SCIENCE AND TECHNOLOGY STUDIES (Div II)

Chair: Professor Jason Josephson Storm

Advisory Committee: Professors: M. Altschuler, D. Dethier, L. Kaplan, B. Mladenovic, J. Thoman. Visiting Assistant Professor: G. Shoffstall.

Science and Technology Studies (SCST) is an interdisciplinary program concerned with science and technology and their relationship to society. In addition to the historical development and a philosophical understanding of the ideas and institutions of science and technology; Science and Technology Studies also examines their ethical, economic, social, and political implications.

The role that science and technology have played in shaping modern industrial societies is generally acknowledged, but few members of those societies, including scientists and engineers, possess any understanding of how that process has occurred or much knowledge of the complex technical and social interactions that direct change in either science or society. The Science and Technology Studies Program is intended to help create a coherent course of study for students interested in these questions by providing a broad range of perspectives. At present, courses are offered which examine the history or philosophy of science and technology, the sociology and psychology of science, the economics of research and development and technological change, science and public policy, technology assessment, technology and the environment, scientometrics, and ethical-value issues.

To complete the requirements of the program, students must complete six courses. The introductory course and senior seminar are required and three elective courses are chosen from the list of designated electives. Students may choose to concentrate their electives in a single area such as technology, American studies, philosophy, history of science, economics, environment, sociology, current science, or current technology, but are encouraged to take at least one elective in history, history of science, or philosophy. The sixth course necessary to complete the program is one semester of laboratory or field science in addition to the College’s three-course science requirement. Other science courses of particular interest include Chemistry 110 and Biology 134.

The program is administered by a chair and an advisory committee of faculty who teach in the program. Students who wish to enroll normally register with the chair by the fall of their junior year.

Elective Courses

Students can check with the program chair to see if other courses not listed here might count as electives.

- ASTR 336/HSCI 336 Science, Pseudoscience, and the Two Cultures
- BIOL 134/ENVI 134 The Tropics: Biology and Social Issues
- CHEM 113 Chemistry and Crime: From Sherlock Holmes to Modern Forensic Science
- ENVI 101F Nature and Society: an Introduction to Environmental Studies
- ENVI 307/PSCI 317 Senior Seminar: Perspectives on Environmental Studies
- HIST 374 American Medical History
- PHIL 209 Philosophy of Science
- PHIL 213T(F) Biomedical Ethics
- PHIL 244T(S) Environmental Ethics
- SOC 368 Technology and Modern Society

Courses of Related Interest

- AMST 216(S) Environmental Humanities: Theory and Practice
- ANSO 205 Ways of Knowing
- ANTH 271 (F) Medicine, Technology, and Power
- ARTH 257 Architecture 17001900
- ASTR 340 Great Astronomers and Their Publications
- BIOL 218T DNA, Life, and Everything
STUDY ABROAD

FAQ

Students MUST contact departments/programs BEFORE assuming study away credit will be granted toward the major or concentration.

Can your department or program typically pre-approve courses for major/concentration credit?

Yes, in some cases, if appropriate course information is available in advance (e.g. syllabi and/or course descriptions), though students should be sure to contact the department.

What criteria will typically be used/required to determine whether a student may receive major/concentration credit for a course taken while on study away?

Complete syllabus and course description, including readings/assignments.

Does your department/program place restrictions on the number of major/concentration credits that a student might earn through study away?

No.

Does your department/program place restrictions on the types of courses that can be awarded credit towards your major?

No.

Are there specific major requirements that cannot be fulfilled while on study away?

No.

Are there specific major requirements in your department/program that students should be particularly aware of when weighing study away options? (Some examples might include a required course that is always taught in one semester, laboratory requirements.)

Yes. Be sure to check record of enrollment in Div 3 (sciences with labs) to satisfy program.

Give examples in which students thought or assumed that courses taken away would count toward the major or concentration and then learned they wouldn’t:
SCST 99 (W) Independent Study: Science and Technology Studies

Open to upperclass students. Students interested in doing an independent project (99) during Winter Study must make prior arrangements with a faculty sponsor. The student and professor then complete the independent study proposal form available online. The deadline is typically in late September. Proposals are reviewed by the pertinent department and the Winter Study Committee. Students will be notified if their proposal is approved prior to the Winter Study registration period.

Class Format: independent study

Distributions: (D2)

Winter 2019

IND Section: 01  TBA  Jason Josephson Storm

SCST 101 (S) Science, Technology, and Human Values

Crosslistings: HSCI101 / SOC201 / SCST101

Primary Crosslisting

This course offers an introduction to science and technology studies, or STS. A radically interdisciplinary field of inquiry, the roots of STS stretch through the philosophy, history, and sociology/anthropology of science and technology. Students will become acquainted with major STS schools, methodological strategies and research trajectories through intensive reading and analysis of classical and contemporary works in the field. Considerable attention will be devoted to exploring the nature of science and technology, their relationships to and interactions with one another, society and the natural world, and the influences these interactions exert in shaping what humans value. A fundamental goal of the course is to cultivate awareness and understanding of the social organization of technology and scientific knowledge production, and the technoscientific structuring of modern social life broadly. The course as such is aimed at attracting from all divisions those students who are intellectually adventurous and inclined to think critically about the place and prominence of science and technology in the modern world.

Class Format: seminar

Requirements/Evaluation: two or three short exercises, two papers (3-5 pages and 5-7 pages), and two hour exams

Prerequisites: none

Enrollment Limit: 25

Enrollment Preferences: first-years and sophomores

Expected Class Size: 20

Distributions: (D2)

Spring 2019

SEM Section: 01  MWF 8:30 am - 9:45 am  Grant Shoffstall

SCST 135 Politics after the Apocalypse

The zombies are coming! Climate change will destroy us! Bird-flu pandemic! To our horror and delight, reminders are everywhere that the end is near. Some of these projected apocalypses are alarmist, some fanciful...and others all too realistic. What shape will politics take after the apocalypse? What aspects of politics will endure the ravages of fire or pestilence? What new political realities might emerge on ground cleared by disaster? And what does it say about politics today that we are so eager to consume stories of states falling and bands of survivors scraping together a nasty, brutish and short existence? In this class, we reconsider what politics is and should be by contemplating accounts of its destruction and rebirth in television, film, literature, activism, social science, and critical theory. We will approach these sources as analogous to political theory's classic thought experiment of the "state of nature" and social contract. And we will consider what it tells us about our time that we are so eager to imagine ourselves at the beginning of the end. Class will be driven primarily by discussion. Students will have significant responsibility for setting the agenda for discussions through informal writing submitted prior to class. Two papers, one close-reading assignment, and one post-apocalyptic short story or video are required.
SCST 153 (S) Androids, Cyborgs, Selves (WI)
Crosslistings: ENGL153 / SCST153

