Science and Technology Studies

The program for Science and Technology Studies at Brown operates under the premise that students and scholars in the field of science and technology studies want to know how scientific knowledge is produced. STS believes that the idealized accounts of knowledge production entrenched in our scientific belief system are inadequate, given the complexity of the process they claim to describe.

STS scholars seek to understand how science operates by analyzing historical case studies, observing contemporary scientists at work, examining representations of scientific ideas in textbooks or journals, and studying the infrastructure of scientific institutions.

This interdisciplinary field brings together anthropologists, philosophers, historians, art historians, literary theorists, sociologists and practicing scientists and technologists. In addition to offering an undergraduate concentration program in Science and Society, Brown also offers interdisciplinary courses under the same rubric.

For more information on STS at Brown, please visit: https://www.brown.edu/academics/science-and-technology-studies/

Science and Society Concentration

Requirements

Science and Society is an interdisciplinary concentration that examines the processes of scientific discovery and the establishment of scientific policies and systems of belief from historical, philosophical, anthropological, and sociological perspectives. Concentrators analyze the practices, norms, and values that reflect and shape our deepest convictions about what is considered "science." Students select courses in the physical sciences, life sciences, or mathematics and choose a thematic track that may include the history and philosophy of science, gender and science, race, science and ethnicity, health and medicine, environment and society, or they may create their own independent focus. Science and Society prepares students to follow, guide, and shape scientific knowledge as it travels from the laboratory into the public arena.

Required Courses (2)
The concentration has two required courses.

- SC400: Gender, Science and Society, or equivalent introductory course: usually taken in the second or third year.
- SC400: Senior Seminar, also open to non-majors with the proper background, usually taken senior year.

Thematic Track (3)

Students will organize their course of study around the choice of a thematic track. The theme may be thought of as the applied content portion of the concentration. Students will take a minimum of three courses, at least one of which must be at an advanced level; in one of the thematic areas listed below:

- History & Philosophy of Science
- Gender & Science
- Race, Science & Ethnicity
- Health & Medicine
- Representing Science in Literature & Culture
- Policy, Persuasion & the Rhetoric of Science
- Environment & Society
- Independent Focus

Science Track (4)

Students will take a minimum of four courses in one of the following scientific areas: physical sciences, life sciences, mathematics/computer science. The chosen area should provide appropriate background and support for the chosen concentration theme. The science courses will be sequenced such that a concentrator will move enough beyond the introductory level to gain some understanding of the world view of scientists within a chosen field. The particular sequence of courses which best meets the science requirement will be chosen in consultation with the concentration advisor. When necessary, the concentration advisor will seek guidance from faculty within the chosen scientific field.

Science and Technology Studies Theory (3)

Students will take three Science and Technology Studies-related courses in the social sciences and humanities. These courses, which will provide critical theoretical background for the study of Science and Society, should address questions of historiography, epistemology and methodology in the field of science and technology studies. A full list of such courses and sample concentrations may be found at https://www.brown.edu/academics/science-and-technology-studies/

Honors

To qualify for Honors a student must:

- Be in good standing
- Have completed at least two thirds of the concentration requirements by the application deadline
- Have earned a majority of “A” grades in the concentration. Classes taken S/NC will count as qualifying towards that majority if they are marked “S with distinction” or are accompanied by a Course Performance Report (https://ask.brown.edu/performance_reports) indicating that had the student taken the course for a grade, the grade would have been an “A.”

