

## Spring 2008 Supplemental Course Descriptions

### ANTHROPOLOGY

#### ANTH 267-010 ANTHROPOLOGY COLLOQUIUM

Talks by individuals trained in anthropology who work in a range of contexts: academic, government, business, museum, etc. Exposes students to the full range of what people trained in anthropology DO and how anthropology shaped their view of the world and informs their work.

#### ANTH 367-010 HUMAN VARIATION & ADAPTATION

Examination of human biological variation and adaptation. How much do humans vary genetically and physically? Are there evolutionary explanations for the distribution and significance of variation (e.g., in blood group systems, skin color, body size and shape, and the distribution of diseases).

#### ANTH 367-011 SOLVING ARCHAEOLOGICAL MYSTERIES

Uses case studies to illustrate the theories, methods, and results of archaeological research. Case studies include hunting and gathering site, the transition to agriculture, Chaco Canyon, the civilizations of the Maya and Rome, and human impacts on ancient environments.

### ART HISTORY

#### ARTH 167-010 ART & SCIENCE

Explores the many intersections of art and science throughout western history and contemporary visual culture, emphasizing issues of vision, light, bodies, and space. Includes linear perspective, anatomical representation, optical and drawing instruments, cartography, conservation, natural history illustration, and architectural design.

#### ARTH 367-010 EARLY PHOTOGRAPHY IN THE U.S

Early photographic practices and technologies in the United States, exploring the social and cultural uses of photography from daguerreotypes (1840s) through stereographs, Civil War photography, pictorialism, and the Stieglitz circle straight aesthetic (1910). Lecture-discussion format; field trips to museum collections.

#### ARTH 367-011 CONTEMPORARY ART

Covers art and theory of the last 20 years in a worldwide context. Includes installation, new media, sound art, video, performance, graphics, ceramics, fiber art, painting, sculpture, and photography.

#### ARTH 402-010 SEM:ART IN THE AGE OF EXPLORATION

Exploration of European images and collections during the period generally called the Age of Exploration (mid-15th century to the mid 17th century). Examines artistic representations of exotic lands and peoples by European artists and the integration of non-European artifacts to early modern collections.

#### ARTH 402-011 SEM:ART HISTORY'S METHODS & AFRICAN AMERICAN ART

Reviews art history's methodological approaches and considers their usefulness when interpreting art by African Americans. For example, is semiotics effective for the analysis of artworks by African Americans? Includes major issues shaping the study of African American art.

ARTH 406-010,080/ARTH606-010 SEM:PROBLEMS IN THE BEGINNING OF ISLAMIC ART

Provides introductory material for students who have no prior familiarity with Islamic art or culture. Includes a detailed examination of some problems concerning art to ca. 800CE, focusing on the Umayyad monuments in Palestine, Syria and Jordan, and the earliest manuscripts of the Qur'an.

ARTH 611-010 SEM:RENAISSANCE HOME: ARCH & MATERIAL CULTURE

Examination of Renaissance palaces and their uses in Italy from 1400-1600. Focus on everyday life and social history. Topics include entertaining, marriage chests and rituals, kitchens and gastronomy, private chapels, decorating the bedroom, gendered spaces, birthing trays.

ARTH 616-010 SEM:CARAVAGGIO: METHODS & MYSTIFICATIONS

Critical readings of recent Caravaggio scholarship. Includes the polemic of Caravaggio theologian versus Caravaggio naturalista; self-fashioning/self-portraiture; Caravaggio refusé; document mania; techniques and condition; new attributions and autograph replicas; the late period in context (Naples, Malta, Sicily); Caravaggio in popular culture.

ARTH 621-010 SEM:ANTI-MODERNISMS (1800-1914)

Seminar on the theories and varied visual strategies of anti-modernism. Modernism, and notions of progress and vanguard, are seen as defining 19th and early 20<sup>th</sup> century French art. Yet equally significant at the time was the urge to recoil from the modern.

ARTH 667-010 SEM:APPROACHES TO CONTEMPORARY ART

The term "contemporary" now describes a field of study. Determining just what makes art "contemporary," and identifying and articulating its contemporaneity, however, is ongoing. This seminar will explore, present, and describe the state of the field in terms of exemplary practices.