Secondary Crosslisting

In this expository writing course, we will analyze and argue about how near-human or partly human bodies and intelligences are imagined in fiction and film. When do these bodies, these intelligences, improve the worlds in which they appear, and when do they threaten them? How are they gendered, how are they raced, and why? And what do they want? As we will see, authors in different cultural and technological contexts have imagined not-quite-human selves for different ends and in radically different ways. This course focuses on articulating these differences and developing significant claims about them in clear, argumentative prose. We will spend half or more of our class time discussing and practicing writing skills. Texts may include *R.U.R.*, "The Bicentennial Man," *Blade Runner*, *Metropolis (Suite 1: The Chase)*, and *Her*.

Class Format: seminar

Requirements/Evaluation: writing (four 5-page essays in multiple drafts) and discussion/participation

Extra Info: not available for the fifth course option

Prerequisites: none

Enrollment Limit: 12

Expected Class Size: 12

Distributions: (D2) (WI)

Distribution Notes: meets Division 1 requirement if registration is under ENGL; meets Division 2 requirement if registration is under SCST WI: This writing-intensive course is geared towards improving students’ analytical and argumentative prose in the context of studying literary and filmic fictions.

Spring 2019
SEM Section: 01 TR 8:30 am - 9:45 am Ezra D. Feldman

SCST 209 (S) Philosophy of Science
Crosslistings: SCST209 / PHIL209

Secondary Crosslisting

It is a generally held belief, in our time and culture, that science is the best source of our knowledge of the world, and of ourselves. The aim of this course is to examine the origins, grounds, and nature of this belief. We will analyze and discuss various accounts of scientific method, structure and justification of scientific theories, scientific choice, change, and the idea that scientific knowledge is progressive. The course will begin with the "received view" of science, advanced by logical empiricists, which assumes the objectivity and the rationality of science. We will then discuss philosophies of science which emerged out of various criticisms of this view - especially those of Popper, Lakatos, Kuhn and Feyerabend - and the challenges to the assumptions of scientific objectivity and rationality their works provoked. This discussion will naturally lead us to the relativist and social-constructivist views developed within contemporary science studies. Finally, we will analyze the current debate about cognitive credentials of science and proper approach to the study of science, which came to be known as "the science wars."

Class Format: seminar with a short lecture component in each class

Requirements/Evaluation: class attendance, preparedness and participation; three short assignments; three 5 pages long papers, the last of which will be the final paper, due a week after the end of classes
SCST 210 (S) Networks of Power: Technology in Human Affairs

Crosslistings: SCST210 / SOC210

Secondary Crosslisting

Do we control our technologies, or do our technologies control us? This course will explore different philosophies of technological progress, particularly the constructivist and determinist theories, by examining major technological innovations that shaped society over the past century, including electrification, automobiles and the highway system, radio and television broadcasting, and the internet and social media. Each of these innovations entailed the construction of a complex network designed to serve a mix of public and business interests, and each resulted in wide-ranging and often unforeseen changes to people's lives. Guided by pertinent readings in the history and philosophy of technology, we will look critically at the forms and consequences of technological change, seeking answers to a series of complex and important questions: Is the course of technological progress an inevitable byproduct of scientific and engineering advances, or is it contingent on social and political circumstances and choices? Does technological change reinforce the social and political status quo or challenge it? Are technological and social progress synonymous, or is there a tension between the two? One of the goals of the course will be to provide students with a more informed and critical perspective on the technological upheavals that continue to shape society today.

Class Format: seminar

Requirements/Evaluation: attendance and participation, two 5-page writing assignments, 15- to 20-page seminar paper

Extra Info: may not be taken on a pass/fail basis

Prerequisites: none

Enrollment Limit: 20

Expected Class Size: 18

Distributions: (D2)

Spring 2019

SEM Section: 01  TR 11:20 am - 12:35 pm  Nicholas Carr

SCST 212 (S) Ethics and Reproductive Technologies (WI)

Crosslistings: WGSS212 / SCST212 / PHIL212

Secondary Crosslisting

In her groundbreaking book, The Tentative Pregnancy, Barbara Katz Rothman writes that "[t]he technological revolution in reproduction is forcing us to confront the very meaning of motherhood, to examine the nature and origins of the mother-child bond, and to replace—or to let us think we can replace—chance with choice." Taking this as our starting point, in this course we will examine a number of conceptual and ethical issues in the use and development of technologies related to human reproduction, drawing out their implications for such core concepts as "motherhood" and "parenthood," family and genetic relatedness, exploitation and commodification, and reproductive rights and society's interests in reproductive activities. Topics will range from consideration of "mundane" technologies such as in vitro fertilization (IVF), prenatal genetic screening and testing, and surrogacy, to the more extraordinary, possibly including pre-implantation genetic diagnosis (PGD), post-menopausal reproduction, and post-mortem gamete
procurement. Background readings include sources rooted in traditional modes of bioethical analysis as well as those incorporating feminist approaches.

**Class Format:** discussion

**Requirements/Evaluation:** active participation in class discussions, three or four short reflection papers, and two longer papers (5-7 and 7-10 pages)

