PROGRAM IN HISTORY AND PHILOSOPHY OF SCIENCE

Chair: Timothy Lenoir
Committee-in-Charge: Barton Bernstein (History), Joe Corn (History), Paula Findlen (History), Peter Godfrey-Smith (Philosophy), Sarah Jain (Cultural and Social Anthropology), Timothy Lenoir (History), Reviel Netz (Classics)
Professors: Barton Bernstein (History), Paula Findlen (History), Michael Friedman (Philosophy), David Holloway (History, Institute for International Studies, Political Science), Timothy Lenoir (History), Richard White (History)
Associate Professors: Ahmad Dallal (History), Peter Godfrey-Smith (Philosophy)
Assistant Professors: Sarah Jain (Cultural and Social Anthropology), Reviel Netz (Classics), Jessica Riskin (History), Michael Strevens (Philosophy)
Senior Lecturer: Joseph Corn (History)
Lecturers: Michael J. Gorman (Science, Technology, and Society), Christophe Lécuyer
Affiliated Faculty: John Bender (English), Hans Gumbrecht (French and Italian), C. Francis Everitt (Hansen Lab), Michael Riordan (SLAC), Charles A. Taylor (Mechanical Engineering, Surgery)
Fellow: Sybille Obrecht
Visiting Scholars: Stephen Hilgartner, Anna Carolina Regner
Other Affiliation: Henry Lowood (Stanford University Libraries), Michael Riordan (SLAC), Larry Zaroff (Department of Anesthesiology), Audrey Shafer (Department of Anesthesiology)

The Program in History and Philosophy of Science (HPS) is an interdisciplinary, non-degree program focusing on the historical and contemporary aspects of science, medicine, and technology. The program offers graduate degrees through the departments in which core faculty teach, principally Classics, Cultural and Social Anthropology, History, and Philosophy. Undergraduate degrees are offered through the departments of History and Philosophy, and through the Program in Human Biology. The program works cooperatively with other departments and programs in the administration of undergraduate majors and graduate degrees. Its undergraduate and graduate 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 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. Alternately, 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 either an M.A. or a Ph.D. in history and philosophy of science through departments in which appropriate faculty members teach. Students interested in pursuing a graduate degree should consult with the appropriate faculty members in order to determine which departmental degree best meets their needs. Applications for admission should be sent to the appropriate department.

COURSES

INTRODUCTORY

60. Introduction to the History and Philosophy of Science—(Same as Philosophy 60.) Survey of 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; case study in the history of biology. GER:3a
5 units, Spr (Godfrey-Smith)

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.

101. Undergraduate Colloquium: Science in the Islamic World—(Enroll in History 290.)
5 units (Dallal) not given 2001-02

102. Undergraduate/Graduate Colloquium: Origins and History of the Scientific Fact—(Enroll in History 206P/306P; graduate students register for 306P.)
5 units, Aut (Riskin)

103. The Darwinian Revolution—(Enroll in History 133.)
4 units (Lenoir) not given 2001-02

104. History of 20th-Century Physics—Describes, analyzes, and interprets the major scientific changes characteristic of the 20th century. Introduction to the ideas of relativity, the influence of quantum theory, and alternating scientific fashions from atomic, nuclear, and particle physics, including the impact on cosmology, semiconductors, and superconductivity. Emphasis is on corresponding cultural changes in areas such as sociology and philosophy, and on the changing role of physics in the 20th century.
3-5 units, Win (Riordan)

106. Minds and Worlds, from Aristotle to Newton to Einstein—(Enroll in History 106.)
5 units, Win (Riskin)

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.

121. The Emergence of Modern Medicine—(Enroll in History 13.)
5 units (Findlen) not given 2001-02

122. The Rise of Scientific Medicine—(Enroll in History 33A.)
5 units (Lenoir) not given 2001-02

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.