BIOLOGICAL SCIENCES

BISC 667-010 ENVIRONMENTAL TOXICOLOGY

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

BISC 667-011 MOLECULAR MECHANISMS OF PATHOGENS

Examination of the emergence, spread and pathogenesis of microbial pathogens. Reviews molecular aspects of disease transmission and infection, the role of horizontal gene transfer and mobile genetic elements in bacterial virulence, and the impact of pathogenomics on our understanding of the mechanisms of pathogenesis.

BUSINESS ADMINISTRATION

BUAD 467-050 SERVICE MANAGEMENT

Focuses on aspects involved in management of services within "pure" service sector. Topics include design and delivery of services, measurement of productivity and quality, managing capacity and demand, quality management, redesign of service delivery processes, management of technology, managing human resources.

## COGNITIVE SCIENCE

### CGSC 667-012/PSYC 667-012 MAPPING THE MIND WITH EEG

Covers the essential aspects of collecting and analyzing electroencephalographic (EEG) data in order to understand the neural basis of cognitive functioning in the human brain. Topics include the neural basis of EEG, practical aspects of recording, data reduction techniques, and statistical analysis.

## CHEMICAL ENGINEERING

### CHEG 667-010 SEM:SPECIAL TOPICS IN ENERGY ENGINEERING

Includes an overview of non-renewable energy sources and renewable energy sources, fuel processing for hydrogen production and storage, process intensification, fuel cells, environmental effects, as well as technical performance and efficiency in energy exchange of various processes along with energy sustainability.

### CHEG 867-013 CHEMICAL ENGINEERING PRINCIPLES II

Equips incoming graduate students with applied mathematical and computational background needed in other graduate courses and research. Includes partial differential equations, tensors, introduction to computer packages, probability and statistics, and molecular simulation. Uses computational software, such as Fluent, Femlab, and Cerius, to solve complex problems.

### CHEG 867-014 POLYMER RHEOLOGY

Principles and applications of the science of the deformation and flow of polymeric fluids. Includes review of vector and tensor mathematics and Newtonian fluid mechanics; structure-rheological property relations for melts and solutions; techniques for experimental rheological characterization; non-Newtonian flow phenomena, including normal stresses, recoil and relaxation; rheological constitutive models, including generalized Newtonian and linear viscoelastic fluids; molecular models of polymer flow behavior.

## CHEMISTRY & BIOCHEMISTRY

### CHEM 830-010 SPEC TPCS:BIOORGANIC CHEMISTRY/CHEMICAL BIOLOGY

Introduction to concepts and experimental methods in molecular recognition and catalysis forms the basis to explore the central dogma of biology with an emphasis on chemical methods to probe, manipulate and exploit biological systems. The course will draw from classic and current literature. Prereq: CHEM 321/322 or CHEM331/332 and CHEM641 or equivalents.

### CHEM 874-010 SPEC TPCS:BIOMOLECULAR NMR

Overview of modern NMR theoretical and experimental approaches used for solving problems in structural biology, biochemistry and biophysics. Includes introduction to the NMR theory and instrumentation, description of modern multidimensional NMR experiments, and extensive discussion of their applications to structure, dynamics, protein folding, drug design, ligand and ion binding, mechanisms of enzymatic reactions.

## CIVIL & ENVIRONMENTAL ENGINEERING

### CIEG 167-011 FRESHMAN DESIGN

Introduction to the civil engineering profession and civil design; computer-aided drawing using Microstation. Team design projects. Course integrated with CIEG461 Senior Design.

CIEG 467-012/CIEG 667-012 WATERSHED ENGINEERING, PLANNING & DESIGN  
Planning, design and engineering of watershed best management practices necessary to protect and restore the quality and quantity of surface and ground waters. Understand the delineation of watersheds and rainfall-runoff characteristics; review various Federal, state, and local laws and regulations; design storm water BMPs, groundwater recharge facilities, and stream restoration and bioengineering projects.

CIEG 467-013 PROJECT PLANNING & MANAGEMENT  
Provides students with 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. Information based on current best practices recognized by leading project management, engineering, and construction industry organizations

CIEG 467-017 ENGINEERS WITHOUT BORDERS  
Introduces topics useful to engineers working in the developing world; appropriate and locally sustainable technologies; cultural concerns in different social environments; project planning and coordination involving diverse teams and locales.

CIEG 467-019 ENGINEERING FOR DISASTERS  
Focuses on how engineers can influence the life cycle of major natural disasters. Provides opportunities to work in teams to practice disaster assessment techniques and engineering methods used in disaster recovery.

