

# Supplemental Course Descriptions for Fall-2014

Updated September 9, 2014

---

## **ANFS – Animal & Food Science**

### **ANFS 267-10 THE HUMAN-ANIMAL BOND**

Focuses on the benefits of animals to human health, work and service, and research, as well as concerns related to grievance, zoonotic disease, natural and man-made disasters, animal conservation, and animal welfare.

### **ANFS 367-10 MICROBIOLOGY & MICROBIAL INT**

Designed for students in preveterinary medicine, animal biology, and food science. Introduces the fundamental biology of bacteria, eukaryotic microorganisms, and viruses. Emphasizes interactions of microorganisms with each other, various hosts and complex environments. Pre-req CHEM104.

### **ANFS 467-14 BIOENVIRONMENTAL MANAGEMENT**

Emphasizes the understanding of poultry and livestock response to environmental changes, management practices to reduce pollution from poultry and livestock operations, and protect natural resources, and analysis of air quality using research instrumentation.

### **ANFS 467-17, 87 EMERGENCY ANIMAL MANAGEMENT**

Discusses livestock, companion animals and specialty animals. Covers tremendous disruption to animals caused by disease, weather and human activity. Includes utilization of emergency response surveillance, quarantine, treatment, disposal and disinfection.

### **ANFS 667-14 BIOENVIRONMENTAL MANAGEMENT**

Emphasizes the understanding of poultry and livestock response to environmental changes, management practices to reduce pollution from poultry and livestock operations, and protect natural resources, and analysis of air quality using research instrumentation.

### **ANFS 667-17 EMERGENCY ANIMAL MANAGEMENT**

Discusses livestock, companion animals and specialty animals. Covers tremendous disruption to animals caused by disease, weather and human activity. Includes utilization of emergency response surveillance, quarantine, treatment, disposal and disinfection.

---

## **ANTH - Anthropology**

### **ANTH 467-10 NUTRITIONAL ANTHROPOLOGY**

A biocultural perspective on food and nutrition examining evolutionary influences, role of agriculture, food security, food ways, foods as medicine, infant feeding ecology, under- and over-nutrition, dietary transitions and globalization, and potential solutions to current nutrition challenges.

### **ANTH 667-10 NUTRITIONAL ANTHROPOLOGY**

A biocultural perspective on food and nutrition examining evolutionary influences, role of agriculture, food security, food ways, foods as medicine, infant feeding ecology, under- and over-nutrition, dietary transitions and globalization, and potential solutions to current nutrition challenges.

---

## **ARSC – Arts & Science**

### **ARSC 367-12 MUSEUM OUTREACH & EDUCATION**

Practicum-based course. Intro to planning, implementing and evaluating interpretive programming relevant to University Museums exhibitions and collections. Introduces strategies for developing and implementing effective community partnership and outreach initiatives.

### **ARSC 390-80 PSYCHODRAMA IN LITERATURE**

Examines the actions and motives of “evil” characters within plays, poetry, and film, including Macbeth, The Duchess of Malfi, Paradise, Angel Street, Buried Child, Frozen, Dr. Jekyll and Mr. Hyde , and Dracula. Class activities include theatre attendance, staged dramatic readings and lively debate.

---

## **ARTH - Art History**

### **ARTH 198-10 BUILDING THE WESTERN WORLD**

Surveys patterns of architecture and settlement form antiquity to last Friday. Lectures link monuments from major traditions with a series of themes to make the past relevant to today.

### **ARTH 199-10 IMAGING THE GREAT WAR**

Revisits the radical makeover of visual, material, and expressive culture that occurred a century ago. World War I marked the pivotal moment when the cultural landscape was revolutionized and made "New" giving birth to the 20th century.

### **ARTH 413-10, 80 ART IN THE AGE OF EXPLORATION**

Examines images and objects produced during the so-called Age of Exploration—the period from the mid-fifteenth to the seventeenth century when Europeans navigated around the globe in search of new lands, goods and trade routes.

### **ARTH 419-10 ART & CONQUEST IN IMPERIAL SPAIN**

A critical examination of monuments and artworks created in Spain and its colonies from 1469 until 1701. Thematically organized, the seminar focuses on the dynamics of power that took place within the artistic production of the Spanish world.

