SCIENCE, TECHNOLOGY, AND SOCIETY

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Technology and science are activities of central importance in modern life, intimately bound up with industrial society's evolving character, problems, and potentials. If scientific and technological pursuits are to further enhance human well-being, they and their effects on society and the individual must be better understood by non-technical professionals and ordinary citizens as well as by engineers and scientists. Issues of professional ethics and social responsibility confront technical practitioners. At the same time, lawyers, public officials, civil servants, and business people are increasingly called upon to make decisions requiring a basic understanding of science and technology and their ethical, social, and environmental consequences. Ordinary citizens, moreover, are being asked with increasing frequency to pass judgment on controversial matters of public policy related to science and technology. These circumstances require education befitting the complex sociotechnical character of the contemporary era.

Science, Technology, and Society (STS) is an interdisciplinary program devoted to understanding the natures, consequences, and shaping of technological and scientific activities in modern industrial society. Achieving this understanding requires critical analysis of the interplay of science and technology with human values and world views, political and economic forces, and cultural and environmental factors. Hence, students in STS courses study science and technology in society from a variety of perspectives in the humanities and social sciences. To provide a basic understanding of technology and science, STS majors are also required to achieve either literacy (B.A.) or a solid grasp of fundamentals (B.S.) in some area of engineering or science.

GENERAL INFORMATION

Selected STS courses may be used, individually or in groups, for various purposes:

1. To satisfy University General Education Requirements
2. To satisfy the Technology in Society Requirement of the School of Engineering
3. To comprise parts of student-designed concentrations required for majors in fields such as Human Biology and Public Policy
4. To satisfy the requirements of the STS Honors Program complementing any major (see below)
5. To satisfy requirements for majors in STS (see below)
6. To satisfy requirements for a minor in STS (see below)

STS courses are particularly valuable for undergraduates planning further study in graduate professional schools (for example, in business, education, engineering, law, journalism, or medicine) and for students wishing to relate the specialized knowledge of their major fields to broad technology- and science-related aspects of modern society and culture.

UNDERGRADUATE PROGRAMS

Degree programs in STS are interdisciplinary curricula devoted to understanding the nature and significance of technology and science in modern society. Majors analyze phenomena of science and technology in society from ethical, aesthetic, historical, economic, and sociological perspectives. In addition, students pursuing the B.A. degree study a technical field in sufficient depth to obtain a grasp of basic concepts and methods, and complete a structured concentration on a theme, a particular STS issue, problem, or area of personal interest related to science and technology in society. Those seeking the B.S. degree complete at least 50 units in technology, science, and mathematics. The particular technical courses chosen reflect the student's special interest in science and technology in society. Specific requirements for the bachelor's degree in STS are as follows:

BACHELOR OF ARTS

1. STS Core (eight courses):
   a) Interdisciplinary Foundational course (STS 101or 101Q)
   b) Disciplinary Analyses (five courses with no more than two courses in each category):
      1) Philosophical perspectives (STS 110, 113, 113E, 117, 119)
      2) Historical perspectives (STS 102, 120, 121, 123, 124, 125)
      3) Social Science perspectives (STS 107, 137, 138, 149, 150, 155, 162, 172)
   c) Advanced courses (one course in each category):
      1) Disciplinary analysis (STS 207, 210, 215, 219, 229, 231, 255 or 256)
      2) Senior Colloquium (STS 200)
2. Technical Literacy (five courses):
   a) CS 105 or 106A or equivalent; and
   b) A four-course sequence (minimum of 12 units) in one field of engineering or science (sample sequences available in the STS office); or
   c) Four of the following "Engineering Fundamentals" courses: Engineering 14, 15, 20, 30, 40, 50, 60, 70 (see the descriptions in the "School of Engineering" section of this bulletin).
3. Thematic Concentration (minimum of 20 units, at least five courses, one each from among those designated on the appropriate concentration course list as "foundational" and "advanced"). Thematic Concentrations are organized around an STS-related problem or area. The following Thematic Concentration topics have been pre-certified: the intersections of technology and science with aesthetics, development, history and philosophy, information and society, public policy, social change, and work and organizations.

Course lists for these concentration topics are available in the STS office. A student selecting one of the certified topics may include one or more courses not on the corresponding course list if they are germane to the concentration and meet the student's special interests. Alternatively, the student may choose to design a Thematic Concentration topic and course package subject to program approval. Each Thematic Concentration, certified or self-designed, requires the signature of an appropriate faculty adviser. See the program chair for details.

