

SCIENCE AND TECHNOLOGY STUDIES MAJOR

MAJOR DESCRIPTION

The College of Science and Technology Studies offers a dynamic interdisciplinary Major in Science and Technology Studies (STS) that investigates the sciences, technology, and medicine as integral to society and culture. The STS major enables students to combine in-depth study in a single science with a broad exploration of the social, cultural, historical, ethical, and philosophical issues related to the practice of the sciences, technology, and medicine. The major consists of three components: STS courses in the history, philosophy, and social studies of the sciences, technology, and medicine; at least two years of coursework in a single scientific discipline; and an area of concentration to provide depth in a related discipline.

The STS major helps students understand the richness and complexities of scientific practice and the cultural and political significance of science, technology, and medicine. The major is designed for students who are curious about the broad historical contexts of scientific research, the cultural dynamics of technologies, and the social structures involved in medicine and health care.

Students can pursue a stand-alone major in Science and Technology Studies, or a joint major that combines STS with a major in one of the following sciences: Astronomy, Physics, Mathematics, Biology, Chemistry, Computer Science, Earth & Environmental Sciences, Molecular Biology & Biochemistry, Neuroscience, Physics, and Psychology. Single STS majors must take on an area of concentration in either Anthropology, Feminist, Gender, and Sexuality Studies, History, Philosophy, Religion, or Sociology. Prospective majors are encouraged to begin their primary science and STS courses in the first and second year.

The STS major is well suited for students interested in a variety of professional and academic pursuits, since it encourages students to develop analytical thinking skills, the ability to translate complex technical issues across diverse audiences, and reasoning skills to grapple with the complex social and ethical contexts of science, technology, and medicine. STS majors are equipped with transdisciplinary knowledge and skills to pursue a range of advanced study and career opportunities in such fields as science and technology studies, medicine, nursing, public health, bioethics, science policy, science communications and education, and sustainability and environmental research.

ADMISSION TO THE MAJOR

There are no pre-requisite requirements for admission to the STS major. First- and second-year students interested in pursuing the major should begin their 4 science courses in their first and sophomore years. Most students take their first STS course as a sophomore. The 200-level core courses in the history of science or sociocultural studies of science are recommended as first courses in the major.

In the second semester of their sophomore year, students who wish to declare the STS major must identify the fields in which they plan to complete their science requirement and their area of concentration. Students who seek to add the major after their sophomore year will only be admitted after review to ensure that they are in a good position to complete the major.

To declare the major, students must do three things:

- 1) indicate their intended status as a single- or joint-major,
- 2) list their science and area of concentration (if a single major); and,
- 3) submit a brief written statement of their goals in the major, for advising purposes, and for later evaluation of how well those goals were met.

MAJOR REQUIREMENTS

The major consists of three components: courses offered by the College of STS in the history, philosophy, and social studies of the sciences, medicine, and technology; at least two years of coursework in a single scientific discipline; and an area of concentration to provide depth in a related discipline. Students may enroll in the program either as a stand-alone major or as a joint major with one of the science departments (astronomy, biology, chemistry, earth and environmental sciences, molecular biology and biochemistry, neuroscience and behavior, physics, or psychology). All students must take one core course each in history of science, philosophy of science, and sociocultural studies of science, along with three additional courses in the program (including at least one 300-level seminar). Students for whom the program is a single-alone major must also take a minimum of four major-track courses in one of the science departments and a structured three-course area of concentration. Students who undertake the double-major with a science must complete all requirements for a science major in place of the area of concentration.

Courses that are cross-listed between STS and the department hosting a student's area of concentration may be counted for either requirement, but not for both simultaneously.

First Year Seminars, Education-in-the-Field, individual tutorials, group tutorials, senior thesis credits, and other independent study formats are not accepted toward the required courses in the major.

We do not allow students to link their STS major to other linked-majors (like Environmental Studies or IDEAS) as a double-major because that means it is possible for the student to take fewer than four courses in a single science.

