysis, performance, and technical theatre. May be repeated up to a total of 12 credit hours.

THE 3110 Theatre History I MW (3) FA TAR
PR: THE 2020. The study of theatrical production in its cultural context, including theatre architecture, scenography, acting and directing. Normally fifteen plays will be read. Required of all theatre majors. Open to upper division non-majors.

THE 3120 Text and Theatre I MW (3) FA TAR
PR: THE 2020, TPP 3920. A study of Theatre History in more detail as a companion to Theatre History I. This course and the companion Theatre History I will offer the opportunity for more careful study and emphasis on particular aspects of cross-cultural theatre in context.

THE 4180 Theatre Origins 6A MW LW (3) FA TAR

THE 4266 Architecture And Decor (3) FA TAR
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 4286 Architectural Revolution (3) FA TAR
An overview of the nature of architecture and furniture from ancient Egypt to the 20th Century. (A requirement in the design track/scenic.)

THE 4320 The Theatre And Myth And Ritual/Northern European (950-1600) And Oriental (400-1200) 6A MW LW (3) FA TAR
PR: THE 3110. Open to upper level non-majors with CI. An investi-

THE 4330 Shakespeare For The Theatre 6A MW LW (3) FA TAR
PR: THE 3110. Open to upper level non-majors with CI. A close study of selected plays with special emphasis on their performance values.

THE 4360 The 19th Century Theatre Revolution 6A LW (3) FA TAR
PR: THE 3110. 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 4393 O’Neill After 6A MW (3) FA TAR
PR: THE 3110. Open to upper level non-majors with CI. A course in the function of the script for the theatre artist treating materials in the American Theatre from 1915 to 1984.

THE 4394 Calvino For The Theatre 6A MW LW (3) FA TAR
This course is a study of plays and popular theatrical forms of the Caribbean. The student will investigate the social and political forces that shape the culture of the Caribbean, the residual effects of the colonialism and the turbulent period of independence as expressed in the dramatic art and theatre of the English-speaking West Indies.

THE 4435 Theatre Of Pluralism 6A MW LW (3) FA TAR
PR: Jr. or Senior standing or THE 3110, CI. Open to upper level non-

THE 4442 The Comedy Of The Classic And Neo-Classical Stages 6A LW (3) FA TAR
PR: THE 3110. Open to upper level non-majors with CI. A study of comedic function in scripts from Greek and Roman, Restoration and French Neoclassical of the late 17th century and other plays from the late 18th and 19th centuries which reflect similar characteristics.

THE 4480 Drama-Special Topics (3) FA TAR
PR: THE 3110. Open to upper level non-majors with CI. A study of a significant playwright or group of playwrights, e.g. Molieres, Brecht, recent American dramatists.

THE 4552 Contemporary Performance Theory 6A MW LW (3) FA TAR

THE 4593 Honors Seminar (2) FA 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 Seminar. Past topics have included New German Theatre, Popular Theatre, New American Theatre, Jacoben Theatre.

THE 4594 Honors Practicum (3) FA TAR
PR: THE 4593. Honors Practicum grows out of the Honors Seminar and engages students in workshops or production with guest artists. Past artists have included the Free Theatre of Munich, the San Francisco Mime Troupe, playwrights Eric Overmeyer, Jeff Jones and Gary Hill.

THE 4595 Honors Thesis (1-3) FA TAR
PR: THE 4594. A practical or written thesis related to the seminar and practicum and approved by the departmental honors committee.

THE 4722 Theatre for Pre-Secondary Schools: The Production Process (3) FA ED
The play production process as it applies to theatre artist-in-schools programs, including development of related classroom workshops and preparation of study guides, and educational program materials as well as design, direction and rehearsal of play and touring methods.

THE 4733 Theatre For Pre-Secondary Schools: The Performance Process (3) FA ED
The artistic process of performing for various school audiences and practice conducting classroom workshops following each perfor-

THE 4761 Methods of Teaching Theatre for Adolescents (3) FAEDD
Methods of effective drama and theatre instruction in middle school, junior and senior high schools, recreation centers, community and professional theatres.

