

# Majoring in STS

## Frequently Asked Questions and Answers

### 1. What is “STS”?

Founded in 1971, STS (Science, Technology, and Society) is a program of teaching and research devoted to study of science and technology in society, in both historical and contemporary perspectives. Similar programs exist around the country (at MIT, Cornell University, Penn State University, North Carolina State University, University of Michigan, Vassar College, Claremont Colleges, Colby College, etc.) and abroad (e.g., in Canada, England, Norway, Sweden, Holland, and Australia). Program faculty often use the expression “STS” as a convenient way of referring to the general area of scholarly activity in which they share an interest. Stanford’s STS Program has affiliated faculty with strong interests in the intersections of science and technology with ethics, aesthetics, public policy, politics, cultural change, economic development, history of science, history of technology, organizations, history of medicine, history of engineering, work, information, and material culture.

### 2. What is the intellectual rationale for the STS Program?

STS teaching and research are predicated on the belief that science and technology are two of the most potent forces for individual, societal, and global change in the contemporary era. Understanding the natures, causes, and social consequences of scientific and technological developments, how science and technology function in different societies, and how social forces attempt to shape and control these forces to serve diverse, often conflicting interests, is, in the opinion of Program faculty, socially important and intellectually challenging. Since adequately understanding this subject matter requires study beyond the purview of any single conventional academic discipline, STS is constituted as a multi- and inter-disciplinary program.

### 3. What kind of major is STS?

The Program offers two major curricula, leading to either a B.A. or a B.S. degree in STS. *All STS majors take the **STS Core**. The 8 courses taken to fulfill Core requirements afford a *basic but comprehensive understanding of phenomena of science and technology in society*. The core can be viewed as having a three-level structure:*

1. An **entry-level course** offering an overview of the STS terrain and exploring fundamental STS concepts, theories, and analytical frameworks (STS 101).
2. Five courses studying STS phenomena from **individual disciplinary perspectives**. These 5 courses fall into 3 categories: philosophical (ethical and aesthetic), historical, and social scientific (economic, sociological, anthropological, and political) studies of science and technology in society.
3. Two **advanced-level courses**: a follow-on disciplinary course devoted to philosophical, historical, or social scientific study of science and technology in society, and a Senior Colloquium (STS 200) devoted to (a) interdisciplinary study at a more advanced level of classic and recent seminal STS works, and (b) a senior research paper.

The **B.A.** major curriculum has two additional components: **Technical Literacy** and **Thematic Concentration**. Through completing the first of these two components--by taking a specified computer science course and a four-course sequence in a field of science, engineering, or

mathematical sciences—the student obtains basic knowledge of some concepts, principles and methods of science, engineering, or mathematics, usually in a single field in one of these general areas. Through completing the latter, the student acquires more in-depth knowledge of and progressive competence in a particular STS issue, problem, or area of personal interest. Although the concentration package must satisfy certain criteria aimed at fostering progressive competence—each must have a center of gravity in a discipline and contain at least one foundational and at least one advanced course from specified lists (see STS B.A. Major Curriculum Form for details)—there is considerable latitude in the choice of its subject matter. Currently 7 topics are pre-certified as viable for STS Thematic Concentrations: the intersections of science and technology with *aesthetics, development, history and philosophy, information and society, public policy, social change, and work and organizations*. Alternately, the student may elect to design her or his own concentration topic and course package, subject to Program approval.

The **B.S.** major curriculum adds to the same STS Core a **Technical Depth** component, composed of a coherent package of at least 50 units of courses in science, engineering, and/or mathematics. The student may fulfill this requirement via either the **Focused Depth** option, requiring completion of a minimum of 7 courses amounting to at least 25 units in one area of science, engineering, or mathematical sciences, or the **Clustered Depth** option, requiring completion of at least 2 sequences, with a minimum of 5 courses and 15 units in each, in different areas of science, engineering, or mathematics. See the STS B.S. Major Curriculum Form for details.

#### **4. Why should a Stanford student consider majoring in STS?**

STS offers a form of undergraduate liberal education especially well suited to the technical character of the contemporary era. The STS Core exposes one to a number of traditional liberal arts disciplines in the humanities and social sciences (philosophy, history, sociology, anthropology, etc.) but in a nontraditional way: through bringing the perspectives and analytical resources of such disciplines to bear on subject matter of clear contemporary relevance: viz., issues and problems of science and technology in society. Students attracted to traditional fields of specialization such as history, political science, philosophy, or sociology, but who seek a major that, while intellectually challenging, is more closely linked to problems of contemporary industrial societies will find STS an option well worth considering.