CIEG 467-020/CIEG 667-020 TRAFFIC ENGINEERING & MODELING  
Introduction to the theoretical and practical aspects of traffic engineering including the theory and practice of the most commonly used computer software tools. The Highway Capacity Software applications, Signal Optimization Software packages (PASSERII) including the theory of signal optimization, and urban network simulation model topics, along with software programs such as CORSIM and SYNCHRO.

CIEG 667-010 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 667-021 RISK ANALYSIS  
Analysis techniques include decision analysis, fault trees, event trees, Markov models, and Monte Carlo simulation. Case studies emphasizing civil engineering applications illustrate the process of risk analysis and the application of the specific analysis techniques. Discusses risk perception, acceptability, and communications.  
Prereq: CIEG315 or equivalent.

COMPUTER & INFORMATION SCIENCES

#### CISC 367-010 DIGITAL INTELLECTUAL PROPERTY

Includes economic, philosophical, social, and technical approaches to intellectual property (15000 BCE to present). Researches contemporary IP issues in software, entertainment, the internet, and biotechnology.

#### CISC 829-010 COMPUTATIONAL GEOMETRY

Explores basic and advanced algorithms, concepts and applications of computational geometry for use in graphic and vision. Equal emphasis will be given to theoretical and applied concepts.

#### CISC 849-010 AUTONOMOUS ROBOT VISION

Survey of camera and lidar based sensing algorithms for mobile robot navigation and interaction, including obstacle/landmark detection, segmentation, recognition, and tracking. Topics of special interest allowing field experiments will be trail following and 2008 IGVC competition tasks ([www.igvc.org](http://www.igvc.org)).

#### CISC 849-011 ANALYSIS OF BIO. SIMULATIONS

Provides an advanced knowledge in modeling techniques to study molecular behaviors in high performance computer simulations. Molecular dynamics simulation algorithms for particles will be implemented and analyzed for desktop machines and massively parallel, distributing computing platforms.

#### CISC 879-010 SYSTEM SUPPORT: MULTICORE ARCHITECTURE

Discusses recent results and explores new ideas in systems development (programming models, compilers, libraries, operating systems) to enhance their performance, scalability, and adaptability on multi-core architectures.

#### CISC 889-010 STATISTICAL APPROACHES TO NLP

With the availability of large amounts of text in electronic form, an emerging trend in natural language processing is to obtain useful quantitative information from such text corpora. Course covers various statistical techniques currently being used in solving important NLP tasks.

#### COMMUNICATIONS

##### COMM 410-018/COMM 618-010 POLITICS AND ENTERTAINMENT

Examines the relationship between politics and entertainment with a specific focus on the latest trends in "politico-tainment." Examples: TV drama West Wing, and presidential candidate appearances on late-night comedy programs.

##### COMM 418-011/COMM 618-011 COMMUNICATION & ADVERTISING

Introduces the relationship between advertising and the consumer, with an emphasis on the cognitive processing of media. Examines what cognitive effects are and how they translate into behavioral effects.

##### COMM 442-010/COMM 642-010 RSCH PRACTICUM: SOCIAL INFLUENCE IN GROUPS

Provides a hands-on experience in performing communication research. Examines relevant research, and conducts an entire study, including data gathering and input, content and survey analysis, and research report writing.

#### CRIMINAL JUSTICE

##### CRJU 467-010 CRIME & CRIMINAL JUSTICE IN EAST ASIA

Examines critical crime and criminal justice issues in East Asian societies, with an emphasis on Japan, China and Taiwan. Purpose is to describe the variety of crime and criminal justice, to understand the determinants of these variations, and to compare the differences and similarities in crime and criminal justice between East Asia and the US.

#### CRJU 467-015/SOCI 467-015 CULTURE, MUSIC & DEVIANCE

The importance of the leisure industry to local, national and international communities, plus theories and research on youth, leisure, culture, and music in connection to both deviant identities and behaviors. Special attention to the U.S., but also to countries such as England, Spain, Brazil, and Japan.

#### ECONOMICS

##### ECON 467-010 STRATEGIC BEHAVIOR OF FIRMS

Uses traditional microeconomic theory and game theory to analyze cooperative and non-cooperative strategic behavior of firms. Includes predatory pricing, price discrimination, limit pricing, collusion, mergers, vertical restrictions, franchise arrangements, technological change, and the role of prices in clearing markets.