THE 4905 Directed Studies (1-4) FA TAR
Independent study in the various areas of Theatre. Course of study and credits must be assigned prior to registration.

THE 4930 Selected Topics In Theatre (1-8) FA TAR
PR: CI. The content of the course will be governed by student demand and instructor interest. May be lecture or class discussion or studio format.

THE 5909 Directed Studies (1-6) FA TAR
PR: CI and CC. Independent studies in the various areas of Theatre. Course of study and credits must be assigned prior to registration.

THE 5931 Selected Topics In Theatre (1-8) FA TAR
PR: CI. The content of the course will be governed by the student demand and instructor interest. May be lecture or class discussion or studio format.

TPA 2210 Introduction to Technical Theatre I (3) FA TAR
CR: TPA 2290L or CI. An introductory course in technical production including coursework in two areas from scenic construction, stage lighting, costume construction, sound, and theatre production/ organization. Required for Theatre Theatre. 6 credit hours. Prerequisite: enrollment with TPA 2210 and TPA 2291L. Open to non-

TPA 2210 Introduction to Technical Theatre II (3) FA TAR
CR: TPA 2291L or CI. An introductory course in technical production including scenic construction, stage lighting, costume construction, sound, and theatre organization. Required for Theatre majors.
TPA 2248 Workshop In Stage Makeup (1) FA TAR
Beginning theory and practice in make-up for the stage. Open to non-majors. Theatre majors given preference. A studio course.

TPA 2260L Technical Theatre Lab I (1) FA TAR
CR: TPA 2260 or CI. A practical laboratory involving the pre-performance preparation of all technical aspects of a major production such as: painting, sewing, lighting, and sound. Students are assigned two areas of study per semester. Required of all Theatre majors. Open to non-majors.

TPA 2291L Technical Theatre Lab II (1) FA TAR
CR: TPA 2291 or CI. A practical laboratory involving the pre-performance preparation of all technical aspects of a major production such as: painting, sewing, lighting, and sound. Students are assigned two areas of study per semester. Required of all Theatre majors. Open to non-majors.

TPA 2292 Theatre Production and Administration (1) FA TAR
PR: TPA 2290L and TPA 2291L or CI. The rehearsal, construction, and performance of major theatrical works. Assignments are made by a faculty committee following the students completion of a PI request form, available in the Theatre Office, and enrollment in this course.

TPA 3007 Introduction to Design I (3) FA TAR
PR: TPA 2290, TPA 2210, TPA 2290L, and TPA 2291L. Open to non-majors. This course will include lectures, demonstrations, field trip(s), individual student presentations, and studio activities. The course work will provide an introduction to the various aspects of design including: two and three dimensional design, basic presentation and visual communication skills, research, and project analysis/organization.

TPA 3008 Introduction to Design II (3) FA TAR
PR: TPA 303. This course will include lectures, demonstrations, field trip(s), individual student presentations, and studio activities. The course work will provide an introduction to the various aspects of design including: two and three dimensional design, basic presentation and visual communication skills, research, and project analysis/organization. Open to non-majors.

TPA 3208 Drafting and CAD I (3) FA TAR
PR: TPA 2200, TPA 2210, TPA 2290L and TPA 2291L. The course will include lectures, demonstrations, field trip(s), 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 drafts. Required of all Design Track Theatre majors. Open to non-majors.

TPA 3221 Lighting: Theory And Practice (3) FA 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/area.

TPA 3231 Costume Construction (3) FA TAR
PR: TPA 3208 or CI. A practical course in the drafting of patterns for constructing costumes. Materials, skills and techniques necessary for construction of costumes and costume accessories will be treated. Included topics will be millinery, footwear, jewelry, masks, armor, courtesy; both period and modern.

TPA 3251 Drafting and CAD II (3) FA TAR
PR: TPA 3208. Continuation of TPA 3208. The course will include lectures, demonstrations, field trip(s), individual student presentations, and studio activities. The course work will provide an opportunity to develop your skills and techniques in the visual presentation of various design and technical drafts. Open to non-majors.