**Prerequisites:** none, but introductory-level course in PHIL and/or WGSS recommended

**Enrollment Limit:** 19

**Enrollment Preferences:** WGSS and PHIL majors or prospective majors

**Expected Class Size:** 19

**Department Notes:** meets Contemporary Value Theory requirement only if registration is under PHIL

**Distributions:** (D2) (WI)

**Attributes:** PHIL Contemporary Value Theory Courses; PHILH Bioethics + Interpretations of Health;

Spring 2019

**LEC Section:** 01  TF 2:35 pm - 3:50 pm  Julie A. Pedroni

**SCST 213 (S) Race, Gender, and the Alien Body: Octavia Butler’s Science Fiction (WI)**

Crosslistings: SCST213 / AFR213 / WGSS213

**Secondary Crosslisting**

Science fiction is a genre well known for its ability to envision new realities, and Octavia E. Butler (1947-2006) is among the most highly regarded science fiction writers. Butler’s uncanny ability to imagine the future anew and to merge those ruminations with her experiences as an African American woman provide powerful commentary on—and often disrupt—modern understandings of race, gender, and human embodiment. We will explore questions such as: What role does ‘gender’ play in Butler’s fiction? How does Butler’s treatment of the ‘alien’ cause us to reconsider what it means to be human? How does Butler incorporate ‘race’ and the concept of ‘other’ into her fiction, and how do these techniques help us situate contemporary discussions of a post-race society? We will examine the relationship between Butler’s visions for the future and what her narratives of future worlds invariably suggest about the present. We will read key texts including the best-selling text *Kindred* (1979), the haunting dystopian novel *Parable of the Sower* (1994), the popular vampire text *Fledgling* (2005), and the collection *Bloodchild and Other Stories* (1996). We will also explore contemporary engagement with Butler’s work including the relationship between the main character from her book *Dawn* (1987), and Henrietta Lacks, the African American woman from whom the immortal cell line (HeLa) used for medical research derives. This tutorial will engage Octavia Butler's work broadly, and with particular attention to how the concepts ‘race,’ ‘gender’, ‘alien’ and ‘body’ are interrogated in her writings.

**Class Format:** tutorial

**Requirements/Evaluation:** attendance, paired weekly reflection/response papers, a 5- to 7-page creative writing assignment, and a final essay of 10 pages

**Extra Info:** may not be taken on a pass/fail basis; not available for the fifth course option

**Prerequisites:** none

**Enrollment Limit:** 10

**Enrollment Preferences:** students with interests and/or prior coursework in Africana Studies and Women's, Gender, and Sexuality Studies

**Expected Class Size:** 10

**Distributions:** (D2) (WI)

**Attributes:** AFR Core Electives; WGSS Racial Sexual + Cultural Diversity Courses

Spring 2019

**TUT Section:** T1  TBA  Rhon S. Manigault-Bryant

**SCST 228 Feminist Bioethics (WI)**

In this course we’ll explore the ways in which feminist approaches to moral thinking have influenced both the methodology and the content of contemporary bioethics. The first portion of the course will address the emergence of the "Ethics of Care," critically assessing its origins in feminist
theory, its development within the context of the caring professions, and its potential as a general approach to bioethical reasoning. The second portion of the course will use feminist philosophy to inform our understanding of the ways in which gender structures the individual's interactions with the health care system. To do this we'll explore topics that might traditionally be considered "women's issues" in health care, such as medicine and body image (e.g., cosmetic surgery, eating disorders), reproductive and genetic technologies, and research on women and their health care needs. In addition we'll also look at feminist analyses of topics that traditionally have not been regarded as "gendered," such as resource allocation and end of life issues.

Class Format: lecture/discussion

Requirements/Evaluation: active participation in class discussions, two mid-length papers (5-7 and 7-10 pages, respectively), one oral presentation, and three or four periodic short writing assignments (2-3 pages each)

Prerequisites: none, although previous coursework in WGSS is desirable

Enrollment Limit: 19

Enrollment Preferences: Women's, Gender and Sexuality Studies and Philosophy majors

Expected Class Size: 10-15

Department Notes: meets Contemporary Value Theory requirement only if registration is under PHIL

Distributions: (D2) (WI)

Attributes: AMST Critical and Cultural Theory Electives; JLST Interdepartmental Electives; PHIL Contemporary Value Theory Courses; PHLH Bioethics + Interpretations of Health;

Not offered current academic year

SCST 229 (F) The Panopticon: Surveillance, Power, and Inequality (DPE)

Crosslistings: SOC228 / SCST229

Secondary Crosslisting

Surveillance is built into the very fabric of modern life. From CCTV cameras, to supermarket loyalty cards, to the massive gathering of personal data on social media sites, people participate in today's "surveillance societies" just by doing everyday activities. This course uses the metaphor of the "Panopticon" as a doorway to engagement with traditional and new forms of surveillance. First described by philosopher and social theorist Jeremy Bentham, the Panopticon is a physical structure that enables one observer to see all inhabitants without those inhabitants knowing if they are being observed. In Discipline and Punish, Michel Foucault famously expanded thinking on the Panopticon as a metaphor for the "disciplinary" power that lies at the heart of inequality in modern society. Since Bentham and Foucault's time, however, surveillance technologies have changed significantly. To what extent does the concept of the Panopticon give us purchase on today's surveillance societies? How does watching people with new digital and algorithmic surveillance technologies shape the exercise of power and, in turn, (re)produce forms of inequality? Are these technologies always bad? Can they be used for good? Topics include: the historical origins and expansion of surveillance in modern societies, the emerging total surveillance state in Baltimore City, the U.S. military drone program, surveillance in the workplace, and whether social media is turning us all into self-surveillance addicts.

Class Format: seminar

Requirements/Evaluation: discussion participation, six reading responses (1- to 2-page papers), Facebook data essay (3-5 pages), final paper (8-10 pages)

Prerequisites: none

Enrollment Limit: 20

Enrollment Preferences: Anthropology and Sociology majors

Expected Class Size: 10

Distributions: (D2) (DPE)

Distribution Notes: DPE: This course explores how power is distributed unequally through the mechanism of surveillance technologies, particularly in regard to racial and class differences. Among other topics, it will consider the concrete case of surveillance in Baltimore City and the question of if and when surveillance is appropriate there given the city's current crisis of gun murders. Students will discuss whether and how to conduct surveillance in a context shaped by deep racial segregation and class inequality.

Fall 2018

SEM Section: 01    MR 2:35 pm - 3:50 pm    Ben Snyder
**SCST 233 (F) Chemical Intimacies** (DPE)

Crosslistings: ENGL243 / WGSS233 / ARTH243 / SCST233

Secondary Crosslisting

This is a research seminar that understands human-chemical entanglement in relationship to environment, sexuality, geography, ecology, and capacity. It doubles as a research class in which students choose a project of chemical intimacy to investigate as their own through the course of the semester. In the first half, we will together read and discuss forms of human-chemical entanglement, whether a matter of industrial pollution, pharmaceutical use, habitual intoxication, gendered self-care or enhancement, or built environment; the goal is to achieve a broad sensibility for the concept as well as a familiarity with thinking biochemically and biopolitically about living bodies, while consistently registering questions of race, gender, class, sexuality, disability, and more. In the second half, each participant will choose and research a historically and geopolitically specific scenario of chemical entanglement, while 1) considering the political, legal, cultural, and labor contexts of the case; 2) exploring relationships between "actual" and "represented" (protest slogans or visual productions in the case of environmental justice activism, for example); 3) examining other research questions germane to their site of interest and their chosen discipline of study. We will take one field trip to a local site.

