

Supplemental Course Descriptions for Spring 2019

Updated Nov 29, 2018

AFRA - Africana Studies

AFRA 293-10 TOPICS IN AFRICANA STUDIES: AFRICAN AMERICAN RELIGIOUS HISTORY

Surveys the ways African culture, plantation experience, emancipation, migration, civil rights movement & urban social issues influence African American religions. Introduces black religious diversity in the US including Islam, African traditional religions, Buddhism, Humanism & New Thought.

AFRA 367-10 RELIGION AND SOCIAL JUSTICE

Many scholars/communities believe that experience affects the ways in which people conceive of & practice their faith. Explores faith/freedom from various social/cultural perspectives, examining how different groups conceive of God, faith & their own actions in struggles against oppression.

AFRA 650-11 BLACK COMMUNITY STUDIES: BECOMING A PUBLIC SCHOLAR

Looks at practices of public scholars, focusing on activist content. Connects work in humanities & black communities, lives of public scholars & theories about public scholarship. Students form & reflect on their identities as public scholars, engage & practice modes of sharing their work.

ANTH – Anthropology

ANTH 367-10 LATIN AMERICA THROUGH FILM

Explores Latin America and the Caribbean through the lens of cinema. Focuses the cultural history of the region within national, regional and global contexts, as it is depicted in twentieth and twenty-first century Latin American film making.

ARTH - Art History

ARTH 198-10 MASTERPIECES OF AFRICAN ART: BEYONCÉ & 'BLACK PRESIDENT' FELA KUTI BACK THROUGH CLEOPATRA TO PREHISTORY'S "LUCY"

Unscrambles the otherwise complex themes & histories of African art from its mysterious prehistoric rock art, through historic Ancient & Islamic art, to Contemporary art --political art, performance art, photography, film, & video art.

ARTH 199-10 VISUALIZING SCIENCE AND KNOWLEDGE-MAKING IN ART, 1400-PRESENT

Art & science are powerful tools for curiosity, experiment & discovery. How have artists communicated new scientific knowledge or created that knowledge themselves? Explores artistic depictions of science & scientists, & the close connection between the studio & laboratory.

ARTH 238-10 ISLAMIC ARCHITECTURE FROM CAIRO TO TIMBUKTU

Architectural dialogues across the Sahara since the 9th C., focusing on the buildings of Cairo, Fez, & Timbuktu --old centers of Islamic learning. Introduces philosophical texts & travelers' memoirs in relation to buildings as congregations of space & visual imagery.

ARTH 419-10 ART & MATERIALITY IN THE IBERIAN WORLD, 1492-1800

Examines the arts in diverse regions of the Spanish & Portuguese empires in light of the raw materials employed in their production, discussing not only the techniques & properties associated with each material choice, but also the ways in which such substances were sourced & traded.

ARTH 435-10 COLONIAL AMERICAN PORTRAITURE

Introduction to current & foundational scholarship on colonial American (defined broadly) portraiture. Focusing on the production, consumption, & iconography of portraits, this course surveys a wide range of paintings & analyzes portraiture as both material & visual culture.

ARTH 619-10 ART & MATERIALITY IN THE IBERIAN WORLD, 1492-1800

Examines the arts in diverse regions of the Spanish & Portuguese empires in light of the raw materials employed in their production, discussing not only the techniques & properties associated with each material choice, but also the ways in which such substances were sourced & traded.

ARTH 623-10 WHAT IS A MEDIUM?

Do media, as Friedrich Kittler claimed, determine our situation? Bridging disciplinary concerns of art history & media studies, this seminar will consider old & new formulations of & challenges to the 'medium' concept & consider their bearing upon our present understandings of art & visual culture.

ARTH 626-10 ART & PERFORMANCE IN THE LONG 19TH CENTURY

Art in relation to music, opera, theatre, poetry, cabaret, circus, street theatre, & early cinema. Tragedy & comedy, gender & sexuality, celebrity, artistic performance, & inter-art connections will be considered with multiple artistic mediums & primary critical texts & recent literature.

ARTH 635-10 COLONIAL AMERICAN PORTRAITURE

Introduction to current & foundational scholarship on colonial American (defined broadly) portraiture. Focusing on the production, consumption, & iconography of portraits, this course surveys a wide range of paintings & analyzes portraiture as both material & visual culture.

ARTH 667-15 EXHIBITIONS & INTERPRETATION OF MATERIAL CULTURE

Practicum at Winterthur in exhibiting & interpreting American material culture & entrepreneurship, centering on objects & images selected from Winterthur & regional collections. Topics include: exhibition preparation, installation, programming, fundraising, marketing.