Prereqs: ECON 300 or ECON 301, MATH 221.

#### EDUCATION

##### EDUC 467-011 TEACHING READING FOR ADOLESCENT SPECIAL ED NEEDS

Foundations of teaching reading to adolescents with special needs, including literacy instruction, readability formulas, strategies to connect reading with study skills, and methods of diagnosing reading difficulties and making instructional modifications and accommodations for students.

##### EDUC 867-010 CHANGING CONCEPTS SPECIAL EDUCATION

Examines evolving ideas about the nature and purpose of special education and its relationship to general education through different frames of reference including: historical trends, international perspectives, teacher roles, students, developmental contexts, dimensions of curriculum, instruction, assessment, and policy concerns. Participation in a symposium featuring nationally prominent Researchers.

##### EDUC 867-011 ETHNOGRAPHIC RESEARCH

Focus is on learning how to conduct ethnographic fieldwork. Formulate research questions, gain access to a local field site, act as participant-observers, write field notes, interview participants and conduct rudimentary data analysis. Discuss the theoretical, methodological and practical dilemmas faced by ethnographic researchers.

#### ENGINEERING TECHNOLOGY

##### EGTE 167-050 SMALL ENGINES

Introduction to the small single and twin cylinder internal combustion reciprocating engine, featuring the Otto Cycle (fuel-spark ignition) engine and the Diesel Cycle (fuel-compression ignited). Discusses power, carburetion and ignition systems, and theory and operation of the two stroke engine as compared to the four stroke cycle. Lab provides hands on experience.

#### EGTE 367-010 DYNAMICS FOR ENGINEERING TECHNICIANS

Introduction to the dynamics and kinematics of particles and rigid bodies. Vibration of structures and machines. Emphasis on problem solving using vector mathematics and simple differential equations. Prereq: EGTE231.

#### EGTE 467-010 INTRODUCTION TO STATISTICAL QUALITY CONTROL

Includes quality improvement in the modern business environment, statistical methods useful in quality improvement and selected topics in statistical process control. CQE preparation. Prereq: MATH201

#### ELECTRICAL ENGINEERING

##### ELEG 467-010/667-010 ELECTRIC POWER DISTRIBUTION DESIGN

Introduction to aerial and underground electric power distribution design. Design a system to replace an existing multi-circuit outdated system using new-generation technology. Consider safety, impact on the environment, coordination with other utilities, disruption to normal service and business, marketing, public opinion, economics and overall cost in the development of several design options.

##### ELEG 467-011/ELEG 667-011 IMMUNOLOGY FOR ENGINEERS

Covers the basics of the human adaptive immune response to viruses, both cellular and humoral, 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 discusses various implications of these models for the treatment of disease.

##### ELEG 867-010/MSEG 867-010 EPITAXIAL GROWTH & BAND ENGINEERING

Focuses on the fundamentals and recent developments in the growth of epitaxial films of electronic/optical materials and devices. Includes vacuum technology, growth thermodynamics, heterojunction physics, materials characterization, and practical considerations. Concentrates on molecular beam epitaxy, but discuss complementary techniques.

#### ENGLISH

##### ENGL 382-010 CULTURE & HISTORY OF ASIAN AMERICANS

An interdisciplinary course in imaginings and history. Explores Asian immigration, anti-Asian violence and internment, Asian American resistance in litigation, legislation, and cultural activities, from Gold Rush to globalization.

#### ENTOMOLOGY & WILDLIFE CONSERVATION

##### ENWC 467 010/ENWC 667-010 WILDLIFE POLICY & ADMINISTRATION

Introduction to policy issues that relate to wildlife management and natural resources. Includes an understanding of current laws, federal agencies, policy formation, and debate the policies of current hot topics.

#### FINANCE

##### FINC 467-050/FINC 667-050 FINANCIAL MODELING & VALUATION

Value initial public offerings, mergers, private equity transactions, and leveraged buyouts using financial modeling techniques. Includes learning the economic principles supporting these techniques, and

applying the techniques to various transaction types using real financial data. Stress is on bridging the gap between theory and practice Prereq: FINC312 and FINC314, or FINC850.

#### FINC 467-051/FINC 667-051 CFA PREPARATORY LAB

Prepares students to take Level I of the Chartered Financial Analysis examination by exposing them to a preparatory structure which emphasizes a schedule of material study, note taking and continuous review, and sample exam taking.

