

**CATALOG SUPPLEMENTAL COURSE DESCRIPTIONS**  
**Spring 2004**

**ANIMAL SCIENCE**

**ANSC 267-010 ELEMENTARY RIDING EQUITATION**

Presents basic methods and techniques of riding in hunt and stock seat equitation. Students will learn and improve their horseback riding skills at an entry level. University horses and equipment will be used, and class time will be primarily hands-on with horses.

**ANSC 467-010 EQUINE REPRODUCTIVE PHYSIOLOGY AND MANAGEMENT**

Review of basic equine reproductive physiology and introduction to the common reproductive management practices appropriate to mares, stallions, and foals. Students will be expected to foal watch and will be assigned non-pregnant mares for breeding. Prereq: ANSC 267 or permission of instructor.

**ANTHROPOLOGY**

**ANTH 267-010 HISTORY OF ANTHROPOLOGICAL THEORY**

Introduction to theory in cultural anthropology, including the history of anthropological theory with special emphasis on the predominate schools of anthropological thought. Teaches students the role theory plays in ethnographic fieldwork and encourages students to identify and build theories in the course of ethnographic research.

**ANTH 367-010 VISIONS OF NATIVE AMERICANS**

Provides a critical study of the relationships between visual portrayals of American Indian people and prevailing beliefs about Indian people in Euro-American culture. Films, photography, and commercial art examined from an anthropological perspective.

**ANTH 367-440 HISTORICAL ARCHAEOLOGY OF AMERICAN BATTLEFIELDS**

Represents the material culture interpretation of selected historical conflicts, emphasizing the American war sites. Includes the traumatic effect of military occupation, the experience of a broad spectrum of social and ethnic groups in battle, and the material evidence of armed struggle. Includes a material culture perspective of the wars of the twentieth century. Emphasizes the commonality of behavior by individuals subjected to war.

**ANTH 390-080 HNRS CLQ: THE ARCHAEOLOGY OF AGRICULTURE**

Surveys the causes and consequences of the transition from hunting and gathering to farming societies. Examines both the archaeological evidence of this transition and theories of its causes and consequences. Adopts a broad anthropological and interdisciplinary perspective in examining food production, alternatives faced by early farmers, transition to food production, the social and the health impacts of agricultural life.

**ARTS AND SCIENCE**

**ARSC 267-010 RESEARCH ON SEXUALITY**

Meets weekly to feature a series of guest speakers, each treating some special aspect of sexuality. Special topics include gay theater, Education and glbt issues, Politics and glbt issues, "Sexuality and Identity."

**ARSC 367-010, 080 GAY AND LESBIAN FILM**

Explores gay and lesbian issues represented in film from 1980 to present. Major themes such as sexuality and gender, Hollywood heterosexism, sex versus sexuality, alternative families, and AIDS, will be analyzed in context of cinematic representation.

**ART HISTORY**

**ARTH 267-010 THE AGE OF CATHEDRALS: FRENCH GOTHIC ARCHITECTURE IN THE 12<sup>TH</sup>**

### **AND 13<sup>TH</sup> c.**

Explores how medieval people constructed the great cathedrals; how were they used; what kinds of meanings-religious, social, political-they had; what effect their construction had on the fabric of society. Looks at buildings large and small, famous and less famous.

### **ARTH 267-011 INTRODUCTION TO DECORATIVE ARTS**

An introduction to interior decoration and household arts during the 18th and 19th centuries, with an emphasis on furniture, metalwork, glass, ceramics, textiles, prints, and wallpaper. Field trips to Winterthur and the Delaware Art Museum are required.

### **ARTH 402-010 SEM: ART OF THE AFRICAN DIASPORA**

Explores work by artists of the diaspora in the USA, the Caribbean (Jamaica, Haiti, Cuba, Trinidad), and Central/South America (Belize, Nicaragua, Uruguay, Surinam, Guyana and Brazil). How have particular histories produced different politics of art making (of what art can be about)?

### **ARTH 417/617-010 SEM: APPROACHES TO REMBRANDT**

Examines changing notions of and approaches to Rembrandt and his artistic production from his earliest biographers and critics in the seventeenth century to the controversial Rembrandt Research Project and other current interpretations.

### **ARTH 425/625-010 SILENT CINEMA**

Examination of the invention, emergence, and development of silent cinema in Europe, the former USSR, and the United States. Includes study of significant films and filmmakers; the social, cultural and artistic contexts; and theoretical literature.

### **ARTH 467/667-010 18<sup>th</sup>-c. PARIS; ARCHITECTURE, TOWN PLANNING AND THEORY**

Focusing on Paris and Versailles, explores how architecture, town-planning, and architectural theory developed from the reign of Henri IV up to the French Revolution. Buildings and projects to be considered in close relation with their intellectual, political, and social contexts.

### **ARTH 467/667-011 SEM: ART AND CONQUEST IN THE NEW WORLD**

Critical examination of the monuments and art works created in the New World after the arrival of the Spanish Conquistadors. Thematically organized, and focuses on the dynamics of power that took place within the artistic production of the Americas from 1492 until the late 1700s.

**ARTH 623-010 STDS: LATE TWENTIETH-CENTURY ART: AFTER THE AVANT-GARDE** The concept of the "avant-garde" serves as a framework for situating departures of artists within the last thirty years from a model in which advanced art was at first scorned, then became the canonical act of the next generation.

### **ARTH 636-010 STDS: THEORY AND PRACTICE IN SCHOLARSHIP ON AMERICAN ART**

Examination of important texts in the field of American art history with close attention to traditional and recent tendencies in interpretation and analysis.

### **ARTH 867-010 SEM: ART HISTORY PEDAGOGY**

Discussion of all aspects of teaching in the field of art history (lectures, discussions, materials, examinations, grading), especially in the context of the teaching of a large introductory survey course.

## **AGRICULTURAL & TECH EDUCATION**

### **ATED 467/667-010 LEADERSHIP TOOLS AND TECHNIQUES**

Designed as a hands-on approach for improving leadership and facilitation skills. Includes leadership theories, decision making skills, team building, conflict resolution, facilitation, etc. Students completing the course receive a certificate verifying that they are trained facilitators. For those entering the work world, officers in student organizations, and others interested in improving leadership and team building skills.

## **BIOLOGICAL SCIENCES**

### **BISC 667-010 MOLECULAR MEDICINE & BIOTECHNOLOGY**

Examines and evaluates the use of genes, proteins and genetically modified cells to treat disease. Focuses on the scientific, ethical and biotechnological aspect of molecular medicine.