ARSC – Arts & Science**ARSC 300-10 MAPPING THE MIGRATION NET: BORDER CROSSING, TECHNOLOGY AND HUMAN RIGHTS IN OUR GLOBAL JOURNEYS**

Maps the global migration net by focusing on the journeys of clandestine migrants from the perspective of the migrants themselves, as well as that of researchers, humanitarians, policymakers, artists, and entrepreneurs.

BHAN - Behavioral Health & Nutrition**BHAN 367-10 MENTAL HEALTH AND WELL-BEING**

Addresses common mental health issues and conditions. Stress management, self-esteem, depression, bipolar disorder, anxiety, substance abuse, and disordered eating will be examined. Students will be commonly used mental health indices and about which mental health professionals to refer.

BHAN 367-11 AQUATICS MANAGEMENT

Trains recreation and athletic professionals in how to manage an aquatic facility. Provides essential skills/knowledge needed by facility managers to oversee the safe operation of an aquatic facility.

BHAN 467-10 PEER MENTOR

Opportunity to develop and apply skills in Peer Mentors for students enrolled in BHAN160 Health Behavior Science Seminar: Peer Mentoring experiences will be learned and applied under BHAN Professional Academic Advisor supervision.

BHAN 467-11 WORKSITE WELLNESS

Explore first-hand an orientation to worksite wellbeing and health promotion. Under the supervision of a field supervisor, this introduction course will provide hands-on experience and emphasis on skills needed to create healthy, happy, highly productive employees and work settings.

BMEG - Biomedical Engineering**BMEG 167-10 INTRODUCTION TO BIOMEDICAL ENGINEERING**

Introduces students to the breadth of career opportunities in biomedical engineering, aseptic cell culture techniques, standard test methods, quantitative analysis, and technical communication. Suggested understanding of CHEM103 or 107, and BISC207.

CHEG - Chemical Engineering**CHEG 667-16 MOLECULAR MODELING AND SIMULATIONS OF SOFT MATERIALS**

Basic concepts in developing/using atomistic & coarse-grained models, conducting a stochastic or deterministic simulations (Monte Carlo & molecular dynamics), & analysis methods for calculating structure & thermodynamic properties for systems containing synthetic and biologically relevant polymers.

CHEG 667-17 VACCINES AND IMMUNOENGINEERING

Apply biomolecular engineering principles to the design and assembly of vaccines and other immune engineering apps. Overview of historical vaccine development, process technologies, immunology for engineers, & literature assessments. Discuss economics, ethics, & medical impact on global human health.

CHEG 867-20 ADVANCED MOLECULAR MODELING AND SIMULATIONS OF SOFT MATERIALS

Adv concepts in developing/using atomistic & coarse-grained models, conducting a stochastic or deterministic simulations (Monte Carlo & molecular dynamics) & analysis methods for calculating structure & thermodynamic properties for systems containing synthetic and biologically relevant polymers

CHEG 867-21 ADVANCED VACCINES AND IMMUNOENGINEERING

Apply advanced biomolecular eng principles to the design & assembly of vaccines & other immune engineering applications. Overview of historical vaccine development, process technologies, immunology for engineers, & literature assessments. Economics, ethics & medical impact on global human health.

CIEG - Civil & Environmental Engineering**CIEG 467-10 PRESTRESSED CONCRETE DESIGN**

Behavior, analysis and design of prestressed concrete structures. Covers flexure, shear, axial load, bond anchorage design and construction considerations for pretensioned and post-tensioned concrete.

CIEG 467-11 TEMPORARY STRUCTURES IN CONSTRUCTION

Temporary structures in construction for example earth retaining structures, construction dewatering, tunneling supports, roadway decking, scaffolding, shoring, concrete formwork, cranes, and bridge false work. Safety and business aspects. Case studies in failures.

CIEG 467-13 FUNDAMENTALS OF BUILDING ENERGY PERFORMANCE

Understand the fundamentals of whole-building energy performance analysis using state-of-the-art 3D modeling and computational tools. Topics include how building designs and energy policies affect buildings' energy consumption.

CIEG 667-10 BRIDGE ANALYSIS

Analysis of bridge structures, emphasis on highway bridges. Includes loads required for bridge analysis, influence lines and surfaces, and understanding their placement. Emphasizes application of analysis techniques.

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CISC - Computer Science**CISC 467-10 PHYSICAL COMPUTING**

Physical computing involves creating interactive objects that can sense and respond to environmental conditions. Focuses on creating such objects to solve a variety of real-world problems within a collaborative, group-based structure.

