

First-Year (Freshman) Seminars Spring 2019

The Sociology of Black Community

Camille Charles, Professor of Sociology, Africana Studies and Education

This course explores a broad set of issues defining important aspects of the Black/African American experience. In addition to the “usual suspects” (e.g., race, socioeconomic status, poverty, gender, and group culture), we also think about matters of health and well-being, the family, education, and identity in Black/African American communities. Our goal is to gain a deeper sociological understanding and appreciation of the diverse and ever-changing life experiences of Blacks/African Americans.

AFRC 008 401 | SOCI 028 401

T | 0130PM-0430PM | VAN PELT LIBRARY 305

Fulfills: Sector I: Society | Cultural Diversity in the U.S.

Anthropology of the Senses

Lauren Ristvet, Associate Professor of Anthropology

Smelling, seeing, hearing, tasting, and touching are the foundation of our empirical knowledge of the world, providing the most basic information we have. These senses are biological yet our sense perception - how we see, smell, taste, hear, and touch - is both shaped by and shapes our different cultures. As a result, they provide a useful framework to investigate a classic problem in anthropology, the intersection between biology and culture. This class investigates the senses as cultural and historical phenomena, drawing on readings from a range of disciplines, including anthropology, history, psychology, musicology, and cultural studies.

ANTH 109 301

MW | 0200PM-0330PM | UNIVERSITY MUSEUM 329

Fulfills: Sector IV: Humanities & Social Sciences

Collecting and Displaying Classical Art

Ann Brownlee, Adjunct Assistant Professor and Associate Curator, Mediterranean Section, Penn Museum - Feith Family Seminar

In this seminar, we will consider the classical collections in the great 19th century European and American museums, with particular attention to issues of provenance and display. We will look at, for example, the collections of Greek and Roman art in the British Museum, the Louvre, the Vatican, the Glyptothek in Munich, the Museum of Fine Arts in Boston, and New York's Metropolitan Museum of Art. With this analysis as background, we will move on to study the formation of the classical collection in the University of Pennsylvania Museum in the second half of the semester. Much of this material comes from archaeological excavations sponsored by the Museum, but we will concentrate on the many small classical collections, formed in the late 19th century, which are now in the Museum. We will look particularly at the collectors, most of them prominent Philadelphians, using well-known collectors such as John G. Johnson and Clara Bloomfield Moore as models. This is an object-based learning course, and the Museum's classical collection will serve as an important resource, as will the documentation preserved in both the Museum's Archives and in archival repositories throughout the city several of which we will visit. Finally, we will consider how these collections were displayed both in the Museum and in the Philadelphia houses of the collectors.

ARTH 100 301

W | 0200PM-0500PM | WILLIAMS HALL 217

Fulfills: Sector III: Arts & Letters

Music & the Brain

Michael Kaplan, Lecturer in the Biological Basis of Behavior

Every human culture that has ever been described makes some form of music. The musics of different cultures cover a wide range of styles, but also display fascinating similarities, and a number of features are shared by even the most disparate musical traditions. Within our own culture, music is inescapable-there are very few individuals who do not listen to some form of music every day and far more who listen to music virtually all day long. Appreciation of music comes very early: newborns prefer music to normal speech and mothers all over the world sing to their babies

in a fundamentally similar way. And yet, despite this seeming ubiquity, the real origin and purpose of music remains unknown. Music is obviously related to language, but how? Why do so many cultures make music in such fundamentally similar ways? What goes into the formation of music “taste” and preferences? Does music have survival value, or is it merely “auditory cheesecake”, a superfluous byproduct of evolution as some critics have maintained? What is the nature of musical ability and how do musicians differ from non-musicians? In this course, we will look for answers by looking at the brain. Almost 200 years of scientific research into brain mechanisms underlying the production and appreciation of music is beginning to shed light on these and other questions. Although the sciences and the arts are often seen as entirely separate or even in opposition, studying the brain is actually telling us a lot about music, and studying music is telling us just as much about the brain.

BIBB 060 301

TR | 0130PM-0300PM | GODDARD LAB 100

Fulfills: Sector V: Living World

Ecological Consequences of Climate Change

Arthur Dunham, Professor of Biology

Students will read and discuss seminal papers on a number of major topics in the ecology of climate change and the long-term consequences of the effects of climate change on ecological systems. Some of the topics include: effects of climate change on species distributions, disruption of plant pollinator systems and the consequences for ecosystem composition and stability, changes in the distribution and epidemiology of insect-borne infectious diseases, and the consequences of sea level rise and the increased intensity and frequency of severe weather events. Other topics may be covered. Grading will be based on participation in discussions, a paper on an approved topic, and a presentation on the topic of the student’s paper.

