

# PROGRAM IN HISTORY AND PHILOSOPHY OF SCIENCE AND TECHNOLOGY

*Co-chairs:* Michael Friedman (Philosophy), Jessica Riskin (History)  
*Committee-in-Charge:* Barton Bernstein (History), Joe Corn (History, emeritus), Paula Findlen (History), Michael Friedman (Philosophy), Helen Longino (Philosophy), Reviel Netz (Classics), Robert Proctor (History)  
*Program Committee:* Paula Findlen (History), Michael Friedman (Philosophy), Helen Longino (Philosophy), Reviel Netz (Classics), Robert Proctor (History), Jessica Riskin (History), Londa Schiebinger (History, Clayman Institute for Gender Research)  
*Professors:* Keith Baker (History), Barton Bernstein (History), Paula Findlen (History), Michael Friedman (Philosophy), David Holloway (History, Institute for International Studies, Political Science), Reviel Netz (Classics), Robert Proctor (History), Londa Schiebinger (History, Clayman Institute for Gender Research), Richard White (History), Helen Longino (Philosophy)  
*Associate Professors:* Jessica Riskin (History)  
*Assistant Professors:* Sarah Jain (Anthropology), Caroline Winterer (History), Thomas Mullaney (History)  
*Professor (Research):* Rega Wood (Philosophy)  
*Senior Lecturer:* Joseph Corn (History, emeritus)  
*Lecturers:* Tom Ryckman (Philosophy), Margo Horn, John McCaskey  
*Other Affiliation:* Henry Lowood (Stanford University Libraries), Audrey Shafer (Anesthesiology), Larry Zaroff (Anesthesiology, Biomedical Ethics)  
*Visiting Scholars:* Adrienne Mayor (Classics), Darrel Rutkin  
*Mail Code:* 94305-2024  
*Email:* rrogers@stanford.edu  
*Web Site:* <http://HPST.stanford.edu>

Courses in History and Philosophy of Science and Technology have the subject code HPS. For a complete list of subject codes, see Appendix.

The Program in History and Philosophy of Science and Technology (HPST) is an interdisciplinary program focusing on historical and contemporary aspects of science, medicine, and technology. Graduate degrees at the doctoral level are offered through the departments of History and Philosophy; master's degrees are offered through affiliated departments and programs, principally Classics, Anthropology, English, and Modern Thought and Literature. The program's courses span the period from antiquity to the late 20th century, with emphasis on: ancient science; Renaissance science; the scientific revolution; Enlightenment and transatlantic science; history of medicine and the body; history and philosophy of biology; history and philosophy of modern physics; history of the philosophy of science in the modern period; and gender, science, and technology. These courses are designed for students looking for a humanistic perspective on the sciences and for those trying to understand the relationship of the sciences to humanistic knowledge.

Stanford is surrounded by archives for the recent history of science and technology. Stanford University Libraries has rich holdings in Special Collections for the Scientific Revolution, as well as the modern and contemporary study of science and technology. The University is in close proximity to the California Academy of Sciences, the Exploratorium, the Computer History Museum, and the Tech Museum. Graduate students can take advantage of faculty, classes, and archives at UC Berkeley through Stanford's exchange program.

The core of the community is the colloquium series which brings together faculty and students several times a quarter to discuss the work of invited speakers on topics of broad concerns to science and technology studies.

## UNDERGRADUATE DEGREES

Students who wish to pursue the history and philosophy of science and technology should consider a major in one of the following: the Department of History which offers an interdisciplinary track in History, Science, and Medicine; the Department of Philosophy which offers a degree field in History and Philosophy of Science; or the Program in Human Biology where a student can craft an individual area of concentration in the History of Science and Medicine. Course work in science, technology, and medicine or in ancient science and philosophy can be arranged with the departments of Anthropology and Classics respectively. Alternatively, students may consult with a member of the committee-in-charge to construct an Individually Designed Major. The major must conform to the requirements for Individually Designed Majors; see the "Individually Designed Majors" section of the bulletin.