140. Popper, Kuhn, and Lakatos—(Enroll in Philosophy 156.)
3 units (Phillips) not given 2001-02

141. Philosophy of Statistics—(Enroll in Philosophy 163.)
4 units, not given 2001-02

142. Central Topics in the Philosophy of Science: Scientific Explanation, Confirmation of Scientific Theories and Scientific Realism—(Enroll in Philosophy 164/264.)
4 units, Aut (Fitelson)

143. Philosophy of Physics—(Enroll in Philosophy 165/265.)
4 units, not given 2001-02

144. Philosophy of Biology—(Enroll in Philosophy 167A/267A.)
4 units, Win (Godfrey-Smith)

145. Philosophy, Biology, and Behavior—(Enroll in Philosophy 167B/267B.)
4 units, not given 2001-02

ADVANCED

HISTORICAL PERSPECTIVES ON SCIENCE

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

152. Undergraduate/Graduate Colloquium: New Worlds, Imaginary Worlds—(Enroll in History 213A/313A.)
5 units (Findlen) not given 2001-02

153. Science, Technology, and Art: The Worlds of Leonardo—(Enroll in History 14.)
5 units, Spr (Findlen, Gorman)

154/254. Undergraduate/Graduate Colloquium: When Worlds Collide—The Trial of Galileo—(Enroll in History 216/316.)
5 units (Findlen) not given 2001-02

155. Undergraduate/Graduate Colloquium: The Prehistory of Computers—(Enroll in History 204B/304B; graduate students register for 304B.)
5 units, Win (Riskin)

157. Undergraduate/Graduate Colloquium: Machines and the Nature of Life and Mind—(Enroll in History 203D/303D; graduate students register for 303D.)
5 units, Spr (Riskin)

159. Artificial Life: From the Golem to Human Cloning—(Enroll in STS 129.)
4 units, Aut (Gorman)

CONTEMPORARY PERSPECTIVES ON SCIENCE, MEDICINE, AND TECHNOLOGY

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

160. Undergraduate Research Seminar: Science and High Technology in Silicon Valley, 1930-1980—(Enroll in History 262S/462S.)
4-5 units, Aut (Lecuyer)

161. Undergraduate/Graduate Colloquium: Body Works—Medicine, Technology, and the Body in Late 20th-Century America—(Enroll in History 274A/374A.)
4-5 units (Lenoir) not given 2001-02

162. Stanford Introductory Seminar: Virtuality
5 units (Lenoir) not given 2001-02

163. History of Computer Game Design: Technology, Culture, and Business—(Enroll in Science, Technology, and Society 145.)
4 units, Win (Lowood)

164. Science, Technology, and Gender—(Enroll in Cultural and Social Anthropology 132.)
5 units (Jain) not given 2001-02

165. Anthropology of Disasters—(Enroll in Cultural and Social Anthropology 283.)
5 units (Jain) not given 2001-02

166. Undergraduate/Graduate Colloquium: The Wired Historian—(Enroll in History 201P/301P; graduate students register for 301P.)
3 units, Win (Gorman)

168. Trials of the 20th Century: Technology, Law, and Culture—(Enroll in Cultural and Social Anthropology 85.)
5 units (Jain) not given 2001-02

169. Medical Humanities Workshop
1 unit, Aut, Win, Spr (Zaroff, Shafer)

170. Car Culture—(Enroll in Cultural and Social Anthropology 181.)
5 units, Aut (Jain)

171. The History of Women and Medicine in the U.S.—(Enroll in History 264.)
5 units, not given 2001-02

199. Directed Reading
1-5 units (Staff)

299. Graduate Individual Work
1-5 units (Staff)

AFFILIATED DEPARTMENT OFFERINGS

COMPARATIVE LITERATURE

355E. SHL Seminar: Buckminster Fuller, Polymath
3-5 units, Win (Schnapp)

CULTURAL AND SOCIAL ANTHROPOLOGY

201. Readings in Science, Technology, and Society
5 units, Spr (Jain)

INTERDISCIPLINARY STUDIES IN HUMANITIES

198Z. Core Seminar: The Prose and Poetry of Medical History
5 units, Spr (Zaroff)

PHILOSOPHY

242. Philosophy of Science Seminar
3 units, not given 2001-02

SCIENCE, TECHNOLOGY, AND SOCIETY

200. Senior Colloquium
2 or 4 units, Win (Jain)

This file has been excerpted from the *Stanford Bulletin, 2001-02*, pages 436-438. Every effort has been made to ensure accuracy; late changes (after print publication of the bulletin) may have been made here. Contact the editor of the *Stanford Bulletin* via email at arod@stanford.edu with changes, corrections, updates, etc.