**Class Format:** seminar

**Requirements/Evaluation:** individual research project

**Extra Info:** may not be taken on a pass/fail basis; not available for the fifth course option

**Prerequisites:** none

**Enrollment Limit:** 10

**Enrollment Preferences:** Women's, Gender and Sexuality Studies majors, Art History majors, English majors, Environmental Studies majors

**Expected Class Size:** 10

**Distributions:** (D2) (DPE)

**Distribution Notes:** meets Division 2 requirement if registration is under WGSS OR SCST; meets Division 1 requirement if registration is under ARTH or ENGL. DPE: The course gives special attention to forms of human-chemical entanglement that are related to environmental justice (pollution), and gender, racial, sexual, indigenous, and disability politics.

**Attributes:** WGSS Theory Courses

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Fall 2018

SEM Section: 01    M 7:00 pm - 9:40 pm    Mel Y. Chen

**SCST 235 (F) Innovation, Gender, and Sustainable Development** (DPE)

Crosslistings: SCST235 / WGSS235

Secondary Crosslisting

Technological innovation is vital for communities, businesses and nations seeking to adapt to a globalized, competitive world. But any innovation also has impacts on all three dimensions of sustainability: the ecological, the economic, and the social. For example, such impacts may either exacerbate or mitigate gender inequalities. This course uses a gender studies lens to study innovation in the development of sustainable practices in the present and for the future. We will look at the impact of gender stereotypes on innovation, including the co-construction of gender and technology. Since the course is taught by a visiting scholar from Sweden, a particular focus will be the EU's policy of "Gender Mainstreaming" which requires all proposed policies to be assessed for their impact on gender inequality. The course looks at technical development as necessary and valuable, while investigating power relations and taken-for-granted views embedded in the particular forms it takes. The course will rely largely on analysis of case studies, and students will be encouraged to apply the analytic tools of the course to develop US-based case studies of their own.

**Class Format:** seminar, combination of lecture and discussion

**Requirements/Evaluation:** reading journal, mid-term exam, and a final research project

**Extra Info:** may not be taken on a pass/fail basis; not available for the fifth course option

**Prerequisites:** none

**Enrollment Limit:** 15

**Enrollment Preferences:** Women's, Gender and Sexuality Studies majors, Environmental Studies majors, students who have taken WGSS 101

**Expected Class Size:** 10
SCST 236 (F)  Automatic Culture: From the Mechanical Turk to A.I.

Crosslistings: HSCI236 / SCST236

Primary Crosslisting

Using literary writing and visual representation as our primary points of entry, we will study the history of automation, exploring its effects as idea and as material implementation upon public and private spheres, craftsmen and courts, wage-laborers, artists, and inventors. Readings from such authors as E.T.A. Hoffmann, Kurt Vonnegut, Roald Dahl, and Sydney Padua will be supplemented with studies in the history and historiography of technology. The objects we examine will be as different from one another as the dulcimer-playing android presented as a gift to Marie Antoinette, IBM's Deep Blue, and contemporary devices like Amazon's Echo.

Class Format: seminar

Requirements/Evaluation: students will be evaluated based on mid-term and final essays, discussion participation, and brief in-class writing exercises.

Prerequisites: none

Enrollment Limit: 25

Enrollment Preferences: SCST concentrators

Expected Class Size: none

Distributions: (D2)

Fall 2018

SEM Section: 01   TF 1:10 pm - 2:25 pm   Maria K. Udén

SCST 240 (F)  Great Astronomers and Their Original Publications  (WI)

Crosslistings: ASTR240 / LEAD240 / SCST240 / HSCI240

Secondary Crosslisting

We study many of the greatest names in the history of astronomy, consider their biographies, assess their leadership roles in advancing science, and examine and handle the first editions of their books and other publications. Our study includes, in addition to a Shakespeare First Folio (with its astronomical mentions) and a page from the Gutenberg Bible, original books such as: 16th-century, Nicolaus Copernicus (heliocentric universe); Tycho Brahe (best pre-telescopic observations); 17th-century, Galileo (discoveries with his first astronomical telescope, 1610; sunspots, 1613; Dialogo, 1632); Johannes Kepler (laws of planetary motion, 1609, 1619); Johannes Hevelius and Elisabeth Hevelius (atlases of the Moon and of stars, 1647, and 1687); Isaac Newton (laws of universal gravitation and of motion, 1687); 18th-century, Edmond Halley (Miscellanea curiosa, eclipse maps, 1715, 1724); John Flamsteed and Margaret Flamsteed (Atlas Coelestis, 1729); William Herschel and Caroline Herschel (1781, 1798). In more recent centuries, the original works are articles: 20th--century: Albert Einstein (special relativity, 1905; general relativity, 1916); Marie Curie (radioactivity); Cecilia Payne-Gaposchkin (hydrogen dominating stars, 1929), Edwin Hubble (Hubble's law, 1929); Vera Rubin (dark matter, 1970s); Jocelyn Bell Burnell (pulsar discovery, 1968); 21st-century: Wendy Freedman (Universe's expansion rate, 2000s). We will also read biographies and recent novels dealing with some of the above astronomers. With the collaboration of the Chapin Librarian, we will meet regularly in the Chapin Library of Rare Books and also have a session at the library of the Clark Art Institute to see its rare books of astronomical interest. The course is a repeat of the successful course first given during the 2014-15 academic year's Year of the Book, honoring the new Sawyer Library and the expansion of the Chapin Library of Rare Books.