### **ARTH 420-10 THE DILEMMAS OF MODERN AND CONTEMPORARY AFRICAN ART**

Explores the artistic interests of African artists, particularly in relation to dialogues on art's history, race, gender, feminism, exile, and medical knowledge. Will occasionally explore some African art before modernity in depth.

### **ARTH 435-10 AMERICAN ART: METHODS AND HISTORIOGRAPHY**

Explores the history of American art history, studying the major ideas and methods that have shaped the subfield in relation to broader disciplinary developments. Weekly papers required. Recommended for graduate students intending to take major or minor field exams in American art.

### **ARTH 445-10, 80 ART HISTORY, EURASIA, AND PROBLEMS OF STYLE**

Examining the construction of knowledge about art forms and Eurasian aesthetics in the 19th and early 20th century, and investigating its subsequent impact upon the study of Greco-Buddhist art and architecture.

**ARTH 619-10 ART & CONQUEST IN IMPERIAL SPAIN**

A critical examination of monuments and artworks created in Spain and its colonies from 1469 until 1701. Thematically organized, the seminar focuses on the dynamics of power that took place within the artistic production of the Spanish world.

**ARTH 620-10 THE DILEMMAS OF MODERN AND CONTEMPORARY AFRICAN ART**

Explores the artistic interests of African artists, particularly in relation to dialogues on art's history, race, gender, feminism, exile, and medical knowledge. Will occasionally explore some African art before modernity in depth.

**ARTH 635-10 AMERICAN ART: METHODS AND HISTORIOGRAPHY**

Explores the history of American art history, studying the major ideas and methods that have shaped the subfield in relation to broader disciplinary developments. Weekly papers required. Recommended for graduate students intending to take major or minor field exams in American art.

**ARTH 667-10 ART HISTORY, EURASIA, AND PROBLEMS OF STYLE**

Examining the construction of knowledge about art forms and Eurasian aesthetics in the 19th and early 20th century, and investigating its subsequent impact upon the study of Greco-Buddhist art and architecture.

**ARTH 667-11 CONTEMPORARY ART AND CURATORIAL PRACTICE: CHANGING MODES SINCE 1990**

Over the last 24 years, the labor, identity & responsibility of the curator has radically changed. Transformations have coincided with an efflorescence of journals & critical writing devoted to curating. Developments will be analyzed, rigorously debated & indexed to pressures originating from art.

---

**BAMS - Black American Studies**

**BAMS 440-10 BLACK AMERICANS EXHIBITING HISTORIES**

Based on Mabel Wilson's recent book, *Negro Building: Black Americans in the World Fairs and Museum*, which centers on black Americans' participation in world's fairs, Emancipation expositions, and early black grassroots museums. Considers black cultural institutions, their formation and foundation as well as exhibition histories of black visual art and culture.

**BAMS 667-10 BLACK AMERICANS EXHIBITING HISTORIES**

Based on Mabel Wilson's recent book, *Negro Building: Black Americans in the World Fairs and Museum*, which centers on black Americans' participation in world's fairs, Emancipation expositions, and early black grassroots museums. Considers black cultural institutions, their formation and foundation as well as exhibition histories of black visual art and culture.

---

**BHAN - Behavioral Health & Nutrition**

**BHAN 130-22 DEATH & DYING**

Examines the many facets of death, including the dying process, grieving process, death's inevitability, the death of loved ones, mass casualties, cultural/religious rituals, as well as bereavement practices and ways to face life and death with no regrets.

**BHAN 267-10 YOGA FOR WELLNESS**

Gain experiential knowledge using the wellness practices of yoga to improve the quality of life through Mind ? body - spirit connection. Includes self - discovery and realization, group discussion, physical asana (poses) practice, pranayama (breathing) techniques and meditation.

**BHAN 467-10 NUTRITIONAL ANTHROPOLOGY**

A biocultural perspective on food and nutrition examining evolutionary influences, role of agriculture, food security, food ways, foods as medicine, infant feeding ecology, under- and over-nutrition, dietary transitions and globalization, and potential solutions to current nutrition challenges.

**BHAN 667-10 NUTRITIONAL ANTHROPOLOGY**

A biocultural perspective on food and nutrition examining evolutionary influences, role of agriculture, food security, food ways, foods as medicine, infant feeding ecology, under- and over-nutrition, dietary transitions and globalization, and potential solutions to current nutrition challenges.