BACHELOR OF SCIENCE

The student pursuing the B.S. degree shall complete the STS Core and a structured package of at least 50 units of technical courses intended to enable students to understand socially significant technical phenomena in some field of engineering or science. Introductory courses in mathematics or physics (for example, Mathematics 19 or Physics 19) are normally not counted as parts of this technical depth component.

The B.S. candidate follows one of two models in fulfilling the minimum 50-unit requirement:

1. "Focused Depth": at least 24 units and seven courses in a single field of science or engineering, with the remaining units (except for at most two stand-alone courses) grouped in clusters of at least three courses each in other fields of science or engineering. For example, a Focused Depth package might contain eight mechanical engineering, three physics, three mathematics, and three computer science courses, and one course each in electrical engineering and chemistry.
2. "Clustered Depth": two or more clusters of at least five courses and 15 units each in different fields of science or engineering, with at most two stand-alone courses, and remaining courses, if any, in sequences of three or more courses. For example, a Clustered Depth package might contain five-course clusters in computer science, electrical engineering, and physics, and three courses in civil engineering and one course each in biology and chemical engineering.

It is strongly recommended that B.S. majors complete Computer Science 106A or its equivalent.

MINORS

Students planning careers in many technical and non-technical fields, including business, education, engineering, science, law, medicine, and public affairs, are faced with important STS issues in their professional practice. Therefore, a minor in STS is likely to prove practically valuable as well as intellectually stimulating.

Requirements—The STS minor requires successful completion of six courses satisfying the following four requirements:

1. Foundational Course (STS 101, 102 or 101Q)
2. One disciplinary analysis course from each of the following three categories
   a) Philosophical/Ethical Perspectives (STS 110, 113, 113E, 115, 117, 118, 119)
   b) Historical Perspectives (STS 102, 120, 121, 123, 124, 125, 132, 133)
   c) Social Scientific/Policy (STS 107, 137, 138, 149, 150, 155, 162, 170, 171, 183)
3. Two advanced courses, from one or two of the following categories, building on courses taken under requirements 1 and 2:
   a) Philosophical/Ethical Perspectives (STS 210, 215)
   b) Historical Perspectives (STS 229)
   c) Social Scientific/Policy Perspectives (STS 207, 210, 219, 231, 233, 255, 256, 279, 280)
4. At least one of the courses taken under requirements 1 to 3 must incorporate a weekly small group discussion.

Note—Students wishing to use a course not listed above to satisfy one of the requirements for a minor in STS may petition to do so. For details, inquire at the STS office (Bldg. 370, room 109).

HONORS PROGRAM

STS offers a limited number of students an opportunity to achieve honors through in-depth study of the interaction of science and technology with society. The honors program is open to students majoring in any field (including STS). Students accepted for this program carry out an honors project, the work for which normally begins in Spring Quarter of the junior year and is completed by mid-May of the senior year. Usually, this project entails writing an honors essay, although occasionally students have chosen to produce a technical artifact or carry out some other work that itself represents original thinking. When a project results in a work other than an essay, students must also submit an accompanying scholarly exegesis of the work.

ADMISSION

Application for admission to the STS honors program is typically made during the last quarter of the student's junior year. By the eighth week of that quarter, interested students must have completed, or be completing that quarter, at least two of the four courses required to satisfy honors requirements 1 to 4 listed below. Each applicant must also have submitted a formal proposal for her or his project to the STS Honors Committee. For proposal parameters, see the brochure *Honors Program Requirements*, available in the STS office. Students whose proposals are approved are encouraged to apply to attend Honors College in early September to get a running start on their theses. STS honors students are also encouraged to sign up for 2-5 units of credit per quarter in STS 190A,B,C for work on the honors project. While not required, doing so will leave the student sufficient time to finish the thesis in three quarters. Writing a senior honors thesis while simultaneously carrying a full academic load each quarter is a very difficult task to complete with distinction. STS majors pursuing honors in STS or another honors program take STS 200 for 2 units instead of 4 and do not write a research paper for this required course. However, failure to complete the thesis will require additional research work in STS 200. (Note: under exceptional circumstances, a student may be admitted to the STS honors program early in the first quarter of his or her senior year.)

REQUIREMENTS

For non-STS Majors

1. Foundational Course: STS 101 or 101Q.
2. One Philosophical and Ethical Perspectives Course: STS 110, 113, 113E.
3. One Historical Perspectives Course: STS 102, 107, 121, 123, 124 or 125.
4. One Social Science Perspectives Course: STS 107, 137, 138, 149, 155, 162, 170, 171 or 183.
5. Honors Project: an original critical essay (or investigative project with accompanying explanatory essay) on an STS topic of general importance (12 to 15 units). Past honors projects are on file in the STS library.