BIOL 010 301

MW | 0200PM-0330PM | LEIDY LAB 109

Fulfills: Sector VII: Natural Sciences & Mathematics

Structural Biology

Ponzy Lu, Professor of Chemistry

This course will explain in non-mathematical terms how essentially all biological properties are determined by the microscopic chemical properties of proteins. It will also explain how research results, especially those of structural biology, are presented to its various audiences.

CHEM 022 301

TR | 0800AM-0900AM | CHEMISTRY BUILDING B13

Fulfills: Sector VII: Natural Sciences & Mathematics

Freshman Seminar: Modern Sci-fi Cinema

Christopher Donovan, House Dean, Gregory College House

Science Fiction has been a cinematic genre for as long as there has been cinema—at least since Georges Melies’s visionary Trip to the Moon in 1902. However, though science fiction films have long been reliable box office earners and cult phenomena, critical acknowledgement and analysis was slow to develop. Still, few genres reflect the sensibility of their age so transparently—if often unconsciously—or provide so many opportunities for filmmakers to simultaneously address social issues and expand the lexicon with new technologies. Given budgetary considerations and the appetite for franchises, science fiction auteurs face a difficult negotiation between artistic expression and lowest common denominator imperatives, the controversy over Terry Gilliam’s Brazil (1985) being perhaps the most infamous example. Nevertheless, many notable filmmakers have done their most perceptive and influential work in the scifi realm, including Gilliam, Ridley Scott, David Cronenberg, Paul Verhoeven, James Cameron and Alfonso Cuarón. This course will survey the scope of contemporary science fiction cinema, after looking first at seminal works like Metropolis (1927) and 2001: A Space Odyssey (1968) that continue to cast their shadow over the genre. We will then devote considerable time to a pair of more modern films, Scott’s Alien (1979) and Blade Runner (1982), which drew from earlier movements (German expressionism, noir), influenced new ones (cyberpunk) and inspired a rare wave of academic discourse. Over the course of the term we will sample smaller, more independent-minded

projects, such as Michel Gondry's *Eternal Sunshine of the Spotless Mind* (2004) and Spike Jonze's *Her* (2013) as well as higher profile but much more risky epics from filmmakers such as Steven Spielberg and Christopher Nolan.

CIMS 016 301

MW | 0300PM-0430PM | FISHER-BENNETT HALL 141

Fulfills: Sector III: Arts & Letters

Rome & America

Campbell Grey, Associate Professor of Classical Studies

This course explores a range of social structures and contexts, cultural understandings and intellectual practices where the influence of Roman exemplars is discernible in both historical and present-day America. It presents students with Roman and American materials placed in explicit or implicit dialog with one another: e.g., descriptions and discussions of political processes and structures; attitudes towards games, public entertainments, and communal cohesion; rhetorics and vocabularies of public space. Among other tasks and projects, students will stage a 'reimagination' of the Constitutional (Philadelphia) Convention of 1787, which resulted in the United States Constitution. They will also emulate ancient moralists and satirists, who attacked Rome's 'Bread and Circuses' culture, by focusing their attention upon comparable practices in modern America.

CLST 029 301

MW | 0330PM-0500PM | CLAUDIA COHEN HALL 493

Fulfills: Sector II: History & Tradition | Cross Cultural Analysis

Topics in Literature: Copyright and Culture

Peter Decherney, Professor of English

In this seminar, we will look at the history of copyright law and explore the ways that copyright has both responded to new media and driven art and entertainment. How, for example, are new media (books, photography, recorded music, film, video, software, video games, and the internet) defined in relation to existing media? How does the law accommodate shifting ideas and circumstances of authorship? What are the limits of fair use? And how have writers, artists, engineers, and creative industries responded to various changes in copyright law? A major focus of the course will be the lessons of history for the current copyright debates over such issues as file sharing, the public domain, fandom, archives, and fair use.