#### FINC 867-010/ECON 867-010 WORKSHOP IN FINANCIAL ECONOMICS

Introduces the core theoretical topics, empirical methods, and data that are the domain of financial economics, mostly by studying journal articles. Focus on the underlying microeconomic concepts and research regarding market efficiency, asset pricing, and corporate finance. Includes financial intermediation, market microstructure, corporate governance, and international finance. Prereq: ECON801 and ECON822 recommended. FINC850 or pre-course reading of an MBA-level textbook.

#### FOREIGN LANGUAGES & LITERATURE

##### FLLT 367-010 MODERN ISRAEL: CULTURE & IDENTITY

Topics include the roots of Zionism, the concept of the Israeli Sabra, the effects of the Holocaust, ethnic groups and the Arab-Israeli conflict. Understanding of this complex culture through historical background and the study of film, literature and music.

##### FLLT 367-012 BRAZIL THROUGH FILM

Studies many aspects of Brazilian reality. Engages other disciplines that help provide an understanding of Brazilian film, including history, literature, gender studies, sociology, cultural studies, politics, and ethnic studies. Most films are viewed in Portuguese with English subtitles. Class is taught in English.

##### FLLT 667-010 SEM:SECOND LANGUAGE ACQUISITION RESEARCH

Provides an in-depth exploration of topics pertaining to the acquisition of a second or additional language. Includes the nature of language learning, individual differences in language acquisition, the role of input and interaction, similarities and differences in L1 and L2 acquisition, instructed acquisition, and the relationship between acquisition research and second language teaching.

#### GEOGRAPHY

##### GEOG 452-010/GEOG 652-010 SEM:ENVIRONMENT AND HEALTH

Explores links between physical, built, and social environment and human health. Overview of data sources and introduction to research methods for assessing relationships. Discussion of policy applications, differences in U.S. vs international research, contemporary paradigms, and debates in the field.

##### GEOG 467-010/GEOG 667-010/GEOL 467-010/GEOL 667-010/PLSC 467-010/PLSC 667-010 GEOMORPHIC PROCESSES & LANDFORMS

Team taught course focusing on selected Earth Surface Processes. Topics could include periglacial geomorphology, glacial geology and glaciology (and their responses to climate changes), watersheds and fluvial geomorphology, coastal processes, and geochemical and geomorphic co-evolution of soils and hillslopes.

GEOG 467-011/GEOG 667-011 WEATHER FORECASTING

Daily analysis and discussion of current and future weather conditions affecting Delmarva. Assemble daily weather talking points and graphics for use by a local television station in their weeknight newscasts. Develop special reports on seasonal weather conditions and unusual weather events.

GEOG 467-012/GEOG 667-012 LANDSCAPE STUDY

Theories of landscape formation and change in relation to cultural processes. Landscape perceptions over time. Landscapes as contested terrain. Landscapes and being.

GEOG 652-050 SEM:GLOBAL DIMMING

Explores literature and data pertaining to "global dimming", and examines its impacts on the climate system. Includes increases in air pollution and decreases in solar radiation reaching Earth's surface ("global dimming"); and decreasing rates of evapotranspiration and land-surface precipitation.

HISTORY

HIST 268-010 SEM:AMERICAN SLAVERY

Examines the institution of slavery from 1619 through the Civil War.

HIST 268-011,081 SEM:THE CRUSADES

Explores the origins and unfolding of the Crusades (1095-1291) through an intensive examination and mining of primary sources.

HIST 268-012 SEM:ETHNIC & AMERICAN IDENTITY

Explores changing interpretations of American ethnic identity, from the mid-nineteenth century through the present. Immigration and assimilation forged ethnic communities with roots in Europe, Mexico, Asia, and elsewhere. Focuses on relationships between ethnicity and race, religion, class, and gender.

HIST 268-013,083 SEM:FASCISM & COMMUNISM IN EUROPE

Explores the Spanish Civil War (1936-39) and the rise of the Nazi Party in Germany.

HIST 268-014 SEM:AMERICA IN THE COLD WAR

Evaluates the influences of ideology, power politics, economics, and the personalities of world leaders on the course of the conflict between the United States and the Soviet Union, from which America emerged as the world's only "superpower."