TPA 3265 Sound For The Stage (3) FA TAR
PR: TPA 2223. Open to non-majors with CI. Basic study of audio components, fundamental properties of sound, multiple channel recording, editing, reproduction and reinforcement. Methods and techniques used in theatre to create sound effects.

TPA 3290 Design Practicum (2) FA TAR
PR: TPA 3018. 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, 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 3601 Stage Management (2) FA TAR
PR: TPA 2200, TPA 2223, or TPA 2232. Open to non-majors with CI. A practical course in the working organizational function of the stage manager in theatre, dance, opera, and other live performance situations.

TPA 3840 Puppetry Performance And Production (4) FA TAR
PR: TPA 3810. Open to non-majors with CI. The creation, building, rehearsal, and performance of plays for puppet theatre.

TPA 4011 Design Studio I (3) FA TAR
PR: TPA 3208 plus two of TPA 3231, TPA 3221, TPA 3251. TPA 4024 will refine design 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 4012 Design Studio II (3) FA 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 III (3) FA 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/or 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 4019 Production Involvement II (1) FA 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) FA 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) FA TAR
EXCEPT: acting skill acting as a passion course. Required of all theatre majors. Open to non-majors.

TPP 2190 Studio Theatre Performance I (1) FA TAR
PR: TPP 2110. THE 2020. 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 2500 Body Disciplines (2) FA TAR
PR: TPP 2110. A laboratory course in various disciplines or systems and understanding the body’s motie powers, with focus on their relationship to performance.

TPP 3121 Improvisation I (3) FA 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 used to develop group creativity.

TPP 3155 Scene Study I (3) FA TAR
PR: Audition and all core 2000 level courses. Identify and investigate the structure of a script. Interpreting the author’s intentions and the playwright’s intentions as experienced actors are used to develop the character. Required of all Theatre majors. May be repeated. Open to non-majors with CI.

TPP 3230 Laboratory Workshop In Performance (3) FA 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 (2) FA TAR
PR: 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.

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TPP 3790 Voice Preparation For The Actor (3) FA 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) FA TAR
PR: TPP 2110. Participation in core level 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) FA TAR
PR: TPP 3920. A continuation of Acting Studio I with greater emphasis on preparing individuals needs in order to explore emotionally complex characters and scenes in an intensive and systematic way. This course will be team taught by the Performance faculty.

TPP 4140 Styles Of Acting (3) FA TAR
PR: TPP 3150 plus audition or TPP 3921. Examination of the actor’s craft and skills needed to fulfill the demands of classical theatre forms.

TPP 4180 Advanced Scene Study (3) FA TAR
PR: Audition and TPP 3150 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 the semester’s end.

TPP 4193 Studio Theatre Performance II (1) FA 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 crew. Placement by audition. If cast in production student must accept role. Required of all Theatre majors. May be repeated. Open to non-majors with consent.

TPP 4220 Audition Workshop for Actors (2) FA TAR
PR: TPP 3150 or TPP 3921. Preparation for professional audition; discussion of professional objectives.

TPP 4280 Advanced Design Practicum (3) FA TAR
PR: TPA 4011. This is a studio/laboratory course in the practical aspects of production. The course is intended to provide a productive 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 4310 Directing I (3) FA TAR
PR: TPP 3155 or TPP 4230. 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 or then proceeds to more complex work in a variety of styles and finally proceeds to the short play or theatre piece.

TPP 4311 Directing II (3) FA TAR
PR: TPP 3155 or TPP 4230. 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 piece.

TPP 4600 Writing For The Theatre (3) FA TAR
PR: TPP 2110 and THE 2305. An elective sequence in writing, in which the student first encounters the problems unique to dramatic language and situation, then progresses to complexities of character, plot, and stage dynamics. Normally the course will be limited to a maximum of 12 students.

TPP 4920 Senior Workshop For Actors (3) FA TAR
PR: TPP 2500, TPP 2790, and TPP 3155 or TPP 3921. A workshop in advanced vocal and movement techniques.