ENGL 015 401 | CIMS 015 401

MW | 0200PM-0330PM | LERNER CENTER (MUSIC BUILDING 210)

Fulfills: Sector IV: Humanities & Social Sciences

First Person Storytelling

Jamie-lee Josselyn, Lecturer in Creative Writing

This interactive, collaborative nonfiction workshop will focus on the way a writer constructs characters in personal essays and other modes of creative nonfiction writing and how readers engage with these characters. Students will examine—through their own work and others'—how nonfiction writers must shape information to render people on the page in a way that is honest and engaging. Much of this workshop will be spent on the "I" character, the first-person perspective. How do we portray ourselves, both when we're at the center of our stories and when we're on the edges looking in? How do we decide what to include and how do we justify what we exclude? We will think about how to integrate what we know—and, just as importantly, what we don't know—about ourselves and the world now into stories that happened in the past. We will look to the writers Joan Didion, Phillip Lopate, Mary Karr, M.K. Asante and others for help when we need it. We will also consider the difference between written and oral storytelling in this class, which will incorporate field trips to story slams hosted by the Moth and First Person Arts here in Philadelphia. There will definitely be extra credit for those brave enough to get up on stage at these events! (But don't worry, introverts: public performance is not required.) Additionally, we will explore community-based storytelling projects such as the Six-Word Memoir, StoryCorps, Storiez, and other literary programming based at the Kelly Writers House. We will host organizers of these collaborations in class for conversations about how the projects came to be. The class will be responsible for planning and executing its own community-based storytelling project that will culminate in April with an event/exhibition, either on campus or elsewhere in Philadelphia. A significant amount of

our class time will be spent discussing student work. Revision will be essential. In addition to writing assignments throughout the semester, students will complete a final portfolio of revised work, along with a critical commentary on the community-based project.

ENGL 016 301

M | 0200PM-0500PM | CTR FOR PGMS IN CONTEMP WTG - 111

Fulfills: Sector III: Arts & Letters

How Earth Works

Alain Plante, Professor of Earth and Environmental Science

This course will explore the physical science of the Earth's environment and human interactions with it. Coverage will include the Earth's various environmental systems, various environmental problems, and the direct and indirect causes of these environmental problems. The Freshman seminar will mirror the ENVS100 recitation, and have additional discussions and social media projects.

Students must enroll in both the Freshman Seminar (section 301, below) and each of the following:

ENVS 100.001 (lec) |TR|9:00 a.m. - 10:30 a.m.

ENVS 100.201 (no separate meeting but registration is required.)

ENVS 100 301

M | 1200PM-0130PM | VAN PELT LIBRARY 113

Fulfills: Sector VI: Physical World

Leonardo Da Vinci: From Renaissance Florence to Assassin's Creed

Marina Johnston, Lecturer in Italian Studies

Leonardo da Vinci is one of the most famous artists of the Italian Renaissance but art was not his primary interest, as testified by the many notebooks he wrote on a great variety of subjects, from architecture to hydraulic and mechanical engineering, to ballistics, painting, biology, anatomy, and so on. In fact, it is through his writings that we can truly get to know him and learn to distinguish between the historical Leonardo, and the mythical painter, inventor, and alchemist he became in popular culture, landing a role, for example, in Dan Brown's *The Da Vinci Code* and in the video game *Assassin's Creed*. While we will acknowledge the myth, in this seminar, we will focus primarily on his own writings to learn what the real Leonardo ate and what he read; about the many jobs he held, particularly at the Sforza court in Milan; and especially how art and science are inextricably linked in his thought.

ITAL 100 401 | COML 107 401

MWF | 0200PM-0300PM | FISHER-BENNETT HALL 141

Fulfills: Sector IV: Humanities & Social Sciences

Proving Things: Algebra

Ron Donagi, Professor of Mathematics

This course focuses on the creative side of mathematics, with an emphasis on discovery, reasoning, proofs and effective communication, while at the same time studying arithmetic, algebra, linear algebra, groups, rings and fields. Small class sizes permit an informal, discussion-type atmosphere, and often the entire class works together on a given problem. Homework is intended to be thought-provoking, rather than skill-sharpening.

Students must enroll in both the seminar (section 301, shown below) and one of the labs (101 or 102, below).