### **BISC 667-011 ENVIRONMENTAL TOXICOLOGY**

Environmental toxicology and its role in the assessment of environmental risk.

### **BISC 667-012 NEUROBIOLOGY OF DISEASE**

Consists of sessions alternating between lecture and discussion of recent papers in scientific literature. Includes a brief introductory lecture on anatomy and cell biology of the central and peripheral nervous systems. Focuses on the molecular pathogenesis of developmental, neurodegenerative, autoimmune, and traumatic disorders of the brain, spinal cord and peripheral nervous systems.

## **BUSINESS ADMINISTRATION**

### **BUAD 467-010 BUSINESS IN EUROPEAN MARKETPLACE**

Focuses on doing business in Europe, with both the European Union and countries hoping to join. Also focuses on doing business with Russia. Students will do projects with European and Russian students via the Internet, and will have an opportunity to travel to Moscow.

### **BUAD 867-050 GLOBAL BUSINESS & SOCIETY**

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

## **CHEMICAL ENGINEERING**

### **CHEG 667-010 CELLULAR BIOPHYSICS AND BIOMECHANICS**

Applies engineering principles to understand cellular organization and behavior, and reinforces concepts from thermodynamics, kinetics, physical chemistry and transport phenomena. Introduces advanced concepts drawn from polymer science, statistical mechanics and non-equilibrium thermodynamics. Discusses experimental approaches used to understand properties and processes in cells.

### **CHEG 667- 011 REACTION ENGINEERING OR ELECTRONIC MATERIALS**

Covers modern reactive processing methods of electronic materials in the semiconductor industry. Includes introduction to semiconductor materials and devices, reactor design, reaction chemistries, reaction mechanisms, materials properties, and modern applications.

### **CHEG 667- 013 APPLIED PROBABILITY AND STATISTICS FOR ENGINEERING PROBLEM SOLVING**

Presents a fundamental approach to modeling, characterization and analysis of random phenomena. Provides the basic principles, methods and tools for solving problems involving randomly varying phenomena. Explores manufacturing, system reliability, and cellular biology. No previous knowledge of probability or statistics is assumed but facility with algebra and calculus is essential.

### **CHEG 667- 014 SAFETY OF CHEMICAL PLANTS**

Covers the principles of general safety engineering; assessing in a systematic manner the hazards associated with the use of chemicals and how to protect people against these hazards; principles of risk analysis of chemical plants; preventing and reducing risks from chemical plants by means of an intrinsic safe design and by using a strategy of protection techniques; and regulations.

### **CHEG 667- 015 GREEN ENGINEERING**

The design, commercialization, and use of processes and products, which are feasible and economical while minimizing the generation of pollution at the source, and the risk to human health and the

environment. Embraces the concept that decisions to protect human health and the environment can have the greatest impact and cost effectiveness when applied early to the design and development phase of a process or product. Takes a multidisciplinary, problem solving approach, to developing the necessary tools and applying the principles of Green Engineering to analyze and address real world problems.

#### **CHEG 867-012 RHEOLOGY OF COMPLEX & POLYMERIC FLUIDS**

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. Prereq: CHEG 600 or 602.

### **CHEMISTRY**

#### **CHEM 667-010 INTRO TO RESEARCH AT THE CHEMISTRY-BIOLOGY INTERFACE**

Research experiences in each of three laboratories chosen to represent different research areas within biochemistry, molecular biology, bio-analytical chemistry, bio-organic chemistry, computational chemistry, biochemical engineering, bio-inorganic chemistry protein crystallography, agricultural biochemistry, virology, and cell biology.

#### **CHEM 667-011 INDUSTRIAL CHEMISTRY**

Follows chemicals from their origins in petroleum and natural gas to the myriad consumer products that we take for granted. Compares and contrasts industrial chemistry with academic chemistry. Includes key concepts of catalysis and organometallic chemistry, as well as selected application areas. Discusses the nature and purpose of patents. Describes needs and future direction of the industry.

#### **CHEM 830-010 TPCS: PHARMACEUTICAL CHEMISTRY**

Discusses the chemistry, discovery, and development of drug compounds. Topics include drug biotransformation, pharmacokinetics and pharmacodynamics, drug delivery, and structure-based design.

### **CIVIL ENGINEERING**

#### **CIEG 467/667-010 ADVANCED WATER QUALITY ENGINEERING**

Review of classical dissolved oxygen models for streams and estuaries: analytical and numerical solutions; Delaware Estuary application. Eutrophication models: carbon, nitrogen, phosphorus and silica mass balances; chlorophyll, primary production and dissolved oxygen; Lake Ontario application. Sediment flux models: organic matter diagenesis; ammonia, nitrate, phosphorus and silica flux models; Chesapeake Bay application. Toxic chemical models: partitioning theory, organic carbon normalization; coupled water column- sediment models; application to lakes; PCBs, PAHs; Hudson River application.

#### **CIEG 467-012 GROUNDWATER FLOW AND CONTAINMENT**

Provides a general introduction to groundwater hydrology and contaminant transport in the subsurface. Includes groundwater and subsurface materials, models for groundwater flow, physical and chemical processes affecting pollutant transport, multiphase flow in porous media, and analytical and numerical solutions to the groundwater flow and pollutant transport equations.

#### **CIEG 467/667-013 ROADWAY GEOMETRIC DESIGN**

Fundamentals of highway and street design covering such topics as the transportation design process, highway location studies, and geometric design concepts and controls. Principle reference is the AASHTO "Green Book". Introduction to the process known as "Context Sensitive Design". Prereq: CIEG 351 and CIEG 223

#### **CIEG 467/667-014 TIMBER & MASONRY DESIGN**

Includes wood as a structural engineering material, design of beams, columns, and nailed and bolted connections. Introduction to masonry design. Includes masonry as a structural engineering material, flexural design, pilasters, and shear wall design.

#### **CIEG 667-015 ENVIRONMENTAL STATISTICS AND RISK ANALYSIS**

Statistical procedures for analysis of environmental monitoring data and risk assessment. Includes parametric and non-parametric statistical tests for research applications. Prerequisite: Previous coursework in statistics or permission of instructor.

#### **CONSUMER STUDIES**

##### **CNST 167-010 UNDERSTANDING CONSUMERS**

Explores the interactions of clients, customers, citizens and cultural groups who are collectively referred to as "consumers". Focuses on diversity of consumers, complexities of dealing with consumers and markets, social responsibilities to and of consumers, and developing and supporting ethical markets that contribute to consumer well-being and advance our society.

