
CATALOG SUPPLEMENTAL COURSE DESCRIPTIONS

This section is the supplement to the current undergraduate and graduate catalogs.
Courses not found nor fully described in the 2006-07 catalog are printed here.

ACCOUNTING

ACCT 367-045 SERVICE LEARNING & THE EITC

Complete eight hours of training in tax preparation for people with incomes low enough to qualify for the Earned Income Tax Credit (EITC). Contribute at least 34 hours of service preparing tax returns for low-income people. Prereq: ACCT 315.

ANTHROPOLOGY

ANTH 367-010 KINSHIP & SOCIAL ORGANIZATION

Explores the attempts of anthropologist to describe, interpret and analyze kinship and social organization of a wide range of human societies, past and present. Includes kinship, descent, marriage, residence and modes of production.

ANTH 367-011 SOLVING ARCHAEOLOGICAL MYSTERIES

Uses case studies to illustrate the theories and methods that archaeologists use in conducting scientific research. Includes Paleolithic art, the peopling of the New World, Stonehenge, Easter Island, North American mounds, the Mayan collapse, and the Great Wall of China.

ANTH 367-012 THE NEW RICH IN ASIA

Dramatic changes in the economies of East and Southeast Asia have produced a "new rich" or affluent middle class. This course examines the socio-economic and historical contexts out of which the "new rich" has emerged, the culture and ideologies of this non-Western elite, and its role in transforming Asian societies.

ART HISTORY

ARTH 402-010 THE AGE OF BERNINI

Considers Bernini's 17th century Rome sculpture and architecture in the context of papal patronage and religious reform, as well as in the larger framework of the development of style in Italian art. Includes fountains, caricature, theater, portraiture, and baroque poetics.

ARTH 402-011 PARIS IN THE AGE OF GERICAULT, DELACROIX & BAUDELAIRE

Explores the pivotal role of Paris in the emergence of French Romantic visual culture. Artists and writers, playwrights and art critics, printmakers and publishers, politicians and actors, art dealers and collectors, are woven in an intriguing, and prolific, social and intellectual patchwork.

ARTH 402-012 MODERN VIEWS, AFRICAN ART

Explores the ways in which three sets of 20th century modern artists, namely African, European and American understood, were inspired by, and used traditional African art. Considers whether something about modernity overrides the divergence assumed for national interpretative perspectives.

ARTH 440-010 ART & WARFARE IN LATIN AMERICA

Battle scenes, revolts, arms, soldiers and heroes as shaped in the arts of Latin America from pre-Hispanic to modern times.

ARTH 605-010 EGYPTOMANIA

Explores ways that Western cultures have constructed the idea of and appropriated Egypt from antiquity to the present day. Source materials include writings, picture books, architecture, fine art, decorative art, exhibitions, and films.

ARTH 614-010 THE IDEA OF THE VILLA

Examines the ideology, form, decoration, and meaning of the villa from Pliny to Le Corbusier with emphasis on Renaissance. Includes villa life and social status impact of antiquity, gender and politics, the literature of villas, the villa as sign.

ARTH 617-010 THE ART MARKET IN THE DUTCH REPUBLIC

Examines the relation between art and commerce in the 17th-century Netherlands of Rembrandt and Vermeer and considers the impact of the production of paintings for the home, the rise of the "open market" and art dealers, the development of specializations.

ARTH 623-010 CROSS CULTURAL ART & THEORY

Since WWII, waves of migration and displacement have created a global, multi-national economy that is not "at home". Explores the ways that visual culture and its reception have shaped and been shaped by recent perceptions of the experience of exile.

ARTH 635-010 AMERICAN ART: METHODS & HISTORIOGRAPHY

Explores the history of American art history, studying the major ideas and methods that have shaped the sub-field in relation to broader disciplinary developments. Especially recommended for students intending to take major or minor field exams in American art.

ARTH 667-010 WRITING ARCHITECTURE: METHODOLOGY & HISTORIOGRAPHY

Considers whether architecture should be addressed as a linguistic form, a physical object, a historical account, or a trace of memory. Explores writings on architecture from diverse interdisciplinary approaches and in cross-cultural contexts.

ARTH 667-011 WRITING MATERIAL CULTURE

Reading seminar. Explores the history and range of critical and theoretical approaches employed in the study and interpretation of objects and images. Includes art history and criticism, social and cultural history, literary theory, sociolinguistics, archaeology, and philosophy. Includes poetry and fiction as strategies for critical writing.