HIST 268-015 SEM:TERRORISM IN NORTHERN IRELAND

Explores what ignited terrorism in Northern Ireland; why it finally stopped; and how historians achieve an accurate understanding of a problem so embedded in emotion and controversy. Studies primary texts, secondary analysis, seminar discussions, and a research paper.

HIST 268-016,086 SEM:AMERICAN ENVIRONMENTAL HISTORY

Introduces students to historical interpretation and methods, and to a relatively new field of history.

HIST 367-010 WHAT'S JAPANESE ABOUT GLOBAL POP CULTURE?

Explores Japan's pop culture industry from Kabuki to the cuteness of Hello Kitty; from the solace of tea ceremony to the violence of Tekken.

Considers the historical contexts that translate Japanese culture into global culture; the worldwide popularity of Japanese cultural goods; the Japanese historical or cultural bases for global products, goods and services; and the economic, social, and political impact of Japanese contributions to global popular culture?.

HIST 367-011,081 WORLD WAR II IN EUROPE

The military history of World War II in Europe, from the German attack upon Poland in 1939 until Germany's defeat in 1945. Some emphasis upon the role of the United States. Lectures, readings, book reviews.

HIST 367-012 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 367-013 CHRISTIANS, JEWS & MUSLIMS IN THE MIDDLE AGES

Examines the complex relationship of Islam and Christianity from the time of Muhammad to end of the Middle Ages.

HIST 367-014 AMERICAN SPORTS HISTORY

Traces major developments in American sports history since the Civil War.

HIST 367-015 AMERICAN RADICALISM

Introduces students to the major themes, problems, and personalities of modern American radicalism.

HIST 367-410 HISTORY OF WILMINGTON

Examines the history of Wilmington from the Swedish settlement of Ft. Christina in 1638 to the present time and Wilmington's emergence as a mid-sized industrial city. Emphasizes the issues connected with urban growth and development. Studies Wilmington's history in the context of mid-Atlantic American history.

HIST 411-010/BAMS 411-010 SEM:THE CIVIL RIGHTS MOVEMENT

Deals with the course of the Civil Rights Movement since about 1900. Devotes considerable attention to current policies with respect to voting rights, affirmative action, and school desegregation, among other topics.

HIST 411-011 SEM:DO-IT-YOURSELF AMERICA

Uses weekly readings, experiments, field trips, and research as signments to explore multiple aspects of what historians call 'technological knowledge' from the 18th century to our own times.

HIST 467-010/BAMS 467-010 SEM:POST-EMANCIPATION CARIBBEAN SOCIETIES

Examines the process of adjustment to Emancipation primarily in the British Caribbean. Discusses the transition from slavery to free labor, systems of domination, the development of multiracial and multi-ethnic societies, and the evolution of syncretic cultural forms.

Prereq: HIST268 or permission of instructor.

HIST 471-010,080/HIST 671-010 SEM:CHARLEMAGNE AND HIS LEGEND

Examines the life and times of the "Father of Europe" and explores the development and importance of his legend for Western civilization.

HIST 475-010,011,080 SEM:THE AGE OF REVOLUTION IN EUROPE, 1789-1848

Examines the leading political, social, and economic issues that made this era a watershed in world history. Discusses a range of critical

themes that unfolded in the decades between the French Revolution and the Revolutions of 1848.

HIST 480-010 SEM:DECOLONIZATION

Focuses particularly on the demise of British India, French Vietnam, French Algeria, the Belgian Congo, and Portugal's African empire.

ITALIAN

ITAL 367-010,080 SEM: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: Two 300 level ITAL courses.

LINGUISTICS

LING 867-010 DEPARTMENT COLLOQUIUM

Talks on current topics in Linguistics and Cognitive Science by guest speakers from other Universities and UD faculty.

LING 867-011 READINGS IN LINGUISTICS

Discussion of on going student and faculty research.

MARINE STUDIES

MAST 629-012 TPCS:ECOLOGY & MANAGEMENT OF SEA ISLANDS

Two week, on-site study of the Sea Islands (a string of islands from SC to FL) in Georgia preceded by readings and followed by a concise series of meetings to discuss results, develop the class paper outline, and finalize writing and editing assignments.

MAST 667-015 SEM:ENVIRONMENTAL BIOINFORMATICS

Focuses on strategies (algorithms and statistics) and techniques (programming languages) for sorting through massive genome data sets (522 microbial genome sequences at present).