##### **CNST 267-010 E-AGE CONSUMER**

A non-technical examination of evolving trends in technology and how consumers will use that technology in markets, and demand that markets serve them with new technology. Investigates the impact of consumers who are accustomed to new technology on business, government and social institutions.

#### **COMPUTER AND INFORMATION SCIENCES**

##### **CISC 859-010 TPCS: NETWORK SECURITY**

Covers a variety of topics in the network security field. Classes consist of short topic overview, the discussion of selected technical articles and a brain-storming session.

##### **CISC 879-010 TPCS: SOFTWARE TESTING AND MAINTENANCE**

Study of testing and maintenance methodologies for object-oriented, component-based, concurrent, distributed, and web software. Includes approaches to automatic test case generation, test oracles, coverage analysis, prioritized testing, construction of tools, regression testing and impact analysis. Focuses on program-based testing and maintenance approaches.

##### **CISC 889-011 TPCS: BIOINFORMATICS**

Core topics: protein homology detection, protein family classification, sequence signature identification, phylogenetic analysis, prediction of the secondary and tertiary structures. Latest developments include: gene expression, genetic networks, metabolic pathway networks, proteomics, and data mining.

#### **COMMUNICATION**

##### **COMM 200-010 TPCS: COMMUNICATION AND FAMILY SYSTEMS**

Introduction to the role of communication within families across the life course. Includes communication issues regarding parent/child communication, teens, sibling relationships, adult/children and elderly parents, and marriage.

##### **COMM 200-440 TPCS: CONFLICT AND YOU**

Explores the various aspects of conflict, as well as the different ways individuals approach conflict. Includes how conflict is defined, ways of coping with conflict, productive and unproductive conflict, and strategies for coping with conflict.

##### **COMM 318-010 TPCS: BROADCAST NEWSWRITING**

Writing for broadcast news, including news judgment, news gathering, writing and editing. Discussion of legal and ethical issues.

##### **COMM 318-080 HNRS TPCS: FORM & FUNCTION**

A comparative analysis of the strengths and limitations of traditional forms of mass communication (television, radio, print) culminating with a discussion of the “mediumlessness” of the World Wide Web. Channel (interpersonal versus mass) differences explored.

**COMM 318-410 TPCS: HISTORY AND INFLUENCE OF TALK RADIO**

Studies the origins and development of talk radio programming and focuses on its role in entertainment, public issues, communication and controversy. Looks at the format’s personalities from Wilmington, DE, talk radio pioneer Joe Pyne, to such present day, nationally-known hosts as Howard Stern, Dr. Laura Schlesinger and Rush Limbaugh.

**COMM 342-410 TPCS: ORGANIZATIONAL COMMUNICATION**

Focuses on the impact organizational culture has on communication in the business arena. Explores what organizational cultures are, how they start, and how they influence the day-to-day work of all those involved.

**COMM 343-080 TPCS: GENDER & COMMUNICATION**

Covers a range of gender issues in communication from gender differences in early socialization, friendship development and intimate relations, to gender differences in organization settings.

**COMM 418-010/COMM 618-010 TPCS: ADVERTISING AND SOCIETY**

Current directions in the study of advertising, with emphasis given to effects research. Focuses on several different types of advertising (commercial, political, health) and the processes associated with both positive and negative message outcomes.

**COMM 418-011/COMM 618-011 TPCS: MEDIA ETHICS & ACCOUNTABILITY**

An examination of the role(s) that mass media are expected to fulfill in society, and of the various ways for holding media accountable for meeting those responsibilities

**COMM 418-012 TPCS: IMPACTS OF COMPUTER TECHNOLOGY**

Surveys the social and psychological effects of new computer technologies. Examines effects at various levels with an emphasis on the individual and interpersonal levels. The goal is to provide students with a better understanding of the impact of computer technologies in light of communication and psychological theories.

**COMM 425-010/POSC 425-010 TPCS: BROADCAST NEWS DOCUMENTARY**

Students create a broadcast news documentary on a current affairs topic, including videography, digital video editing, writing, interviews, production. Prereq: COMM 318 or ENGL 307 or COMM 326 or permission of instructor.

**COMPUTER ENGINEERING**

**CPEG 467-011 COMPUTER NETWORK DESIGN AND MANAGEMENT**

Introduces data networks and telecommunications with emphasis on practical design and engineering. Students learn fundamental computer and voice networking, aided by case studies and hands-on laboratories. Explores standards, protocols, current tools and technologies. Examines security, convergence, wireless, IPv6, and network management.

**CPEG 867-010 INTERNET TRAFFIC ENGINEERING**

Surveys issues in Internet traffic analysis and management, including service quality, congestion control, admission policies, traffic shaping and deadline scheduling. Considers designs based on packet buckets, fair queuing, differentiated service, admission reservation, chromo graphic discard, early detection and binary marking.

**CRIMINAL JUSTICE**

**CRJU 367-010/SOCI 367-010/LEST 367-010 HOMELAND SECURITY LAW AND POLICY**

Explores law and policies regarding emergency response, emergency management and terrorism after 9/11. Includes incident management, WMD, volunteers, Governors' powers, FEMA, Homeland Security Department, suing terrorists, civil rights, and international anti-terrorism efforts. Features well-known guest experts.

#### **CRJU 467-010 CIVIL LIABILITY IN CRIMINAL JUSTICE**

A study of the legal doctrines and principles that guide American courts in the adjudication of lawsuits alleging misconduct on the part of police officers, correctional officials, and other criminal justice practitioners. Includes analysis of the impact of civil litigation on policies and practices in American criminal justice.

#### **CRJU 467-011 HATE CRIMES**

Explores the causes, penalties, and constitutional issues revolving around hate crimes and resulting laws. Emphasizes collaborative and problem-based learning as teaching tools.

#### **EARLY AMERICAN CULTURE**

##### **EAMC 667-013 CRAFTSMANSHIP IN AMERICA**

Takes as its thesis that the primary suppliers of consumer goods in the 17th and 18th centuries were craftsmen. Concentrates on the social, economic and cultural aspects of the craft system in Colonial America.

##### **EAMC 667-016/ UAPP 667-016 HISTORIC INTERIORS, 1800-1915**

An introduction to household decoration in America from the Early Republic to World War I. Historic houses from New York to Baltimore provide practical case studies in interior decoration. The Winterthur Library's extensive collection of design books and domestic guides document changing tastes, particularly among middle and upper class patrons during the 19<sup>th</sup> century.