BIOLOGICAL SCIENCES

BISC 467-010 EPIDEMICS & PLAGUES

Studies a number of episodes from "The Plague" which devastated Europe starting in the mid 14th century to AIDS, which has been called the plague of the 20th century. Considers the agent of the disease, why the disease was able to infect a large proportion of the population and why we haven't, in our sophisticated, high tech society, been able to prevent recurrences of these diseases. Prereq: BISC 300 or equivalent.

BISC 667-010 ENVIRONMENTAL TOXICOLOGY FOR BIOLOGY MAJORS

Environmental toxicology and its role in the assessment of environmental risk, using a team-based approach. Teams are provided "real world" environmental problems and are asked to solve them by conducting an environmental risk assessment.

BIORESOURCE ENGINEERING**BREG 167-010/CIEG 167-010 INTRODUCTION TO LAND SURVEYING**

Provides experience with the use of equipment, instruments and the fundamental techniques of plane surveying. Includes distance measurement, leveling, traversing, mapping, and calculation of areas and earth volumes. Requires knowledge of trigonometry.

BUSINESS ADMINISTRATION**BUAD 867-050 SCIENCE INDUSTRY MANAGEMENT**

Focuses on the management of science-based enterprises. Draws on case studies from the pharmaceutical and biotechnology industries. Covers valuing a research effort, portfolio optimization, global development and marketing, costs and benefits of regulation, new technologies (biotech and the human genome), mergers and acquisitions, partnerships and alliances, and ethical considerations in the development and marketing of highly technical products.

BUAD 867-051 GLOBAL MARKETING & SOCIETY

Focuses on how economic objectives and socio-environmental goals can be reconciled and achieved in the modern business world. Studies concepts and techniques that can assist marketing managers in recognizing, framing, and addressing social and environmental issues.

BUAD 867-052 OM: PRACTICAL OPTIMIZATION MODELING

Emphasizes practical applications of math programming (e.g., services, production, industrial engineering, logistics, agriculture, portfolio design). Advanced techniques greatly simplify model development and maintenance by efficiently generating families of constraints, and by linking to databases to automatically update parameters values each time a model is used.

COGNITIVE SCIENCE**CGSC 367-011,080/LING 367-011,080 DISCOVERING HUMAN LANGUAGE: THE LANGUAGE OF MALAYSIA**

Discover human languages and how they work by studying the language of Malaysia. Learn how human languages are structured and how field linguists figure out the secrets of unknown languages. Includes the culture, people and food of Malaysia. Prereq: or coreq: one course in linguistics.

CHEMISTRY**CHEM 667-010/MAST 667-010 ENVIRONMENTAL CHEMISTRY**

Introduces the advanced chemistry student to the earth and its environment. Principles of energy and chemistry will be utilized for reactions in gas, liquid and solid phases of the earth's atmosphere and geosphere, via modern problem based models.

CHEM 667-011 Green Chemistry

Describes how to make chemistry inherently safer, avoid polluting in the first place, find substitutes for toxic chemicals, reduce waste, save energy, use renewable raw materials instead of fossil hydrocarbons to make chemicals and aid the transition to a sustainable society.

Prereq: CHEM 321 and permission of instructor, or CHEM 321 and CHEM 322.

CHEM 667-012 COLLOID CHEMISTRY

Introduction to the principles of colloid chemistry and discussion of applications including; surface and interfacial tension, capillarity, interfacial adsorption, adsorption isotherms, adhesion, contact angles, surface wetting and de-wetting, emulsification, foaming and de-foaming, interfacial thermodynamics and electrostatics, etc.

CHINESE**CHIN 467-010,080 SELECTED AUTHORS WORKS & THEMES**

Introduces students to representative writers in modern and contemporary Chinese literature. Focuses on nationalism, revolution, gender, major cultural movements, and literary conventions and innovations. Selected authors include Lu Xun, Shen Congwen, Eileen Zhang, Ba Jin, Can Xue, Yu Hua, Mo Yan, etc. Selected films will complement the discussions. Conducted in Mandarin Chinese.

CIVIL & ENVIRONMENTAL ENGINEERING**CIEG 167-014,015,080 INTRO TO CAD**

Designed for the new MicroStation user and builds a solid foundation in the concepts, tools and features found in the MicroStation drawing environment. Create 2-D drawings using basic graphic tools and procedures.