CISC 467-12 VIP: CLOUD CRYPTO

The Cloud Crypto team has several aims. We are working actively on ATM security using biometrics, Blockchain voting systems, Penetration Testing, Secure Software Design, and Fully Homomorphic Encryption.

CISC 467-12 VIP: CLOUD CRYPTOGRAPHY

Working actively on ATM security using biometrics, Blockchain voting systems, Penetration Testing, Secure Software Design, and Fully Homomorphic Encryption.

CISC 467-13 VIP: HIGH-PERFORMANCE COMPUTING

Learning and using directives for parallel platforms; Migrating legacy code to GPUs and co-processors using high-level parallel programming models; Parallelizing irregular algorithms on massively parallel processors; Exploring Repeatability and Reproducibility issue.

CISC 667-10 COMMUNICATIONS SKILLS FOR COMPUTER SCIENCE RESEARCHERS

Mentored experience in writing computer science research papers, proposals, and dissertations through focused writing exercises and critiques. Practice in developing and presenting elevator talks; research posters; conference and thesis defense presentations; and research interview talks.

CISC 849-10 HPC FOR SCIENTIFIC APPLICATIONS

Data is increasing exponentially as are hardware and software challenges to analyze, simulate and understand large volumes of data. Explore how to develop and migrate legacy scientific applications using parallel programming, compiler and runtime paradigms on large scale, accelerated HPC systems.

CISC 867-101 ADVANCED MACHINE LEARNING

Features in-depth treatment of modern learning theory, and emphasizes its interplay with real-world learning algorithms. Focuses on research, in particular, helping students transition from knowing how to implement a learning algorithm, towards exploring why to do this, and how to do it better.

CISC 889-10 TPCS: ADVANCED TOPICS IN ARTIFICIAL INTELLIGENCE: MUTI-AGENT LEARNING

How should we learn what actions to take when others (teammates or adversaries) are simultaneously learning to respond to us? Primary focus on multi-agent reinforcement learning (stochastic games). Both traditional AI and game-theoretic approaches in the recent literature will be discussed.

CISC 889-11 TPCS: ADVANCED TOPICS IN ARTIFICIAL INTELLIGENCE: NEURAL NETWORKS/DEEP LEARNING IN NLP

Covers several applications of neural networks in NLP tasks, such as sentiment analysis and event extraction. Motivates the use of neural network architectures such as CNN, RNN and attention mechanisms.

COMM – Communication**COMM 305-10 COMMUNICATION AND SOCIAL PROTEST**

Explores the communication strategies, political issues and public arguments of social protest and social movements around the world. Paying particular attention to the issue of dissent in civil society, examining strategies and tactics of leaders, supporters, and opponents of social movements.

COMM 418-10 MEDIA ETHICS & ACCOUNTABILITY

Examines the challenges, successes and failures of ethical behavior in the news media. Looks at digital, broadcast and print platforms from a historical and current perspective.

COMM 418-12 PUBLIC OPINION & RESEARCH

Explores the dynamics of public opinion, focusing on the forces that shape citizens' opinions; the methods for measuring public opinion; and the process of public opinion formation. Historic and contemporary readings will offer a broad understanding of public opinion.

COMM 618-10 MEDIA ETHICS & ACCOUNTABILITY

Examines the challenges, successes and failures of ethical behavior in the news media. Looks at digital, broadcast and print platforms from a historical and current perspective.

COMM 618-12 PUBLIC OPINION & COMM

Explores the dynamics of public opinion, focusing on the forces that shape citizens' opinions; the methods for measuring public opinion; and the process of public opinion formation. Historic and contemporary readings offer a broad understanding of public opinion.

CPEG - Computer Engineering

CPEG 467-10 INTRODUCTION TO BLOCKCHAIN & SMART CONTRACT DEVELOPMENT

Focuses on the innovative technology of Blockchain by exploring the underlying principles of the technology, studying recent developments, and gaining hands on learning by developing Blockchain applications, both Decentralized and Permissioned, and using existing tools.

EAMC - Early American Culture

EAMC 667-12 ORAL HISTORY: METHOD AND PRACTICE

This interdisciplinary course (held at Winterthur Museum) will approach the theory and method of oral history in a seminar as well as field work involving the practice of oral history using digital and analog methods for use in an academic and public setting. Instructor: Thomas A. Guiler

EAMC 667-15 EXHIBITION AND INTERPRETATION OF MATERIAL CULTURE

Practicum at Winterthur in exhibiting & interpreting American material culture & entrepreneurship, centering on objects & images selected from Winterthur & regional collections. Topics include: exhibition preparation, installation, programming, fundraising, marketing. Instructor Catharine Dan Roeber.

