

Science, Technology, and Society

Courses offered by the Program in Science, Technology, and Society are listed under the subject code STS on the (<https://explorecourses.stanford.edu/search?filter-term-Autumn=on&filter-catalognumber-STIS=on&filter-term-Summer=on&page=0&q=STS&filter-coursestatus-Active=on&view=catalog&filter-term-Spring=on&collapse=&filter-term-Winter=on&academicYear=20142015>) ExploreCourses web site (<https://explorecourses.stanford.edu/search?filter-term-Autumn=on&filter-catalognumber-STIS=on&filter-term-Summer=on&page=0&q=STS&filter-coursestatus-Active=on&view=catalog&filter-term-Spring=on&collapse=&filter-term-Winter=on&academicYear=20142015>).

Mission of the Undergraduate Program in Science, Technology, and Society

The Program in Science, Technology, and Society (STS) aims to provide students with an interdisciplinary framework through which to understand the complex interactions of science, technology and the social world. To major in STS, students work through a common core of courses drawn from the social sciences, the humanities, the natural and physical sciences and engineering. Students pursue coursework in one of five specialized areas:

- Communication and Media
- Innovation and Organization
- Nature and Environment
- Life Sciences and Health
- Politics and Policy

Students may also undertake research in affiliated laboratories and through the honors program for course units. All students complete a capstone project, either by taking one of the senior capstone courses (STS 200) or by applying for and completing an STS honors thesis. Students are encouraged to pursue mastery in at least one field from within the humanities or social sciences and at least one field from within the sciences or engineering. Majors may declare either a B.A. or a B.S. degree (see the specific requirements for each degree).

The Program's affiliated faculty represent over a dozen departments, including Anthropology, Communication, Computer Science, Education, Electrical Engineering, History, Law, Management Science and Engineering, Political Science and Sociology. By learning to bring such a rich collection of disciplinary approaches to bear on questions of science and technology, students graduate uniquely equipped to succeed in professions that demand fluency with both technical and social frameworks. Recent graduates of STS have entered top-ranked Ph.D. and MBA programs and forged successful careers in a variety of fields, including business, engineering, law, public service, medicine and academia.

Learning Outcomes (Undergraduate)

The Program expects undergraduate majors to be able to demonstrate the following learning outcomes. These learning outcomes are used in evaluating students and the Program in Science, Technology, and Society. Students are expected to demonstrate:

1. A knowledge of core theories and methods in the interdisciplinary field of STS.

2. An ability to deploy these theories and methods to analyze interactions between science, technology and society in particular historical and cultural contexts.
3. An ability to critically evaluate empirical evidence and theoretical claims in STS-related debates.
4. An ability to communicate clearly and persuasively about STS issues to a general audience in multiple media including oral presentation and writing.

Advising and Course Selection

The Program in Science, Technology, and Society offers an advising process that includes faculty, staff and peer advisers. Prospective majors must first meet with a peer adviser and then with the Program's Student Services Officer to determine which degree they will pursue (the B.A. or B.S.) and how they will fulfill the Program's basic requirements. When they are ready to declare, they meet with the Program's Student Services Officer to submit their degree plan and then the Associate Director reviews the coursework for intellectual coherence. Majors are then assigned to a faculty adviser who serves as an intellectual mentor and helps them identify the core questions driving their interest in the field. The Program also sponsors a wide variety of events designed to help students meet their colleagues and Program alumni, discover research and internship opportunities, and make their way toward the career of their choice.

STS Core

The program offers a Bachelor of Arts and Bachelor of Science in Science, Technology, and Society. Both degree programs require that the student complete the STS Core.

Units

With a grade of C or higher in each course, complete 8 courses satisfying the following requirements:

A. Gateway Requirement

STS 1	The Public Life of Science and Technology	4
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B. Disciplinary Requirement: six courses, one of these courses must be a STS WIM course and at least one of these courses must be a STS Global course. ^{Note 1 & 2}

1. Social Sciences and Humanities Courses (complete 4 courses) ^{Note 3}	13-20 & 4
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ANTHRO 41	Genes and Identity	
ANTHRO 90C	Theory of Ecological and Environmental Anthropology	
ANTHRO 126	Urban Culture in Global Perspective	
ANTHRO 138	Medical Ethics in a Global World: Examining Race, Difference and Power in the Research Enterprise	
ANTHRO 186	Culture and Madness	
CLASSICS 151	Ten Things: An Archaeology of Design	
COMM 120W	Digital Media in Society	
COMM 142W	Media Economics	
ECON 106	World Food Economy	
HISTORY 44Q	Gendered Innovations in Science, Medicine, Engineering, and Environment	
HISTORY 131	Leonardo's World: Science, Technology, and Art in the Renaissance	
HISTORY 140	World History of Science	
HISTORY 140A	The Scientific Revolution	

HISTORY 144	Women and Gender in Science, Medicine and Engineering	
HISTORY 203J	Water in World History	
HISTORY 232F	The Scientific Revolution	
PHIL 60	Introduction to Philosophy of Science	
POLISCI 233F	Science, technology and society and the humanities in the face of the looming disaster	
RELIGST 31	The Religious Life of Things	
SOC 114	Economic Sociology	
2. Engineering and Science Courses (complete 2 courses)		6-10
CEE 64	Air Pollution and Global Warming: History, Science, and Solutions	
CEE 146A	Engineering Economy	
CS 181W	Computers, Ethics, and Public Policy	
ENGR 131	Ethical Issues in Engineering	
HUMBIO 173	Science, Innovation and the Law	
ME 214	Good Products, Bad Products	
MSE 189	Social Networks - Theory, Methods, and Applications	
MSE 193	Technology and National Security	
MSE 197	Ethics, Technology, and Public Policy	
C. Senior Requirement		4-10
STS 200A	Food and Society: Politics, Culture and Technology	
or STS 200D	Text Technologies: A History	
or STS 200H	Ethics, Science, & Technology	
or STS 200J	Advanced Topics in Agnotology	
or STS 200K	Sciences of Learning	
STS 299	Advanced Individual Work	
Total Units		27-44

¹WIM courses: ANTHRO 90C, COMM 120W, CS 181W, HISTORY 140A, HISTORY 232F, MS&E 193 or MS&E 197

²Global courses: ANTHRO 41, ANTHRO 126, ANTHRO 138, ANTHRO 186, ECON 106, HISTORY 131, HISTORY 140, HISTORY 44Q, HISTORY 144, HISTORY 203J, HISTORY 208A, CEE 64, POLISCI 233F

³May only take HISTORY 140A or HISTORY 232F

⁴May only take HISTORY 144 or HISTORY 44Q

Concentration Area

In addition to the Core requirements common to all STS students, a minimum of 50 units, at least twelve courses, are required from among those designated on the appropriate Concentration Area course list (available in the Related Courses tab and on the STS website). All courses must be taken for a letter grade if offered and may not be double-counted with core coursework. Students may count no more than two course petitions outside the list of approved Concentration Area courses toward their STS degree plan. Thematic concentrations are organized around an STS-related area or topic:

1. Communication and Media
2. Innovation and Organization
3. Nature and Environment
4. Life Sciences and Health
5. Politics and Policy

6. Self-Designed Concentration

A student pursuing a Bachelor of Arts degree must take at least 8 classes from the Socio-Cultural Course menus, including at least 3 designated as Foundational, and at least 4 classes from the Technical Course menus.