Class Format: seminar

Requirements/Evaluation: class participation, two 5-page intermediate papers, and a final 15-page paper

Enrollment Limit: 12
**Enrollment Preferences:** if overenrolled, preference by written paragraph of explanation of why student wants to take the course

**Distributions:** (D2) (WI)

**Distribution Notes:** meets Division 3 requirement if registration is under ASTR; meets Division 2 requirement if registration is under HSCI, LEAD or SCST

**Attributes:** LEAD Facets or Domains of Leadership; SCST Related Courses;

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Fall 2018

SEM Section: 01   W 1:10 pm - 3:50 pm   Jay M. Pasachoff

**SCST 250 (S) Environmental Justice** (DPE)

Crosslistings: ENVI250 / SCST250

**Secondary Crosslisting**

How are local and global environmental problems distributed unevenly according to race, gender, and class? What are the historical, social and economic structures that create unequal exposures to environmental risks and benefits? And how does inequity shape the construction and distribution of environmental knowledge? These are some of the questions we will take up in this course, which will be reading and discussion intensive. Through readings, discussions, and case studies, we will explore EJ in both senses. Potential topics include: toxics exposure, food justice, urban planning, e-waste, unnatural hazards, nuclearism in the U.S. West, natural resources and war, and climate refugees. Occasionally, community leaders, organizers, academics, and government officials will join the class to discuss current issues.

**Class Format:** seminar

**Requirements/Evaluation:** several short essays, final essay

**Extra Info:** may not be taken on a pass/fail basis; not available for the fifth course option

**Prerequisites:** ENVI101 or permission of the instructor

**Enrollment Limit:** 12

**Expected Class Size:** 10

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**SCST 265 (F) Digital Performance Lab**

Crosslistings: THEA265 / SCST265

**Secondary Crosslisting**

A collaborative laboratory investigating the intersection of live art and new media, this studio course explores the opportunities for (and problems of) performing through various media. Using audio, video, web-based, interactive, algorithmic, and analog platforms, students will perform research and create performances that examine liveness, broadcasting, digital stages, networking, and what it means to be both a spectator and a maker in the digital age. Students will develop technical and collaborative skills in artistic and new media production, gain fluency in contemporary theories of liveness, performance, and visual culture, and will research historical and current trends in mediatized performance practices. Platforms/technologies/media forms that may be considered include Twitter, live radio, in-ear monitors, algorithmic composition, bots, video games, live streaming, VJ software, interactive audio, sensors, soundwalks, Snapchat, VR, and surveillance.

**Class Format:** studio and lab

**Requirements/Evaluation:** bi-weekly projects and presentations, bi-weekly 2-page critical writing assignments, class participation, work ethic, and collaborative skills
**Extra Info:** may not be taken on a pass/fail basis

**Prerequisites:** none

**Enrollment Limit:** 20

**Enrollment Preferences:** none

**Expected Class Size:** 6

**Materials/Lab Fee:** $100

**Distributions:** (D2)

**Distribution Notes:** meets Division 1 requirement if registration is under THEA; meets Division 2 requirement if registration is under SCST

**Attributes:** EXPE Experiential Education Courses

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**Fall 2018**

**STU Section: 01**  W 1:10 pm - 3:50 pm  Emily E. Rea

**STU Section: 02**  T 1:10 pm - 2:25 pm  Emily E. Rea

**SCST 273 (F) Politics without Humans?**

**Crosslistings:** SCST273 / PSCI273 / ENVI273

**Secondary Crosslisting**

Are human beings the only beings who belong in politics? And is political involvement a unique or defining aspect of what it means to be human? Such questions are increasingly complex as the boundaries of "the human" become blurred by the rise of artificial intelligence, robotics, and brain implants: shifting attitudes towards both animal and human bodies; and the automation of economic and military decisions (buy! sell! attack! retreat!) that used to be the prerogative of human actors. How do visions of politics without humans and humans without politics impact our thinking about longstanding questions of freedom, power, and right? Can and should the link between humans and politics survive in an age in which "posthuman" or "transhuman" entities become central characters in the drama of politics? This class will consider these questions through readings, films and artifacts that bring political theory into conversation with science fiction, popular literature on the so-called "singularity" (the merger of humans with computers), science and technology studies, evolutionary anthropology, "new materialist" philosophy, and feminist theory.

**Class Format:** lecture/seminar

**Requirements/Evaluation:** class participation, three 6- to 8-page papers

**Extra Info:** please note that this is an introductory-level course with no prerequisites. First year students and those with no background in political theory are welcome, as are more experienced students

**Prerequisites:** none

**Enrollment Limit:** 35

**Expected Class Size:** 15

**Distributions:** (D2)

**Attributes:** AMST Critical and Cultural Theory Electives; ENVI Environmental Policy; PHIL Related Courses; PSCI Political Theory Courses

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**Fall 2018**

**LEC Section: 01**  Cancelled

**SCST 276 Music and the Internet**

Since the release of Napster in 1999, the Internet's relationship with music has been sometimes elevating and sometimes adversarial. While it has granted listeners access to broad music libraries and musicians access to large audiences, the Internet has also exposed listeners to legal action, taxed artists with dwindling royalties, and disrupted and reshaped the recording and publishing industries. This course examines how the Internet has affected music at every level, from its creation to its distribution and consumption. Topics will include music written for online spaces, musical performances that take place online, music and online gaming, live music that refers to the Internet, the financial and philosophical background of music file formats, changing notions of musical ownership, censorship of music online, music's place in memes, and the user experience in (and attitudes toward music projected by) services like iTunes, YouTube, Spotify, and musically.
SCST 281 (F) Religion and Science
Crosslistings: REL281 / SCST281
Secondary Crosslisting
In the last few years the deniers of religion such as Dennett and Dawkins have forcefully argued that recent scientific developments show the degree to which religion is irrelevant to a modern understanding of what it means to be human. Atran and Boyer have made a similar case, arguing that recent progresses in our understanding of human cognition demonstrate that religion is a purely natural phenomenon that has little if any value for human development. Theologians such as Haught and Polkinghorne have rejected these views, arguing that a proper understanding of scientific developments such as evolution and quantum mechanics suggests religiously relevant views of the universe and our place therein. This course considers these competing perspectives while offering critical reflections on the views and categories involved in these controversies. We also examine the works of reflective naturalists such as Bellah and Herrstein, who argue that far from showing the irrelevance of religious ideas and practices, the new mind and life sciences suggest a much more nuanced view according to which religion is both grounded in the natural world and central to the development of human culture. Hence, it cannot be easily discounted as irrelevant to a scientifically informed understanding of what it means to be human.