## GRADUATE DEGREES

Students can pursue a Ph.D. specializing in the history and philosophy of science and technology through the departments of History and Philosophy. Students can pursue an M.A. specializing in the history and philosophy of science and technology through any of the participating departments and programs. In addition, students may also participate in the HPST program on a non-degree basis. Students should consult departmental descriptions for the details of graduate degree requirements specific to their main department. They are also encouraged to design an interdisciplinary component in their program of studies, drawing on the most relevant classes across the humanities, sciences, and engineering which allow them to connect their discipline-specific work to a broader understanding of science and technology as historical and contemporary phenomena. Prospective students should work closely with their advisers in developing this aspect of their program of studies.

## COURSES

### INTRODUCTORY

**HPS 60. Introduction to Philosophy of Science**—(Same as PHIL 60.) 20th-century views on the nature of scientific knowledge. Logical positivism and Popper; the problem of induction; Kuhn, Feyerabend, and radical philosophies of science; subsequent attempts to rebuild moderate empiricist and realist positions. GER:DB-Hum

5 units, Aut (Longino, H)

**HPS 61. Science, Religion, and the Birth of Modern Philosophy**—(Same as PHIL 61.) Galileo's defense of the Copernican world-system that initiated the scientific revolution of the 17th century, led to conflict between science and religion, and influenced the development of modern philosophy. Readings focus on Galileo and Descartes. GER:DB-Hum

5 units, Win (Friedman, M)

### COGNATE COURSE

See respective department listings for course descriptions and General Education Requirements (GER) information. See degree requirements above or the program's student services office for applicability of these courses to a major or minor program.

**PHIL 16N. Values and Objectivity**

3 units, Aut (Ryckman, T)

### SCIENCE IN HISTORY

This sequence is designed to introduce students to the history of science from antiquity to the 20th century. Students are advised to take most or all of this sequence as a core foundation.

### COGNATE COURSES

**CLASSGEN 22N. Technologies of Civilization: Writing, Number, and Money**

4-5 units, Spr (Netz, R)

**HISTORY 31. Science, Technology, and Art: The Worlds of Leonardo**

5 units, Spr (Rutkin, D)

### MEDICINE IN HISTORY

This sequence is designed to introduce students to the history of medicine from antiquity to the 20th century. Students are advised to take most or all of this sequence as a core foundation.

**HPS 156. History of Women and Medicine in the United States**—Women's bodies in sickness and health, and encounters with lay and professional healers from the 18th century to the present. Historical construction of thought about women's bodies and physical limitations; sexuality; birth control and abortion; childbirth; adulthood; and menopause and aging. Women as healers, including midwives, lay physicians, the medical profession, and nursing. GER:EC-Gender

5 units, Aut (Horn, M)

### COGNATE COURSE

**HISTORY 243G/343G. Tobacco and Health in World History**

4-5 units, Aut (Proctor, R)

### PHILOSOPHICAL PERSPECTIVES ON SCIENCE, MEDICINE, AND TECHNOLOGY

This sequence is designed to introduce students to the philosophy of science. Students are advised to take HPS 60 above as a starting point, and combine a number of the electives listed below in conjunction with courses in the other concentrations that address their specific interests.

### COGNATE COURSES

**PHIL 107/207. Plato and Heraclitus**

3 units, not given this year

**PHIL 115/215. Foundations of Medieval Psychology**

3-5 units, Spr (Wood, R)

**PHIL 163/263. Significant Figures in Philosophy of Science**

4 units, not given this year

**PHIL 164/264. Central Topics in the Philosophy of Science: Theory and Evidence**

4 units, Aut (Ryckman, T)

**PHIL 165/265. Philosophy of Physics**

4 units, Spr (Ryckman, T)

**PHIL 167A/267A. Philosophy of Biology**

4 units, not given this year

**PHIL 167B/267B. Philosophy, Biology, and Behavior**

4 units, Win (Longino, H)

**PHIL 184F/284F. Feminist Theories of Knowledge**—(Same as FEMST 166.)

4 units, not given this year

**PHIL 224. Kant's Philosophy of Physical Science**

4 units, Win (Friedman, M)

**PHIL 360. Core Seminar in Philosophy of Science**

4 units, alternate years, not given this year

**PHIL 365. Seminar in Philosophy of Science: Structural Realism**

4 units, not given this year

## ADVANCED

### HISTORICAL PERSPECTIVES ON SCIENCE

The following courses focus on specific episodes in or approaches to the history of science.