A student pursuing a Bachelor of Science degree must take at least 8 classes from the Technical Course menu, and at least 4 classes from the Socio-Cultural Course menus, including at least 3 designated as Foundational.

Students in both degree programs are encouraged to pursue sequences of courses that build on one another to increase the coherence of their program and give depth to their skill set and knowledge related to STS.

Alternatively, subject to program approval, a student may choose to design a self-designed concentration. Students interested in designing their own concentration must work with the associate director and have their proposal approved at least 2 quarters prior to your graduating quarter. A proposal (5 to 10 pages) should (a) describe your intellectual objectives in detail, (b) explain why a self-designed concentration is the optimal way to pursue these objectives (as opposed to the five STS concentrations or other majors at Stanford), and (c) list at least 12 courses and 50 units that comprise the plan of study. Students with a self-designed concentration must fulfill the same core requirements as other STS students. More information can be found on the STS website (<https://sts.stanford.edu/major-sts/thematic-concentrations>).

Each student's Concentration Area, certified or self-designed, requires the approval of the STS Associate Director.

Honors Program

The Stanford Program in Science, Technology, and Society (STS) invites STS majors to apply for admission to its Honors Program. An honors project is equivalent to a capstone course and one Socio-Cultural concentration course. Since the program was launched in 1978, STS honors students have carried out a wide array of innovative research projects. Honors projects present a unique undergraduate opportunity to pursue one's intellectual interests in depth, work closely with a faculty adviser, and develop a new set of research and analytical skills that are broadly applicable. STS honors signals expertise in a given field, organizational skills, and intellectual rigor, and students have used them as a springboard for graduate studies and for careers in fields such as information technology, entrepreneurship, finance, public policy, media, education, law, medicine, and the nonprofit sector. Often, the thesis project proves to be among the most rewarding and memorable experiences in a student's academic career at Stanford, as well as an important intellectual milestone. An STS honors thesis tackles a significant problem or question related to a particular area of STS. Students draw research methods from one or more of the disciplines that shape STS, such as history, sociology, communication, anthropology, environmental science, computer programming/modeling, engineering, economics, political science, and art history. Past honors projects are on file in the STS office library.

Honors Program Eligibility and Admission Criteria

To be eligible to apply for the honors program, students must meet the following criteria at the beginning of their senior year:

1. Find an honors faculty adviser and develop research questions, methodology and plan
2. Attend at least one of the quarterly STS workshops offered for prospective honors students, take STS 191: Introduction to Research in STS, or speak with the STS Associate Director
3. Submit a complete honors program application and research proposal

For application and proposal parameters, see the document STS Honors Program, available on the STS web site.

Honors Degree Requirements

To graduate with honors, seniors in the honors program must meet the following criteria:

1. Attend required monthly workshops for current STS honors students
2. Develop an original and complete thesis in consultation with honors faculty adviser
3. Submit a first draft of thesis to honors adviser no later than April 1
4. Submit the final thesis to honors adviser by May 1
5. Earn at least a grade of 'B' on final thesis
6. Have an overall Stanford GPA of 3.4 at the end of Winter Quarter, senior year, or demonstrated academic competence

As of September 1, 2012, STS is no longer admitting non-majors to the honors program.

Minor in Science, Technology, and Society

The program no longer offers a minor. Students currently enrolled in the minor should consult the Stanford Bulletin 2011-12 (<http://www.stanford.edu/dept/registrar/bulletin1112/6074.htm>) for degree requirements.

STS Affiliated Faculty

Director and Professor of Education: John Willinsky

Associate Director: Kyoko Sato

Executive Board: Stephen Barley (Management Science and Engineering), Paula Findlen (History), Mark Granovetter (Sociology), Hank Greely (Law), Sarah Lochlann Jain (Anthropology), Robert McGinn (Management Science and Engineering), Brad Osgood (Electrical Engineering), Eric Roberts (Computer Science), Scott Sagan (Political Science), Fred Turner (Communication), John Willinsky (Education)

Affiliated Faculty and Staff: Jeremy Bailenson (Communication), Stephen Barley (Management Science and Engineering), Thomas Byers (Management Science and Engineering), Jean-Pierre Dupuy (French), Paula Findlen (History), Duana Fullwiley (Anthropology), Mark Granovetter, (Sociology), Hank Greely (Law), Ann Grimes (Communication), James T. Hamilton (Communication), Martin Hellman (Electrical Engineering, Emeritus), Hector Hoyos (Iberian and Latin American Cultures), Miyako Inoue (Anthropology), Sarah Lochlann Jain (Anthropology), Robert Laughlin (Physics), Pamela Lee (Art and Art History), Sandra Soo-Jin Lee (Biomedical Ethics), Helen Longino (Philosophy), Henry Lowood (Stanford University Libraries), Robert McGinn (Management Science and Engineering), Thomas Mullaney (History), Brad Osgood (Electrical Engineering), Walter Powell (Education), Robert Proctor (History), Jessica Riskin (History), Eric Roberts (Computer Science), Scott Sagan (Political Science), Kyoko Sato (STS), Londa Schiebinger (History), Michael Shanks (Classics, Anthropology), Mitchell Stevens (Education), Elaine Treharne (English), Fred Turner (Communication), John Willinsky (Education), Gavin Wright (Economics)

Emeriti: James Adams (Management Science and Engineering, Mechanical Engineering), Barton Bernstein (History), Walter Vincenti (Aeronautics and Astronautics)

Thematic Concentrations Course Lists Communication and Media

Thematic concentration in Communication and Media:

Units

Socio-Cultural Courses

AMSTUD 143X	Starstuff: Space and the American Imagination
ARTHIST 157A	Histories of Photography
ARTHIST 164A	Technology and the Visual Imagination
ARTHIST 245	Art, Business & the Law
ARTHIST 263B	The View through the Windshield: Cars and the American Landscape
ARTSTUDI 236	Future Media, Media Archaeologies
ARTSTUDI 285	Topics in Media Studies: Street Media
COMM 1A	Mass Media, Society, and Democracy
COMM 106	Communication Research Methods
COMM 108	Media Processes and Effects
COMM 120W	Digital Media in Society
COMM 137W	The Dialogue of Democracy
COMM 140	Digital Media Entrepreneurship
COMM 142W	Media Economics
COMM 166	Virtual People
COMM 169	Computers and Interfaces
COMM 172	Media Psychology
COMPLIT 271A	Futurity: Why the Past Matters
CS 181	Computers, Ethics, and Public Policy
CS 546	Seminar on Liberation Technologies
ECON 153	Economics of the Internet
EDUC 226	Curating Experience: Representation in and beyond Museums
EDUC 358	Learning, Sharing, Publishing, and Intellectual Property
ENGLISH 202	History of the Book
ENGR 110	Perspectives in Assistive Technology (ENGR 110)
ENGR 131	Ethical Issues in Engineering
ENGR 145	Technology Entrepreneurship
FILMSTUD 110	Science Fiction Cinema
GERMAN 154	Poetic Thinking Across Media
HISTORY 205A	The History of Information
MSE 180	Organizations: Theory and Management
MSE 189	Social Networks - Theory, Methods, and Applications
MSE 197	Ethics, Technology, and Public Policy
OSPBEIJ 17	Chinese Film Studies
OSPBEIJ 20	Communication, Culture, and Society: The Chinese Way
OSPBEIJ 42	Chinese Media Studies

OSPFLOR 48	Sharing Beauty in Florence: Collectors, Collections and the Shaping of the Western Museum Tradition
OSPFLOR 49	On-Screen Battles: Filmic Portrayals of Fascism and World War II
OSPMADR 45	Women in Art: Case Study in the Madrid Museums
OSPMADR 71	Sociology of Communication
OSPOXFRD 57	The Rise of the Woman Writer 1660-1860
OSPPARIS 30	The Avant Garde in France through Literature, Art, and Theater
PSYCH 30	Introduction to Perception
PSYCH 75	Introduction to Cultural Psychology
RELIGST 31	The Religious Life of Things
STS 140	Science, Technology and Politics
STS 160Q	Technology in Contemporary Society
STS 191	Introduction to Research in STS
SYMSYS 100	Minds and Machines
SYMSYS 245	Cognition in Interaction Design

Technical Courses

ARTSTUDI 160	Intro to Digital / Physical Design
ARTSTUDI 177	Video Art I
ARTSTUDI 179	Digital Art I
ARTSTUDI 260	Design II
ARTSTUDI 275	Introduction to Digital Photography and Visual Images
CEE 112A	Industry Applications of Virtual Design & Construction
CME 108	Introduction to Scientific Computing
CS 105	Introduction to Computers
CS 106A	Programming Methodology
CS 106B	Programming Abstractions
CS 106X	Programming Abstractions (Accelerated)
CS 107	Computer Organization and Systems
CS 108	Object-Oriented Systems Design
CS 109	Introduction to Probability for Computer Scientists
CS 110	Principles of Computer Systems
CS 124	From Languages to Information
CS 144	Introduction to Computer Networking
CS 145	Introduction to Databases
CS 147	Introduction to Human-Computer Interaction Design
CS 148	Introduction to Computer Graphics and Imaging
CS 224W	Social Information and Network Analysis
CS 247	Human-Computer Interaction Design Studio
CS 248	Interactive Computer Graphics
CS 255	Introduction to Cryptography
CS 376	Human-Computer Interaction Research
EE 101A	Circuits I
EE 101B	Circuits II
EE 102A	Signal Processing and Linear Systems I
EE 102B	Signal Processing and Linear Systems II
EE 108	Digital System Design
EE 168	Introduction to Digital Image Processing

EE 169	Introduction to Bioimaging
EE 180	Digital Systems Architecture
ENGR 40P	Physics of Electrical Engineering
FILMSTUD 6	Introduction to Digital Media
MSE 107	Interactive Management Science
MSE 111	Introduction to Optimization
MSE 120	Probabilistic Analysis
MSE 130	Information Networks and Services
MUSIC 220A	Fundamentals of Computer-Generated Sound
MUSIC 220B	Compositional Algorithms, Psychoacoustics, and Computational Music
MUSIC 253	Symbolic Musical Information
MUSIC 254	Music Query, Analysis, and Style Simulation
MUSIC 257	Neuroplasticity and Musical Gaming

Innovation and Organization

Thematic concentration in Innovation and Organization:

Units

Socio-Cultural Courses

ANTHRO 41	Genes and Identity
ANTHRO 136	The Anthropology of Global Supply Chains
ARTHIST 147	MODERNISM AND MODERNITY
ARTHIST 263B	The View through the Windshield: Cars and the American Landscape
ARTSTUDI 236	Future Media, Media Archaeologies
BIO 182	Modeling Cultural Evolution
CEE 32B	Design Theory
CLASSICS 151	Ten Things: An Archaeology of Design
COMM 140	Digital Media Entrepreneurship
COMM 169	Computers and Interfaces
CS 181	Computers, Ethics, and Public Policy
CS 546	Seminar on Liberation Technologies
ECON 113	Economics of Innovation
ECON 116	American Economic History
ECON 118	Development Economics
ECON 145	Labor Economics
ECON 153	Economics of the Internet
ECON 158	Regulatory Economics
ENGR 145	Technology Entrepreneurship
HISTORY 1C	Global History: Empires, Technology, and Modernity
HISTORY 44Q	Gendered Innovations in Science, Medicine, Engineering, and Environment
HISTORY 131	Leonardo's World: Science, Technology, and Art in the Renaissance
HISTORY 140	World History of Science
HISTORY 140A	The Scientific Revolution
HISTORY 144	Women and Gender in Science, Medicine and Engineering
HISTORY 203C	History of Ignorance
HISTORY 219C	Science, Technology, and Modernity in the Soviet Union