SCST 301 (F) Social Construction (DPE)
Crosslistings: WGSS302 / REL301 / COMP315 / SOC301 / SCST301
Secondary Crosslisting
"Social construction" can often seem like the great collegial insight. By now, you've all heard that categories such as race, gender, and sexuality are in some sense not part of nature, but instead are created and maintained socially or culturally. The idea of social construction has been vital to critical race theory and queer theory, and, in this course, we will push ourselves into philosophy of science to see whether or not these same insights apply to everything. If we know that "Whiteness," "heterosexuality," and "masculinity," for instance, are all socially constructed, we will ask if the same is true of "electrons," "money," "the solar system," and "climate change." Can it be that all of our reality is socially constructed? Or does social construction have limits? If so, what are they? We will also ask more fundamental questions, such as: What does it mean to say something is socially constructed? How does social construction relate to claims that an aspect of the world is "real" or "not real?" Is social construction a theory about language, power, culture, societies, human perceptions, or the limits of science? What kind of political, ethical, ontological, or epistemological work do theories of social construction do? We will begin with different accounts of the social construction of race, gender, and sexuality. In the second part of the course, we will dig deeper into philosophical debates about social construction as such. Then we will explore constructionism about natural science. In the last part of
the course, we will change gears and explore cutting-edge work in the theory of social science aimed at explaining the construction and ontology of social worlds. The class will culminate in a project in which students will put their social construction theories into practice.

Class Format: seminar

Requirements/Evaluation: regular attendance and participation, short weekly reflection papers, a 10-page research paper, and final project

Extra Info: may not be taken on a pass/fail basis

Prerequisites: none

Enrollment Limit: 15

Enrollment Preferences: Religion majors, then majors from cross-listed departments

Expected Class Size: 15

Distributions: (D2) (DPE)

Distribution Notes: meets Division 2 requirement if registration is under REL, SOC, WGSS or SCST; meets Division 1 requirement if registration is under COMP. DPE: Central to REL 301 will be an analysis of the social construction of race, gender, and sexuality. It will show how power and difference are tied up in their construction and maintenance of these categories. Students will be taught how to critically analyze race, gender, and sexuality as well as social construction as such. Students will also learn sophisticated tools for studying systems of social power and difference.

Attributes: PHIL Related Courses

Fall 2018

SEM Section: 01    W 1:10 pm - 3:50 pm     Jason Josephson Storm

SCST 312 (S) Philosophical Implications of Modern Physics (QFR)

Crosslistings: PHIL312 / SCST312 / PHYS312

Secondary Crosslisting

Some of the discoveries made by physicists over the last century seem to show that our common sense views are deeply at odds with our most sophisticated and best confirmed scientific theories. The course will present the essential ideas of relativity theory and quantum theory and explore their implications for philosophy. We will ask, for example, what these theories tell us about the nature of space, time, probability and causality.

Class Format: lecture

Requirements/Evaluation: attendance, participation, problem sets, exams, six 1- to 2-page papers and a 12- to 15-page term paper

Prerequisites: MATH 140, high-school physics, and either a 200-level course in PHIL or a 100-level course in PHYS

Enrollment Limit: 20

Enrollment Preferences: Philosophy majors and Physics majors

Expected Class Size: 20

Distributions: (D2) (QFR)

Distribution Notes: meets the Division 2 requirement if registration is under PHIL or SCST; Division 3 requirement if registration under PHYS

Attributes: PHIL Contemp Metaphysics & Epistemology Courses;

Spring 2019

LEC Section: 01    TR 11:20 am - 12:35 pm     Frederick W. Strauch, Keith E. McPartland

SCST 315 (S) Blackness 2.0: Race, Film and New Technologies

Crosslistings: AMST315 / AFR315 / SCST315

Secondary Crosslisting

Are distinctions of race truly eliminated with digital technologies? Through an engagement with scholarship in media studies, cultural studies, gender studies, and Africana studies (to name a few), this course will investigate the nuanced ways blackness is (re)constructed and (re)presented in digital technologies. Although we will largely focus on representations of blackness in modern film, we will examine the impact of ‘new’ technologies upon the broader categories of race, gender, and sexuality. Additional topics may include: avatar-based entertainment; race in the ‘real’ vs ‘virtual’ world; emoji wars; blogosphere politics; internet and hashtag activism; social networking and a post-race future; and fandom in the twitter era.
SCST 319 Neuroethics (WI)

Neuroscience studies the brain and mind, and thereby some of the most profound aspects of human existence. In the last decade, advances in our understanding of brain function and in our ability to manipulate brain function have raised significant ethical challenges. This tutorial will explore a variety of important neuroethical questions. Potential topics will include pharmacological manipulation of "abnormal" personality; the use of "cosmetic pharmacology" to enhance cognition; the use of brain imaging to detect deception or to understand the ability, personality or vulnerability of an individual; the relationship between brain activity and consciousness; manipulation of memories; the neuroscience of morality and decision making. In addition to exploring these and other ethical issues, we will explore the basic science underlying them.

Class Format: tutorial

Requirements/Evaluation: evaluation will be based on five 5-page position papers and five short response papers as well as participation in discussions

Extra Info: may not be taken on a pass/fail basis; not available for the fifth course option

Prerequisites: PSYC 212 (same as BIOL 212 or NSCI 201); or permission of instructor

Enrollment Limit: 10

Enrollment Preferences: Psychology majors and Neuroscience concentrators

Expected Class Size: 10

Distributions: (D2) (WI)

Distribution Notes: meets Division 2 requirement if registration is under PSYC; meets Division 3 requirement if registration is under NSCI

Attributes: NSCI Group B Electives; PSYC Area 1 - Behavioral Neuroscience;

Not offered current academic year

SCST 330 (S) Technology, Culture and Society

Crosslistings: SCST330 / SOC330

Secondary Crosslisting

An introduction to major trajectories of theory and empirical research in the sociology and history of technology: the Social Construction of Technology (SCOT), Large Scale Technological Systems (LTS), Actor-Network Theory (ANT), and cultural studies of technoscience broadly. Students will also become acquainted with a number of philosophical positions on technology: instrumentalist, Marxist, cultural/substantivist, humanist and posthumanist. Topics to be explored include technology, (post)industrial capitalism, and the nature of modern power; the role of technology in giving shape and weight to social institutions and forms of agency; technology, individualism, and everyday life in the modern world; technological determinism; resistance and accommodation to technological change; technology as a point of view and total way of life (culture); language, quantification, computerization, and (tele)visual media; and technology and environment. The course is furthermore designed to allow students to explore and research topics not appearing on the syllabus in the main.