TPP 4923 Music Theatre Workshop (3) FA TAR
PR: TPP 2110 and audition. Open to non-majors by audition only. Exploration of Musical Theatre materials and performance techniques for the performer. Individual and ensemble work.

TSL 4374 Methodology of Teaching English Overseas (3) AS MLL
PR: Upper-level standing. Designed to introduce and prepare the student to be a facilitator 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 study of methodologies at the college level. Course requires a minimum of ten credits in ESL.

TSL 5321 ESOL Strategies for Content Area Teachers (3) AS MLL
Course designed for public school teachers working with limited English Proficiency (foreign) students in the classroom. The new ESOL requirements specify that this course be offered to content area teachers and to ESOL teachers.

TSL 5371 Methods of Teaching English As A Second Language (3) AS MLL
Analysis of the methods of teaching English pronunciation and structure to speakers of other languages.

TSL 5372 ESOL Curriculum and Instruction (3) AS MLL
Analysis of the methods of teaching English pronunciation and structure to speakers of other languages.

TSL 5471 Language Testing (3) AS MLL
PR: TSL 5371 Lecture course on testing English as a second/foreign language.

TSL 5525 Cross-Cultural Issues in ESL (3) AS MLL
PR: LIN 5700 Lecture course on cultural issues in Teaching English as a Second/Foreign language.

TTE 4004 Transportation Systems Engineering I (3) EN EXG
PR: EGN 3321. Principles of surface transportation system development, design, and operations; administration, modal characteristics, capacities, and functional classifications; vehicle kinematics, human factors and minimum design standards; traffic flow theory and queueing, capacity and signalization; transportation planning and economics.

TTE 4005 Transportation Engineering II (3) EN EXG
PR: TTE 4004, CR: SUR 3140. 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 Impact Report, site selection, and operation of alternate models including bus, air, rail, water, and pipeline facilities and terminals.

TTE 4821 Transportation Systems Design (2) EN EXG
PR: TTE 4005. Comprehensive study of surface transportation design laboratory experience involving function design, traffic and facility sizing, complete alignments, site surveying, layout & plan and quantity preparation with computerized design applications.

TE 5205 Traffic Systems Engineering (3) EN EXG
Traffic models, intersection analysis, capacity analysis, data methods collection, parking studies, volume and speed studies, freeway management, and advanced technologies.

TE 5501 Transportation Planning and Economics (3) EN EXG
PR: College Algebra & CI. Fundamentals of urban transportation planning: trip generation, trip distribution, modal split, traffic assignment. Introduction to environmental impact analysis, evaluation of choice of transportation alternatives.

URP 4050 City Planning and Community Development (3) AS POL
An introduction to the development, role, and components of city planning, and 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 3402, 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.

VIC 3001 Introduction to Visual Communications (3) AS COM PR: MMC 2100 and MMC 3602. The survey of visual communication theory, techniques, and their contemporary application and social influences as applied to the visual media with emphasis on still photography, motion pictures, video tape, and graphics.

VIC 3943 Visual Communication Practicum (1) AS COM PR: Senior standing and CI. For visual communications sequence majors, S/U only. Practical experience outside the classroom where the student works for academic credit under the supervision of a professional practitioner. Periodic written and oral reports to the faculty member coordinating the study.

WST 3010 Introduction to Women’s Studies SS AF (3) AS WST
Survey of major issues relevant to the female experience, the women’s movement: historical, psychological, sociological, anthropological perspectives.

WST 3011 Issues in Feminism SS (3) AS WST
Survey of major issues relevant to the female experience: marriage and the family, sexuality, work, creativity.

WST 3210 Women in Western Civilization I 6A HP (3) AS WST

WST 3210 Women in Western Civilization II LP 6A HP AS WST
Survey of European women from the late Middle Ages to the twentieth century: differing consequences of historical change for women and men.

WST 3210 Women, Environment and Gender MW (3) AS WST
Course designed to: provide students with a basic understanding of relationships between women’s physical, health and occupa-
WST 3440 Women and Social Action SS (3) AS WST
Course focuses on contemporary 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 4260 Research Issues on Women of Color 6A MW (3) AS WST
An interdisciplinary introduction to the research process as it has been carried out on women of color nationally and internationally.