For STS majors

1. Completion of STS Core.
2. Requirement 5 above.

To earn honors, the project must receive a grade of at least 'B.' The student not majoring in STS must also achieve a grade point average (GPA) of at least 3.3 in the courses taken to satisfy requirements 1 to 4 above. In the case of STS majors, the student must compile a GPA of at least 3.3 in the entire STS core. If all these requirements are met, the designation "Honors Program in Science, Technology, and Society" is affixed to the student's permanent record and appears in the commencement program.

COURSES

(WIM) indicates that the course meets the Writing in the Major requirements.

The STS web site (http://www.stanford.edu/group/STS/) contains updated course scheduling information, course syllabi, faculty and staff information, and information about how to declare a major or a minor in STS.

101. Science, Technology, and Contemporary Society—(Graduate students register for 201; same as Engineering 130.) Analysis of the interplay of science, technology, and society in the contemporary U.S. Topics: the key social, cultural, and values issues raised by contemporary scientific and technological developments; distinctive features of science and engineering as sociotechnical activities; major influences of scientific and technological developments on 20th-century society, including transformations and problems of work, leisure, human values, the fine arts, and international relations; ethical conflicts in scientific and engineering practice; and the social shaping and management of contemporary science and technology. GER:3b

4-5 units, Aut (McGinn)

101Q. Stanford Introductory Seminar: Technology in Contemporary Society—Preference to sophomores. Introduction to the STS field. Topics: the natures of science and technology and their relationship, what is most distinctive about these forces today, and how they have transformed and been affected by contemporary society. Salient social, cultural, and ethical issues raised by recent scientific and technological developments. Case studies from specific areas, e.g., information technology and biotechnology, with emphasis on the contemporary U.S. Unexpected influences of science and technology on contemporary society and how social forces shape the scientific and technological enterprises and their products. Focus is on developing the ability to think critically, comprehensively, and in a balanced way about technology in contemporary society. Enrollment limited to 12. GER:3b

4 units, Aut (McGinn)

102. Science, Technology, and Art: The Worlds of Leonardo—(Graduate students register for 202; same as History 14.) The intersections among science, technology, and society, and an interdisciplinary introduction to Renaissance studies. The 15th-century artist, engineer, and inventor continues to inspire innovative, interdisciplinary work. Why does this Renaissance figure continue to fascinate us? The world of the historical Leonardo, looking at his range of interests and accomplishments (e.g., Mona Lisa, human anatomies, flying machines) and the culture of invention that shaped him. Students think with Leonardo, reconstructing some of his projects. The persistence of the Renaissance as a touchstone for innovation in the 21st century, examining the "myth of Leonardo." Recommended for STS majors; complements STS 101. GER:3a

5 units, Spr (Findlen, Gorman)

107. Technology and Economic Change—(Enroll in Economics 113.)

5 units, Win (Arora)

110. Ethics and Public Policy—Ethical issues in science- and technology-related public policy conflicts. Develops the capacity for rigorous critical analysis of complex, value-laden policy disputes. Topics: the natures of ethics and morality; the natures of and rationales for liberty, justice, and human rights; and the use and abuse of these concepts in recent and current policy disputes. Cases from: biomedicine, environmental affairs, the technical professions, communications, and international relations. GER:3a (WIM)

5 units, Win (Jamieson)

113. Technocritique—(Enroll in French 128.)

3-5 units (Dupuy) not given 2001-02

113E. Science, Ethics, and Society: Debates and Controversies in Europe and America—(Enroll in French 128E.)

3-5 units, Spr (Dupuy)

115. Ethical Issues in Engineering—(Same as Engineering 131.) Ethical issues in contemporary engineering practice. Topics: the moral rights and responsibilities of engineers in relation to society, employers, colleagues, and clients; cost-benefit-risk analysis, safety, and informed consent; the ethics of whistle blowing; ethical conflicts of engineers as expert witnesses, consultants, and managers; ethical issues in engineering design, manufacturing, and operations; ethical issues arising from engineering work in foreign countries; and ethical implications of the social and environmental contexts of contemporary engineering. Use of real life case studies, guest practitioners, and field research. Limited enrollment. GER:3a

4 units, not given 2001-02

117. Art and Technology—(Enroll in Art History 172.)

4 units, Spr (Lee)

118. The Invention of Modern Architecture—(Enroll in Art History 141.)

4 units (Turner) not given 2001-02

119. Cyborgs and Synthetic Humans—(Enroll in Art History 162.)

4 units (Bukatman) not given 2001-02

120. Science and Technology in the Islamic World—The origins, development and cultural significance of science, medicine, and technology in the Islamic World, with emphasis on the worldview and achievements of individual scientists, issues of progress and decline, the role of science in an Islamic religious and political context, the transmission of the Islamic sciences to Europe, and modern Islamic responses to western science. The practice of science in Muslims societies contributed both to the preservation of the Greek sciences and to the gradual transformation of this scientific tradition.