CIEG 467-010/CIEG667-010 SLOPE & EMBANKMENT DESIGN

Common slope and embankments problems; site investigation; stress, strength and consolidation concepts; slope stability analyses; landslide investigation; embankment design; stabilizing methods; construction and monitoring; use of software to analyze slope stability and embankment settlement.

CIEG 467-012/CIEG 667-012 WATERSHED ENGINEERING, PLANNING & DESIGN

Reviews planning, design and engineering of watershed best management practices necessary to protect and restore the quality and quantity of surface and ground waters. Enables students to understand the delineation of watersheds and rainfall-runoff characteristics, review Federal, state, and local laws and regulations, design stormwater BMPs, design groundwater recharge facilities, and design stream restoration and bioengineering projects.

CIEG 467-013 PROJECT PLANNING & MANAGEMENT

Provides students with the knowledge and skills associated with the discipline of project management practiced in the civil engineering and construction industries. Overview of contemporary project management with an emphasis on topics unique to engineering and construction. Includes current best practices recognized by leading project management, engineering, and construction industry organizations.

CIEG 467-014/CIEG 667-014 INDUSTRIAL ECOLOGY-SCIENCE OF ENVIRONMENTAL SUSTAINABILITY

Includes thermodynamic concepts, earth mineral cycles, environmental performance indices, life cycle analysis (LCA), eco-indicators, the environmental susceptibility index (ESI), material flows, fossil fuels and energy, metals production, management of water resources, material and energy recovery, waste minimization, green chemistry, design for the environment, and eco-industrial park concept.

CIEG 467-015/CIEG 667-015 ROADWAY GEOMETRIC DESIGN

Fundamentals of highway and street design, including transportation design process, highway location studies, and geometric design concepts and controls. Uses the AASHTO "Green Book" and covers the process known as "Context Sensitive Design".

CIEG 467-016/CIEG 667-016 EARTH PRESSURES & FOUNDATION DESIGN

Behavior and design of retaining walls and shallow foundations. Includes earth pressures, bearing capacity, stress distribution, settlement, and consolidation theory.

CIEG 667-011 BRIDGE DESIGN II

Provides practical insight into bridge-engineering methods and bridge types beyond those studied in the first course on bridge engineering. Includes refined methods of analysis, post-tensioning, segmental construction, fracture-critical members, load evaluation, extreme-events and cable-supported bridges.

COMPUTER & INFORMATION SCIENCE**CISC 459-010 NETWORK & SYSTEM SECURITY**

In depth look at concepts essential in maintaining a secure network of computers connected to the internet. Includes information security, classic/common exploits and how to prevent them, buffer overflows, cryptography and others. Prereq: CISC 450

CISC 467-010/CISC 667-010 INTRODUCTION TO BIOINFORMATICS

Introduction to concepts, methodologies and tools in bioinformatics. Abstraction of biological problems for computational solutions. Genome sequencing and assembly, bio-sequence, comparison and database search, dynamics programming, hidden Markov models, and phylogenetic trees. Prereq: CISC 220 or permission of instructor.

CISC 489-010/CISC 689-010 COMPUTER VISION

Introduction to the analysis of images and video in order to recognize, reconstruct, model, infer static, and dynamic properties of objects in the three-dimensional world. Study geometry of image formation; basic concepts in image processing; segmentation; techniques for 3-D reconstruction, and image registration methods. Prereq: CISC 481

CISC 829-010 PARALLEL ALGORITHMS

Design and analysis of parallel algorithms. Emphasis on both specific parallel algorithms and on general techniques used in the design of parallel algorithms. Covers lists, trees, searching, sorting, several graph problems, convex hulls, and string problems. Prereq: CISC 621.

CISC 849-010 ROBOT NAVIGATION & AUTONOMY

Studies and implements algorithms for an outdoor ground robot including vision and ladder-based obstacle detection and tracking, map creation, localization, and motion planning. Develop and test the system sufficiently to enter the robot competition described at <http://www.igvc.org/rules.html>.

CISC 879-010 SOFTWARE TOOLS & ENVIRONMENTS

Software tools used throughout the software life cycle. Tool goals and uses in practice, tool architectures, technical challenges and strategies in building tools, evaluation, and open problems. Tools: version control, documentation generation, software testing, issue tracking, debugging, intellectual property protection, and integrated

COMPUTER ENGINEERING**CPEG 467-011 COMPUTER NETWORK DESIGN & MANAGEMENT**

Introduces Data Networks and Telecommunications, with emphasis on practical Design and Engineering. Learn fundamental computer and voice networking, aided by case studies and hands-on laboratories. Explores standards, Protocols, current tools and technologies. Examines issues such as Security, Convergence, Wireless, IPv6, and Network Management.