---

**BMEG - Biomechanics Engineering**

**BMEG 667-11 COMPUTATIONAL SYSTEMS BIOLOGY**

Computational/mathematical techniques for modeling & analysis of biological systems. Topics include properties of gene-regulatory & signaling networks; network reconstruction from data; stochastic modeling to study cellular variation & physiological modeling.

**BMEG 467-10 BIOMEDICAL NANOTECHNOLOGY**

Overview of biomedical nanotechnology Topics include: history and current status of biomedical nanotechnology; ethics and global policies; emergent properties at the nanoscale; interactions between nanoscale materials and cells,tissues, and the environment; cancer nanomedicine, emerging applications. Pre-req: BISC207, BISC208 and CHEM321.

**BMEG 467-13 CELL ENGINEERING**

Covers how engineered biomaterials can be implemented to regulate cell function with respect to lineage-specific stem cell differentiation, prevention of de-differentiation during culture and expansion, regulation of migration, and induction of proliferation or apoptosis among others.

**BMEG 667-10 BIOMEDICAL NANOTECHNOLOGY**

Overview of biomedical nanotechnology Topics include: history and current status of biomedical nanotechnology; ethics and global policies; emergent properties at the nanoscale; interactions between nanoscale materials and cells,tissues, and the environment; cancer nanomedicine, emerging applications. Pre-req: BISC207, BISC208 and CHEM321.

**BMEG 667-13 CELL ENGINEERING**

Covers how engineered biomaterials can be implemented to regulate cell function with respect to lineage-specific stem cell differentiation, prevention of de-differentiation during culture and expansion, regulation of migration, and induction of proliferation or apoptosis among others.

---

**BMSC – Biomechanics & Movement Science****BMSC 667-10 SEMINAR IN MOTOR NEUROSCIENCE**

Present and lead discussion of influential articles in the field of motor systems neuroscience, with an emphasis on supraspinal control of movement. Requires permission of instructor.

---

**CHEG – Chemical Engineering****CHEG 867-11 BIOPHYSICAL PRINCIPLES, CHARACTERIZATIONS & TECHNOLOGIES**

Provides a combination of experimental practice and the fundamentals underlying the instrumentation and data analysis of a number of the most widely used methods for characterization of protein structure, stability, and interactions during pharmaceutical product development.

---

**CHEM - Chemistry & Biochemistry****CHEM 667-10 INTRODUCTION TO VACUUM TECHNOLOGY**

Covers fundamental aspect associated with flow and absorption in various pressure ranges; vacuum pump technology; pressure measurement; valves and fittings; methods to calculate the appropriate dimensions of pumps and vacuum connections.

**CHEM 667-12 MOLECULAR SPECTROSCOPY & BIOMACROMOLECULES**

Focuses on the interpretation of spectroscopic data, applied primarily to organic and small biological molecules. Focuses on NMR (Nuclear Magnetic Resonance) and mass spectrometry. Investigates UV-VIS, Fluorescence and purification.

---

**CHIN - Chinese****CHIN 267-10 ART OF CHINESE CALLIGRAPHY**

Introduces students to 2000-year-old Chinese calligraphy, including the evolution of Chinese characters, the aesthetics of Chinese calligraphy, and its relevance to Chinese and western philosophies. Students will learn to write seal and regular scripts and the basics of Chinese painting.

---

**CIEG - Civil & Environmental Engineering****CIEG 367-10 ENVIRONMENTAL ENGINEERING THERMODYNAMICS**

Reviews the principles of materials and energy conservation. Introduces the first and second laws of thermodynamics and applies them to environmental engineering problems, including equilibrium partitioning and transformation processes in natural and engineered systems. Pre-req: CIEG233, MATH243, CHEM104.

**CIEG 467-19 STRUCTURAL STEEL DESIGN**

Structural steel design concepts: methodologies, limit states, design codes. Design of structural steel members subjected to tension, compression, bending, combined bending, compression are considered. Includes design of bolted and welded connections, intro to the design of composite beam members. Pre-req: CIEG302.

#### **CIEG 667-19 ADVANCED DATA ANALYSIS**

Comprehensive introduction to the principles and practices of emerging advanced data with particular focus to engineering science. Provides insight to emerging advanced statistical techniques.