#### **ECONOMICS**

##### **ECON 367-050 THE ECONOMY OF FAMILY BUSINESS**

Enables students to apply economic reason to some of the issues unique to family business - the role of entrepreneurship, family issues, the dynamic of changing markets, and the next generation.

##### **ECON 367-051 ENVIRONMENTAL ECONOMICS**

Examines the impact of the economy on the environment, the significance of the economy to the environment, and the appropriate way of regulating economic activity so that balance is achieved among environmental, economic, and other social goals. Covers introductory welfare economics, the impact of free markets on the environment, and environmental regulation. Prereq: ECON 151.

##### **ECON 467-010 GAME THEORY FOR ECONOMIST**

Introduces the theory of games with complete and incomplete information in both static and dynamic contexts and applies it to economic problems in the areas of information and uncertainty, international economics and labor economics. Occasional use of calculus. Prereq: ECON301 or ECON300.

##### **ECON 467-011 ECONOMICS, CONTRACTS & LAW**

Capstone course with readings on how law is used and understood in the business side of the economy. Ethical values and norms and their effect on business contractual enforcement. Research paper, preferably based on empirical research on contracts. Prereq: ECON 151 or permission of instructor.

#### **EDUCATION**

##### **EDUC 267-010-013 ED TECH: PROFESSIONAL TOOLS**

Acquaints students with basic computing concepts and personal productivity tools, including e-mail, word processing, spreadsheets, graphics, presentation technology and web pages. Identifies and analyzes social and ethical issues raised by computing with respect to equal access, privacy and copyright.

### **EDUC 667-010/867-010 ORGANIZATION & SUPERVISION OF READING PROGRAMS**

Applies knowledge of reading assessment and instruction in a whole-school context. Through partnership with a school, students describe the school's use of time and curriculum materials, analyze and summarize existing data, plan for collection of additional data, plan interventions, and communicate such information to stakeholders inside and outside the school.

### **EDUC 837-010 MOTIVATION, IDENTITY AND LEARNING**

Explores how to motivate students to learn. Shares socio-cultural and dialogic theoretical biases and interests. Discusses the key research on motivation and identity in education, and whether the notions of identity and motivation are culture- and class-biased.

## **ELECTRICAL ENGINEERING**

### **ELEG 467-010 ELECTRONIC MATERIALS PROCESSING**

Theory and current technology of semiconductor fabrication processes, including crystal growth, wafer preparation, lithography, liquid and vapor phase epitaxy, molecular-beam epitaxy of ultra-thin layers and super lattices, oxide growth, thin-film deposition, diffusion, ion implantation, etching and metallization.

### **ELEG 467/667-011 NANO-ELECTRONIC DEVICE PRINCIPLES**

Introduction to the operating principles of nanoscale optical and electronic devices, with emphasis on how nanotechnology and quantum mechanics affect devices with reduced sizes and dimensions. Develops the performance and limitations of devices based on quantum wells, wires, dots, and manophase materials.

### **ELEG 467/667-012 OPTICAL FIBER COMMUNICATIONS**

Introduces the components and system design issues of fiber optics-based communications systems. Includes propagation of light waves in fibers, a review of sources and detectors used in fiber-based systems. Topics include propagation of light waves in fibers, a review of sources and detectors used in fiber-based systems, link analysis, and overall architecture issues. Prereq: ELEG440/640 or permission of instructor.

### **ELEG 467/667-013 NANOMATERIALS AND APPLICATIONS**

Provides a practical introduction to the various areas of nanotechnology in engineering and science. Includes details of processing and characterization of materials for nanotechnology. Covers the properties and applications of nanoparticles, carbon nanostructures, nanostructured ferromagnetism, quantum wells, quantum nanowires and quantum dots, organic compounds and polymers, biological materials and nanodevices.

### **ELEG 467/667-014 PHOTONICS CRYSTALS**

Introduces design and fabrication tools required for photonic crystal structures. Begins with a working knowledge of their basic operational physics, then introduces mathematical and computational methods for their design. Discusses various fabrication methods, such as lithographic and self-assembly methods. Prereq: Undergraduate course in electromagnetics, ELEG 648.

### **ELEG 467-015 ROBOTIC PROGRAMMING WITH JAVA**

Covers sophisticated programming and robotic control using Lego Mindstorms robots and the TinyVM for Java. Applications will utilize sensors, such as light and touch, and learning algorithms to allow the robots to complete simple tasks.

### **ELEG 467/667-017 HIGH TECHNOLOGY ENTREPRENEURSHIP**

Focuses on the critical financial, legal, scientific and engineering issues that must be confronted during the initial planning stages of a start-up enterprise. Students work in teams to develop a business plan for a real world business product offering.

### **ELEG 467/667-020 SIGNAL PROCESSING IN NEURAL SYSTEMS**



Signal processing in real neural systems, with emphasis on mammalian/human sensory systems. Stimulus transduction, complex receptive fields, encoding, feature binding, and experimental techniques in visual, somatosensory, auditory and olfactory systems. Prereq: ELEG471 or instructor's permission.

#### **ELEG 667-018 MODERN CRYPTOGRAPHY AND APPLICATIONS**

Comprehensive introduction to cryptography, and, specifically, its main problems, formalisms, solutions, applications, and open questions. Prereq: Familiarity with basic probability notions.

#### **ELEG 667-019 ADVANCED COMPUTER NETWORKING**

Includes TCP, active queue management (AQM), routing quality of service (QoS), traffic engineering, resource provisioning/pricing and modeling. Prereq: CPEG419, CISC450, CISC650, or ELEG651.

#### **ELEG 667-021 SOLAR ELECTRIC SYSTEMS**

Basics of solar cell and wind technology, applications, and systems. Critical issues in research and manufacturing. Off-grid, grid-connected and centralized power system design. Influence of economics and policy. Emphasis 80% on solar, 20% on wind.

#### **ELEG 867-010 ADVANCED TOPICS IN COMMUNICATIONS**

Covers state of the art topics in communications area: trellis coded modulations, MIMO systems, extensive studies on space-time coding.

#### **ELEG 867-011 ADVANCED COMPUTER ELECTROMAGNETICS II**

Studies the Method of Moments and the Finite Element Method for the numerical computation of electromagnetic fields. Such methods are integral to the analysis and design of many modem devices, including antennas, radar systems, computers, and cell phones.

#### **ELEG 867-012 NANO-ELECTRO-MECHANICAL SYSTEMS**

Explores the world of quantum controlled nano-electro-mechanical systems (NEMS). Includes quantum mechanics, scaling laws, principles for NEMS, modeling of NEMS devices and structures, nanoelectromagnetics, nanomaterials and nanofabrication for NEMS sensors.