Courses

SCSO 0020. The Digital World (CSCI 0020). Interested students must register for CSCI 0020.
SCSO 0050C. Reproductive Health: Science and Politics (GNSS 0090C). Interested students must register for GNSS 0090C.
SCSO 0050E. Crossing the Consumer Chasm by Design (ENGN 0120A). Interested students must register for ENGN 0120A.
SCSO 0050F. Crossing the Space Chasm through Engineering Design (ENGN 0120B). Interested students must register for ENGN 0120B.
SCSO 0070E. The Anthropology of Gender and Science (ANTH 0077N). Interested students must register for ANTH 0077N.
SCSO 0070G. Skill: From to the Medieval Workshop to the Maker Movement (AMST 0150E). Interested students must register for AMST 0150E.
SCSO 0020. Culture and Health (ANTH 0300). Interested students must register for ANTH 0300.
SCSO 0121. Foragers, Farmers, Feasts: An Anthropology of Food (ANTH 0680). Interested students must register for ANTH 0680.
SCSO 0251. Ancient Philosophy (PHIL 0350). Interested students must register for PHIL 0350.
SCSO 0270. Poetic Cosmologies (ENGL 0700Q). Interested students must register for ENGL 0700Q.

SCSO 0292. Introduction to Environmental Social Science (ENVS 0495). Interested students must register for ENVS 0495.


SCSO 0381. The Philosophers’ Stone: Alchemy From Antiquity to Harry Potter (HIST 0150B). Interested students must register for HIST 0150B.

SCSO 0382. Food and Drugs in History (HIST 0150H). Interested students must register for HIST 0150H. Fall SC50382 S01 17139 Arranged "To Be Arranged"

SCSO 0383. From Fire Wielders to Empire Builders: Human Impact on the Global Environment before 1492 (HIST 0270A). Interested students must register for HIST 0270A. Fall SC50383 S01 17140 Arranged "To Be Arranged"

SCSO 0382. Food and Drugs in History (HIST 0150H). Interested students must register for HIST 0150H. Fall SC50382 S01 17139 Arranged "To Be Arranged"

SCSO 0383. From Fire Wielders to Empire Builders: Human Impact on the Global Environment before 1492 (HIST 0270A). Interested students must register for HIST 0270A. Fall SC50383 S01 17140 Arranged "To Be Arranged"

SCSO 0392. The Phoenix and the Hummingbird: Natural History from Antiquity to Evolution. Scientists love to solve mysteries. From the philosophers of antiquity to pioneers of Biology, the study of nature has focused on the creatures that have most puzzled humankind. These have inspired natural histories: encompassing studies covering everything that could be known about an animal—from what it symbolized and how it behaved to its place in the natural order. By looking at issues of truth and its relationship to myth, direct experience, and nature’s systematization, this course provides an introduction to the history of science through what naturalists have written about the more mystifying creatures in the natural world. DPLL

SCSO 0470. Digital Media (MCM 0230). Interested students must register for MCM 0230.


SCSO 0520. Modern Science and Human Values (PHIL 0060). Interested students must register for PHIL 0060.

SCSO 0700B. Science and Social Controversy. In this course we examine the institution of science and its relations to the social context in which it is embedded. Scientific objectivity, scientific consensus, scientific authority, and the social and moral accountability of scientists will be considered in the context of discussing such controversies as: the AIDS epidemic, climate change, science and religion, the Manhattan Project, the Tuskegee Syphilis Experiment, genetic and pharmacological enhancement, the role of drug companies and religion, the use of nuclear weapons during World War II. Enrollment limited to 30 sophomores, juniors, seniors; others may enroll with permission of instructor. WRIT

SCSO 0700C. Gender, Nature, the Body (ANTH 1223). Interested students must register for ANTH 1223.

SCSO 0700D. The Social Lives of Dead Bodies in China and Beyond (HIST 0685A). Interested students must register for HIST 0685A.

SCSO 0700E. Bodies of Knowledge: Gender, Race and Science (AMST 0150C). Interested students must register for AMST 0150C.

SCSO 0700F. Science and Society in Darwin’s England (HIST 0582B). Interested students must register for HIST 0582B.

SCSO 0700G. Digital Media in the Time of Ecological Crisis (MCM 0902C). Interested students must register for MCM 0902C.