HISTORY 232F	The Scientific Revolution	PUBLPOL 134	Ethics On the Edge: Business, Non-Profit Organizations, Government, and Individuals
HUMBIO 173	Science, Innovation and the Law	PUBLPOL 194	Technology Policy
ME 120	History and Philosophy of Design	PUBLPOL 353	Science and Technology Policy
ME 177	Global Engineers' Education	RELIGST 31	The Religious Life of Things
ME 214	Good Products, Bad Products	SOC 114	Economic Sociology
ME 297	Forecasting for Innovators: Technology, Tools & Social Change	SOC 160	Formal Organizations
MSE 175	Innovation, Creativity, and Change	SOC 161	The Social Science of Entrepreneurship
MSE 177	Creativity Rules	SOC 162	Markets and Governance
MSE 180	Organizations: Theory and Management	STS 140	Science, Technology and Politics
MSE 185	Global Work	STS 160Q	Technology in Contemporary Society
MSE 189	Social Networks - Theory, Methods, and Applications	STS 190	Issues in Technology and the Environment
MSE 197	Ethics, Technology, and Public Policy	STS 191	Introduction to Research in STS
OSPBER 115X	The German Economy: Past and Present	SYMSYS 100	Minds and Machines
OSPBER 126X	A People's Union? Money, Markets, and Identity in the EU	SYMSYS 245	Cognition in Interaction Design
OSPBER 161X	The German Economy in the Age of Globalization	Technical Courses	
OSPCPTWN 36	The Archaeology of Southern African Hunter Gatherers	ARTSTUDI 160	Intro to Digital / Physical Design
OSPFLOR 17	The Evolution of Modern Italian Design	ARTSTUDI 260	Design II
OSPFLOR 20	Design Driven Innovation: Italian Excellence	CEE 146A	Engineering Economy
OSPFLOR 41	The Florentine Sketchbook: A Visual Arts Practicum	CS 105	Introduction to Computers
OSPFLOR 48	Sharing Beauty in Florence: Collectors, Collections and the Shaping of the Western Museum Tradition	CS 106A	Programming Methodology
OSPFLOR 58	Space as History: Social Vision and Urban Change	CS 106B	Programming Abstractions
OSPFLOR 115Y	Building the Cathedral and the Town Hall: Constructing and Deconstructing Symbols of a Civilization	CS 106X	Programming Abstractions (Accelerated)
OSPISTAN 62	Business Policy and Strategy in a Global Environment	CS 107	Computer Organization and Systems
OSPKYOTO 54	Escaping Galapagos: Japan's New Innovation Boom	CS 108	Object-Oriented Systems Design
OSPMADR 45	Women in Art: Case Study in the Madrid Museums	CS 109	Introduction to Probability for Computer Scientists
OSPMADR 71	Sociology of Communication	CS 110	Principles of Computer Systems
OSPPARIS 30	The Avant Garde in France through Literature, Art, and Theater	CS 124	From Languages to Information
OSPPARIS 44	EAP: Analytical Drawing and Graphic Art	CS 147	Introduction to Human-Computer Interaction Design
OSPPARIS 72	The Ceilings of Paris	CS 223A	Introduction to Robotics
OSPPARIS 92	Building Paris: Its History, Architecture, and Urban Design	CS 225A	Experimental Robotics
OSPSANTG 29	Sustainable Cities: Comparative Transportation Systems in Latin America	CS 247	Human-Computer Interaction Design Studio
OSPSANTG 71	Santiago: Urban Planning, Public Policy, and the Built Environment	CS 376	Human-Computer Interaction Research
OSPSANTG 119X	The Chilean Economy: History, International Relations, and Development Strategies	CS 402	Beyond Bits and Atoms: Designing Technological Tools
OSPSANTG 130X	The Chilean Economy in Comparative Perspective	CS 402L	Beyond Bits and Atoms - Lab
PSYC 136A	Valuescience: Shedding Illusion to Live Better	EE 101A	Circuits I
PSYC 136B	Valuescience: Shedding Illusion to Live Better	EE 101B	Circuits II
PUBLPOL 102	Organizations and Public Policy	EE 102A	Signal Processing and Linear Systems I
		EE 102B	Signal Processing and Linear Systems II
		EE 108	Digital System Design
		EE 169	Introduction to Bioimaging
		EE 180	Digital Systems Architecture
		ENGR 14	Intro to Solid Mechanics
		ENGR 40M	An Intro to Making: What is EE
		ENGR 40P	Physics of Electrical Engineering
		ME 80	Mechanics of Materials
		ME 101	Visual Thinking
		ME 115A	Introduction to Human Values in Design
		ME 115B	Product Design Methods
		ME 203	Design and Manufacturing
		ME 216A	Advanced Product Design: Needfinding
		MSE 52	Introduction to Decision Making

MSE 107	Interactive Management Science
MSE 111	Introduction to Optimization
MSE 120	Probabilistic Analysis
MSE 121	Introduction to Stochastic Modeling
MSE 130	Information Networks and Services
MSE 152	Introduction to Decision Analysis
MUSIC 220A	Fundamentals of Computer-Generated Sound
MUSIC 220B	Compositional Algorithms, Psychoacoustics, and Computational Music
MUSIC 257	Neuroplasticity and Musical Gaming

Nature and Environment

Thematic concentration in Nature and Environment:

Socio-Cultural Courses

AMSTUD 143X	Starstuff: Space and the American Imagination
ANTHRO 90C	Theory of Ecological and Environmental Anthropology
ANTHRO 126	Urban Culture in Global Perspective
ANTHRO 147	Nature, Culture, Heritage
ANTHRO 160	Social and Environmental Sustainability: The Costa Rican Case
ANTHRO 162	Indigenous Peoples and Environmental Problems
ANTHRO 166	Political Ecology of Tropical Land Use: Conservation, Natural Resource Extraction, and Agribusiness
ANTHRO 169	The Ecology of Cuisine: Food, Nutrition, and the Evolution of the Human Diet
ANTHRO 170	Australian Ecosystems: Human Dimensions and Environmental Dynamics
ARTHIST 263B	The View through the Windshield: Cars and the American Landscape
EARTHSYS 61Q	Food and security
EARTHSYS 105	Food and Community: New Visions for a Sustainable Future
EARTHSYS 112	Human Society and Environmental Change
EARTHSYS 121	Building a Sustainable Society: New Approaches for Integrating Human and Environmental Priorities
EARTHSYS 181	Urban Agriculture in the Developing World
EARTHSYS 184	Climate and Agriculture
EARTHSYS 185	Feeding Nine Billion
ECON 106	World Food Economy
ECON 155	Environmental Economics and Policy
ENGLISH 168	Imagining the Oceans
GERMAN 285	Environmentalism, Literature and Cultural Criticism
HISTORY 1C	Global History: Empires, Technology, and Modernity
HISTORY 131	Leonardo's World: Science, Technology, and Art in the Renaissance
HISTORY 140	World History of Science
HISTORY 140A	The Scientific Revolution