ECON – Economics

ECON 867-10 TOPICS IN DYNAMIC MODELING

Covers computational and numeric methods for solving, simulating, and estimating models with intertemporal choice. Begins with foundational material on function representation and object-oriented programming before focusing on dynamic discrete choice models and continuous choice models. Suggested understanding of ECON 811, ECON 812, ECON 813

EDUC – Education

EDUC 867-10 ADVANCED TOPICS: STRUCTURAL EQUATION MODELING

Addresses structural equation models that are typically not covered in an introduction to structural equation modeling class, as well as methods of methodological research about structural equation modeling. Suggest a strong foundation in methodological foundation evidenced by prior success in a regression and introduction to structural equation modeling such as EDUC812.

EDUC 867-11 ADVANCED RESEARCH: DESIGN FOR CASUAL INFERENCE

Doctoral-level course on advanced research design and analysis for causal inference. Internal/external validity, sampling/survey design, potential outcomes, true/quasi-experiments, propensity-score, instrumental variables, principal stratification, mediation/moderation, longitudinal designs. Suggest a strong methodological foundation evidenced by prior success in introductory and advanced research methods (e.g., HDFS615, EDUC862, PSYC809, UAPP702) and statistics (e.g., EDUC812, 856, 874, 873, PSYC878, 879, UAPP704).

ELEG - Electrical Engineering

ELEG 467-10 VIP: GRID INTEGRATED VEHICLES

Identify electric vehicles based on their unique charging characteristics; develop open source software that can be deployed by all electric vehicle chargers; collect data and validate results using our university fleet of electric vehicles and charging stations.

ELEG 467-11 VIP: E-TEXTILES

Involves electronic material design such as functional inks for realizing conductive, resistive and capacitive elements using additive manufacturing; Electronic design of integrated textile based biosensors; Seamless integration of electronic components. <http://vip.udel.edu/e-textiles>.

ELEG 467-12 VIP: CLOUD CRYPTO

The Cloud Crypto team has several aims. We are working actively on ATM security using biometrics, Blockchain voting systems, Penetration Testing, Secure Software Design, and Fully Homomorphic Encryption.

ELEG 467-13 VIP: HIGH-PERFORM COMPUTING

Learning and using directives for parallel platforms;
Migrating legacy code to GPUs and co-processors using high-level parallel programming models;
Parallelizing irregular algorithms on massively parallel processors; Exploring Repeatability and Reproducibility issues

ELEG 467-14 VIP: ARTGINEERING

Applications of photography in engineering and the fine arts. Art topics include light painting, image composition, photographic tools and techniques. Engineering topics include optics, electronics, digital cameras, digital image, LED lighting systems.

ELEG 467-15 VIP: ACOUSTICS & SIGNAL PROCESSING

Develops understanding in a variety of fields related to sound propagation and engineering. Includes instrumentation, signal processing and analysis, algorithm development for AI and ML dealing with sound signals.

ELEG 467-16 VIP: DRONES

Key Elements include Image Processing, Sensor Fusion, Control Systems, Volume Reconstruction, Object Detection In Images, Adaptive Systems And Machine Learning. To learn more, go to <http://vip.udel.edu/drone>.

ELEG 467-17 VIP:SCOOTERSV2.0

Goals: A self-driving mobility scooter for the elderly and the nfirm. Key elements are Electronic sensors, computer vision, and machine learning. To learn more, go to <http://vip.udel.edu/scooterv2>.

ELEG 467-18 CYBERSECURITY SCHOLARS

Cybersecurity scholars intends to train thought leaders in cybersecurity as part of a four-year program. Students will explore real-world issues in cybersecurity while working with clients and experts.

ELEG 467-19 TRIC ROBOTICS

Learn computer programming and mechanical design by developing novel, commercially relevant capabilities for a small grond mobile robot.

ELEG 867-10 ADVANCED MACHINE LEARNING

Features in-depth treatment of modern learning theory, and emphasizes its interplay with real-world learning algorithms. Focusses on research, in particular, helping students transition from knowing how to implement a learning algorithm, towards exploring why to do th is, and how to do it better.

ENGL – English

ENGL 110-113 THE EXAMINED LIFE

Autobiography has always been recognized as an important site of debate about authorship and identity. Where do we draw the line between fact and fiction? Students will reflect on their own lives and produce a series of reflective compositions and formal academic essays.

