PROGRAM IN HISTORY AND PHILOSOPHY OF SCIENCE AND TECHNOLOGY

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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 the historical and contemporary aspects of science, medicine, and technology. It offers graduate degrees at the doctoral level through the departments of History and Philosophy, as well as at the master's level through a variety of affiliated department and programs, principally Classics, Cultural and Social Anthropology, English, and Modern Thought and Literature. In addition, graduate students in such affiliated departments and programs may participate in the HPST program by taking selected courses (see below). Its courses span the period from antiquity to the late 20th century, with special emphasis on ancient and Islamic science; Renaissance science; the scientific revolution; 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; history of computers and information sciences; and gender, science, and technology. These courses are designed both for students looking for a humanistic perspective on the sciences and for students trying to understand the relationship of the sciences to humanistic knowledge.

Stanford has unique resources for the history and philosophy of science. Situated in the heart of Silicon Valley at an institution with a long and distinguished tradition in many sciences, the University 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 some of the most interesting public science museums in the country: 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 major in the Department of History, which offers an interdisciplinary major in History and Science, in the Department of Philosophy, which offers a specific degree in History and Philosophy of Science, or in the Program in Human Biology, which offers a concentration in history of science and medicine. A concentration in the anthropology of science or in ancient science can be arranged with the departments of Cultural and Social 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. in HPST through the departments of History and Philosophy. Students can pursue an M.A. in HPST through any of the participating departments and programs. Students completing the requirements of the HPST program for the M.A. or Ph.D. (including appropriate dissertation work) graduate with a diploma stating their concentration in HPST. In addition, students may also participate in the HPST program on a non-degree basis. The degree and program requirements are as follows:

All students participating in the program are required to attend the HPST colloquium series and are expected to present their own research at least once in the course of their studies at Stanford. The colloquium series meets four times per quarter as a one-unit course.

All students participating in the program take the HPST core graduate seminar (a one quarter, 6-unit course). This course is offered every other year, crosslisted in HPST, History, and Philosophy, and is team-taught by two faculty as an introduction to historical and philosophical perspectives on science and technology. In alternate years, both History and Philosophy offer their departmental core seminars in history or philosophy of science and technology respectively.

The core seminars are designated each year by the HPST program committee.

In addition to the HPST colloquium series, all doctoral students in HPST complete a four-course sequence:

1. HPST core seminar
2. Department core seminar in History or Philosophy
3. One elective seminar in history of science and/or technology
4. One elective seminar in philosophy of science and/or technology

In addition to participating in the HPST colloquium series, all master's students in HPST are required to complete a three-course sequence:

1. HPST core seminar (or department core in alternate years)
2. One elective in history of science
3. One elective in philosophy of science

In addition to participating in the HPST colloquium series, all students in other programs participating in HPST are required to complete a two-course sequence:

1. HPST core seminar
2. One elective seminar in history or philosophy of science

Electives, in all cases, are to be selected from a list approved each year by the HPST program committee.

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, Feyerbend, and radical philosophies of science; subsequent attempts to rebuild moderate empiricist and realist positions. GER:DB-Hum

5 units, Spr (Longino)

HPS 61. Philosophy and the Scientific Revolution—(Same as PHIL 61.) The relationship between the scientific revolution of the 17th century that resulted in the birth of modern science and the contemporaneous intellectual developments constituting the birth of modern philosophy. Readings focus on Galileo and Descartes. GER:DB-Hum
5 units, Aut (Friedman)

HPS 62. World History of Science: From Prehistory to the Scientific Revolution—(Enroll in HISTORY 140.)
5 units, Spr (Proctor)

HPS 62N. Values and Objectivity—(Enroll in PHIL 16N.)
3 units, Win (Ryckman)

HPS 63N. Freedom, Community, and Morality—(Enroll in PHIL 15N.) Stanford Introductory Seminar.
3 units, Win (Friedman)

HPS 65N. The History of Women and Gender in Science—(Enroll in HISTORY 44N.) Stanford Introductory Seminar.
5 units, Win (Schiebinger)

HPS 68N. Technologies of Civilization: Writing, Number, Money—(Enroll in CLASSGEN 22N.) Stanford Introductory Seminar.
3-4 units, Spr (Netz)

SCIENCE IN HISTORY

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

HPS 102. The Scientific Revolution—(Enroll in HISTORY 232F/332F.)
5 units, Win (Findlen)

HPS 104. The History of Twentieth-Century Physics: The Quantum Century—(Enroll in HISTORY 143.)
3-5 units, Aut (Riordan)

HPS 105. Origins and History of the Scientific Fact—(Enroll in HISTORY 241F/341F.)
5 units (Riskin) not given 2005-06

HPS 106. The Greek Invention of Harmony and Proportion—(Enroll in CLASSGEN 137.)
3-4 units, Spr (Netz)

HPS 107. Intellectual Revolutions—(Same as HISTORY 142J.)
5 units, Spr (Pal)