MATHEMATICS

MATH 567-010 FOUNDATIONS OF MATHEMATICS

Graduate students in mathematics education develop mathematical knowledge for the purpose of enhancing the research and teaching of mathematics teacher education. Includes developing skills in problem solving, problem posing, extending problems, and developing profound understanding of fundamental mathematics concepts.

MATH 826-011 TPCS:MARTINGALES, BROWNIAN MOTION, & STOCHASTIC CALC

Discrete and continuous martingales, stopping times, martingale inequalities, martingale convergence theorems, optional stopping theorem, ergodic theory, Brownian motion, construction, strong Markov property, sample path properties, stochastic Ito integration, Ito formula, martingale representation theorem, Girsanov theorem, stochastic differential equations, diffusion processes, applications in analysis, engineering, and finance.

MATH 826-050 AN INTRODUCTION TO FINITE GEOMETRY

Classical projective geometries, including axioms, coordinates, Desargues configuration, and the Fundamental Theorem of Projective Geometry. Introduction to non-Desarguesian projective planes, including

the Bruck-Bose construction for finite translation planes. Discusses Conics, ovals, Segres Theorem, polarities, quadratics, Hermitian surfaces, and unitals. Miquelian inversive planes if time permits.

#### MECHANICAL ENGINEERING

MEEG 467-010/MEEG 667-010 NANOSTRUCTURED MATERIALS & NANOTECHNOLOGY  
Introduces students to the science of the building blocks of nanostructured materials, material behavior when they are assembled, technology for building nanoscale structures and features, nanomaterials for energy conversion and storage, and the technological implications of these nanomaterials and nanotechnologies.

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: MEEG211, MEEG304.

MEEG 467-012/MEEG 667-012 INTRODUCTION TO NANOCOMPOSITES  
Reviews the advancements of composites composed of nanostructured reinforcement materials. Examines the development of sensors and actuators based upon carbon nanotubes and their composites. Prereq: MEEG215, MSEG302.

MEEG 467-013/MEEG 667-013 ANALYSIS OF AIRCRAFT STRUCTURES  
Analysis and design of flight structures and other light-weight structures. Loads, supports and reactions, constitute equations, and stress and deformation of components for flight vehicles. Overview of fatigue, thermal stress and instability analysis of structures. Prereq: MEEG215.

MEEG 467-015/667-015 BIOROBOTICS  
Design, analysis, and control of bio-inspired intelligent machines, from macro to milli/micro/nano scale robotics systems. Basic background on biomimetic sensors, actuators, and control systems will be covered, as well as detailed case studies and current trends.

MEEG 667-014 MULTI-SCALE MODELING & SIMULATION  
Multi-scale modeling and simulation methods applied to specific engineering systems involving transport and/or reaction phenomena in porous media, and involving length scales ranging from the atomic to the macroscopic. More information at [www.me.udel.edu/~roy/MMS](http://www.me.udel.edu/~roy/MMS)

#### MATERIALS SCIENCE ENGINEERING

MSEG 467-011/667-011 FUNDAMENTALS OF TISSUE ENGINEERING  
Provides basic understanding of the principles and methodologies of tissue engineering. Prepares MSEG PhD students for future careers in biomedical engineering.

#### MUSIC

MUSC 367-010/ELEG 367-010 INTRO TO SOUND/AUDIO ENGINEERING PRINCIPLES & PRACTICE  
Presents the fundamental theory and practice of modern recording and the reproduction of sound through mechanical and electronic means.

Includes the study of sound and hearing, elementary music acoustics, transducers, signal processors, equalizers, and recording systems.

#### PHYSICS

##### PHYS 367-010 OSCILLATIONS & WAVES

Builds on and extends concepts of classical physics introduced in PHYS207; complements PHYS 208. Includes an introduction to continuum physics, with elements of elasticity theory and fluid mechanics; discussion of wave propagation, interference and diffraction, emphasizing acoustics; and oscillations and resonance phenomena in both mechanical systems and electrical circuits. Coreq: PHYS208, MATH242.

##### PHYS 467-010 ASTROBIOLOGY

Fundamental concepts of astronomy, physics, chemistry, and biology to identify conditions that affected origin of Earth life and planetary evolution. Attention to generation of elements necessary for life, chemistry prior to appearance of life, molecular evolution, and extreme conditions in which life is known to exist.