CRIMINAL JUSTICE**CRJU 367-440 PRISONER RE-ENTRY**

Utilizes theories of desistance to examine issues of prisoners returning from prison to the community. Focuses on drug treatment, probation and parole, community response and offender adaptation. Special emphasis on how politics shapes the reentry process and hinders and/or helps the offender and the community.

ECONOMICS**ECON 367-050 ECON/ENTREPRENEURSHIP OF BUSINESS**

Analyzes the economic environment and the impact of public policy on business behavior and development. Students develop a business for a day and a business plan.

ECON 467-010,080 SEM: PUBLIC POLICY ECONOMICS

Read books on current topics in Economics, e.g., privatizing Social Security, education choice, African economic growth, foreign aid, Canadian health care, globalization, immigration, policies dealing with poverty. Focuses on student's presentation of papers. Prereq: ECON 300 or 301.

ECON 867-010 URBAN & TRANSPORTATION ECONOMICS

Focuses on transportation systems and urban growth. Apply microeconomics and econometrics to transportation issues, and evaluate policy arguments related to public investment in transportation infrastructure. Prereq: Econ 801, and Econ 822.

ELECTRICAL ENGINEERING**ELEG 467-010/ELEG 667-010 INTRODUCTIN TO NANO & BIOPHOTONICS**

Covers fundamentals of light-matter interactions and nano-scaled materials. Discusses their use in understanding, characterizing and manipulating biological systems. Uses several applications, including laser manipulation & dissection, bio-imaging, flow cytometry & biosensors, optical biopsy & spectroscopy and photodynamic therapy.

ELEG 467-011/ELEG 667-011 SENSOR NETWORKS

Discusses and implements recently developed protocols for sensor networking. Includes projects and presentations. Prereq: background in networking with knowledge of routing and transport layer protocols as well as a strong background in programming.

ELEG 467-012/ELEG 667-012 HIGH PERFORMANCE COMPUTING WITH COMMODITY HARDWARE

Explores alternative computing platforms including field-programmable gate arrays (FPGAs), graphics processing units (GPUs), and Cell processors. Discusses implementation techniques and how they differ from microprocessors and from each other. Project-based, allowing students to work on the platforms presented.

ELEG 467-013/ELEG 667-013 ELECTRIC POWER AND RENEWABLE ENERGY SYSTEMS

Introduction to electric power systems and interfaces with renewable energy sources. Covers electric power generation, transmission, distribution; residential, commercial, and industrial systems; components, operation, losses, metering and load management. Prereq: ELEG 205.

ELEG 467-018/ELEG 667-018/ PHYS 667-018 MAGNETISM & SPINTRONICS

Surveys an exciting new field with a focus on fundamentals of magnetism in solids, magnetic materials, thin film spintronics devices (such as magnetic tunnel junctions and Giant Magneto-Resistance (GMR) sensors), metal-semiconductor spintronics devices, and semiconductor spin transport and optical methods.

ELEG 667-014 ELECTRICAL PROPERTIES OF MATTER

Provides a basic understanding of electronic behavior in materials used for fabricating semiconductor devices. Introduces fundamentals of electron theory; elementary quantum mechanics (as applied to semiconductors); concept of energy bands; electronic behavior in crystals; electrical conduction in metals, alloys, semiconductors and insulators; metal-semiconductor contacts and metallization.

ELEG 667-015 IMMUNOLOGY FOR ENGINEERS

Covers the basics of the human adaptive immune response to viruses, both cellular and humoral. No prior knowledge is assumed. Covers the generation of the immune response cells, their differentiation, and their response to various types of immunogen. Introduces basic mathematical models of their interactions and discuss various implications of these models for the treatment of disease.

ELEG 667-017 ULTRAFAST OPTICS

Introduction to the techniques and applications involving femtosecond and picosecond lasers. Includes temporal and spectral properties of ultrashort pulses, linear propagation in bulk media and waveguides, dispersion control (stretchers and compressors), nonlinear effects (self phase modulation, self focusing, supercontinuum generation, solitons), active and passive modelocking (dye lasers, bulk solid-state lasers, fiber lasers, semiconductor lasers), chirped pulse amplification, pulse measurement techniques, ultrafast optoelectronics, and high field interactions.