HPS 108. Darwin in the History of Life—(Enroll in HISTORY 45.)
5 units, Aut (Proctor)

MEDICINE IN HISTORY

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

HPS 122. The Rise of Scientific Medicine—(Enroll in HISTORY 41B/343.)
4-5 units (Lenoir) not given 2005-06

HPS 123. Ancient Medicine—(Enroll in CLASSGEN 139.)
3-4 units, Win (Netz)

HPS 124. Tobacco and Health in World History—(Enroll in HISTORY 243G/343G.)
5 units, Aut (Proctor)

HPS 125. Medicine and Society in Early Modern Europe—(Enroll in HISTORY 242G.)
5 units, Win (Pal)

PHILOSOPHICAL PERSPECTIVES ON SCIENCE, MEDICINE, AND TECHNOLOGY

This sequence is designed to introduce students to fundamental aspects of the philosophy of science. Students concentrating in the philosophy of science 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.

HPS 140. Popper, Kuhn, and Lakatos—(Enroll in EDUC 214, PHIL 156.)
3 units, Spr (Phillips)

HPS 141. Philosophical Applications of Cognitive Science—(Enroll in PHIL 189.)
4 units (Staff) not given 2005-06

HPS 142. Central Topics in the Philosophy of Science: Theory and Evidence—(Enroll in PHIL 164/264.)
4 units, Win (Ryckman)

HPS 143. Philosophy of Physics—(Enroll in PHIL 165/265.)
4 units, Spr (Ryckman)

HPS 144. Philosophy of Biology—(Enroll in PHIL 167A.)
4 units (Staff) not given 2005-06

HPS 145. Philosophy, Biology, and Behavior—(Enroll in PHIL 167B/267B.)
4 units, Win (Longino)

HPS 146A. Plato's Ontology and Mathematics—(Enroll in PHIL 107/207.)
3 units (Moravcsik) not given 2005-06

HPS 147. Kant's Philosophy of Physical Science—(Enroll in PHIL 224.)
4 units, Aut (Friedman)

HPS 148. Seminar in Philosophy of Science: Structural Realism—(Enroll in PHIL 365.)
4 units (Ryckman) not given 2005-06

HPS 150. Core Seminar in Philosophy of Science—(Enroll in PHIL 360.)
4 units (Friedman, Ryckman) alternate years, given 2006-07

ADVANCED

HISTORICAL PERSPECTIVES ON SCIENCE

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

HPS 151. History of the Senses—(Enroll in HISTORY 241G/341G, STS 134.)
5 units (Riskin) not given 2005-06

HPS 153. Science, Technology, and Art: The Worlds of Leonardo—(Enroll in STS 102/202 HISTORY 31/314.)
5 units, Win (Findlen)

HPS 154. When Worlds Collide: The Trial of Galileo—(Enroll in HISTORY 232G/332G.)
5 units, Win (Findlen)

HPS 155. The Prehistory of Computers—(Enroll in HISTORY 241J/341J.)
3-5 units (Riskin) not given 2005-06

HPS 158. Human Origins: History, Evidence, and Controversy—(Enroll in HISTORY 243S/466.)
5 units, Win (Proctor)

CONTEMPORARY PERSPECTIVES ON SCIENCE, MEDICINE, AND TECHNOLOGY

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

HPS 159. Theory and Practice of Feminism in Science —(Enroll in HISTORY 244/344L.)
5 units, Spr (Schiebinger)

HPS 163. History of Computer Game Design: Technology, Culture, and Business—(Enroll in STS 145.)
4 units (Lowood) not given 2005-06

HPS 164. Science, Technology, and Gender—(Enroll in CASA 132.)
3-5 units (Jain) not given 2005-06

HPS 166. Foundations of Nanoethics: Toward a Rapprochement between Europe and the U.S.—(Enroll in FRENGEN 258E.)
3-5 units, Spr (Dupuy)

HPS 167. Health Care as Seen Through Medical History, Literature, and the Arts—(Enroll in HUMBIO 175.)
4 units, Aut (Zaroff)

HPS 196. Minds and Worlds from Aristotle to Newton to Einstein—(Enroll in HISTORY 141.)
1-5 units (Riskin) not given 2005-06

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 (Staff)

HPS 299. Graduate Individual Work—May be repeated for credit.
1-15 units, Aut, Win, Spr, Sum (Staff)

OVERSEAS STUDIES

Descriptions of these courses are in the "Overseas Studies" section of this bulletin or at the Overseas Studies office, 126 Sweet Hall. Students overseas are encouraged to participate in a wide range of internships and independent research as well.

BEIJING

HPS 105V. History of Science and Technology in China—(Same as STS 127V.)
4 units, Spr (Ren)

FLORENCE

HPS 43V. Eating and Eating Disorders in the Context of History and Culture
4 units, Spr (R. Casper)

HPS 44V. Medicine and Art in the Renaissance
4 units, Win (R. Casper)

HPS 104V. In the Footsteps of Freud in Florence
4 units, Aut (Pallanti)