### **GEOGRAPHY**

#### **GEOG 467-013/667-013 ENVIRONMENTAL VIDEOGRAPHY**

Blends geographical inquiry and electronic storytelling. Research and produce short video documentaries on local environmental and social issues. Investigate spatial distribution, science and politics involved in resource management and social policy. Learn the techniques of video field-production. Research, write, shoot and edit stories, producing effective video communication.

#### **GEOG 667-010 LEGATES SPATIAL STATISTICS**

Introduces the application of advanced multivariate and geostatistical methods in climatology. Theory will build upon traditional univariate statistical analyses to include multiple regressions, principal component and factor analysis, cluster analysis, discriminant analysis, and the analysis of time series. Spatial statistical methods will include model validation, kriging and spatial interpolation, point pattern analysis, and the analysis of directional data.

### **GEOLOGY**

#### **GEOL 467-010 SENIOR SEMINAR**

Capstone course offered around a "general geology topic of interest" selected by the instructor(s). Emphasizes presentation, writing skills and review/understanding of published literature.

### **HEBREW**

#### **HEBR 267-010 CONVERSATIONAL HEBREW**

Geared towards solid intermediate level students, Conversational Hebrew aims to strengthen the conversational, as well as the reading/writing skills of the students, in a multicultural context. Compares the Hebrew-speaking culture and the American culture. Includes the revival of the Hebrew language and discusses their future homes.

## **HEALTH AND EXERCISE SCIENCES**

### **HESC 267-010,011 INTRODUCTION TO ATHLETIC TRAINING**

Orientation to athletic training as a career in the health care industry and introduction to the prevention and care of injuries in the physically active population. Open to “Athletic Training Interest” students only.

### **HESC 667-010 SEMINAR IN EXERCISE SCIENCE**

Guest and student presentations on research or other topics related to Exercise Science.

## **HEALTH PROMOTION**

### **HLPR 667-010 HEALTH OF OLDER ADULTS**

Focuses on the understanding of the physical, psychological, and social changes that occur with the natural aging process through discussions, readings, and interactions with older adults in the community.

## **HISTORY**

### **HIST 367-010 HISTORY OF MODERN AMERICAN BUSINESS**

Explores how business affects so much of our world. Answers questions about the history of modern American business in the 19<sup>th</sup> and 20<sup>th</sup> centuries, including worldwide corporate reports, stock market existence and its role over time, and how the flow of international investments shaped American history.

### **HIST 367-011 ENGLAND’S RISE TO GREATNESS**

Synthesizes the social, economic, and political, cultural and colonial developments during England’s rise to world power from 1689-1789. Covers the rise of the novel, voyages of Captain Cook, origins of empire, growth of industry, Celtic fringe, novelty of popular politics, fascination with landscape, birth of class, and changing status of women.

### **HIST 367-012 AMERICAN SPORTS HISTORY**

Traces major developments in American sports since the Civil War. Discusses the professionalization of sports and the 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, and the “Golden Age” of sports in the 1920’s and the creation of athletic celebrities.

### **HIST 367-013/WOMS 367-013 WOMEN, REVOLUTION AND SOCIETY IN LATIN AMERICA**

Introduction to the Latin American historiography of women and gender. Readings represent the diversity of ethnicity, politics, and culture from the late colonial era to the national period. Considers how that historiography changes our views of revolution and social change in Latin America.

### **HIST 367-411 20<sup>TH</sup> CENTURY LATIN AMERICAN REVOLUTIONS**

Examines revolutionary change, attempted revolutionary change, and the obstacles to such change in five Latin American nations: Mexico, Guatemala, Nicaragua, Chile, and Cuba. Discusses both external and internal processes within the context of each of the five country’s historical development.

### **HIST 367-440 EUROPEAN WOMEN’S HISTORY 1789-PRESENT**

Examines women’s lives in Europe from the French Revolution to the late twentieth century. Through analysis of social, economic, political, religious, and cultural developments, explores women’s roles and the importance of gender in modern Europe. Covers women’s political action, gender and industrialization, women’s writing, suffrage and feminism, sexuality and the state, and family life.

### **HIST 411/ 611-011 SEM: TOURISM IN AMERICA: 1820-1940**

Examines the origins, development, promotion, and changing nature and impact of tourism in the U.S. from the early decades of the 19<sup>th</sup> century to the WW II era. Focuses on economic, social, cultural, and material culture history. Includes selected topics as opposed to a general survey.

## **INDIVIDUAL AND FAMILY STUDIES**

### **IFST 367-010 YOUTH AT RISK**

Explores diverse theories regarding the characteristics of youth at risk. Examines individual, family, school, and societal factors that place adolescents at risk. Studies risk behaviors including substance abuse, teenage pregnancy, suicide, delinquency, and violence. Focuses on facilitating the acquisition of skills in early identification of youth at risk and applying effective, research based intervention programs.

### **IFST 667-010 EARLY EXPERIENCES, BRAIN DEVELOPMENTS AND EDUCATION**

A review of brain development, risk associated with early developmental and acquired organic disorders in childhood, psychobiological underpinnings of early life and implications for educational approaches for children from underprivileged backgrounds. Designed for early childhood educators and other professionals working with young children.

## **MASTER OF LIBERAL STUDIES**

### **MALS 667-010,430 TWENTIETH CENTURY ART**

From Matisse to Mapplethorpe, twentieth-century art demands our attention and deserves a closer appraisal. Explores painting, sculpture, photography, and architecture.

### **MALS 667-011 HITLER AND NAZI GERMANY**

Examines recent literature on Adolf Hitler, the Nazi state, and the Holocaust. Addresses both German society under National Socialist rule, and the planning and implementation of the Holocaust.

### **MALS 667-431 MILITARY STRATEGY: THE AMERICAN EXPERIENCE**

Provides deeper understanding of American military strategy throughout the years. Discusses a variety of concepts, including national strategy vs. military strategy, strategy of attrition, strategy of annihilation, the climactic Napoleonic battle, the role of sea power, containment, partisan warfare, etc.

## **MARINE STUDIES**

### **MAST 629-010 TPCS: STATISTICS IN MARINE SCIENCES**

Introduction to statistics, with emphasis on applications in the marine sciences. Topics include exploratory data analysis, graphical presentation, correlation, regression, ANOVA, analysis of frequencies, nonparametric statistics and re-sampling approaches, and use of statistical software.