ENGL 306-10 CREATIVE NON-FICTION

A detailed course description is found on the English Department web page:
<https://www.english.udel.edu/courses-and-advising/courses>

ENGL 306-11 WRITING INSIDE THE BOX

A detailed course description is found on the English Department web page:
<https://www.english.udel.edu/courses-and-advising/courses>

ENGL 306-12 THE BUSINESS OF CREATIVE WRITING: WRITING THAT PAYS THE RENT

A detailed course description is found on the English Department web page:
<https://www.english.udel.edu/courses-and-advising/courses>

ENGL 306-13 SCREENWRITING

A detailed course description is found on the English Department web page:
<https://www.english.udel.edu/courses-and-advising/courses>.

ENTR - Entrepreneurship

ENTR 467-12 CULTIVATING ENTREPRENEURSHIP

Develops skills of cultivating an entrepreneurial mindset with a specific focus on the impact of entrepreneurship within governance structures of public institutions and in all stages of the policy making process.

ENWC - Entomology & Wildlife Conservation

ENWC 467-13 GROWING YOUNG NATURALISTS

Teach key concepts in curriculum development and pedagogy to create interactive and engaging teaching modules that explore insect and wildlife behavior, life history and ecology. Students will learn entomology and wildlife fundamentals and will develop their own educational units.

ENWC 467-14 INSECT RESEARCH METHODS

Sampling techniques for insect survey or biodiversity studies, including field experience, research design, data preparation, analysis and interpretation for publication.

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GEOG – Geography

GEOG 667-11 CLIMATOLOGY READINGS

A readings seminar to explore background and preliminary work being done for the upcoming Intergovernmental Panel on Climate Change 6th Assessment Report.

HDFS - Human Development & Family Sciences

HDFS 667-11 HOMELESS EDUCATION POLICY

Focuses on analyzing homeless education policies in family/community settings. Historical examination of politics and policies shaping homeless discourse and intersections of class, race, gender, sexuality, language, ability, citizenship, etc. influencing student and family life with homelessness and instability are emphasized.

HDFS 667-12 FOOD POLICY FOR FAMILIES AND COMMUNITIES

Review food policy through a community lens examining how changes to the farm bill (incl. SNAP), school food (HHFKA), food deserts, childcare and feeding in early childhood CACFP and community food efforts like farmers markets, community gardens and CSA's impact well-being.

HIST – History

HIST 268-12 SEMINAR: RACISM & SOCIAL EXCLUSION, A GLOBAL HISTORY

Introduces students to the institutional practices of social exclusion practiced in much of the world in the twentieth century.

HIST 268-26 SEMINAR: FASCISM & COMMUNISM IN EUROPE

Ideologies of fascism, communism & anarchism captivated the imagination of Europeans during the 1930's because it offered radical solutions to economic, social & political troubles created by WWI & the great depression. Explore the developments that led to that polarization.

HIST 268-31 SEMINAR: DISABILITY IN THE AMERICAN EXPERIENCE

Understanding how the life circumstances & prospects of people with disabilities are shaped will be explored. The critical framework for how technologies reveal individual experiences with disability, notions of citizenship, gender, sexuality, identity & accessibility will be introduced.

HIST 268-32 SEMINAR: AMERICAN ETHNIC IDENTITIES

Meanings of "ethnicity" in the 20th-century U.S. & their connection to histories of race relations & immigration will be explored. Examples of ethnic artifacts & historical interpretations of their contexts & meanings will be explored through reading, written work and development of a class website.

HIST 337-10 TOPICS IN HISTORY: AMONG THE AMERICANS

Takes the measure of contemporary American life and character and launches upon an adventure in moral imagination. Enters upon a longstanding conversation about American virtue and default, evil done and denied and the things worth saving.

HIST 337-13 TOPICS IN AMERICAN HISTORY: AMERICAN SPORTS HISTORY

Traces major developments in American sports history since the Civil War, including the professionalization of sports, race, women, mass media and free agency through lectures, films and discussion.

HIST 337-14 TOPICS IN AMERICAN HISTORY: EDIBLES: HISTORY OF FOOD AND CULTURE

Analyzes American cultures and society through the history of food production and consumption, investigating how the simple act of eating reveals interconnections. Considers food choices as biological, cultural, personal and political.

HIST 364-13 TOPICS IN ASIAN & PACIFIC HISTORY: JAPAN'S WORLD WAR II

Examines World War II through the lens of Japanese analysts and observers and moves beyond "us vs them" dichotomies to explore world historical themes such as militarism, nationalism, imperialism, total war and racism.