5 units (Dallal) given 2002-03

121. Technology and Culture in 19th-Century America—(Enroll in History 115.)

4-5 units, Win (Corn)

123. The Scientific Revolution—What sort of tools do historians use to understand and interpret science? How did science emerge as a distinctive kind of knowledge? The history of science as a field of study, using the Scientific Revolution of the 16th and 17th centuries; the age of Copernicus, Galileo, Kepler, and Newton as a case study in the historical interpretation of science. The intellectual, cultural, and institutional context in which Western science emerged. How historians have explained and debated the birth pangs of modern science.

5 units (Findlen) given 2002-03

124. American Economic History—(Enroll in Economics 116.)

5 units, not given 2001-02

125. The Emergence of Modern Medicine—(Enroll in History 13.)

5 units (Findlen) not given 2001-02

126. Undergraduate Colloquium: The Prehistory of Computers—(Enroll in History 204B/304B.)

5 units, Win (Riskin)

128. Science and Technology in WW II and What Happened Afterward—(Same as Electrical Engineering 45.) The efforts of engineers, scientists and mathematicians during WW II had enormous effects on the way the war was fought and won, and many aspects of postwar research and development were shaped at that time. Much of the work was done in secret, and science and counter-science went hand in hand; weapons and counter-weapons, intelligence and counterintelligence. Examples of science and counter-science in the war effort, and what became of them after the war. Examples: encryption and computation; radar; communication and electronics; control and optimization; materials; drugs and medicine.

4 units, Win (Osgood)

129. Artificial Life: From the Golem to Human Cloning—Should scientists "play God"? What are the moral pitfalls associated with creating artificial life? Historical background to current debates on artificial life beginning with Jewish legends surrounding the Golem, a figure made from clay and endowed with dangerous powers, continuing with the Paracelsian homunculus, a humanlike creature made from incubated human sperm in the sixteenth century, and tracing the complex history of the moral and technical obstacles to artificial life from the Renaissance to the present. Examination of real and imagined technologies, from automata simulating the living body to attempts to extend and manipulate human life artificially.

4 units, Aut (Gorman)

132. Undergraduate Colloquium: Yesterday's Tomorrows—Technology and the "Future" in History—(Enroll in History 267.)

5 units, Spr (Corn)

137. Telecommunication Policy and the Internet—(Enroll in Communication 137.)

5 units, Aut (Bar)

138. International Security in a Changing World—(Enroll in Political Science 138.)
5 units, Win (Blacker, May, Perry, Sagan)

145. History of Computer Game Design: Technology, Culture, and Business—Reading, discussion, reports, and projects on the developing culture and technology of computer and video game design. Historical contexts include entertainment media, computing technology, applications of gaming technology, and business history. Topics: play in human culture, early computer games from chess to Spacewar, the role of artificial intelligence research, the history of computer graphics and sound technology, the evolution of techniques and genres of computer game design, video game machines, games and the microcomputer revolution, networked gaming, gadgets and games as factors in the evolution of software and hardware, marketing, gendering of games and game play, virtual worlds, simulation, video and computer game industries, technology transfer (e.g., military simulations). Enrollment limited to 80.
4 units, Win (Lowood)

148. Programming in Society—Acts of programming inform and shape world of computers, ATMs, video games, cell phones, PDAs, GPS systems, global capital flows, smart bombs, and the Internet. What is the intellectual ancestry of programming? Where are its political roots? Exploration of links relating programming to the Enlightenment, 20th-century military designs, and the expansion of capitalism.
4 units, Aut (Aneesh)

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

150. Car Culture—(Same as Cultural and Social Anthropology 181.) Since at least the 1950s the U.S. has been notorious as a nation in love with the car. An examination of this premise, analyzing new methods of production brought by automobile manufacture, the ways that automobiles shaped urban growth, debates about pollution and environmental degradation, and debates around auto safety. The ways that the car has influenced American practices, e.g., courting, eating out, and suburban living.
5 units, Aut (Jain)