One of the hallmarks of the STS B.A. curriculum--for that matter, of the STS B.S. curriculum as well--is *balance*. While comprised primarily of humanities and social science courses, the B.A. curriculum stands out from other B.A. programs at Stanford in requiring “literacy” in a field of science, or engineering, or mathematical sciences. This reflects the view of Program faculty that such literacy is an essential component of a liberal arts education suited to today’s world. The B.A. also promotes uncommonly good balance in a second sense: between required courses and electives. While the STS Core is prescribed to a significant degree, the Thematic Concentration affords the student considerable latitude of choice, in both its intellectual focus and constituent courses.

Some students who once envisioned themselves as practicing scientists or engineers eventually conclude that they do not wish to follow such a career path. However, they often do not wish to completely abandon their past technical interests and course work, rightly seeing them as valuable intellectual resources. They imagine themselves, rather, as working in some kind of position at the interface between science and technology on the one hand and society on the other, e.g., in some kind of regulatory, policy, educational, development, law, or business work. The STS B.S. is a superb option for such students, one in which they make excellent use of their prior technical course work as complemented by the STS Core.

Other students, currently majoring in a field of science or engineering, decide to complement such study by also fulfilling the requirements for the B.A. major in STS. They thereby earn Stanford's B.A.S. degree. This has become an increasingly popular option for Stanford science and engineering majors in recent years.

An attractive feature of both the STS B.A. and B.S. majors is the fact that the STS Core emphasizes intensive development of indispensable academic skills: critical-analytical reading, thinking, and writing, as well as well-honed oral exposition skills. Such skills are portable and will serve the student well throughout life, regardless of career path. Further, STS is a relatively small program in which students can get to know their professors on a personal basis. STS professors take pride in their teaching as well as their research and are accessible to their students. Also, STS majors (as well as students from any other major) may apply for admission to the STS Honors Program, culminating in an original senior thesis on an important STS topic of personal interest carried out under the supervision of a faculty advisor.

### **5. What can one do with a degree in STS?**

STS graduates have many attractive options open to them. Like their fellow Stanford graduates, most STS B.A. graduates eventually pursue advanced degrees. They have gained admission to and done well at many of the nation's best graduate schools of business, law, education, government, public policy, journalism, medicine, and international affairs. While relatively few STS B.A. graduates go on to get Ph.D. degrees in conventional academic disciplines, some have done so. STS B.A. alumni have earned doctoral degrees, one in history of technology at Oxford University, another in risk analysis in environmental and health policy at Harvard, another in economic history at the London School of Economics, and another in comparative literature at the University of Pennsylvania.

STS B.S. graduates have become management consultants, program managers and strategic marketers in computer companies, and government employees, e.g., at the EPA and with state governments. Others obtained M.S. degrees in computer science, civil engineering, electrical engineering, and industrial engineering. Still others entered medical school—the STS B.S. major provides an excellent pre-med path—and pursued advanced degrees in graduate schools of business, law, government, education, and public policy. A few have started their own companies. Occasionally, an STS B.S. graduate pursues a doctorate in a traditional academic discipline, e.g., electrical engineering or the history of technology.

Prospective majors are welcome to peruse the Program's "IDP Self-Study Report: STS Program, 1999-2006," which contains an appendix with 65 letters from STS B.A., B.S., and honors program graduates. These letters describe their writers' respective career paths and current positions, and indicate how they see their STS studies in relation to their ensuing professional development. This document is a unique and extremely valuable resource for students considering majoring in STS.

If you have questions about either STS degree program, wish to declare in STS, or desire more information, contact Program Director Robert McGinn ([mcginn@stanford.edu](mailto:mcginn@stanford.edu)). STS Program Administrator Margaret Harris ([mharris@stanford.edu](mailto:mharris@stanford.edu), 650-725-0119) or STS Student Services Specialist Julie Widman ([jwidman@stanford.edu](mailto:jwidman@stanford.edu), 650-723-2565) will be happy to set up an appointment for you. Feel free to stop by the STS Office (Building 370, Room 109, Main Quad) where you will find Curriculum Forms for the B.A. and B.S. majors that explain their respective options and requirements. The short form "Six Steps to Majoring in STS" also available at the STS Office, spells out the process to follow to become an STS major. In addition, more information about the STS program is available on our website at <http://sts.stanford.edu>.