HIST 365-12, 13 TOPICS IN ASIAN & PACIFIC HISTORY: JAPAN'S WORLD WAR II

Examines World War II through the lens of Japanese analysts and observers and moves beyond "us vs them" dichotomies to explore world historical themes such as militarism, nationalism, imperialism, total war and racism.

HIST 367-10 AUSTRALIAN HISTORY

Using contemporary issues in Australia-race, immigration, popular culture, gender, politics, foreign policy & the environment-the course explains the historical origins of issues & provides critical analysis.

HIST 400-10 CAPSTONE: ASIAN HISTORY: U.S. - CHINA RELATIONS

U.S.-China relations from 1784 to present will be discussed including the process in which the U.S. & China moved from friends to enemies during the past 2 centuries. Major historical events affecting the American, Chinese & East Asian history will be explored.

HIST 400-20 HISTORY CAPSTONE SEMINAR: CROSS-DRESSING, IDENTITY AND GENDER IN HISTORY

Focus on questions of identity and gender and NOT sexuality or sexual preference through the use of plays, novels, memoirs, movies and more to examine the construction and development of gender distinctions from antiquity to the present.

HIST 400-30 CAPSTONE: POLITICAL ECONOMY OF THE MODERN U.S.

Introduces the managerial revolutions attendant upon the late 19th century advent of corporate capitalism; the changing face of modern opportunity & the characteristics of contemporary elites, among other subjects.

HLPR - Health Promotion**HLPR 467-11 PUBLIC HEALTH IN PRACTICE**

Examines factors that lead to health inequities i.e.; educational, economic, disadvantage, food insecurity, trauma, and isolation. Explores the dilemma confronting policymakers, providers, and community members, through cases and presentations. Exposure to community engagement.

HLTH – Health**HLTH 667-10 EMPATHY & AFFECT RECOGNITION FOR HEALTHCARE PROFESSIONALS: A MINDFUL APPROACH**

This is a hybrid (in-class/online) course that will engage students in interdisciplinary approaches to understanding the experience of empathy and being an empathic provider, emotions and recognizing emotional states in others, as well as the fundamentals of mindfulness and mindful meditation.

ITAL – Italian**ITAL 367-070 INTERNSHIP**

120-150 hours of non-paid, graded, credit-bearing employment experience at an Italian company, non-profit, or other organization, with academic expectations such as a journal and final report. Guided oversight by JCU faculty. Requires an application and employer interview; placement not guaranteed.

MALS - Liberal Studies

MALS 626-10 STUDIES IN CONTEMPORARY CULTURES:: AMERICAN NIGHTMARES

There is tension in our culture between our aspirations, idealized by the notion of the American Dream, and our fears that things are--or are on the verge of--getting worse. We might call these fears American Nightmares. Seminar explores these concerns about inequality, injustice, conspiracies, etc.

MALS 667-11 VESTED INTEREST: IDENTITY, GENDER & CLOTHES IN HISTORY

Examines clothing and gender ambiguity throughout history. Uses the manipulation of identity and gender roles as portrayed in plays, novels, memoirs, movies and more, to examine the construction and changes in distinctions rooted in dress, from antiquity to the present.

MAST - Marine Studies

MAST 267-11 BIOSTATISTICS FOR MOLECULAR ECOLOGY OF MARINE ENVIRONMENTS

Introduces the fundamental practices of statistics, emphasizing methods used in marine sciences. Topics - exploratory data analysis, correlation, regression, analysis of variance, analysis of frequencies, statistical graphics, basic experimental design & modern computer-intensive statistical methods

MAST 667-27 ECONOMICS AND HUMAN COUPLING

Concerned w/coupling of human & natural systems in economics. It's intended to introduce students to the idea of coupling in economics & is suited for those with little/no background in economics looking to explore or those w/background in economics looking for applications tied to nature.

MATH – Mathematics

MATH 267-12 INTEGRATED CALCULUS 1A

Integrates Calculus and PreCalculus.

MATH267-10, 11 INTEGRATED CALCULUS 1B

Integrates Calculus and PreCalculus.

MATH 667-10 TOPOLOGICAL DATA ANALYSIS

Topological methods in data analysis. Network analysis, multi-layer networks, visualization and community detection. Simplicial models for data, persistent homology, topological statistics and null models, Methods such as quasi-periodicity detection, shape and image analysis, multi-dimensional persistence. Suggested course understanding; MATH349, MATH243, MATH350 and CISC 108.