#### **CIEG 667-20 UNSATURATED SOIL MECHANICS**

Introduction to unsaturated soil problems. Strength, flow, volume change behavior. Stress states, concept of effective stress. Hydraulic conductivity, water potential, suction, soil water characteristic curve. Techniques applied in measuring variables affecting unsaturated behavior. Constitutive relations.

---

### **CISC - Computer & Information Sciences**

#### **CISC 167-80 INTRODUCTORY MATLAB PROGRAMMING FOR CHEMICAL ENGINEERS**

Introduces chemical engineering students to MATLAB, a programming system for solving technical computing problems in a fraction of the time it takes to program in languages such as C or Fortran. MATLAB is a standard tool utilized in mathematics, engineering and science courses.

#### **CISC 367-10 SIMULATION-BASED CYBERSECURITY**

Introduces the principles and practices of cybersecurity (computer and network security). Via the use of a network simulator, students learn how attacks work, and how to defend against them. Topics include encryption; IP spoofing; bots; buffer overflows; DoS attacks; and others. Pre-req: CISC361

#### **CISC 849-10 DEVELOPING ENERGY EFFICIENT APPLICATIONS**

Focusses on current research tools and techniques that can be applied to minimize concerns such as battery life, heat creation, fan noise, and overall potentially high energy costs, via energy-efficient software development.

#### **CISC 879-10 HIGH PERFORMANCE COMPUTER & DATA ANALYTICS**

Targets the important aspects of scientific big data analytics from the HPC point of view. Students will use the MapReduce programming model to cluster and classify large datasets, reproducing and extending problems from published computer science papers via teamwork .

#### **CISC 889-10 INFORMATION RETRIEVAL**

Organizing, analyzing, and searching GB to TB of heterogeneous, unstructured textual data. Search tasks, retrieval models, index structures, and effectiveness evaluation.

---

### **COMM - Communication**

#### **COMM 200-10 STRATEGIC COMMUNICATION IN THE WORK PLACE**

Examination of theories about and relevant practices to communication in the workplace, particularly in the contexts of group decision making and negotiation

#### **COMM 318-10 SOCIAL MEDIA STRATEGY**

Focuses on strategic social media with an emphasis on user engagement, content curation and public relations. Draws upon multiple disciplines and provides hands-on experiences with leveraging social platforms, such as Facebook, Twitter, Pinterest and Instagram. Interactive class format uses case studies.

**COMM 343-10 PERSONALITY AND INTERACTION**

Explores how personality is linked to communication styles. Students will explore a number of concepts and measures of personality in order to understand their own personality profile and also problematic relationships in an effort to develop healthy communication skills for dealing with difficult people.

**COMM 418-10 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 418-11 PSYCHOLOGICAL PROCESSING OF MEDIA**

Examines the ways in which people understand and process media, including traditional and digital media. By better understanding the process, students can learn how to predict media uses and gratifications, media's effect on consumers, and even what media in the future may look like.

**COMM 440-10 SOCIAL MEDIA AND INTERACTION**

Discusses the ways in which social media have transformed the way in which we communicate with one another, and the implications of these changes.

**COMM 447-10,80 2014 BATTLE FOR CONGRESS**

Focuses on the U.S. congressional 2014 election. Guest speakers: office holders/candidates, political/media practitioners-explore problems and their implications for the nation/campaigns/decision making. Topics include tracking the 2014 congressional campaign/national issues/tactics used by politicians.

**COMM 618-10 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 618-11 PSYCHOLOGICAL PROCESSING OF MEDIA**

Examines the ways in which people understand and process media, including traditional and digital media. By better understanding the process, students can learn how to predict media uses and gratifications, media's effect on consumers, and even what media in the future may look like.

**COMM 640-10 SOCIAL MEDIA AND INTERACTION**

Discusses the ways in which social media have transformed the way in which we communicate with one another, and the implications of these changes.

---

**CPEG – Computer Engineering**

**CPEG – ADVANCED COMPUTER & NETWORK SECURITY**

Covers a collection of advanced topics that are not covered in the introductory Computer and Network Security course. Includes DoS attacks, DNS security, Email spam, On-line Authentication, Phishing attacks, Security inside Cloud, Spyware/Malware, TCP behaviors & Web security.