FINANCE**FINC 867-011/ECON 867-011 WORKSHOP IN FINANCIAL ECONOMICS**

Introduction to financial economics, studying central topics in the social science of finance: finance fundamentals/market efficiency, asset pricing, and corporate finance. Provides selected coverage of financial institutions, market microstructure, corporate governance, and international finance.

FOREIGN LANGUAGES & LITERATURES**FLLT 667-010 SEM: SECON LANGUAGE ACQUISITION RESEARCH**

In depth exploration of topics pertaining to the acquisition of a second or additional language. Provides an introduction to quantitative and qualitative research methods in applied linguistics, and seeks to develop students' independent study, problem-solving, research, reading, writing and oral presentation skills.

FRENCH**FREN 667-010 ADVANCED COMPOSITION & GRAMMAR**

Offers intensive writing practice and a systematic grammar review (tense use, subjunctive, participles, etc.). Read French texts as models, write regular short compositions and work with each other correcting mistakes and improving style. Address individual problems.

GEOGRAPHY**GEOG 667-010 GIS IN THE K-12 CLASSROOM**

Practical curricular applications provide hands-on training in the use of GIS to explore geographic questions that meet the Delaware K-12 Geography Standards. Gives teachers an overview of GIS and the ability to turn data into effective maps for use in geographic inquiries. Implements the technology to suit the specific concepts of Delaware's Geography Standards.

GEOLOGY

GEOL 467-010/GEOL 667-010 QUATERNARY ENVIRONMENTS

Subsurface and environmental geologic interpretation of rapid sea-level and climate change during the Quaternary and Holocene using microfossils, especially foraminifera and pollen.

GEOL 667-011 GEOLOGY SEMINAR

The Department of Geological Sciences weekly seminar series. Varied topics presented by invited guest speakers.

HISTORY

HIST 367-010,080/WOMS 367-010 WOMEN'S RIGHTS IN AMERICAN HISTORY

Focuses on the evolution of women's rights over the entire span of American History. Considers the experiences of women of varying class, racial, ethnic, and religious backgrounds. Examines the ideas of theorists of women's rights and the changing meaning of rights and equality.

HIST 367-012,082 WORLD WAR II IN EUROPE

An in-depth study of this period, from the German attack upon Poland in 1939 to the German surrender in 1945, with some emphasis on the role of the United States.

HIST 367-013 CHRISTIANS & MUSLIMS IN THE MIDDLE AGES

Examines the complex relationship between Islam and Christianity from the time of Muhammad to the end of the Middle Ages. Considers both the clash of civilizations and more fruitful exchanges between the two faiths.

HIST 367-081 ENGLAND'S RISE TO GREATNESS

Synthesizes the social, economic, political, cultural and colonial developments during England's rise to world power from 1689-1789.

HIST 367-410 DELAWARE: FROM JACKSON TO LINCOLN

Examines political, social, economic, and cultural developments in Delaware from the 1820s to the end of the Civil War in 1865. Includes issues of importance such as slavery, industrialization, and political change, looking at these issues in the context of the "bigger picture" of American history.

HIST 367-411 HOLLYWOOD & THE GREAT DEPRESSION: AMERICAN MOVIES OF THE 1930'S

View a number of the most popular films of the 1930s, placed within their historical contexts. Discuss how they reflected developments in the movie industry, and investigate how they were related to Americans' understanding of their society during the Great Depression.

HIST 367-440 AMERICAN SPORTS HISTORY

Major developments in American Sports history since the Civil War. Includes the professionalization of sports, transformation from amateur game to big business, industrial sport, race and the evolving position of African American athletes, mass media's effect on sports, the shifting role of women in sports, the "Golden Age" of sports in the 1920s and the creation of athletic celebrities.

ITALIAN

ITAL 367-010 ITALIAN RADIO PRODUCTION

Radio programs in Italian. Research Italian news, art, history, music, current events, etc., and produce broadcasting segments. Incorporate culture from the basin of the Mediterranean. Programs broadcast on the Internet. Prereq: ITAL 300 (2 courses).

LIBERAL STUDIES

MALS 667-410 HISTORIC AMERICAN INTERIORS

Discusses how gender, class, and race have played a roll in the design of American interiors dating from the Colonial period to the present. Presents historic theories relating to the "decorative arts". Includes two field trips to area museums.