**HPS 154. What is Science? Explaining Nature from Pythagoras to Popper**—How many great changes in science were accompanied by changes in method. Case studies of scientific practice from ancient Greece to the 20th century; how theory and practice have influenced each other. What kinds of science and technology emerged under different methods; how science influenced ideas about knowledge, discovery, and truth. What is or is not science, such as the debate over intelligent design.

3-5 units, Aut (McCaskey, J)

### COGNATE COURSES

**FRENGEN 295. Science, Technology, and Society in Europe and the U.S.: Ethical Debates and Controversies**

3-5 units, Win (Dupuy, J)

**HISTORY 208A/308A. Science and Law in History**

4-5 units, Spr (Riskin, J)

**HISTORY 232F/332F. The Scientific Revolution**

4-5 units, Win (Riskin, J)

**HISTORY 232G/332G. When Worlds Collide: The Trial of Galileo**

4-5 units, not given this year

**HISTORY 241F/341F. History of the Modern Fact**

4-5 units, not given this year

**HISTORY 241G/341G. History of the Senses**—(Same as STS 134/234.)

4-5 units, not given this year

**HISTORY 241S. Science and Culture Wars**

5 units, not given this year

## CONTEMPORARY PERSPECTIVES ON SCIENCE, MEDICINE, AND TECHNOLOGY

The following courses focus on contemporary cultural and social science approaches to science, technology, and medicine.

### HPS 199. Directed Reading

*1-15 units, Aut, Win, Spr, Sum (Staff)*

**HPS 201. HPST Colloquium**—Several meetings per quarter to discuss the work of invited speakers on topics of broad concerns to science and technology studies. Required of students participating in the program. See <http://hpst.stanford.edu/colloquia.html> for times and locations. May be repeated for credit.

*1 unit, Aut, Win, Spr (Riskin, J)*

**HPS 299. Graduate Individual Work**—May be repeated for credit.

*1-15 units, Aut, Win, Spr, Sum (Staff)*

## COGNATE COURSES

**CASA 132. Science, Technology, and Gender**

*3-5 units, not given this year*

**HISTORY 243C/343C. 18th-Century Colonial Science and Medicine**

*4-5 units, not given this year (Schiebinger, L)*

**HISTORY 243S/443A. Human Origins: History, Evidence, and Controversy**

*4-5 units, not given this year*

**HISTORY 244C/444C. The History of the Body in Science, Medicine, and Culture**

*4-5 units, not given this year*

**HUMBIO 175. Health Care as Seen Through Medical History, Literature, and the Arts**

*3 units, Aut (Zaroff, L)*

## OVERSEAS STUDIES

These courses are approved for the History and Philosophy of Science and Technology major and taught overseas at the campus indicated. Students should discuss with their major advisers which courses would best meet individual needs. Descriptions are in the "Overseas Studies" section of this bulletin or at the Overseas Studies office, 126 Sweet Hall.

## FLORENCE

**OSPFLOR 44. The Revolution in Science: Galileo and the Birth of Modern Scientific Thought**

*5 units, Win (Galluzzi, P)*

This file has been excerpted from the *Stanford Bulletin, 2007-08*, pages 470-471. Every effort has been made to ensure accuracy; post-press changes may have been made here. Contact the editor of the bulletin at [arod@stanford.edu](mailto:arod@stanford.edu) with changes or corrections. See the bulletin web site at <http://bulletin.stanford.edu> for additional information.