SCSO 1000. Introduction to Science and Society: Theories and Controversies. What is “science”? How do scientific ideas become knowledge? What is the nature of scientific objectivity, how can it be compromised? What is a scientific community, scientific consensus, and scientific authority? What roles does science play in our culture, and how is science related to other social institutions and practices? The interdisciplinary field of science studies is introduced through exploration of topics that include: gender and race, psychiatric classification, the drug industry, science and religion, and the use of nuclear weapons during World War II. Enrollment limited to 30 sophomores, juniors, seniors; others may enroll with permission of instructor. WRIT

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SCSO 1120. International Health: Anthropological Perspectives (ANTH 1310). Interested students must register for ANTH 1310.

SCSO 1121. AIDS in Global Perspective (ANTH 1020). Interested students must register for ANTH 1020.

SCSO 1122. Bioethics and Culture (ANTH 1242). Interested students must register for ANTH 1242.

SCSO 1152. Astronomy, Divination and Politics in the Ancient World (ASYR 1700). Interested students must register for ASYR 1700.

SCSO 1155. Astronomy Before the Telescope (ASYR 1600). Interested students must register for ASYR 1600.


SCSO 1340. History of Medicine I: Medical Traditions in the Old World Before 1700 (HIST 0286A). Interested students must register for HIST 0286A.

SCSO 1342. History of Medicine II: The Development of Scientific Medicine in Europe and the World (HIST 0286B). Interested students must register for HIST 0286B.

SCSO 1389. The Science of Life: Biology, 1790 to Present (HIST 1825R). Interested students must register for HIST 1825R.

SCSO 1390. Science at the Crossroads (HIST 1825M). Interested students must register for HIST 1825M.

SCSO 1391. From Medieval Bedlam to Prozac Nation (HIST 1830M). Interested students must register for HIST 1830M.

SCSO 1392. Science, Medicine, Technology (HIST 1825H).

SCSO 1393. Nature on Display (HIST 1825L). Interested students must register for HIST 1825L.


SCSO 1396. Fethery Things: An Avian Introduction to Animal Studies (HIST 1777B). Interested students must register for HIST 1777B.

SCSO 1520. Philosophy of Quantum Mechanics (PHIL 1620). Interested students must register for PHIL 1620.
SCSO 1522. Philosophy of Science (PHIL 1590). Interested students must register for PHIL 1590.
Fall SCSO1522 S01 17133 'To Be Arranged'

SCSO 1523. Time (PHIL 1670). Interested students must register for PHIL 1670.

SCSO 1524. Aristotle (PHIL 1250). Interested students must register for PHIL 1250.

SCSO 1700C. Science and Technology Policy in the Global South. Junior-senior seminar exploring the relationships among science, technology, society, and public policymaking in the Global South. Exemplar countries are South Africa, Brazil, India, and China. Biotech, nanotech, public health, environment, and science training policies are among those closely examined. Three writing assignments, plus electronic conversations with counterparts in the Global South.

SCSO 1700F. Health Inequality in Historical Perspective (BIOL 1920B). Interested students must register for BIOL 1920B.

SCSO 1700H. Native American Environmental Health Movements (ETHN 1890J). Interested students must register for ETHN 1890J.

SCSO 1700N. Race, Science, and Society: Genomics and Beyond. Why are drugs being marketed as racial saviors? What does biotechnology have to do with race? This course introduces students to interdisciplinary approaches to the study of race in science and society as an integrated natural and social scientific endeavor. Using a team-based pedagogy, interdisciplinary groups of natural and social science concentrators will explore real-world problems like validating knowledge about racial difference, the relationship between politics and science, and the newest findings in such scientific fields as anthropology, epidemiology, and cognitive science. Enrollment limited to 20. S/N/C DLL

SCSO 1700P. Neuroethics. In this course, we will examine ethical, social, and philosophical issues raised by developments in the neurosciences. Topics will include: neurodevelopment and the emergence of persons; the impact of child abuse on brain development; aging, brain disease, and mental decline; life extension research; strategies and technologies for enhancement of human traits; “mind-reading” technologies; agency, autonomy, and excuse from responsibility; error and bias in memory; mind control; neuroscientific and evolutionary models of religious belief and moral judgement. Enrollment limited to 20. Instructor permission required.
Spr SCSO1700P S01 25677 Th 4:00-6:30(17) (J. Poland)

SCSO 1700R. Community Engagement with Health and the Environment (AMST 1700I). Interested students must register for AMST 1700I.