MATH 203.101 (lab) |M| 6:30 to 8:30 pm

MATH 203.102 (lab) |W| 6:30 to 8:30 pm

MATH 203 301

TR | 0130PM-0300PM | DAVID RITTENHOUSE LAB 4C4

Math in Age of Info: Math in the Media

Jerry Kazdan, Professor of Mathematics

This course counts as a regular elective for both the Mathematics Major and Minor. This is a course about mathematical reasoning and the media. Embedded in many stories one finds in the media are mathematical questions as well as implicit mathematical models for how the world behaves. We will discuss ways to recognize such questions

and models, and how to think about them from a mathematical perspective. A key part of the course will be about what constitutes a mathematical proof, and what passes for proof in various media contexts. The course will cover a variety of topics in logic, probability and statistics as well as how these subjects can be used and abused.

MATH 210 301

TR | 0130PM-0300PM | DAVID RITTENHOUSE LAB 4C8

Fulfills: | Quantitative Data Analysis

Sound Artifacts: The Materiality of Musical Cultures

Lauren Flood, Mellon Postdoctoral Fellow in the Humanities, Wolf Humanities Center

What is the “stuff” of music and sound? In this class, we dig past sound’s ephemeral and ineffable qualities, connecting these to the material culture behind what we hear. Topics will span recording equipment, live performance gear, ancient and modern musical instruments, archaeological artifacts, labor and work songs, artisanship and entrepreneurship, the Maker Movement and DIY cultures, electronic waste and recycled materials, architectural acoustics, ecology and sounds of nature, and “container” technologies like mp3s and rare archival record collections. Looking globally, we will ask: How do non-Western cultures source materials for instruments and conceive of the materiality of music-making? What are the roles of musical materials in times and places characterized by excess or scarcity? How do such materials circulate, and what happens when they can’t (for instance, due to international treaties, war, or power outages)? Occasionally, we will delve deeper into the science and technology that contributes to sound production. Through local field trips, we will also learn how the makers of musical materials work and how they use acoustic cues in their craft.

MUSC 018 301

M | 0200PM-0500PM | FISHER-BENNETT HALL 406

Fulfills: Sector IV: Humanities & Social Sciences

Music in Urban Spaces

Molly McGlone, Associate Director and Assistant Dean of Academic Affairs

Open only to students enrolled in this seminar in Fall 2018. Music in Urban Spaces explores the ways in which individuals use music in their everyday lives and how music is used to construct larger social and economic networks that we call culture. We will read musicologists, cultural theorists, urban geographers, sociologists and educators who work to define urban space and the role of music and sound in urban environments, including through music education. While the readings make up our study of the sociology of urban space and the way we use music in everyday life to inform our conversations and the questions we ask, it is within the context of our personal experiences working with music programs at West Philadelphia High School or Henry C. Lea Elementary, both inner city neighborhood schools serving economically disadvantaged students, that we will begin to formulate our theories of the contested musical micro-cultures of West Philadelphia. This course is over two-semester where students register for .5cus each term (for a total of 1cu over the entire academic year) and is tied to the Music and Social Change Residential Program in Fisher Hassenfeld (<http://fh.house.upenn.edu>)

MUSC 018 401 | URBS 018 401

F | 0200PM-0400PM | GOLDBERG CH - FOERDERER BUILD 205

Fulfills: Sector IV: Humanities & Social Sciences | Cultural Diversity in the U.S.

Honors Physics II: Electromagnetism and Radiation

Charles Kane, Professor of Physics

This course parallels and extends the content of PHYS 151, at a somewhat higher mathematical level. Recommended for well-prepared students in engineering and the physical sciences, and particularly for those planning to major in physics. Electric and magnetic fields; Coulomb’s, Ampere’s, and Faraday’s laws; special relativity; Maxwell’s equations, electromagnetic radiation. Credit is awarded for only one of the following courses: PHYS 009, PHYS 102, PHYS 151, or PHYS 171. Students with AP or Transfer Credit for PHYS 092 or PHYS 094 who complete PHYS 171 will thereby surrender the AP or Transfer Credit.

Students must enroll in both the seminar (PHYS 171.301, shown below) and one of the labs (PHYS 171.102, 103, 104 immediately below).

PHYS 171.102 (lab) | T | 0300PM - 0500PM

PHYS 171.103 (lab) | R | 0300PM - 0500PM

PHYS 171.104 (lab) | F | 0300PM - 0500PM

PHYS 171 301

MWF | 1000AM-1100AM | DAVID RITTENHOUSE LAB A6 M | 0200PM-0300PM | DAVID RITTENHOUSE LAB A6

Fulfills: Sector VI: Physical World

War on Drugs in Latin America

Dorothy Kronick, Assistant Professor of Political Science

The United States government has spent tens of billions of dollars on policies aimed at reducing the flow of illicit drugs from Latin America and the Caribbean. In this seminar, we will ask: What motivates these policies? On what were these billions of dollars spent? How did these policies affect the supply of drugs to the United States? How did these policies affect violence in Latin American countries? How did they shape the revenues and political power of drug trafficking organizations? Through readings, discussion, and writing, we will analyze one of central tenets of the relationship between the United States and Latin America.