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

162. Computers and Interfaces: Psychological and Social Issues—(Enroll in Communication 169.)
5 units, Spr (Nass)

170. Work, Technology, and Society—(Enroll in Management Science and Engineering 182.)
4 units (McGinn) given 2002-03

171. Technology in National Security—(Enroll in Management Science and Engineering 193/293.)
3 units, Aut (Perry)

172. Issues in Technology and Work for a Post-Industrial Economy—(Enroll in Management Science and Engineering 181.)
3 units, Spr (Barley)

173. Introduction to High Technology Entrepreneurship—(Same as Engineering 145.) A high-level overview of the entrepreneurial process, enterprise, and individual. For those who would like to form or grow a technology company, and those with a general interest in the field. Weekly assignments, case studies, lectures, workshops, and projects. For juniors and seniors in engineering, sciences, and humanities. No auditors.
3 units, Win (Byers)

175. Technology, Body, and Work—How does technology shape the structure and experience of work? Conversely, how do social and political interests lead to particular work technologies? Exploration of management principles, production systems, and related technologies as affected by such concerns. Focus on information technologies and the relationships with the human body in contemporary work environments.
4 units, Win (Aneesh)

180. Social Issues in Science and Technology—Seminar. Students investigate an area of science and technology that raises timely social concerns. Reading, research, group discussion, and a public presentation of the issues. Topics will vary depending on the expertise and interest of the students and faculty.
1 unit, Win (Roberts)

183. Media Economics—(Enroll in Communication 183.)
5 units, Win (Bar)

185. Intellectual Property and the Information Era—Intellectual property rules that evolved in the world of physical artifacts do not work well in the context of digital programming and genetic sequencing. How do and should we resolve difficult intellectual property choices posed by new technologies? Exploration of the history of patent laws and their current applications. Cases drawn from biotechnology, print and visual media, and the music industry.
4 units, Win (Aneesh)

190A,B,C. Honors Project—Project for students in STS honors program.

190A. Submission of Proposal
2-5 units, Aut, Win, Spr (Staff)

190B. Continued Study and Writing
2-5 units, Aut, Win, Spr (Staff)

190C. Final Work on Project
2-5 units, Aut, Win, Spr (Staff)

195. Junior Seminar—What are scientific knowledge and technical innovation? What are the social and cultural conditions of their production and the processes through which they are realized? Central topical and methodological issues in STS at a non-introductory level. Strongly recommended for STS majors prior to the Senior Colloquium.
4 units, Spr (Aneesh)

199. Individual Work
1-5 units, Aut, Win, Spr (Staff)

200. Senior Colloquium—(Same as Cultural and Social Anthropology 200.) Reading/discussion of key analytical and theoretical texts treating the natures and interplay of science, technology, and society. Only STS majors writing senior honors theses may take for 2 units. Prerequisite: STS major with senior standing and four STS core courses, or consent of the instructor. Course is primarily for STS majors, but CASA students with an appropriate background may enroll by consent of instructor.
2 or 4 units, Win (Jain)

ADVANCED UNDERGRADUATE AND GRADUATE

201. Science, Technology, and Contemporary Society—(Same as Engineering 130; see 101.)
4-5 units, Aut (McGinn)

202. Science, Technology, and Art: The Worlds of Leonardo—(Same as History 14; see 102.)
5 units, Spr (Findlen, Gorman)

207. Science and Technology in Economic Growth—(Enroll in Economics 224.)
5 units, Spr (Arora)

210. Ethics, Science, and Technology—In-depth analysis of cutting-edge ethical issues raised by advances in science and technology. Topics: biotechnology (including agriculture and reproduction), the built environment, energy technologies, and information technology. Prerequisite: 110 or another course in ethics. Limited enrollment.

4 units (McGinn) given 2002-2003

215. Computers, Ethics, and Social Responsibility—(Enroll in Computer Science 201.)

4 units, Win (Roberts)

219. Management and Organization of Research and Development—(Enroll in Management Science and Engineering 281.)

4 units, Spr (Barley) alternate years, not given 2002-03

226. The History of Women and Medicine in the U.S.—(Enroll in History 264.)

5 units, not given 2001-02

228. SHL Seminar: Buckminster Fuller, Polymath—(Enroll in Comparative Literature 355E.)

3-5 units, Win (Schnapp)

229. Undergraduate Colloquium: When Worlds Collide—The Trial of Galileo—(Enroll in History 216.)

5 units (Findlen) not given 2001-02

230. Undergraduate Colloquium: The Wired Historian—(Same as History 201P.) Essential skills and tools for teaching, research, and the presentation of their work. Topics: the construction of effective web sites on historical topics; online instructional materials; intellectual property and copyright on the web; creating and using digital resources for historical research. Hands-on lab work and demonstrations. Digital media resources available at Stanford. Each student carries out a digital project relating to his/her research or teaching interests.