---

## **CRJU – Criminal Justice**

### **CRJU 367-11 BEHAVIORAL HEALTH IN JUVENILE JUSTICE**

Covers adolescent development, trauma, risk factors and common mental health and substance use problems. Provides practical information for working with justice-involved youth and health issues that increase the risk of offending and recidivism.

### **CRJU 467-10 APPLIED RESEARCH ON VIOLENCE AGAINST WOMEN**

Studies intimate partner violence against women and the protection order process. Students participate in field-based data collection.

---

## **EDUC – Education**

### **EDUC – MATHEMATICS TEACHERS IN FILM**

Analyze how mathematics teachers are represented in contemporary films; common ways they are portrayed; what the portrayals communicate about the work of mathematics teachers and the role of learning mathematics in student's lives.

---

## **ECCC – Engineering**

### **ECCC 667-10 TECHNICAL & SCIENTIFIC WRITING**

Five-week, one-credit course primarily for engineering students. Emphasis on learning to write clear, coherent college-level prose within a variety of technical and scientific formats. Includes practical instruction in technical communication, written and oral. Develops an understanding of workplace genres and audiences, by mastering communication skills and techniques, and by collaborating with peers on selected projects.

---

## **ELEG - Electrical Engineering**

### **ELEG 667-11 COMPUTATIONAL SYSTEMS BIOLOGY**

Computational/mathematical techniques for modeling & analysis of biological systems. Topics include properties of gene-regulatory & signaling networks; network reconstruction from data; stochastic modeling to study cellular variation & physiological modeling.

---

## **FINC - Finance**

### **FINC 467-50 FIXED INCOME**



An overview of the fixed income markets and instruments within those markets. Focus is on valuation and analysis of fixed income instruments and the roles of different participants within the fixed income markets. Pre-req: FINC311.

**FINC 867-50 PORTFOLIO ASSET ANALYSIS**

Analysis of how to match attributes of assets of portfolios to investor preferences. Pre-req: FINC850.

**FINC 867-51 TRADING & FINANCIAL MARKET STRUCTURE**

Understand how financial markets operate and what traders do in them. Introduces the theory and practice of financial trading on exchanges, in upstairs dealer networks, and via alternative trading systems. Pre-req: FINC850.

**FINC 867-52 BEHAVIORAL FINANCE**

The two building blocks of behavioral finance are cognitive psychology (how people think) and the limits to arbitrage (when markets will be inefficient). The growth of behavioral finance research has been fueled by the inability of the traditional framework to explain many empirical patterns. Pre-req: FINC850.

---

**FLLT - Foreign Languages & Literatures**

**FLLT 367-70 JAPANESE VISUAL CULTURE**

Examples of Japanese comic and animation art-as historical moments, aesthetic movements and as Japanese (world even) popular cultural properties. Explores anime and manga, and its connected bodies from both media theory, and artistic directions.

**FLLT 467-10,80 COMMUNITIES & IDENTITIES**

Introduces the development and significance of social and cultural practices and imaginations that produce and shape Chinese communities and identities. Our approach is broadly interdisciplinary, roughly chronological, and ultimately self-reflective.

---

**FREN - French**

**FREN 367-70 PRACTICAL WRITTEN EXPRESSION**

Improve your written expression through regular writing practice and the study of authentic documents. 3 credits

**FREN 367-71 PROFESSIONAL COMMUNICATION**

Communication in French in a professional environment, with particular focus on how to carry out common professional written tasks, such as writing emails, and oral tasks such as public speaking. 3 credits

**FREN 367-72 RELIGION & SOCIETY IN FRANCE**

Presents the history of religion and secularism in France, from the creation of the 'Catholic Kingdom' to present-day issues, such as the separation of church and state and recent challenges to the principle of secularism.

---

**HDFS - Human Development & Family Studies**

**HDFS 167-10 SCHOLARS SEMINAR**

Designed to reinforce the core values, theory and applied research upon which the UD Scholars program is founded. Allows students to reflect upon the relationship between the ongoing first semester experience and the core values of the program.

**HDFS 467-10 APPLIED RESEARCH ON VIOLENCE AGAINST WOMEN**

Studies intimate partner violence against women and the protection order process. Students participate in field-based data collection.

**HDFS 475-11 TOPICS IN HUMAN DEVELOPMENT & FAMILY STUDIES: AGING & HEALTH**

Provides an overview and analysis of the fundamental aspects of healthy aging across adult life. Emphases on concepts of health and disease, positive health practices, health related behaviors, and their interactions with the developmental processes of bodily change over the human lifespan.