#### PLANT & SOIL SCIENCES

##### PLSC 167-010 ESTIMATING & BIDDING

Overview of the various estimating techniques used by landscape professionals to produce accurate bids and proposals.

##### PLSC 367-010 CAD for Landscape Design

Application of computer assisted drafting (CAD) and 3-D modeling programs useful to the landscape industry.

##### PLSC 467-012 ADVANCED LANDSCAPE DESIGN

Advanced studio design projects including small and large-scale landscapes, investigating issues pertinent to both residential and non-residential settings.

##### PLSC 667-012 MOLECULAR PLANT PATHOLOGY

Plants come in contact with millions of potentially pathogenic microbes over the course of their lives. Explores molecular aspects of resistant interactions, as well as those that lead to disease, from both the plant and pathogen perspectives. Considers why they are not constantly succumbing to disease.

#### PSYCHOLOGY

##### PSYC 467-010/667-010 HUMAN COMPUTER INTERACTION

Extremely applied course, teaching the principles and methods of HCI via real world examples and hands-on projects.

Prereq: Grades of C- or better in PSYC207 and PSYC209.

##### PSYC 467-011 SOCIAL SELF

Discusses how social and personality psychologists study the self. Topics include whether people view themselves accurately; if self-esteem is a good trait; what motivates people; how culture shapes the self; and if some selves are healthier than others.

##### PSYC 467-012,013 COUNSELING SKILLS & TECHNIQUES

Enhances competency in at least three broad areas including developing basic counseling/interviewing skills that contribute to developing a

helping relationship; increasing self-awareness; and integrating multicultural awareness, basic skills, and knowledge into the counseling interview. Prereq: Grades of C- or better in PSYC 207 and PSYC209.

#### PSYC 467-015 THE PSYCHOLOGY OF PREJUDICE

Surveys the literature on prejudice and prejudice reduction and also involves students in guided, team-based research projects for up to an additional seven hours per week beyond the three hour class session. Prereq: Grades of C- or better in PSYC 207 and PSYC209.

#### PSYC 467-080 PERSONALITY THEORY

Examines various theories of personality, starting with Freudian theory and ending with more modern perspectives. Familiarity with each theory's explanation of people's consistency and distinctiveness in thought and behavior, as well as each theory's strengths and weaknesses. Prerequ: Grades of C- or better in PSYC 207 and PSYC209.

#### PSYC 867-010 EMOTIONS SEMINAR

Discussion of articles that interest students and faculty in different specialties and that have the potential to help set new directions in emotion science. Articles for discussion are selected on the basis of members' interests. Faculty members representing our four PhD programs participate in this seminar.

#### PSYC 867-011 SOCIAL & EMOTIONAL DEVELOPMENT

Explores issues in social and emotional development, especially as related to research interests of psychology faculty. Prepare a grant application as a final project.

#### STATISTICS

##### STAT 467-010 APPLIED DATA BASE MANAGEMENT

Provides in-depth understanding of using computers to manage data using programs such as SAS and Microsoft/Access.

#### URBAN AFFAIRS & PUBLIC POLICY

##### UAPP 667-010 INTRODUCTION TO PHOTOGRAPHING HISTORIC ARCHITECTURE

Combines principles of architectural photography to the photographic documentation of historic architecture. Emphasizes how to identify and photograph character-defining features of architecture and engineering structures. Reviews photographic protocols of the Historic American Buildings Survey and Engineering Record. Student will learn in field photographing properties.

##### UAPP 667-012 WORLD HERITAGE SITES

Eight hundred and fifty-one properties have been named to the World Heritage List, deemed to embody outstanding universal values for humankind. Explores the history, global strategy, and preservation effectiveness of UNESCO's list. Examines in detail, each of the ten primary selection criteria for inclusion in the list.

##### UAPP 667-011 IT FOR PLANNING & ADMINISTRATION

Considers the use of technology tools in administration, planning and policy advocacy. Provides specific skills in selecting, using and applying technology. Considerable attention is given to Internet based applications.

WOMS 205-010 WOMEN OF COLOR IN THE U.S.A.

Explores the contemporary works by women in the United States who can trace their heritage to what has been categorized as the "Third World." Considers cultural (racial/ethnic) identifications, the role of oral traditions and their transmissions and transformations in print culture, stylistic experimentation/innovations, the use of language, women as individuals and as members of a community.