Class Format: seminar
SCST 338 (F) Transhumanism: Religion, Technoscience, Obsolescence
Crosslistings: SOC338 / REL338 / HSCI338 / SCST338
Secondary Crosslisting
This interdisciplinary seminar invites students to pursue sociohistorical analysis and sustained critical discussion of the so-called "transhumanist movement" and its overriding aim: the transformation and eventual transcendence of human biological constitution; the realization, through highly speculative technoscientific means, of an enhanced or even "postbiological" existence, the so-called "posthuman condition," "Humanity 2.0." Through close readings of historical documents, transhumanist texts, scholarship on transhumanism, and relevant works of science-fiction film and literature, we will position the movement as an empirical conduit through which to explore the sociohistorical conditions under which transhumanist ideas have emerged, circulated, and taken up residence. To this end, we will consider transhumanism's ties to some of the most objectionable aspects of modern technology and late capitalism; eugenics, the commodification of health, and massive investments in pharmaceuticals, anti-aging medicine, and so-called "GNR" technologies (i.e. genetics, nanotechnology, and artificial intelligence and robotics); the movement's affinities with neoliberalism and Euro-American (cyber) libertarian politics; and what some have pointed to as transhumanism's racialized subtext of whiteness. We will furthermore devote considerable attention to the technological singularity, artificial intelligence, the figure of the cyborg, mind-uploading, space colonization, and cryonic suspension, all of which, like transhumanism broadly, suggest that science and technology have in some sense come to operate as powerful channeling agents for the very sorts of magical beliefs, practices, and forms of expectation and association that theorists of secularization expected modernity to displace. Lastly, throughout the course of the seminar we will take transhumanism as a provocation to think broadly and seriously about embodiment, culture, and ways of being human.

Class Format: seminar
Requirements/Evaluation: attendance and participation, informal weekly writing, 15- to 20-page seminar paper
Extra Info: not available for the fifth course option
Prerequisites: none
Enrollment Limit: 20
Enrollment Preferences: Anthropology and Sociology majors and Science and Technology Studies concentrators
Expected Class Size: 20
Distributions: (D2)
Not offered current academic year

SCST 348 (S) Women, Men and Other Animals (DPE)
Crosslistings: SCST348 / WGSS348 / ARTH348 / ENGL348
Secondary Crosslisting
In this seminar, we will together learn to be "animal critics." We will explore ways in which human groups and interests, particularly in the United States, have both attached and divorced themselves from other animals, considering such axes as gender, race, ability, and sexuality as key definitional foils for human engagements with animality. What are the "uses" of "animals" for "us," and precisely who is this "us"? How and when are some willing to see themselves as animal--indeed, under what political conditions do they embrace it? What is the history of unique, often asymmetric, interdependencies between human animals and nonhuman animals? How do actual lives of humans and non-human animals merge and clash with the rhetorics and visualities of human animality? We will examine both "everyday" animality and the forms of animality that stand out only today in retrospect, in their exceptionality, or upon reflecting on structures of privilege. We will build a critical animal studies vocabulary from a range of readings in science, philosophy, art, feminism, indigenous studies, critical race, geography, fiction, film, rhetoric, history, activist movements, disability studies, postcolonial studies, and examine both visual and narrative cultural production.
SCST 370 (F) Medicine, Pathology, and Power: An Ethnographic View (DPE) (WI)

Crosslistings: SCST370 / ANTH371 / WGSS371

Secondary Crosslisting

How do medical anthropologists examine and interpret health, disease, and illness today, in order to elucidate the biosocial determinants of health and health-seeking behaviors? We are particularly interested in how medical anthropologists employ ethnographic techniques including interviewing, surveys, and observant participation/participant observation--also known as as 'deep hanging out.' Through experiential inquiries, we investigate the systemic health inequalities that are produced by socio-economic hierarchies, while paying particular attention to the most marginalized and vulnerable groups. Through the semester, students pursue their own individual, fieldwork-based projects on campus with students & staff. Our goal is a better understanding of the limits and strengths of ethnographic inquiry as we explore the challenges of collaborative research into health and inequality in a local world structured by diverse forces, actors, and motives. We consider how medical anthropologists: tell stories that describe and influence the ways that patients and providers respond to a dialogic quest for health and well-being within a world structured by social inequality and suffering; interpret the biological, socio-cultural, and behavioural determinants of health at individual and population levels and seeks to mitigate the ways that health inequities are produced by social inequality and unequal access to health resources; understand biomedicine and other medical systems as scientific and cultural discourses that project their own rationalities and biases even as they try to improve health outcomes.

Class Format: seminar

Requirements/Evaluation: four fieldnotes, weekly class discussion and writing exercises, final presentation on ethnographic project

Extra Info: may not be taken on a pass/fail basis; not available for the fifth course option

Prerequisites: none

Enrollment Limit: 19

Enrollment Preferences: Anthropology, Sociology, Women's, Gender and Sexuality Studies majors; Public Health, Science and Technology Studies concentrators

Expected Class Size: 19

Distributions: (D2) (DPE) (WI)

Distribution Notes: DPE: This class examines the intersection of race, gender, class, and sexuality in structuring health outcomes and access to health resources. It theorizes the dynamics of race, gender, and class in shaping patient/provider encounters and efforts to 'improve' health outcomes within contexts of structural violence (poverty, racism, and sexism) and social suffering. WI: This class includes; weekly writing exercises and monthly 'writing chats' with instructor.

Attributes: EXPE Experiential Education Courses; PHLH Methods in Public Health; SCST Related Courses;
SCST 371 (S)  Medicine, Technology, and Modern Power

Secondary Crosslisting

Medicalization: those processes by which previously non-medical problems, once defined as ethical-religious, legal or social (e.g. drug and alcohol addition, shyness, obesity), are brought within the purview of medical science and redefined as medical problems, usually in terms of "illness" or "disorder." Part I: The history of the medicalization thesis; medicalization as a technical process; modern medicine as a form of social control; critiques of the medicalization thesis. Part II: From medicalization to biomedicalization; from the management of human life to the transformation of "life itself" by way of post-World War II technoscientific interventions aimed at "optimizing" human vitality. Empirical cases for consideration will be drawn from those technoscientific developments having made possible the work of optimization that defines biomedicalization: molecular biology, pharmacogenomics, biotechnologies, imaging techniques, robotics, and transplant medicine, among others. Finally, a consideration of how processes of biomedical optimization have produced new ways of seeing, knowing, and imagining human bodies, such that biology is increasingly less representative of "destiny" than it is of possibility. The course will to this end conclude with a survey of emerging issues in speculative technoscience and the ethics and politics of human enhancement.