**HDFS 667-10 POVERTY, HOUSING & COMMUNITY DEVELOPMENT**

Examines social and economic conditions within American cities with an emphasis on the role that local, state and federal housing, community development and other policies play in reducing poverty and enhancing the quality of life within urban areas.

**HDFS 667-14 GRADUATE SEMINAR**

Developmental seminar including topics related to being successful in graduate school, as well as preparing for subsequent careers.

---

**HIST - History****HIST 267-10 RUSSIA FROM THE 17<sup>TH</sup> CENTURY TO 1917**

Imperial Russian history from the mid-seventeenth century to the 1917 Revolution. Includes Russia's growth as a geographically vast empire, the autocracy that accompanied this growth, and the responses of Russian people to these two developments.

**HIST 337-12 AMERICAN ASSASSINS**

Examines the traumatic events, the people and the circumstances surrounding the assassinations of political and social figures such as Abraham Lincoln and John Lennon.

**HIST 365-10 CHINA to 1600**

Covers the philosophical, intellectual and cultural history of the early Chinese empire, from its unification in the 3<sup>rd</sup> century BCE through the height of the Ming dynasty and the beginning interaction with the colonial naval powers of Europe.

**HIST 365-11 BEYOND GEISHA: WOMEN IN JAPANESE HISTORY**

From layered kimono to Gwen Stefani's Harujuku girls, this course explores the lives and experiences of Japanese women through historical analysis- and in their own words- from earliest times to the recent past.

---

**ITAL - Italian**

**ITAL 267-10 ITALIAN THROUGH MUSIC**

Drawing on Italy's rich musical tradition, this course strengthens students' skills in Italian conversation and composition. Improves the command of grammar, writing, speaking and comprehension, while exploring Italian culture thru music from opera librettos to pop songs.

---

**JAPN - Japanese****JAPN 367-70 INTERMEDIATE JAPANESE**

Emphasizes overall Japanese language skills, but mostly reading and writing at the intermediate level. Co-req; JAPN306.

**JAPN 467-70 ADVANCED JAPANESE**

For advanced students; focuses on all four language skills of listening, speaking, reading, and writing through TV, movies, newspapers, and other authentic materials. Co-req: JAPN445.

**JAPN 467-71 ENGLISH-JAPANESE TRANSLATION**

Requires students to translate mainly from English to Japanese and understand the difference between the two languages.

**JAPN 467-72 HIGHER INTERMEDIATE JAPANESE**

Designed to improve overall Japanese proficiency in the four language skills of listening, speaking, reading and writing, with primary emphasis on reading. Co-req: JAPN445.

**JAPN 467-73 JAPANESE-CHINESE TRANSLATION**

For Chinese speakers who have an advance level of Japanese language skill. Investigate the differences and contrasts between Japanese-Chinese language. Using practical material, explain which translation is most appropriate for transmitting information.

**JAPN 467-74 KANJI CONSOLIDATION**

Aimed mainly for students whose first language makes use of Chinese characters (but not exclusively), or those who have built reasonable foundation of Kanji to learn effectively in intermediate level. Provides opportunities to learn and review Kanji introduced in elementary level classes.

**JAPN 467-75 KANJI FOUNDATION**

Aimed mainly for students whose first language DOES NOT make use of Chinese characters (but not exclusively), or those who have not yet built reasonable foundation of Kanji to learn effectively in intermediate level. Provides opportunities to learn and review Kanji introduced in elementary level.

**JAPN 467-76 LISTENING COMPREHENSION**

Advanced JAPN course designed to improve students listening and speaking skills for conversational JAPN. Learn useful expressions to be used in everyday life, and speech styles appropriate for formal and informal situations. Practice conversations using the learned expressions and phrases.

**JAPN 467-77 PRONUNCIATION**

Improves accuracy of pronunciation and fluency in conversational Japanese. Course conducted in Japanese.

**JAPN 467-78 READING COMPREHENSION I**

Features practice reading pre-intermediate and intermediate level material about Japanese culture and society. Co-req: JAPN306 and JAPN367.

**JAPN 467-79 READING COMPREHENSION**

Features practice reading intermediate level materials about Japanese culture and society. Co-req: JAPN401 and JAPN405.