3 units, Win (Gorman)

231. Technology and Work—(Enroll in Management Science and Engineering 284.)

4 units (Barley) alternate years, given 2002-03

255. Anthropology of Disasters—(Enroll in Cultural and Social Anthropology 283.)

5 units (Jain) not given 2001-02

256. Readings in Science, Technology, and Society—(Same as Cultural and Social Anthropology 201.) Seminar. Contemporary writings in Science and Technology Studies, focusing specifically on anthropological approaches and contributions to the fields.

5 units, Spr (Jain)

260. Information Technology in Society: Legal and Policy Perspectives—Analysis of issues at the interface of law, computer science, and information technology. Topics: intellectual property controversies (e.g., DVD, copyright, and Napster), technological and policy issues around the Internet (e.g., monitoring, access filters, encryption, domain names, and the digital divide), and commerce issues (e.g., network security, taxation, and U.S. and European approaches to privacy). The technical, legal, political, and ethical components of the controversies studied. Seminar format, with enrollment limited to 20 advanced undergraduates. Prerequisite: a course in computer science or consent of instructor.

4 units, Spr (Simons)

269. Experimental Research in Advanced User Interfaces—(Enroll in Communication 369.)

1-5 units, Spr (Nass)

279. Technology, Policy, and Management in Newly Industrializing Countries—(Same as Management Science and Engineering 298.) Technology as the key to development and prosperity in most parts of the world. Building technological capability in newly industrializing countries at the national and firm level. Government intervention, the concept of technology leader and technology follower environments, the transfer of technology from "leader" countries, indigenous technological capability, human capital, culture and innovation, the role of small firms and new enterprises in technological capability. Managing innovation in firms: how innovation is different in technology followers, organizing for shop floor innovation, building an innovation culture, the special role of R&D in followers, the role of design, technology strategy for followers. Cases from Korea, India, Brazil, Singapore, and other NICs. Enrollment limited to 50.

2 or 4 units, Aut (Forbes)

280A. Research Workshop: Commercialization of Knowledge—(Enroll in Education 374A.)

2-3 units, Aut (Powell)

299. Advanced Individual Work

1-5 units, Aut, Win, Spr (Staff)

RELATED DEPARTMENT OFFERINGS

AMERICAN STUDIES

152. American Spaces: An Introduction to Material Culture and the Built Environment

5 units, Spr (Corn)

CIVIL AND ENVIRONMENTAL ENGINEERING

148. Design and Construction of Affordable Housing

4 units, Win (Paulson)

ENGINEERING

1N. Stanford Introductory Seminar: The Nature of Engineering

3 units, Aut (Freyberg)

HISTORY

33A. The Rise of Scientific Medicine

5 units (Lenoir) not given 2001-02

133. The Darwinian Revolution

4 units (Lenoir) not given 2001-02

262S. Undergraduate Research Seminar: Science and High Technology in the Silicon Valley, 1930-1980

4-5 units, Aut (Lecuyer)

274A. Undergraduate Colloquium: Body Works—Medicine, Technology, and the Body in Late 20th-Century America

4-5 units (Lenoir) not given 2001-02

MATERIALS SCIENCE AND ENGINEERING

159Q. Stanford Introductory Seminar: Research in Japanese Companies

3 units, Spr (Sinclair)

POLITICAL SCIENCE

125. The Rise of Industrial Asia

5 units, Aut (Okimoto, Oi)

OVERSEAS STUDIES

These courses are approved for the Science, Technology, and Society 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.

BERLIN

117V. The Industrial Revolution and its Impact on Art, Architecture, and Theory
5 units, Aut (Neckenig)

119V. Architecture and the City, 1871-1990: Berlin as a Nucleus of Modernity—(Same as Overseas Studies 143U.)
4 units, Spr (Neckenig)

120V. Industry, Technology, and Culture, 1780-1945
4 units, Win (Neckenig)

FLORENCE

125V. The Scientific Revolution: From the Renaissance to the 18th Century—(Same as Overseas Studies 215V.)
4-5 units, Aut (La Vergata)