Units

HISTORY 203C	History of Ignorance
HISTORY 203J	Water in World History
HISTORY 207G	The Age of Discovery: Maritime Science and Empire, 1400-1850
HISTORY 232F	The Scientific Revolution
HISTORY 254	Popular Culture and American Nature
HISTORY 278S	The Ethical Challenges of Climate Change
HUMBIO 2B	Culture, Evolution, and Society
HUMBIO 4B	Environmental and Health Policy Analysis
ME 297	Forecasting for Innovators: Technology, Tools & Social Change
MSE 92Q	International Environmental Policy
OSPBER 115X	The German Economy: Past and Present
OSPCPTWN 36	The Archaeology of Southern African Hunter Gatherers
OSPKYOTO 45	Japan's Energy-Environment Conundrum
OSPPARIS 91	Globalization and Its Effect on France and the European Union
OSPSANTG 29	Sustainable Cities: Comparative Transportation Systems in Latin America
OSPSANTG 71	Santiago: Urban Planning, Public Policy, and the Built Environment
PHIL 60	Introduction to Philosophy of Science
POLISCI 110G	Governing the Global Economy
POLISCI 233F	Science, technology and society and the humanities in the face of the looming disaster
SIW 116	International Environmental Policy
STS 140	Science, Technology and Politics
STS 190	Issues in Technology and the Environment
STS 191	Introduction to Research in STS
URBANST 164	Sustainable Cities
Technical Courses	
BIO 43	Plant Biology, Evolution, and Ecology
BIO 101	Ecology
BIO 144	Conservation Biology: A Latin American Perspective
BIOHOPK 172H	Marine Ecology: From Organisms to Ecosystems
BIOHOPK 187H	Sensory Ecology
CEE 64	Air Pollution and Global Warming: History, Science, and Solutions
CEE 70	Environmental Science and Technology
CEE 100	Managing Sustainable Building Projects
CEE 107A	Understanding Energy
CEE 120A	Building Information Modeling Workshop
CEE 124	Sustainable Development Studio
CEE 176A	Energy Efficient Buildings
CEE 176B	Electric Power: Renewables and Efficiency
CEE 272R	Modern Power Systems Engineering

EARTHSYS 101	Energy and the Environment
EARTHSYS 102	Renewable Energy Sources and Greener Energy Processes
EARTHSYS 104	The Water Course
EARTHSYS 155	Science of Soils
EARTHSYS 180B	Principles and Practices of Sustainable Agriculture
ENERGY 104	Sustainable Energy for 9 Billion
ENERGY 120	Fundamentals of Petroleum Engineering
ENERGY 160	Modeling Uncertainty in the Earth Sciences
ENGR 25E	Energy: Chemical Transformations for Production, Storage, and Use
ENGR 30	Engineering Thermodynamics
MATSCI 154	Thermodynamic Evaluation of Green Energy Technologies
MATSCI 156	Solar Cells, Fuel Cells, and Batteries: Materials for the Energy Solution
OSPAUSTL 10	Coral Reef Ecosystems
OSPAUSTL 25	Freshwater Systems
OSPAUSTL 30	Coastal Forest Ecosystems
OSPSANTG 31	The Chilean Energy System: 30 Years of Market Reforms
OSPSANTG 85	Marine Ecology of Chile and the South Pacific
PHYSICS 240	Introduction to the Physics of Energy
PHYSICS 241	Introduction to Nuclear Energy

Life Sciences and Health

Thematic concentration in Life Sciences and Health:

Social-Cultural Courses

AMSTUD 156H	Women and Medicine in US History: Women as Patients, Healers and Doctors
ANTHRO 15	Sex and Gender
ANTHRO 41	Genes and Identity
ANTHRO 82	Medical Anthropology
ANTHRO 138	Medical Ethics in a Global World: Examining Race, Difference and Power in the Research Enterprise
ANTHRO 169	The Ecology of Cuisine: Food, Nutrition, and the Evolution of the Human Diet
ANTHRO 177	Environmental Change and Emerging Infectious Diseases
ANTHRO 186	Culture and Madness
ARTSTUDI 284	Art and Biology
BIOE 131	Ethics in Bioengineering
EDUC 340	Psychology and American Indian Mental Health
FRENCH 219	The Renaissance Body in French Literature and Medicine
GENE 104Q	Law and the Biosciences
HISTORY 41Q	Madwomen: The History of Women and Mental Illness in the U.S.

Units

HISTORY 44Q	Gendered Innovations in Science, Medicine, Engineering, and Environment
HISTORY 130A	In Sickness and In Health: Medicine and Society in the United States: 1800-Present
HISTORY 140	World History of Science
HISTORY 144	Women and Gender in Science, Medicine and Engineering
HISTORY 203C	History of Ignorance
HISTORY 243C	People, Plants, and Medicine: Atlantic World Amerindian, African, and European Science
HISTORY 243G	Tobacco and Health in World History
HISTORY 264G	The Social History of Mental Illness in the United States
HUMBIO 2B	Culture, Evolution, and Society
HUMBIO 3B	Behavior, Health, and Development
HUMBIO 4B	Environmental and Health Policy Analysis
HUMBIO 122S	Social Class, Race, Ethnicity, and Health
HUMBIO 174	Foundations of Bioethics
MED 157	Foundations for Community Health Engagement
OSPFLO 85	Bioethics: the Biotechnological Revolution, Human Rights and Politics in the Global Era
OSPMADR 57	Health Care: A Contrastive Analysis between Spain and the U.S.
OSPMADR 72	Issues in Bioethics Across Cultures
OSPOXFRD 27	Medical Ethics through Literature and Film
OSPPARIS 153X	Health Systems and Health Insurance: France and the U.S., a Comparison across Space and Time
PHIL 60	Introduction to Philosophy of Science
PHIL 63S	Introduction to Bioethics
PHIL 167B	Philosophy, Biology, and Behavior
POLISCI 216E	International History and International Relations Theory
PSYCH 30	Introduction to Perception
PSYCH 75	Introduction to Cultural Psychology
PUBLPOL 122	Biosecurity and Bioterrorism Response
RELIGST 22	Method in the Sciences of Nature and Society
STS 140	Science, Technology and Politics
STS 190	Issues in Technology and the Environment
STS 191	Introduction to Research in STS
Technical Courses	
BIO 41	Genetics, Biochemistry, and Molecular Biology
BIO 42	Cell Biology and Animal Physiology
BIO 43	Plant Biology, Evolution, and Ecology
BIO 44X	Core Molecular Biology Laboratory
BIO 44Y	Core Plant Biology & Eco Evo Laboratory
BIO 109A	The Human Genome and Disease
BIO 109B	The Human Genome and Disease: Genetic Diversity and Personalized Medicine
BIO 144	Conservation Biology: A Latin American Perspective
BIO 150	Human Behavioral Biology
BIOE 44	Fundamentals for Engineering Biology Lab