**JAPN 467-90 READING COMPREHENSION III**

Features practice reading intermediate level materials about Japanese culture and society. Co-req: JAPN401 and JAPN405.

**JAPN 467-91 HIGHER INTERMEDIATE JAPANESE**

Designed to improve overall Japanese proficiency in the four language skills of listening, speaking, reading and writing, with primary emphasis on reading. Co-req: JAPN445.

**JAPN 467-92 SPEAKING**

Designed for students at the 400 level. Practice how to choose appropriate speech styles in different situations.

**JAPN 467-93 WRITING**

Designed for students who have advance level proficiency in Japanese and want to improve their writing skills. Course will focus on the development of academic writing skills. Learn basic rules and styles for academic paper writing and write their own papers on a wide range of topics.

---

**LEAD - Leadership**

**LEAD 467-10 POVERTY, HOUSING & COMMUNITY DEVELOPMENT**

Examines social and economic conditions within American cities with an emphasis on the role that local, state and federal housing, community development and other policies play in reducing poverty and enhancing the quality of life within urban areas.

---

**MCST – Material Culture Studies**

**MCST 299-010 THE MATERIAL CULTURE OF WAR**

On the 100<sup>th</sup> anniversary of the start of World War I, this series of talks provides interdisciplinary perspectives on people and objects during times of armed conflict, declared or not, on the battlefield and on the home front.

---

**MAST - Marine Studies**

**MAST 467-10 INTRODUCTIN TO ARTIC OCEANOGRAPHY**

Lectures and tools sessions focused on data analysis from observing systems (satellite, weather, and ice-tethered ocean buoys) presenting the results of such analysis on the web via websites or blogs. Based on current public discussions on Arctic climate change, sea ice-cover, etc.

**MAST 667-10 INTRODUCTIN TO ARTIC OCEANOGRAPHY**

Lectures and tools sessions focused on data analysis from observing systems (satellite, weather, and ice-tethered ocean buoys) presenting the results of such analysis on the web via websites or blogs. Based on current public discussions on Arctic climate change, sea ice-cover, etc.

---

## **MATH – Mathematics**

### **MATH 467-010 MATHEMATICS & TECHNOLOGY**

Focuses on recent important themes in this context: Global Positioning system, Cryptography and the RSA Algorithm, JPEG Compression Designs of Mosaics and Friezes, Robotics. Uses the Sage computational framework. Prereq: MATH341, or MATH349, or MATH359, or permission of instructor.

---

## **MUSC - Music**

### **MUSC 067-010, 011 FUNDAMENTALS OF MUSIC REVIEW**

Learn the basic materials needed to begin the core music theory sequence (MUSC195 HARMONYi), including pitch-register naming, rhythm and meter, key signatures, scales, modes, intervals, triads, and seventh chords.

---

## **NTDT - Nutrition & Dietetics**

### **NTDT 367-10 NUTRITION AND EARLY CHILDHOOD**

Nutrient requirements and feeding principles of infants and young children; emphasis on early life nutrition and its role in healthy growth, diet, obesity prevention, and other health outcomes; review of current guidelines and recommendations. Prereq: NTDT200.

---

## **PHYS - Physics**

### **PHYS 667-10 INTRODUCTION TO VACUUM TECHNOLOGY**

Covers fundamental aspect associated with flow and absorption in various pressure ranges; vacuum pump technology; pressure measurement; valves and fittings; methods to calculate the appropriate dimensions of pumps and vacuum connections.

---

## **PHYT – Physical Therapy**

### **PHYT 667-10 SEMINAR IN MOTOR NEUROSCIENCE**

Present and lead discussion of influential articles in the field of motor systems neuroscience, with an emphasis on supraspinal control of movement. Requires permission of instructor.

---

## **PLSC - Plant & Soil Science**

### **PLSC 167-10 SOILS AND CIVILIZATION**

Basic introduction to soil resources. Historical examples of the critical role of soils and associated water resources on the sustainability of human civilization. Viability of present-day societies in relation to their stewardship of soils will be emphasized.

**PLSC 167-11 UNDERSTANDING DELAWARE AGRICULTURE**

Overview of Delaware agriculture. Topics: the diversified Ag industries in the state, food supply & security, state government & the importance of technology. Through field trips students get career focused "hands on" experiences in Ag equipment operations & interact w/unique Ag industries.