### **MAST 629-011 TPCS: WETLANDS RESTORATION ECOLOGY: GOALS, TECHNOLOGY & REGULATIONS**

Examines the restoration of traditional ecological functions to degraded wetlands and the establishment of these functions in created wetlands. Design criteria to achieve these goals and techniques to execute the design are central to the theme. Regulations and policies as they drive restoration processes round out the course.

### **MAST 667-010 MARINE TRANSPORTATION POLICY**

Provides an overview of marine transportation policy and develops analytical techniques in the contexts of local, national, and international perspectives. Includes maritime transportation technology and projected fleet development; overview of policy frameworks affecting trade, safety, and environment; quantitative analysis of shipping business economics under policy constraints.

### **MAST 827-010 TPCS: ECOLOGY & EVOLUTION OF CORAL REEFS**

Introduction to coral reefs, including the physiology, ecology, and evolution of reef building corals and the communities they form. Includes the potential impact of human populations on reef systems and the status of the emerging fields of restoration and conservation biology of coral reefs.

#### **MAST 827-011 TPCS: FISH BIOLOGY**

Group discussion/seminar focusing on current topics in fish biology and fisheries research. Students lead discussions by representing topical seminars, critiquing research papers from the current literature, or presenting their thesis or dissertation research.

#### **MAST 867-010 BIOLOGICAL OCEANOGRAPHIC METHODS**

Provides basic skills for carrying out laboratory and field experiments in biological oceanography. Lab sessions and field trips teach common methods for carrying out investigations into the ecology and physiology of marine bacteria, phytoplankton, zooplankton, fish, benthic algae and invertebrates. Hands on training includes instruction in sample collections, field surveys, experimental design and widely used analytical methods. Students develop an independent biological oceanographic experiment.

#### **MAST 867-011 ISOTOPE GEOCHEMISTRY**

Introduction to the field of isotope geochemistry and the application of isotope systematics to the study of geological, geochemical, hydrological, atmospheric and marine cycles. Designed for students with interests in geology, geochemistry, environmental chemistry, and biogeochemistry, and requires a prerequisite background in one of these fields or permission of the instructors.

### **MATH**

#### **MATH 167-010 QUANTITATIVE REASONING**

Modern world applications of mathematics. Quantitative reasoning used in everyday life. How mathematics is used in a variety of topics and issues. Combines critical thinking skills with basic mathematics in contexts encountered in various disciplines such as social sciences business and economics.

#### **MATH 267-010 PERSPECTIVES ON MATHEMATICS**

Expands students' understanding of contemporary mathematical thought, practice, culture and tools. Features presentations from faculty and invitees on mathematical endeavors and professional activities in an informal atmosphere. Students receive orientations on summer internships, undergraduate research opportunities and student competitions that add value to their education.

### **MECHANICAL ENGINEERING**

#### **MEEG 167-010-014 INTRO TO MECHANICAL ENGINEERING LABS**

Designed to introduce freshmen to the handling of experimental data, and to the various areas of Mechanical Engineering including composite materials, robotics, biomechanics, and rapid prototyping.

#### **MEEG 467-010 MODELING AND ANALYSIS OF SELECTED BIOLOGICAL SYSTEMS**

Differential equation models of a variety of biological systems, such as ecological systems, the firing of the neuron, pulsatile blood flow, and pattern formation. Emphasis is on their nonlinearity and phase plane analysis. Prereq: MATH 351.

#### **MEEG 467-011 SPECIAL TOPICS IN ENGINEERING DESIGN AND DEVELOPMENT**

Continuation of MEEG 401. Offers students the opportunity to continue to work on senior design projects with their sponsors. Permission of instructor required.

#### **MEEG 467-012 INTRODUCTION TO FUEL CELLS**

Basic principles of fuel cells; fuel cell types; efficiency, open circuit voltage and irreversibility's; PEM fuel cells, direct methanol fuel cells; fueling fuel cells, fuel processing, hydrogen storage; fuel cells for portable, automotive and stationary applications. Prereqs: Fluid Mechanics, Thermodynamics, Heat Transfer.

**MEEG 467-013 MATERIALS AND TECHNOLOGY**

Covers the engineering materials used in various industries including aerospace, automotive, biomedical and electronic. Analyzes the fundamental material properties and issues relevant to each industry, discusses the materials currently used, and explores new direction in materials development. Prereq: MEEG 321 or equivalent.

**MEEG 667-010 MICROSCALE FLUID FLOW**

Includes scalings, interfacial forces, low Reynolds number flows, microfluidics, micro particles (lipid vesicles, drops, bubbles), Brownian Motion, biological flows, biomedical applications. Prereq: MEEG630 or permission of instructor.

**MEEG 667-011/CIEG667-011 MECHANICAL BEHAVIOR OF MATERIALS AND STRUCTURES**

Covers a set of conditions associated with properties of materials and failures of structures. Plasticity; thermal stresses; fracture and damage mechanics; and buckling. Problem solving will be based on both analytical methods and computational mechanics. Prereq: MEEG 610 or similar.

**MEEG 867-011 HYDRODYNAMIC STABILITY**

Global stability and uniqueness; instability and bifurcation; calculation of branching behavior; thermal instability; shear flow instability; inertial instability; centrifugal instability; transition prediction and control; engineering aspects and technological applications.

**MEEG 867-012 LATTICE BOLTZMANN APPROACH FOR COMPLEX FLOWS**

Intro to lattice Boltzmann equation and its applications as a numerical approach to single and multiple-phase flows. Relationships between microscopic operation rules and macroscopic differential equations. Treatment of complex boundary conditions and multiscale fluid-fluid and fluid-particle interfaces. Examples of lattice-Boltzmann computer simulations.

**MATERIALS SCIENCE ENGINEERING****MSEG 667-011 ENTREPRENEURSHIP & RISK TAKING**

Exposes students to contemporary lectures from entrepreneurs and leading experts in fields such as intellectual property and venture capital.

**MSEG 667-012 POLYMER SYNTHESIS**

Topics include basic principles of polymers and their distributions, step and chain growth polymerizations, living polymerizations, and other advanced polymerization mechanisms. Discusses the chemical basis of the polymerizations and applications of the polymers.

**MSEG 867-010 CRYSTALLIZATION OF POLYMERS**

The development of crystalline structure in synthetic polymers. Description of crystal structure, morphology and kinetics, and the effects of temperature, composition and flow. Discusses industrial examples.