Class Format: lecture

Requirements/Evaluation: weekly discussion précis, science-fiction book review essay, class presentations, and a take-home midterm

Extra Info: may not be taken on a pass/fail basis

Prerequisites: none

Enrollment Limit: 25

Enrollment Preferences: preference will be given to Anthropology and Sociology students

Expected Class Size: 20-25

Distributions: (D2)

Attributes: PHLH Bioethics + Interpretations of Health

Not offered current academic year

SCST 376 (F)  Human-Computer Interaction

Secondary Crosslisting

Human-Computer Interaction (HCI) principles are practiced in the design and evaluation of most software, greatly impacting the lives of anyone who uses interactive technology and other products. There are many ways to design and build applications for people, so what methods can increase the likelihood that our design is the most useful, intuitive, and enjoyable? This course provides an introduction to the field of human-computer interaction, through a user-centered approach to designing and evaluating interactive systems. HCI draws on methods from computer science, the social and cognitive sciences, and interaction design. In this course we will use these methods to: ideate and propose design problems, study existing systems and challenges, explore design opportunities and tradeoffs, evaluate and improve designs, and communicate design problems and solutions to varying audiences.

Class Format: lecture

Requirements/Evaluation: course projects, in-class group work/participation, and exams

Extra Info: may not be taken on a pass/fail basis; not available for the fifth course option

Prerequisites: CSCI 136

Enrollment Limit: 24

Enrollment Preferences: current or expected Computer Science majors

Expected Class Size: 24

Distributions: (D2)

Distribution Notes: meets Division 3 requirement if registration is under CSCI; meets Division 2 requirement if registration is under SCST

Fall 2018

LEC Section: 01  TF 1:10 pm - 2:25 pm  Iris Howley
SCST 380 (F) Freedom Dreams, Afro-Futures & Visionary Fictions
Crosslistings: AFR380 / ENGL381 / AMST380 / WGSS380 / SCST380

Secondary Crosslisting
In this course we will examine the various ways Black scholars, artists, & writers use science fiction and visionary fiction to imagine freedom and new world orders. We will focus on the role of history, particularly slavery, in the Black radical imagination. "Freedom" is the keyword throughout the course. We will grapple with the various and sometimes conflicting meanings and uses of freedom as it relates to blackness, gender, sexuality, class and ability. We will explore multiple forms of scholarship and cultural productions, including film, music, novels, short-stories, art, poetry, and other academic texts. All students will be asked to discover and develop their writerly voices through various critical, creative, experimental and performative assignments.

Class Format: seminar

Requirements/Evaluation: active participation, completion of various short assignments, one 5-page paper and one 7- to 10-page final paper

Extra Info: may not be taken on a pass/fail basis

Prerequisites: none

Enrollment Limit: 20

Enrollment Preferences: Women's, Gender and Sexuality Studies majors, then Africana Studies concentrators

Expected Class Size: 20

Distributions: (D2)

Distribution Notes: meets Division 2 requirement if registration is under WGSS, AFR, SCST or AMST; meets Division 1 requirement if registration is under ENGL

Attributes: WGSS Racial Sexual + Cultural Diversity Courses

Fall 2018
SEM Section: 01 TR 11:20 am - 12:35 pm Kai M. Green

SCST 397 (F) Independent Study: Science and Technology Studies

Class Format: Independent Study

Distributions: (D2)

Fall 2018
IND Section: 01 TBA Jason Josephson Storm

SCST 398 (S) Independent Study: Science and Technology Studies

Class Format: Independent Study

Distributions: (D2)

Spring 2019
IND Section: 01 TBA Jason Josephson Storm

SCST 401 (F) Senior Seminar: Critical Perspectives on Science and Technology

A research-oriented course designed to give students direct experience in evaluating and assessing scientific and technological issues. Students initially study particular techniques and methodologies by employing a case study approach. They then apply these methods to a major research project. Students may choose topics from fields such as biotechnology, computers, biomedical engineering, energy, and other resource development. Students will apply their background of historical, philosophical, and technological perspectives in carrying out their study.

Class Format: studio
SCST 401 (F) Cold War Technocultures

Crosslistings: SOC363 / SCST401

Secondary Crosslisting

In this seminar students will pursue sociohistorical analyses of Cold War American culture(s) by attending to key points of intersection between politics, aesthetics, and major technoscientific developments during this period. Part I will focus principally on the emergence of the computer and its role in shaping American infrastructure and styles of thought aimed at Soviet "containment." We will trace the historical threads connecting MIT's "Whirlwind" computer project and the SAGE continental air defense system; nuclear wargaming at the RAND Corporation and the aesthetics of "thinking the unthinkable"; the science of cybernetics and the prospect of automation; and ultimately the role of computation, intermedia, and systems logic in perpetrating the atrocities of the Vietnam War. Part II will take up the Cold War space race--from Luna 2, Sputnik I, and Yuri Gagarin to Projects Mercury, Gemini, and the Apollo moon landing. Within this context we will also consider the Club of Rome's Limits to Growth report; plans backed by NASA for the industrialization and colonization of outer space; and the place of science-fiction as a Cold War aesthetic (print, televisual, cinematic). Part III, finally, will explore key moments of conflict, resistance, appropriation, and unintended consequences of Cold War technoscientific developments, among them antipsychiatry and environmentalism; Project Cybersyn, an infrastructural casualty of the U.S./CIA-backed Chilean coup of 1973; the New Left, the American counterculture, new social movements, and the countercultural roots of new media and neoliberalism.

Class Format: seminar

Requirements/Evaluation: two 5-page book review essays, weekly 1-page papers, midterm essay exam, final essay exam

Extra Info: may not be taken on a pass/fail basis; not available for the fifth course option

Prerequisites: SCST 101 or instructor consent; prior coursework in Anthropology and Sociology and/or History

Enrollment Limit: 15

Enrollment Preferences: Anthropology and Sociology majors, Science and Technology Studies concentrators

Expected Class Size: 15

Department Notes: SCST Senior Seminar

Distributions: (D2)

Fall 2018

SEM Section: 01  W 1:10 pm - 3:50 pm  Grant Shoffstall