BIOE 80	Introduction to Bioengineering (Engineering Living Matter)
BIOE 101	Systems Biology
BIOE 103	Systems Physiology and Design
BIOE 115	Computational Modeling of Microbial Communities
CHEM 31A	Chemical Principles I
CHEM 31B	Chemical Principles II
CHEM 31X	Chemical Principles Accelerated
CHEM 33	Structure and Reactivity
CHEM 35	Synthetic and Physical Organic Chemistry
CHEM 130	Organic and Bio-organic Chemistry Laboratory
CHEM 131	Organic Polyfunctional Compounds
CHEM 135	Physical Biochemistry
CHEM 171	Physical Chemistry I
COMP MED 87Q	Introduction to the Mouse in Biomedical Research
EE 102A	Signal Processing and Linear Systems I
EE 102B	Signal Processing and Linear Systems II
EE 169	Introduction to Bioimaging
HUMBIO 2A	Genetics, Evolution, and Ecology
HUMBIO 3A	Cell and Developmental Biology
HUMBIO 4A	The Human Organism
OSPAUSTL 10	Coral Reef Ecosystems
OSPAUSTL 25	Freshwater Systems
OSPAUSTL 30	Coastal Forest Ecosystems
OSPSANTG 85	Marine Ecology of Chile and the South Pacific

Politics and Policy

Thematic concentration in Politics and Policy:

Socio-Cultural Courses

AMSTUD 143X	Starstuff: Space and the American Imagination
ANTHRO 166	Political Ecology of Tropical Land Use: Conservation, Natural Resource Extraction, and Agribusiness
COMM 133	Need to Know: The Tension between a Free Press and National Security Decision Making
COMPLIT 171	Ethics of Jihad
COMPLIT 271A	Futurity: Why the Past Matters
CS 181	Computers, Ethics, and Public Policy
EARTHSYS 61Q	Food and security
ECON 106	World Food Economy
FRENCH 122	Nation in Motion: Film, Race and Immigration in Contemporary French Cinema
GERMAN 132	Dynasties, Dictators and Democrats: History and Politics in Germany
GERMAN 264	Post-Cold War German Foreign Policy
HISTORY 1C	Global History: Empires, Technology, and Modernity
HISTORY 102	History of the International System

Units

HISTORY 103F	The Changing Face of War: Introduction to Military History
HISTORY 140	World History of Science
HISTORY 203C	History of Ignorance
HISTORY 203J	Water in World History
HISTORY 207G	The Age of Discovery: Maritime Science and Empire, 1400-1850
HISTORY 219C	Science, Technology, and Modernity in the Soviet Union
HISTORY 235	The Renaissance of War: Politics, Technology, and War in Late Medieval and Renaissance Italy
HISTORY 261G	Presidents and Foreign Policy in Modern History
HUMBIO 173	Science, Innovation and the Law
INTNLREL 140A	International Law and International Relations
INTNLREL 140C	The U.S., U.N. Peacekeeping, and Humanitarian War
INTNLREL 180A	Transitional Justice, Human Rights, and International Criminal Tribunals
IPS 203	Issues in International Economics
IPS 219	Intelligence and National Security
IPS 250	International Conflict Resolution
MSE 193	Technology and National Security
MSE 197	Ethics, Technology, and Public Policy
OSPFLOR 49	On-Screen Battles: Filmic Portrayals of Fascism and World War II
OSPKYOTO 45	Japan's Energy-Environment Conundrum
OSPMADRD 57	Health Care: A Contrastive Analysis between Spain and the U.S.
OSPPARIS 91	Globalization and Its Effect on France and the European Union
OSPPARIS 153X	Health Systems and Health Insurance: France and the U.S., a Comparison across Space and Time
OSPSANTG 71	Santiago: Urban Planning, Public Policy, and the Built Environment
OSPSANTG 119X	The Chilean Economy: History, International Relations, and Development Strategies
POLISCI 2	Introduction to American National Government and Politics
POLISCI 110G	Governing the Global Economy
POLISCI 110Y	War and Peace in American Foreign Policy
POLISCI 114D	Democracy, Development, and the Rule of Law
POLISCI 114S	International Security in a Changing World
POLISCI 116	The International History of Nuclear Weapons
POLISCI 122	Introduction to American Law
POLISCI 150A	Data Science for Politics
POLISCI 214R	Challenges and Dilemmas in American Foreign Policy
POLISCI 216E	International History and International Relations Theory
POLISCI 224L	The Psychology of Communication About Politics in America

POLISCI 233F	Science, technology and society and the humanities in the face of the looming disaster
PUBLPOL 122	Biosecurity and Bioterrorism Response
PUBLPOL 194	Technology Policy
PUBLPOL 353	Science and Technology Policy
STS 140	Science, Technology and Politics
STS 190	Issues in Technology and the Environment
STS 191	Introduction to Research in STS

Technical Courses

CHEM 31A	Chemical Principles I
CHEM 31B	Chemical Principles II
CHEM 31X	Chemical Principles Accelerated
CHEM 33	Structure and Reactivity
CHEM 35	Synthetic and Physical Organic Chemistry
CS 105	Introduction to Computers
CS 106A	Programming Methodology
CS 106B	Programming Abstractions
CS 106X	Programming Abstractions (Accelerated)
CS 107	Computer Organization and Systems
CS 108	Object-Oriented Systems Design
CS 109	Introduction to Probability for Computer Scientists
CS 110	Principles of Computer Systems
CS 255	Introduction to Cryptography
MSE 93Q	Nuclear Weapons, Energy, Proliferation, and Terrorism
MSE 107	Interactive Management Science
OSPSANTG 31	The Chilean Energy System: 30 Years of Market Reforms
PHYSICS 41	Mechanics
PHYSICS 42	Classical Mechanics Laboratory
PHYSICS 43	Electricity and Magnetism
PHYSICS 240	Introduction to the Physics of Energy
PHYSICS 241	Introduction to Nuclear Energy

Overseas Studies Courses in Science, Technology, and Society

The Bing Overseas Studies Program (<http://bosp.stanford.edu>) manages Stanford study abroad programs for Stanford undergraduates. Students should consult their department or program's student services office for applicability of Overseas Studies courses to a major or minor program.

The Bing Overseas Studies course search site (<https://undergrad.stanford.edu/programs/bosp/explore/search-courses>) displays courses, locations, and quarters relevant to specific majors.