**MUSIC****MUSC 167-010 STEEL BAND**

Teaches how to play steel drums and is open to all interested university students. Prereq: Permission of instructor.

**MUSC 167-011 STEEL BAND**

Advanced level ensemble of students with prior steel band experience. Emphasis on reading and improvisation. Prereq: Permission of instructor.

**MUSC 167-012 PEP BAND**

Attends all home basketball games performing a variety of pop, rock and jazz selections. Performs at select games during Winter Session. Attendance at these games is mandatory.

### **MUSC 167-013 MARCHING PERCUSSION TECHNIQUES**

Focuses on advancing skills on the marching snare drum, multi-tenors, bass drum, cymbals or front ensemble. Emphasizes techniques through an opportunity to learn basic arranging skills. Open to students of all performing levels.

### **MUSC 167-014 MARCHING BAND TECHNIQUES**

Focuses on designing and charting a show of the complete contemporary marching band. Includes history and development of the marching band and “hands on” sessions in marching percussion and color guard. Prereq: Must have completed at least one semester in UD Marching Band.

### **MUSC 667-010 ADVANCED CHORAL CONDUCTING**

Study of the conducting gesture as it relates to efficiency in the rehearsal and quality choral sound as based upon musical structure and style. Prereq: Mastery of basic conducting technique as determined by the instructor.

## **NURSING**

### **NURS 167-010,011 NEW NURSING STUDENTS CONNECTIONS**

Introduces students to the profession of nursing. Includes the roles of nursing, historical development, managed care systems, and nursing philosophy. Introduces students to basic clinical nursing skills.

## **PHILOSOPHY**

### **PHIL 367-010 TPCS: PHILOSOPHY OF LAW**

Covers three topics in the Philosophy of Law, one from each of the main areas of law: criminal, civil and constitutional.

### **PHIL 367-440 TPCS: COMP. PHIL.: DEATH AND DYING**

Looks at various, cross-cultural philosophical approaches to death and dying. Concerns the idea that philosophy is a way of preparing for death, and that the good life is the one that ends in a good death.

### **PHIL 465-010 SR. SEM: AFTER BEAUTY IN ART?**

Conceptions of beauty from the start of modern aesthetics to the present, from the empiricist claim that beauty is not an objective property of objects to postmodern conceptions of beauty. Readings may include: Hutcheson, Hume, Kant, Hegel, Baudelaire, Nietzsche, Santayana, Gadamer, Adorno, and Danto.

### **PHIL 467-010/667-010 BIOETHICS**

Practical introduction to methods in bioethics giving an understanding of the ethical dimension of such developments as growing human brain tissue in chimp brains, modifying the genetic makeup of our crops, and manipulating stem cells. Discusses and examines current controversies. Prior classes in either bioscience or philosophy strongly recommended.

## **PHYSICS**

### **PHYS 467/667-010 OBSERVATIONAL ASTRONOMY**

Focuses on the techniques and analysis of astronomical observation, with emphasis on CCD imaging. Includes celestial coordinates, telescope handling, CCDs, data reduction, and data analysis.

## **PLANT SCIENCES**

### **PLSC 267-010 LANDSCAPE PRESENTATION GRAPHICS**

Graphic techniques for presentation of landscape designs, including plans, sections, elevations, sketches and perspectives, using drawing methods such as pencil, ink, pastels, watercolor and computerized programs.

**PLSC 267-080 HNRS: HEALING PLANTS: MEDICINE, MYTH, MAGIC**

Exploration of the medicinal use of plants from scientific, historical and cultural perspectives, including the healing connection that comes from cultivating plants. Includes plant-based medicinal traditions in China -- - past and present; in Belize among the Mayans; and in native cultures of North America, India and Africa. Investigates the healing properties and cultural value of specific plants.

**PLSC 367-010 ADVANCED WOODY PLANTS**

Studies new and unusual woody plants in the nursery industry. Discusses plant introduction. Provides the tools necessary to stay current with future developments in new plants. Prereq: PLSC 212.

**PLSC 667-010 TOPICS IN FACILITIES MANAGEMENT**

Presentation and discussion of the variety of philosophies, systems, processes and regulations important in maintaining physical plants. Individual topic areas will be addressed by guest speakers and specialists in the topics.

**PLSC 667-011 PLANT AND SOIL INTERFACES**

Several aspects of plant and soil interfaces will be developed including: the influence of soil chemistry on plant chemistry and vice versa; plant interactions with soil-borne microbes; and phytoremediation of contaminated soils.

**POLITICAL SCIENCE**

**POSC 444-010/COMM444-010 TPCS: GLOBAL AGENDA 2004 ENEMIES LIST**

International media and policy speaker series focuses on "enemies" of the United States, ranging from specific nations to global environmental, terrorism and health threats. Exploration of complex relationships which make some "friends" also "enemies."

**PSYCHOLOGY**

**PSYC 367-010/CGSC 367-010 INTRODUCTION TO NEUROSCIENCE**

Interdisciplinary approach to the study of the nervous system, including gross anatomy of the nervous system and the anatomy and physiology of nerve cells, sensory and motor systems, neuroendocrine function, and the neural basis of behavior. Lab included. Prereq: PSYC 201, BISC 208, 2 semesters of chemistry.

**PSYC 467-010/080 IDEAS IN BIOPSYCHOLOGY**

Required readings of "classics" in psychology, biology, and philosophy. Student led discussion on readings. The reading list is flexible and will be chosen depending on the interests of the students.

**PSYC 467-011 RESEARCH METHODS**

Reviews the major issues the design of psychological experiments. Includes measurement of psychological variables, internal and external validity of experiments, research with single subjects, and research ethics. Discusses both laboratory and field research. Designed for students planning to apply to graduate school in psychology

**PSYC 467-012 COGNITION AND EMOTION**

Focus on the interplay between affective and cognitive processes-how feelings influence thought, and vice-versa. Includes the relationships between thinking, feeling, and the brain; how feelings might be related to self-consciousness; and how cognitive processes are altered in emotional disorders.

**PSYC 467-081 HNRS: SOCIAL MOTIVATION**

Analysis of theory and research in the social psychology of motivation. Includes active student participation in research projects. Prereq: PSYC 309, and PSYC 303 or 390, and permission of instructor.

#### **PSYC 667-011 NEUROPHARMACOLOGY**

Examines the biochemical bases of neuropharmacology, or how drugs work in the brain. Includes basic pharmacodynamics and pharmacokinetics, therapeutic drugs for the major mental and neurological disorders (anxiety, depression, schizophrenia, epilepsy, Alzheimer's and Parkinson's) and the neurobiological and behavioral bases of drug addiction. Uses a combination of textbook material and research articles.