PSCI 010 401 | LALS 107 401

T | 0130PM-0430PM | MCNEIL BUILDING 582

Fulfills: Sector I: Society

Sociology of Religion

Herbert Smith, Professor of Sociology

Most of us are pretty good amateur sociologists, because sociology is the study of human society; human society is people organized in groups (families, churches, clubs, schools, civic associations, nation-states) and their relations with one another (people with people, people with groups or institutions)... we're all "doing it" at one level or another. It is also the case that sociology -- the subject, the field, the science -- provides some useful tools for understanding how society operates, and a sociological perspective can teach us some things that are not obvious from our day-to-day participation in social life. So this is a course about the sociology of religion, a subject that has a lot to do with belief, with meaning, and with the very organization of society itself; and we will learn a lot about religion, from a sociological perspective (to what extent is belief an individual versus a social phenomenon? where do new religions -- sects -- come from and how do they become churches? Why does religion sometimes thrive and other times drift into the background?). But it is also a way to introduce first-year students to sociology and the sociological perspective; to fundamental issues in the social sciences; and --- this is the great advantage of a Freshman Seminar -- to the responsibilities and rewards of intellectual life at a university.

SOCI 041 301

T | 0130PM-0430PM | WILLIAMS HALL 320

Fulfills: Sector I: Society

Inequality in Daily Life

Annette Lareau-Freeman, Professor of Sociology

Although most Americans strongly believe that their accomplishments are the result of their hard work and talent, accidents of birth shape life chances. In this sociology course, we will learn about the amount of social inequality in the United States today, as well as the ways in which class and race inequality are interwoven. We will read about inequality in a variety of spheres, education, neighborhoods, and family life. We will pay particular attention to the experiences of wealthy families since they provide a window into the power of social class. We will also look at the experiences of the upwardly mobile. Course requirements include weekly readings, a five-page paper, an essay

midterm and final. In addition, you will have some exercises such as conducting an interview with someone from a different social class position than your own.

SOCI 041 302

W | 0200PM-0500PM | MCNEIL BUILDING 110

Fulfills: Sector I: Society | Cultural Diversity in the U.S.

Work, Technology and Society

Benjamin Shestakofsky, Assistant Professor of Sociology

This course draws on sociological and social scientific research and theorizing to conceptualize the complex and dynamic relationship between work and technology. Rather than viewing technology as an immutable force that sweeps across societies and leaves social change in its wake, we will examine how the design, implementation, and outcomes of technological change are imbricated in political, economic, and social forces. We will mostly, though not exclusively, focus on developments in and case studies of work and technology in the United States. We will begin by examining theoretical perspectives on the historical interplay between work and technology. Then, we will consider contemporary issues, building dialogues between our theoretical groundwork and empirical evidence to trace continuities and disjunctures. By the end of the course, you will be equipped to interrogate the role of technology in capitalism's past, understand its relation to our present age of digital disruption, and imagine the possibilities for our uncertain future.

SOCI 041 303

W | 0200PM-0500PM | COLLEGE HALL 311F

Fulfills: Sector I: Society

Vagelos Integrated Program in Energy Research (vipr) Seminar, Part I

Andrew Rappe, Professor of Chemistry; John Vohs, Professor of Chemical and Biomolecular Engineering

This is the first part of the two-semester seminar designed to introduce students to the VIPER program and help them prepare for energy-related research. Research articles on various energy-related topics will be discussed, and students will be guided toward their research topic selection. Library research, presentation of data, basic research methods, research ethics, data analysis, advisor identification, and funding options will also be discussed. Sample energy topics discussed will include: Applications of nanostructured materials in solar cells; solid oxide fuel cells; global climate modeling; radiant heat transfer; nanocrystal-based technologies for energy storage; photo-bioreactor systems for mass production of micro-algae; advanced rare earths separations chemistry; modeling of oxides for solar energy applications; and electronic transport in carbon nanomaterials.

VIPR 120 301

T | 1100AM-1200PM | CHEMISTRY BUILDING 119