For course descriptions and additional offerings, see the listings in the Stanford Bulletin's ExploreCourses (<http://explorecourses.stanford.edu>) or Bing Overseas Studies (<http://bosp.stanford.edu>).

OSPBEIJ 20	Communication, Culture, and Society: The Chinese Way	4
OSPBEIJ 42	Chinese Media Studies	4
OSPBER 115X	The German Economy: Past and Present	4-5
OSPBER 126X	A People's Union? Money, Markets, and Identity in the EU	4-5
OSPBER 161X	The German Economy in the Age of Globalization	4-5
OSPCPTWN 36	The Archaeology of Southern African Hunter Gatherers	4
OSPFLO 17	The Evolution of Modern Italian Design	4
OSPFLO 41	The Florentine Sketchbook: A Visual Arts Practicum	4
OSPFLO 48	Sharing Beauty in Florence: Collectors, Collections and the Shaping of the Western Museum Tradition	4
OSPFLO 49	On-Screen Battles: Filmic Portrayals of Fascism and World War II	5
OSPFLO 58	Space as History: Social Vision and Urban Change	4
OSPFLO 85	Bioethics: the Biotechnological Revolution, Human Rights and Politics in the Global Era	4
OSPFLO 115Y	Building the Cathedral and the Town Hall: Constructing and Deconstructing Symbols of a Civilization	4
OSPISTAN 62	Business Policy and Strategy in a Global Environment	4
OSPKYOTO 45	Japan's Energy-Environment Conundrum	4-5
OSPKYOTO 54	Escaping Galapagos: Japan's New Innovation Boom	5
OSPMADRD 45	Women in Art: Case Study in the Madrid Museums	4
OSPMADRD 57	Health Care: A Contrastive Analysis between Spain and the U.S.	4
OSPMADRD 71	Sociology of Communication	5
OSPMADRD 72	Issues in Bioethics Across Cultures	4
OSPOXFRD 27	Medical Ethics through Literature and Film	4
OSPOXFRD 57	The Rise of the Woman Writer 1660-1860	5
OSPPARIS 30	The Avant Garde in France through Literature, Art, and Theater	4
OSPPARIS 44	EAP: Analytical Drawing and Graphic Art	2
OSPPARIS 72	The Ceilings of Paris	4
OSPPARIS 88	Principles of Biochemistry	3
OSPPARIS 91	Globalization and Its Effect on France and the European Union	5
OSPPARIS 153X	Health Systems and Health Insurance: France and the U.S., a Comparison across Space and Time	5
OSPSANTG 29	Sustainable Cities: Comparative Transportation Systems in Latin America	4-5
OSPSANTG 31	The Chilean Energy System: 30 Years of Market Reforms	4-5
OSPSANTG 71	Santiago: Urban Planning, Public Policy, and the Built Environment	4-5
OSPSANTG 85	Marine Ecology of Chile and the South Pacific	5
OSPSANTG 119X	The Chilean Economy: History, International Relations, and Development Strategies	5
OSPSANTG 130X	The Chilean Economy in Comparative Perspective	5

Units

OSPAUSTL 10	Coral Reef Ecosystems	3
OSPAUSTL 25	Freshwater Systems	3
OSPAUSTL 30	Coastal Forest Ecosystems	3
OSPBEIJ 17	Chinese Film Studies	4

Courses

STS 1. The Public Life of Science and Technology. 4 Units.

The course focuses on key social, cultural, and values issues raised by contemporary scientific and technological developments through the STS interdisciplinary lens by developing and applying skills in three areas: (a) The historical analysis of contemporary global matters (e.g., spread of technologies; climate change response); (b) The bioethical reasoning around health issues (e.g., disease management; privacy rights); and (c) The sociological study of knowledge (e.g., intellectual property, science publishing). A discussion section is required and will be assigned the first week of class.

STS 103Q. Reading and Writing Poetry about Science. 4 Units.

Preference to sophomores. Students will study recent poetry inspired by the phenomena and history of the sciences in order to write such poems themselves. These poems bring sensuous human experience to bear on biology, ecology, astronomy, physics, earth science, and medicine, as well as on technological advances and calamities. Poets such as Linda Bierds, Mark Doty, Albert Goldbarth, Sarah Lindsay, W.S. Merwin, Adrienne Rich, Pattiann Rogers, Tracy K. Smith, Arthur Sze, and C. K. Williams. Grounding in poetics, research in individually chosen areas of science, weekly analytical and creative writing. Fulfills the Creative Expression requirement. Enrollment limited to 12.

STS 131. Science Technology & Environmental Justice. 4 Units.

The Bay Area is renowned for its technological innovations and progressive politics, including environmental justice activism. This course explores the multifaceted intersections of science, technology, and environmental issues, in the Bay Area and beyond. It also facilitates students' engagement with Wikipedia, as contributors and analysts. Throughout, students investigate the politics of place, with an eye to inequalities of race, class, gender, age, disability, and citizenship. Topics include: Internet and "new economy" geographies; public health and urban planning; food systems; climate change; innovation policy; "undone science."

STS 140. Science, Technology and Politics. 5 Units.

This course will critically interrogate the relationship between science and technology and politics. Politics plays a significant role in the production of scientific knowledge and technological artifacts. Science and technology in turn constitute crucial elements of politics and governance in modern democracy. This course will explore these interactions through (1) key theoretical texts in STS and (2) case studies of such issues as climate change, race and science, urban planning, elections and technology, and information technology in social movements. Preference to juniors and seniors. First class attendance mandatory. Enrollment limited to 16.

STS 160Q. Technology in Contemporary Society. 4 Units.

Preference to sophomores. Introduction to the STS field. 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. Social, cultural, and ethical issues raised by recent scientific and technological developments. Case studies from areas such as 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 scientific and technological enterprises and their products. Enrollment limited to 12.

STS 165N. Cars: Past, Present, and Future. 3 Units.

(Formerly COMM 165N.) Preference to freshmen. Focus is on the past, present and future of the automobile, bridging the humanities, social sciences, design, and engineering. Focus on the human experiences of designing, making, driving, being driven, living with, and dreaming of the automobile. A different theme featured each week in discussion around a talk and supported by key readings and media. Course is informed by history, archaeology, ethnography, human-technology interaction, mechanical engineering, and cognitive science.

STS 190. Issues in Technology and the Environment. 4 Units.