#### **PSYC 667-012 EMOTIONS AND CLINICAL SCIENCE**

Emotions: their neural, expressive, and experiential components, and their relation to adaptive behavior, psychopathology, psychotherapy, and preventive intervention.

#### **PSYC 867-014 SOCIAL COGNITION**

Examines how people process information related to impressions of themselves and other people.

### **SOCIOLOGY**

#### **SOCI 267-010 RESEARCH ON ALCOHOL**

Scholars, administrators, and clinicians from off-campus and from the University of Delaware community present and discuss their research and experiences with issues of alcohol use and abuse. Special focus on the use of alcohol on college campuses and the impact of high risk drinking on the college and neighboring communities.

#### **SOCI 467/667-010/BAMS 467/667-010 THE BLACK MIDDLE CLASS**

Looks at class structure at the end of the Jim Crow era. Examines the mobility paths of the black middle class. Focuses on the challenges faced as families and in the areas of education, employment, politics, housing and community activities, including religion.

#### **SOCI 467-011/WOMS 467-011 RACE & GENDER BETWEEN THE WARS**

Explores American Society between WWI and WWII. Examines changes in race and gender relations during the great migration, the roaring twenties, the great depression, as well as the wars from the perspective of both contemporary and recent sociological literature.

#### **SOCI 467-012/CRJU 467-012 SEM: ORGANIZED CRIME**

Explores functions of organized crime; its history in the U.S., its relationship to ethnicity and its principal illegal activities.

#### **SOCI 667-011 GENDER, CRIME AND DEVIANCE**

Explores the theories and empirical research that relate to gender, deviance and social control, and crime. Also examines policy implications of these issues, focusing on how multiple statuses (race, gender, social class, etc.) effect social and institutional responses.

#### **SOCI 667-012 SOCIOLOGY OF DISASTERS**

Examines current knowledge and ongoing social science research on preparedness, response, recovery, and mitigation. Reviews approaches to the conceptualization and methods of disasters as well as theory and findings on risk perception and communications, mass media, warning and warning response, evacuation, disaster myths, victims and no-victims response to disasters, looting, emergent groups in disasters, organizational response, emergent multi-organizational networks, and mental health.

#### **SOCI 867-010 MICROTHEORETICAL FOUNDATIONS IN SOCIOLOGY**

Provides a substantive and theoretical introduction to the major issues in microsociology and sociological social psychology. Reviews many of the substantive research areas, and concentrates on a few key theoretical areas (symbolic interaction; the linkage between attitude and behavior; identity). Emphasizes philosophical underpinnings to the methodologies used.



## **STATISTICS**

### **STAT 467/667- 010 REGRESSION AND EXPERIMENTAL DESIGN**

Introduction to linear models in regression and Analysis of Variance/experimental designs. Relevant to a wide variety of disciplines - social science, business, as well as the life sciences. Includes the basic regression model, inference in regression, multiple regression, and experimental design.

### **STAT 667- 011 ADVANCED REGRESSION TECHNIQUES**

Selected topics from the area of regression analysis, not typically included in an introductory regression or econometrics course. Includes: Non-linear regression models, Linear and non-linear regression with unequal error variances, Linear regression subject to parameter constraints, Model selection techniques, Penalized least squares estimators (including ridge regression), and Non-parametric regression

## **THEATRE**

### **THEA 367-010 CAD & COMPUTER APPLICATIONS IN THEATRE**

Examines various ways of applying computer technology to the production of live theatre. Emphasis is placed on CAD and graphic software in addition to Power Point, spreadsheets, databases, and the World Wide Web.

## **URBAN AFFAIRS AND PUBLIC POLICY**

### **UAPP 667-010 GEOGRAPHIC INFORMATION SYSTEMS: APPLICATIONS IN THE PUBLIC AND NON PROFIT SECTOR**

Focuses on GIS in the social sciences with an emphasis on Urban and Regional Planning. Examples are based on planning issues, but the concepts can be applied to other disciplines such as government, economics, natural resources, and sociology. Includes: fundamentals of spatial analysis; overview of GIS technology and applications; designing a GIS project; gathering and analyzing data; and creating thematic maps.

### **UAPP 667-011 ORGANIZING FOR SOCIAL JUSTICE**

An analysis and comparison of four contemporary types of organizing approaches used in the U.S. examining their ideologies, methods of application, theories of change, and expected outcomes relative to changing social and economic policies.

### **UAPP 667-013 BUDGETING: POLICY, POLITICS & PRACTICE**

Advanced seminar focusing on the relationship between budget and policy development and implementation and the political process through readings, case studies and presentations by and discussions with public policy practitioners.

### **UAPP 667-014 MANAGING RISK & SECURITY**

Examines the policy agenda regarding risk reduction during a time of increasing threats to safety and security. Introduces public entity and intergovernmental risk assessment and response strategies. Includes information system development, exposure reduction, loss prevention, incident management, and resource coordination.

### **UAPP 667-015 INFORMATION TECHNOLOGY IN THE PUBLIC & NONPROFIT SECTOR**

Introduces students to the issues surrounding IT Infrastructure in the public and nonprofit sectors. Focuses on three themes that impact the adoption, implementation, and evaluation of IT efforts: technology, policy, and administration.

### **UAPP 667-017 LAND USE AND TRANSPORTATION LINKAGES**

Explores the linkages between land use planning and the provision of transportation infrastructure. Includes guest speakers who are recognized practitioners in the fields of land use and transportation planning. Covers land development techniques and patterns which influence transportation needs.

Examines how the interplay between land use patterns and transportation infrastructure influences travel and development characteristics.

**UAPP 667-018 VIRTUAL GOVERNMENT**

Explores the evolving field of e-government and will evaluate opportunities to enhance the delivery of government services. Reviews developments throughout the world and recommends strategies for implementation in Delaware.

**UAPP 667-021 REGRESSION ANALYSIS**

Focuses on a variety of topics within the regression framework. Includes the basic model and its underpinnings, appropriate uses, regression diagnostics, and interpretation of results.

**UAPP 667-022 LAW FOR NONPROFIT ADMINISTRATORS**

Overview of the landscape of legal issues that a non-profit manager will face. Includes corporate structure and governance; maintaining tax-exempt status; lobbying and advocacy; board and trustee fiduciary obligations; liability and risk management; employment issues; and the legal relationship among board members, executives, staff members, and professional service providers such as attorneys and accountants.