WST 4262 Literature by American Women of Color 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 4263 Third World Women Writers 6A LW (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 4310 Feminism in America 6A MW (3) AS WST
A study of feminist critiques of American women's experiences and status, and their implications for women's lives, by 19th- and 20th-century theorists, and how adequately these Various critics address the intersections of gender, class, ethnicity, and race.

WST 4320 Woman's Body/Woman's Mind (3) AS WST
An analysis of the historical, social and political perspectives of women's health and healing experiences, and how women's role as patient and provider of care are shaped by public and cultural assumptions.

WST 4335 Women and Film (4) AS WST

WST 4342 Classics in Feminist Theory MW (3) AS WST
A study of classic contributions to the elaboration of feminist thought from the 18th century to the present in an attempt to discover the roots of the contemporary feminist movement.

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 4900 Directed Readings (1-3) AS WST
PR: Registration requires written consent and signed contracts from instructor of choice. To provide advanced students with interdisciplinary research experience in areas of specific interest.

WST 4910 Directed Research (1-3) AS WST
PR: Registration requires written contract signed by student and instructor of choice. To provide advanced students with interdisciplinary research experience in areas of specific interest.

WST 4930 Selected Topics (1-4) AS WST
Study in special areas such as Women and Work, Reproductive Law, Women and Health.

WST 4935 Seminar in Women's Studies (3) AS WST
PR: Women's Studies Major and 24 credit hours in Women's Studies. Recognizing the interplay between personal connections and intellectual experience, this capstone course is designed to focus on topical areas related to women's studies and facilitate linking student learning experience to future plans.

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 5934 Selected Topics (1-4) AS WST
PR: DPR Study of current research methods and scholarship on women from a multidisciplinary perspective.

YOR 1120 Yoruba (4) AS MLL
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 BIO
PR: BSC 2010, BSC 2010L, BSC 2011, BSC 2011L. The origin, diversity, and adaptations of vertebrates. Phylogenetic systematics ( cladistics) will be used as the basis for determining evolutionary relationships of organisms.

ZOO 3205C Advanced Invertebrate Zoology (4) AS BIO
PR: BSC 2010, BSC 2010L, BSC 2011, BSC 2011L. An introduction to the major invertebrate groups, with emphasis on local forms. Field work will be required. Lec.

ZOO 3323C Anatomy of Chordates (4) AS BIO

ZOO 3713C Comparative Vertebrate Anatomy (4) AS BIO

ZOO 4512 Sociobiology MW (3) AS BIO
This course is restricted to seniors. An analysis of Animal and human behavior such as sex, territoriality, and aggression in the context of evolution.

ZOO 4513C Animal Behavior (3) AS BIO
PR: PCB 3043 or PCB 3063. An introduction to comparative animal behavior (Ethology), with emphasis on communication, social use of space, and behavioral evolution.

ZOO 4603 Embryology (4) AS BIO

ZOO 4753C Histology (4) AS BIO
PR: PCB 3023 and PCB 3063. Comparative approach to the study of tissues and the relation of their structure and function. Lec.-lab.

ZOO 5253 Parastology (3) AS BIO
PR: PCB 3023, PCB 3043, PCB 3063 Fundamentals of parasitology and parasitism, the biology of selected animal parasites, including those of major importance to man.

ZOO 5425C Herpetology (4) AS BIO
PR: CI. Major aspects of amphibian and reptilian biology emphasizing fossil history, evolutionary morphology, sensory physiology, life history and reproductive behavior. Lec.-lab. Field trip.

ZOO 5456C Ichthyology (4) AS BIO
PR: Senior or GS in Biology. ZOO 3323C. PCB 4674 is suggested. Evolution, systematics, structure, behavior, physiology, and ecology of fishes.

ZOO 5555C Marine Animal Ecology (4) AS BIO
PR: PCB 3043 and senior standing. Investigation of energy flow, biogeochemical cycles, and community structure in marine environments. Lec.-lab.