MARINE STUDIES

MAST 629-011 ICTHOLOGY

Covers the diversity of fishes; characteristics, classification, & zoogeography. Establishes a foundation on the diversity of fishes, family-level characteristics, and overall relationships among fish groups. Includes fish anatomy and physiology, and ecology and behavior. Focuses on marine fishes. Open to advanced undergraduates with permission of the instructor.

MAST 667-014 PERL PROGRAMMING FOR BIOLOGISTS

Introduction to programming concepts and the utilization of PERL to handle large biological data sets.

MECHANICAL ENGINEERING

MEEG 467-010/MEEG 667-010 ANALYSIS OF AIRCRAFT STRUCTURES

Analysis and design of flight structures and other light-weight structures. Loads, supports and reactions, constitutive equations, and stress and deformation of components for flight vehicles. Overview of fatigue, thermal stress and instability analysis of structures.

Prereq: MEEG 251 & MEEG 321

MEEG 467-011/MEEG 667-011 FORENSIC ENGINEERING

Studies the application of Mechanical Engineering in forensic investigation and analysis. Includes case studies in various technical areas, (i.e. product liability, injury biomechanics, accident reconstruction, structural failure) as well as discussion of the role of the engineer as an expert witness in the legal system. Prereq: MEEG 304 & MEEG 211

MEEG 467-012/MEEG 667-012 WIND POWER ENGINEERING

Includes a historical overview, the energetics of wind power, wind turbine aerodynamics, and the basics of related dynamical, structural and electrical aspects. Includes a visit to a nearby wind farm. Prereq: MEEG 331 or CIEG 305 and MATH 351.

MEEG 467-013/MEEG 667-013 CELL & TISSUE TRANSPORT

Transport in biological porous media will be examined and applied to arterial wall, bone, and cartilage. Active transport across membranes will be considered and applied to kidney and secretary organs. Introduction to transport across cell membrane and the role of receptors in transport, cell adhesion, and intracellular signaling. Prereq: MEEG 331 or transport course or equivalent.

MEEG 467-014 SENIOR-DESIGN: NASA & INDUSTRY PROJECTS

Two projects from a UD Space-Grant program are available: design of a minimum gas loss and low power EVA airlock that provides quick exit and entry for space-suited astronauts, and design of innovative concepts for microspacecraft lander, rovers, and/or communication relays.

Prereq: MEEG 304

MEEG 867-010 MECHANICS OF NANOCOMPOSITES

Introduction to nanomaterials and their composites based on polymer, ceramic and metal matrices. Review on recent developments in carbon nanotubes, fiber materials and composites. Review of Numerical Modeling Techniques--atomistic and continuum approaches. Molecular Structural Mechanics Method. Multiscale Modeling of Carbon Nanotube-Reinforced Composites. Modeling of Short Fiber Composites. Constitutive Modeling of Carbon Nanotube Reinforced Composites. Electro-Mechanical Coupling. Prereq: MEEG 610 or equivalent

MEEG 867-011 SPECIAL TOPICS ON NONLINEAR DYNAMICS & CONTROL IN BIOLOGICAL SYSTEMS

Literature studies on dynamics and control of biological systems. Includes human gait, chaos in neural signal transmission, molecular dynamics, and medical devices. Find and discuss papers of assigned subjects.

PHILOSOPHY**PHIL 367-010/CGSC 367-010 ANIMAL MINDS**

Examines a number of philosophical, theoretical, and methodological issues raised by the study of animal cognition and behavior. May include mental continuity between human and nonhuman animals, animal communication and deception, self-recognition, moods and emotions, culture, and animal ethics.

PHYSICS**PHYS 667-010/MSEG 667-010 NANOMATTER & THIN FILM PROCESSES**

Include physics and chemical vapor deposition processes. Selected topics from Vacuum Science and Technology, Thin-Film Evaporation Processes, Discharges, Plasmas, Ion-Surface Interactions, Chemical Vapor Deposition, Laser Ablation, Substrate Surfaces and Thin-Film Nucleation, Epitaxy, Film Structure, Characterization of Thin Films, etc.

PHYS 867-010 INTRODUCTION TO PLASMA PHYSICS

Introduction to the properties of ionized gases. Topics include characteristic plasma parameters, single particle orbit theory and adiabatic invariants, cold plasma waves, magnetohydrodynamics (MHD), MHD waves, equilibria, shocks, and instabilities. Presents applications to solar system space plasmas, astrophysical plasmas, and laboratory plasmas for each topic.