STUDENT LEARNING GOALS

The STS Faculty engages in ongoing review of the effectiveness of the major in enabling students to meet the Learning Goals intended for all students, and the student's own individual goals within the major. The STS Faculty have approved the following list of Learning Goals for all students undertaking the major in STS: the four Learning Goals are scientific competence, core competence in science studies, disciplinary depth, and scientific contextualization. Because each student's course of study is individualized, we rely upon student self-assessment as a crucial input to our review.

- **Scientific competence:** Competence beyond the major-track introductory level in a scientific discipline, indicated by students' performance in appropriate courses in that science;
- **Core competence in science studies:** Improved understanding of the sciences and/or medicine as historically developing, socially and culturally situated practices of inquiry and conceptual understanding; that understanding should have both multidisciplinary breadth and greater depth within a particular disciplinary area of concentration.
- **Disciplinary depth:** Those students whose area of concentration is in a discipline that incorporates the sciences and medicine as objects of inquiry should improve their understanding of how that discipline conceives and approaches the sciences and/or medicine and how its approach connects

to other ways of understanding the sciences and medicine; those students whose area of concentration is fulfilled by a second major in a scientific discipline should improve their understanding of how practices and achievements of that science are historically, culturally, and philosophically situated and how their scientific understanding and their core competence in science studies can be mutually informative.

- **Scientific contextualization:** Improved skills for engaging their scientific understanding in relevant ways with specific issues or concerns of broader social, cultural, political, and/or philosophical significance and for acquiring and assessing relevant technical background for such issues that go beyond their prior scientific training.

become capstone projects, and students are encouraged to choose their seminar courses and their research topics in those courses with this possibility in mind.

(2) Students may pursue Honors in STS by completing a two-semester senior honors thesis. Majors interested in undertaking a thesis will be expected to submit a thesis prospectus in the spring semester of their junior year. Candidates for Honors in STS must submit a thesis by the University's April deadline, and must have maintained an average grade of 88.3 (B+) or better in Wesleyan courses that are cross-listed with the College of STS to earn Honors or High Honors. Theses submitted as a candidate for departmental Honors in STS must comply with all the regulations of the University Honors Program.

STUDY ABROAD

Many STS majors participate in study abroad for a semester as a junior. Students may count seek to transfer a course taken while abroad toward their STS major. Students should first consult with their STS major advisor and the Study Abroad Office about their planned course of study while abroad. Follow the submission process for the Study Abroad Office, which will route your request to transfer a course to the Chair of STS, who will consider all requests to transfer credit through the electronic portal that is maintained by the Study Abroad Office.

The Chair will consider the course content, instructor, and university context to determine if the proposed course is clearly equivalent in level and field to an STS course class we would offer at Wesleyan. For a course to count towards your STS major, it must contain course content (readings, lectures, media) that are germane to STS and an instructor whose training is broadly aligned with STS or its trans-disciplines. Many institutions do not offer STS courses; some do. Generally, we encourage STS majors to seek credit for their areas of concentration because those courses are widely available in universities around the world.

TRANSFER CREDIT

Courses may be transferred from other institutions to replace one of the STS requirements, but we review these requests very stringently, and we only accept courses clearly equivalent in level and field to courses we would accept at Wesleyan.

HONORS

Candidates for Honors in STS must submit a thesis by the University's deadline, and must have maintained an average grade of 88.3 (B+) or better in Wesleyan courses that are cross-listed with the STS to earn Honors or High Honors (as evaluated by faculty). Theses submitted as a candidate for departmental Honors in STS must comply with all the regulations of the University Honors Program (<https://www.wesleyan.edu/registrar/honors/>). Truly exceptional theses may be nominated for University Honors.

CAPSTONE EXPERIENCE

The STS major offers two options for the capstone experience:

- (1) All 300-level seminars in the major may be designated as a capstone experience. These courses, on a wide range of topics, each with a term paper or other independent research component, provide many opportunities for what can