MATH 829-10 INTRODUCTION TO WAVELET ANALYSIS

Continuous and discrete Fourier transforms; continuous and discrete wavelet transforms. Orthonormal bases and frames in general. Wavelet bases. Multisolution Analysis; constructing Shannon, Daubechies and spline wavelets. Signal processing; application to data/image compression and denoising. Some background in Real Analysis and Linear Algebra, or permission of the instructor.

MATH 829-11 TPCS: BOOLEAN FUNCTIONS & THEIR APPLICATIONS

Finite fields and vector spaces. Polynomials & functions; specialization to Boolean functions, especially perfect non-linear & almost perfect non-linear, bent, differentially k-uniform and more. Examples and construction techniques. Standard applications.

MEEG - Mechanical Engineering

MEEG 867-11 NONLINEAR PROGRAMMING

Provide a comprehensive treatment of optimality conditions, Lagrange multiplier theory, and duality theory. Applications will be focusing on control, communications, and resource allocation problems.

MSEG - Materials Science & Engineering

MSEG 667-19 MACROMOLECULAR DESIGN AND BIOCONJUGATIONS

Provides an examination of strategies for sequence-specific orthogonality (e.g., "click" chemistry), protection and deprotection schemes, convergent versus divergent syntheses, grafting to versus grafting from approaches, solid-phase synthesis, polymer architectures, and purification.

MSEG 867-14 MATERIALS FOR OPTICS, NANOPHOTONICS, AND PLASMONICS

Cover the optical properties of bulk materials and low-dimensional structures including quantum wells and dots. We will discuss emerging technologies such as photonic crystals, plasmonics, metamaterials, and nanophotonics. New materials for optics will also be presented.

MUSC- Music

MUSC 367-10 SONGWRITING

Designed to be an authentic experience of a songwriting culture (e.g., songwriting circle). Engages students in sharing of original works within genres of music in which they identify. Compose and perform original songs, as well as participate in collaborative feedback.

NSCI – Neuroscience

NSCI 467-12 NEUROSCIENCE LAB

Lab course that aims to provide neuroscience majors and minors with hands-on opportunities. From brain dissections to behavioral experiments, students will explore aspects of neuro-anatomy, neuro-physiology, animal behavior, experimental methods, and surgical techniques.

NSCI 467-13 NEUROLOGICAL DISORDERS

Consideration of the effects of damage to the nervous system in human beings, including both common disorders and rarer conditions that provide a window into complex aspects of brain function.

NSCI 467-15 SPATIAL COGNITION

This seminar will focus on the brain mechanisms that allow us to acquire information about our environment and use that information to navigate in space.

NSCI 467-80 LEARNING, MEMORY, & THE BRAIN

Surveys a variety of topics in the neurobiology of learning and memory. A multiple memory systems perspective is used to illustrate the diversity of brain systems and behavioral processes that govern overt behavior, affective states, and cognition in humans and experimental animals.

NTDT - Nutrition & Dietetics

NTDT 367-11 CULINARY MEDICINE

Blended course provides online learning, experiential lab experience, problem-based case studies in the practical application, translation of nutrition recommendations into food prep. Topics include basic

preparation principles, recipe modifications for nutrition-related medical conditions/concerns. Suggested understanding of NTDT200.

NURS – Nursing

NURS 367-10 INTERPROFESSIONAL HEALTHCARE INFORMATICS

Introduces students to healthcare informatics and helps them learn to work in interprofessional groups seeking innovative informatics solutions, to solve complex healthcare problems. Faculty from Nursing, Health Sciences and Public Policy encourage entrepreneurial thinking and learning.

PHIL – Philosophy

PHIL 465-10, 80 POLITICAL AUTHORITY AND OBLIGATION

States claim vast powers: they imprison wrongdoers, collect taxes, regulate markets, conscript soldiers, and so on. But state officials are just ordinary fallible human beings. What entitles these people as officials to exercise these powers over others? What justifies a state's claim to authority?

PLSC - Plant Science

PLSC 267-10 WETLAND MONITORING AND ASSESSMENT

Topics include hydrologic & biogeochemical monitoring, rapid assessment of ecological services & wetland condition, rapid assessment of hydrology, wetland classification, & wetland delineation. This is a hands-on course with considerable time spent in the field applying accepted methods.

PLSC 367-11 CONTROLLED ENVIRONMENT AGRICULTURE FOR URBAN ENVIRONMENTS

Hands-on and lecture-based introduction to controlled environment agriculture including the use of hydroponics for urban food production.