SCSO 1700S. Environmental Change: Ethnographic Perspectives (ANTH 1552). Interested students must register for ANTH 1552.

SCSO 1700V. The Changing Arctic Environment: Science, Society and Politics. The Arctic has become a lens through which to understand the world. An unstable Arctic poses threats not only to the future of the Arctic but the world itself. This seminar will explore the Arctic as a region and the challenges it faces due to climate change, the rising conflicts over its vast mineral reserves, and the competing interests within the nations. The course is intended for students who are interested in Science, Technology and Society, Environmental Studies, Environmental Policy, and International Relations. There are no prerequisites for this class.


SCSO 1700Z. Science and Performance (TAPS 1450). Interested students must register for TAPS 1450.


SCSO 1701C. The First Scientific Americans: Exploring Nature in Latin America, 1500-1800. Who were the “first scientists” in the Americas? What, exactly, do we mean by “science” in this context? What has amounted to “America” in the past? Focusing on present-day Latin America, this seminar analyses the links between the exploration of the New World and scientific discovery in the early modern period. We will explore issues of primacy (why have both empires and scientists cared about “arriving first?”); the nature of science (what kind of knowledge has been considered “scientific” in different periods); and locality in knowledge production (was there something special about the New World in fostering scientific thinking).


SCSO 1701E. Race, Difference, and Biomedical Research: Historical Considerations (BIOL 1920D). Interested students must register for BIOL 1920D.

SCSO 1701F. The Nuclear Age (HIST 1974S). Interested students must register for HIST 1974S.

SCSO 1701G. War and the Mind in Modern America (AMST 1905N). Interested students must register for AMST 1905N.

SCSO 1701H. The Anthropocene: Climate Change as Social History (HIST 1976E). Interested students must register for HIST 1976E.


SCSO 1701K. Anthropology of Climate Change (ANTH 1112). Interested students must register for ANTH 1112.

SCSO 1701L. Gender, Nature, the Body (ANTH 1223). Interested students must register for ANTH 1223.


SCSO 1701N. International Indigenous Studies (ETHN 1891A). Interested students must register for ETHN 1891A.

SCSO 1701O. Medicine and Public Health in Africa (HIST 1960Q). Interested students must register for HIST 1960Q.


SCSO 1900. Senior Seminar in Science and Society. This is an advanced seminar that uses a Problem Based Learning style pedagogy to explore real-world problems in STS. To solve assigned problems students will want to explore critical scholarship in areas such as laboratory studies, feminist science and technology studies, the rhetoric and discourse of science and technology, expertise and the public understanding of science. Course is intended for Science and Society senior concentrators, but is open to others with appropriate background. Enrollment limited to 20.
Fall SCSO1900 S01 17037 T 4:30-6:30(09) (J. Poland)

SCSO 1970. Independent Study in Science and Society. Independent reading and research work in Science and Society is available to students who have completed introductory and intermediate level work in Science and Society. A decision to enroll must be made via consultation with the concentration advisor and the faculty advisor for the course. Section numbers vary by instructor. Please check Banner for the correct section number and CRN to use when registering for this course. Prerequisite: SCSO 1400. Open to junior and senior concentrators in Science and Society; instructor permission required.
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SCSO 2700A. The Politics of Knowledge (HIST 2981F).
Interested students must register for HIST 2981F.

SCSO 2700B. Environmental History (HIST 2981E).
Interested students must register for HIST 2981E.

SCSO 2700E. Plato’s Theaetetus (PHIL 2150I).
Interested students must register for PHIL 2150I.
Font Notice

This document should contain certain fonts with restrictive licenses. For this draft, substitutions were made using less legally restrictive fonts.
Specifically:
Helvetica was used instead of Arial.
The editor may contact Leepfrog for a draft with the correct fonts in place.