**PLSC 267-10 HUMANS & ENVIRONMENTAL SUSTAINABILITY**

Introduces the major resources that humans need food, water, energy, land, and materials, and explores ways in which resources are utilized, and provides a framework for future resource utilization.

**PLSC 467-10 ECOSYSTEM ECOLOGY**

Gain an understanding of biotic and abiotic components of ecosystems and their interactions. Explore how ecosystems work and relate to different biogeochemical cycles and weather variability across the world.

**PLSC 467-11 MOLECULAR PLANT PATHOLOGY**

Explores molecular aspects of resistant interactions as well as those that lead to disease from both plant & pathogen perspectives. Considers why plants are not constantly succumbing to disease, after coming into contact with millions of potentially pathogenic microbes over the course of their lives.

**PLSC 667-10 ECOSYSTEM ECOLOGY**

Gain an understanding of biotic and abiotic components of ecosystems and their interactions. Explore how ecosystems work and relate to different biogeochemical cycles and weather variability across the world.

**PLSC 667-11 MOLECULAR PLANT PATHOLOGY**

Explores molecular aspects of resistant interactions as well as those that lead to disease from both plant & pathogen perspectives. Considers why plants are not constantly succumbing to disease, after coming into contact with millions of potentially pathogenic microbes over the course of their lives.

---

**POSC - Political Science**

**POSC 367-11 THE POLITICS OF DIVERSITY**

Considers how social identities like race, class, gender, and sexuality affect political processes. Identifies how the social construction of difference informs our understanding, access to and engagement with social forms of diversity. Focuses on ethnicity/race, class, gender, and sexualities. Familiarizes students with historical and empirical indicators of how individuals' lives are materially and symbolically shaped by difference.

**POSC 447-10,80 2014 BATTLE FOR CONGRESS**

Focuses on the U.S. congressional 2014 election. Guest speakers: office holders/candidates, political/media practitioners-explore problems and their implications for the nation/campaigns/decision making. Topics include tracking the 2014 congressional campaign/national issues/tactics used by politicians.

---

## **SOCI – Sociology**

### **SOCI 367-10 RACE & HEALTH**

Critically examines the health status of socially disadvantaged racial and ethnic groups in the US. Attention will be focused on the patterned ways in which the health of these groups is embedded in the social, cultural, political, and economic contexts, and arrangements of US society.

### **SOCI 367-11 ENVIRONMENTAL HEALTH**

Couched in the sociological perspective of popular epidemiology, this course shows students how both traditional epidemiology and citizen-science alliances are at the forefront of environmental and health issues.

---

## **SPAN - Spanish**

### **SPAN 367-70 SPEAKING & WRITING SKILLS 5&6**

Aims to be of fundamental linguistic support in difficult areas the student may have at this level. Enables the student to understand and express him/herself in a variety of unfamiliar situations, and which require exchanging informational and personal opinions using complex linguistic structures.

### **SPAN 467-70 ENGLISH-SPANISH TRANSLATION I**

Deals with the new approaches to language learning that view the activities of translation and interpreting as a tool for the development of communication ability and mediation skills.

### **SPAN 467-74 SPANISH GRAMMAR (SUPERIOR LEVEL)**

Includes the main points of those remaining difficulties which a student may encounter in the latter part of an advanced learning phase and the best way to solve them, within a pragmatic tone. 3 credits

### **SPAN 467-75 SPEAKING & WRITING SKILLS 7&8**

Aims to be of fundamental linguistic support in difficult areas the student may have at this level. Enables the student to understand and express him/herself in a variety of unfamiliar situations, and which require exchanging informational and personal opinions using complex linguistic structures.

---

## **UAPP - Urban Affairs & Public Policy**

### **UAPP 467-10 POVERTY, HOUSING & COMMUNITY DEVELOPMENT**

Examines social and economic conditions within American cities with an emphasis on the role that local, state and federal housing, community development and other policies play in reducing poverty and enhancing the quality of life within urban areas.

### **UAPP 667-10 POVERTY, HOUSING & COMMUNITY DEVELOPMENT**

Examines social and economic conditions within American cities with an emphasis on the role that local, state and federal housing, community development and other policies play in reducing poverty and enhancing the quality of life within urban areas.