Humans have long shaped and reshaped the natural world with technologies. Once a menacing presence to conquer or an infinite reserve for resources, nature is now understood to require constant protection from damage and loss. This course will examine humanity's varied relationship with the environment, with a focus on the role of technology. Topics include: industrialization, modernism, nuclear technology, and biotechnology. Students will explore theoretical and methodological approaches in STS and conduct original research that addresses this human-nature-technology nexus. STS majors must have Senior status to enroll in this Senior Capstone course.

STS 191. Introduction to Research in STS. 4 Units.

This seminar introduces key analytical approaches and methodologies in STS, as well as basic tools for conducting original research in STS. Students survey a series of influential empirical studies; identify productive questions of their own interest; and explore how to pursue them through strong research design. Research proposal as final assignment. Preference to STS juniors; others require consent of instructor. The final proposal can serve as an honors prospectus for students who seek to participate in the STS honors program.

STS 199. Independent Study. 1-5 Unit.

Every unit of credit is understood to represent three hours of work per week per term and is to be agreed upon between the student and the faculty member. Instructor consent required. Please contact the department for a permission number.

STS 199A. Curricular Practical Training. 1 Unit.

Students obtain internship in a relevant research or industrial activity to enhance their professional experience consistent with their degree program and area of concentration. Prior to enrolling students must get internship approved by the STS Program Director. At the end of the quarter, a one-page final report must be supplied documenting work done and relevance to degree program. Meets the requirements for Curricular Practical Training for students on F-1 visas. Student is responsible for arranging own internship. Limited to declared STS majors only. Course may be repeated twice. Instructor consent required. Please contact the department for a permission number.

STS 199J. Editing a Science Technology and Society Journal. 1-2 Unit.

The Science Technology and Society (STS) Program has a student journal, *Intersect*, that has been publishing STS student papers for a number of years. This course involves learning about how to serve as an editor of a peer-reviewed journal, while serving as one of the listed editors of *Intersect*. Entirely operated online, the journal uses a work-flow management to help with the submission process, peer-review, editing, and publication. Student editors learn by being involved in the publishing process, from soliciting manuscripts to publishing the journal's annual issue, while working in consultation with the instructor. Students will also learn about current practices and institutional frameworks around open access and digital publishing.

STS 200A. Food and Society: Politics, Culture and Technology. 5 Units.

This course will examine how politics, culture, and technology intersect in our food practices. Through a survey of academic, journalistic, and artistic works on food and eating, the course will explore a set of key analytical frameworks and conceptual tools in STS, such as the politics of technology, classification and identity, and nature/culture boundaries. The topics covered include: the industrialization of agriculture; technology and the modes of eating (e.g., the rise of restaurants); food taboos; globalization and local foodways; food and environmentalism; and new technologies in production (e.g., genetically modified food). Through food as a window, the course intends to achieve two broad intellectual goals. First, students will explore various theoretical and methodological approaches in STS. In particular, they will pay particular attention to the ways in which politics, culture, and technology intersect in food practices. Second, student will develop a set of basic skills and tools for their own critical thinking and empirical research, and design and conduct independent research on a topic related to food. First class attendance mandatory. STS majors must have Senior status to enroll in this Senior Capstone course.

STS 200D. Text Technologies: A History. 5 Units.

Beginning with cave painting, carving, cuneiform, hieroglyph, and other early textual innovations, survey of the history of writing, image, sound, and byte, all text technologies employed to create, communicate and commemorate. Focus on the recording of language, remembrance and ideas explicating significant themes seen throughout history; these include censorship, propaganda, authenticity, apocalypticism, technophobia, reader response, democratization and authority. The production, transmission and reception of tablet technology, the scroll, the manuscript codex and handmade book, the machine-made book, newspapers and ephemera; and investigate the emergence of the phonograph and photograph, film, radio, television and digital multimedia. The impact of these various text technologies on their users, and try to draw out similarities and differences in our cultural and intellectual responses to evolving technologies. STS majors must have senior status to enroll in this senior capstone course. Same as: ENGLISH 184H

STS 200E. Technology, Nature, and Environmentalism. 5 Units.

Humans have long shaped and reshaped the natural world with technologies. Once a menacing presence to conquer or an infinite reserve for resources, nature is now understood to require constant protection from damage and loss. Humanity's relationships with the environment have changed over time and differed across societies. In this course, students (1) explore diverse ways in which people in different historical and cultural settings have conceptualized nature and their relationships with it, with a focus on the role of technology; and (2) learn the basics of STS research and conduct an original study that addresses this human-nature-technology nexus. First class attendance mandatory. STS majors must have senior status to enroll in this senior capstone course.

STS 200H. Ethics, Science, & Technology. 4 Units.

Critical analysis of ethical issues raised by recent or emerging advances in science and engineering. Issues: privacy, intellectual property, design equity, the public interest, ethical responsibilities of technical practitioners, research ethics, and freedom of inquiry. Advances from fields such as IT, biotechnology, nanotechnology, neurotechnology, construction technology, and transport technology. Seminar limited to 25 senior STS majors. Prerequisite: a course in ethics or permission of the instructor.

STS 200J. Advanced Topics in Agnotology. 4-5 Units.

Advanced research into the history of ignorance. Our goal will be to explore how ignorance is created, maintained and destroyed, using case studies from topics such as tobacco denialism, global climate denialism, and other forms of resistance to knowledge making. Course culminates in a research paper on the theory and practice of agnotology, the science of ignorance. Same as: HISTORY 204D, HISTORY 304D

STS 200K. Sciences of Learning. 4 Units.

Understanding the process of learning has enticed and eluded scientists for generations. Abetted by the rise of massive open online courses (MOOCs), learning has attracted new cadres of researchers and stars from scientists in adjacent fields, as well as new forms of financial support and visibility. This seminar investigates the recent dynamics of learning science as a case study in the politics of knowledge. Student projects will enable focused empirical inquiry.

STS 200L. Critique of Technology. 3-5 Units.

Informed citizens living in today's world, and especially in Silicon Valley, should be able to formulate their own, articulate positions about the role of technology in culture. The course gives students the tools to do so. Against the trend towards the thoughtless celebration of all things technological, we will engage in critique in the two senses of the term: as careful study of the cultural implications of technology and as balanced, argumentative criticism. Can technology make life more meaningful, society more fair, people smarter, and the world smaller? Selections by fiction writers, philosophers and thinkers (such as Heidegger and Beller), as well as recent popular works of social commentary, such as *You are not a Gadget*, *The Shallows*, *24/7*, and *Present Shock*.

Same as: ILAC 235

STS 299. Advanced Individual Work. 1-5 Unit.

For students in the STS Honors program. Every unit of credit is understood to represent three hours of work per week per term and is to be agreed upon between the student and the faculty member. May be repeated for credit.