PLANT SCIENCE**PLSC 167-010 LANDSCAPE SKETCHING**

Field sketching and computer modeling (SketchUp) of landscape subjects. Emphasis on techniques, style and creativity. Media; pencil, pastels, watercolor and markers.

SOCIOLOGY**SOCI 367-010/LATN 367-010 SOCIOLOGY OF LATIN AMERICA**

Includes the geography, population, urbanization and history of Latin America, and its politics, family, religion, economy, and education. Reviews race, class, and gender relations as well as key social movements.

SOCI 467-010 APPROCHES TO QUALITATIVE INQUIRY

Explores such qualitative methods as participant observation, intensive interviews, focus groups, and content analysis, among others. Considers are how these techniques are used in social research, and the issues they raise. Create a research design and conduct qualitative research.

SOCI 467-011 SOCIOLOGY OF ART & CULTURE

Considers classical statements in the sociology of art and culture, assessing their continued relevance for contemporary research. Part two focuses on selected current issues in the field. Prereq: SOCI 312 or permission of instructor.

SOCI 467-012/BAMS 467-012 BLACK MIDDLE CLASS

New race and class scholarship provides a lens to investigate Black Americans who entered the middle class since World War II. Focuses on the challenges people face in the areas of education, employment, family, and community activities.

THEATER**THEA 267-410 INTRODUCTION TO FILM ACTING**

Examines film acting from a film critic's perspective. Showcases various aspects of the craft and includes commentary based on the instructor's years of interviews with actors and/or directors. Recognizes and analyzes Aristotle's "Six Elements of Drama"; plot, character, theme, diction, temp-rhythm, and spectacle using lectures, and examples from films.

URBAN AFFAIRS AND PUBLIC POLICY**UAPP 641-010 THE FUTURE OF NONPROFIT AMERICA**

Covers factors that influence the current and future roles of the nonprofit sector in the United States as well as the challenges that face nonprofit organizations. Explores fiscal and competitive challenges associated with cross-sectoral relationships Prereq: UAPP 840 or UAPP 841.

UAPP 667-010 THE AMERICAN ROAD: FROM TRAILS TO THE INTERSTATE

Traces the historic development of the American road and its role in American culture. Beginning with Native American trails, colonial roads and 19th century turnpikes, the course focuses on the invention of the modern American road in late 19th century.

UAPP 667-011 STRATEGIC MARKETING AND COMMUNICATIONS

Case-based overview of the Marketing and Communications function in contemporary Non-Profit Organizations and Government Agencies. This course balances concepts with relevant applications, for both early-stage and mid-career professionals. Small group analysis and written/oral presentations are typical.

UAPP 667-012 COMMUNITY DEVELOPMENT FINANCE

Course explores financial options in underserved and minority communities and the role the private, government and nonprofit sectors play in helping to facilitate economic development. Course is intended to expose students to the array of financing options available to individuals and underserved communities.

WOMEN'S STUDIES**WOMS 205-010 WOMEN IN THE ARTS & HUMANITIES: WOMEN & COMEDY**

Examines the work of women as comic writers, performers, and theorists. Studies women's use of comedy in the visual arts and in media such as film and television. Considers how politics and culture shape the definitions and aims of women's comedies using material from the 18th century through the present, in both the U.S. and England.

WOMS 205-011 WOMEN IN THE ARTS & HUMANITIES: THE BURDEN OF REPRESENTATION

Places women's experiences at the center of our interpretation, introducing philosophical, historical, political, cultural and sexual issues. Emphasizing diversity, students consider women's lives across class, racial, and ethnic experiences and sexual identities.

WOMS 250-010 THIRD WORLD WOMEN & WOMEN OF COLOR

Focuses on the contributions "Third World women" and "women of color" in the U.S. have made to struggles for civil rights, decolonization, anti-racism and progressive coalition politics across the globe.

WOMS 250-011 INTERNATIONAL WOMEN'S STUDIES: LATIN AMERICA

Explores women's lives, challenges, feminist goals and controversies within Latin American cultures and in "Hispanic" communities in the United States. Despite many commonalities, the differences of social class, education, race, religion and ethnicity influence experience and alter interpretations of problems and solutions. Studies Latin American women's voices through research and literature.