POSC – Political Science

POSC 467-12 CULTIVATING ENTREPRENEURSHIP

Develops skills of cultivating an entrepreneurial mindset with a specific focus on the impact of entrepreneurship within governance structures of public institutions and in all stages of the policy making process.

POSC 467-70 POWER, INEQUALITY & SOCIAL POLICY

Examines the development of the American welfare state, and current conflicts and debates about its performance and future. Improves students' understanding of the history of social welfare policies in the U.S. and the challenges associated with changing these policies.

POSC 467-80 PREJUDICE, STEREOTYPING, & DISCRIMINATION

Examines stereotyping, prejudice, discrimination, and minority experience from a social psychological perspective. Highlights the impact of self-relevant identities and political ideologies from a scientific perspective.

PSYC – Psychology

PSYC 467-11 ADVANCED RESEARCH METHODS

An advanced course in correlational and experimental research in the behavioral and social sciences with an emphasis on applied data analysis using statistical regression-based methods. Work in teams to critically read empirical research and formulate novel hypotheses.

PSYC 467-12 ANTISOCIAL MINDS

Focuses on understanding the origins of antisocial and criminal behavior from a psychological perspective. It covers a range of theoretical and empirical material so as to begin to understand the development of the 'antisocial mind.'

PSYC 467-80 PREJUDICE, STEREOTYPING, AND DISCRIMINATION

Examine stereotyping, prejudice, discrimination, and minority experience from a social psychological perspective. Moreover, the course will highlight the impact of self-relevant identities and political ideologies from a scientific perspective.

PSYC 867-10 PSYCHOLOGICAL STRESS AND THE PERIPHERY

This discussion based course will help students learn about the various ways that psychological stress can impact peripheral physiology in humans, including via the cardiovascular system, the immune system, and the HPA axis.

PSYC 867-13 ANALYSIS OF CHANGE

A review of issues and methods for the analysis of change in behavioral and social sciences. Rationale, utility, and overlap of newer methods including latent growth approaches, latent change approaches, multilevel modeling, and growth mixture modeling.

SOCI – Sociology**SOCI 367-70 SOCIOLOGY OF SOUTHERN ITALY**

Examination of the social history and contemporary realities of Southern Italy. Focuses on the many paradoxes which continue to characterize the area; such as the influence of history and tradition alongside the often rapid social changes which have occurred since World War II.

SPAN – Spanish**SPAN 367-074 GRAMMAR & ORAL COMMUNICATION**

Strengthens skills in grammar and vocabulary in preparation for advanced courses. Includes oral exposes, discussion of articles and videos, textual analysis and compositions.

SPAN 467-070 ENGLISH-SPANISH TRANSLATION 1

Develops the skills for the translation process by means of the analysis and practice of aspects relative to the use of documentation, translation strategies, the tools and recourses for the translator, pragmatic and textual considerations, among others.

SPAN 467-71 APPLIED LINGUISTICS IN TEACHING SPANISH

The study of language and principles of Spanish linguistics for Spanish educators.

SPAN 467-72 TEACHING IN BILINGUAL SCHOOLS

Familiarizes the student with basic questions related to bilingual education in which there are three main aspects.

SPAN 467-073 ENGLISH-SPANISH TRANSLATION II

Develops the skills necessary for the translation process, or they will perfect those acquired in the Translation 1 course, through the analysis and interpretation of aspects relating to the use of documentation, translation strategies, the tools and recourses for the translator, among others.

SPAN 467-74 SEM: 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.

UAPP - Urban Affairs & Public Policy**UAPP 301-10 U.S. LGBTQ POLICY**

Explores current legal, social and political landscape for LGBTQ rights throughout the U.S. Includes license discrimination against the transgender community, the push for nationwide LGBTQ-inclusive civil rights protections, and how these policies/strategies impact transgenders and others.

UAPP 467-70 POWER, INEQUALITY & SOCIAL POLICY

Examines the development of the American welfare state, and current conflicts and debates about its performance and future. Improves students' understanding of the history of social welfare policies in the U.S. and the challenges associated with changing these policies.

UAPP 467-19 URBAN & REGIONAL ANALYSIS

Addresses data sources, methods, and skills to analyze regions as economic, social, and spatial systems. Using data management and statistical and geospatial analysis tools to study regional conditions at scales ranging from neighborhoods to metropolitan areas.

UAPP 667-11 MACHINE LEARNING FOR PUBLIC POLICY

Surveys common machine learning (including AI) techniques used in analyses of academic/public/private sector data that impact decision making. Focus on qualitative & quantitative understanding of machine learning & appropriate use of data including uncertainties, model bias, & ethical considerations