

**Program in Science, Technology, and Society  
Stanford University**

**STS Honors Program  
2009-2010**

**Introduction**

The Stanford Program in Science, Technology, and Society (STS) invites students, regardless of major, to apply for admission to its Honors Program. The innovative research projects carried out by STS honors students since the program was launched in 1978 are a source of pride and satisfaction for their authors and academic advisors alike. Honors projects have also served students well after graduation, providing a springboard for graduate studies, work in the corporate world, and other occupations. Not only do honors students become experts in a specialized field of interest, but the honors designation signifies general intellectual rigor and a demonstrated ability to pursue original research. These skills are broadly marketable even outside of the area of expertise, and serve individuals well upon graduating from college.

An *STS honors thesis* tackles a significant problem or question involving the interplay of science, technology, and society. Questions may be explored using methods drawn from a wide range of disciplines, such as history, sociology, economics, art, and management, and/or from STS studies. STS honors theses have addressed a wide range of issues over the years, including the following:

- How are cell phones changing everyday life in South Africa?
- How do cultural assumptions shape the ways humans may someday interact with robots?
- When and why did international cooperation on nuclear power come to be seen as a national security risk?
- What criteria do venture capital decision makers use when choosing to invest in new technology?
- What aspects of technology has the Slow Foods movement rejected, what has it embraced, and will this shape its future strategies for success?
- How does media reporting on stem cell research shape political debates and public policy?
- When and why does “medical effectiveness” matter for treating criminal behavior?
- How has the automotive industry responded to growing concerns about global warming?
- How do users perceive and shape social networking technology such as Facebook.com?
- How should software liability be managed in an increasingly open source world?
- Does the development of advanced technology for restoration of well-known works of art change the ways that art is valued and interpreted? The case of the leaning tower of Pisa
- What are the sexual politics of birth control pills?
- To what extent and in what ways are internet search engines socially shaped? The case of Google.
- How are genetically modified foods regulated in the political climates of U.S. and the U.K.?
- In what ways has the off-shoring of call centers to India shaped Indian society?
- How have African-Americans adapted music technologies to their own interests?
- Can indigenous knowledge be protected by intellectual property laws, and if so, how? The case of *hoodia gordonii* and its adaptation to weight loss programs

In 2008-09, five STS honors theses were completed, and two received awards for excellence in Honors Research. Additionally, eight students began pursuing honors theses to be completed in 2009-10.

## **Applying to the STS Honors Program**

Students typically apply to the STS Honors Program in the spring quarter of their junior year, although earlier applications are welcome. **Applications for the academic year 2010-11 are due on June 15, 2010.** The application consists of a completed application form (see the final two pages of this document), and an attached research proposal. Before writing your proposal, discuss your interests with Dr. Slayton, and ideally, additional advisors. Also ensure that you can complete all prerequisite course requirements with the minimum GPA of 3.4 by the time you graduate. These aspects of the application process are described in more detail below.

### **Research Proposal**

Proposals for the STS Honors Program are ideally developed in the STS Junior Honors Seminar (STS 190) during winter quarter of the junior year. **STS 190 is designed to help students apply for a major research grant, which is typically due in mid-February.** Regardless of whether you take STS 190, be sure to write your proposal with feedback and advice from faculty members and the STS Honors Program Director, Dr. Rebecca Slayton <rslayton@stanford.edu>. Your proposal should be a double-spaced, ~10 page document. *The length of the proposal is much less important than attending to the following important points of substance and form.*

- **Your name, the date, and the title of your proposal**
- **Research Objectives/Questions (~1 page).** What are your primary research questions and objectives? Why are they important?
- **Literature Review (~3 pages).** How have others addressed your research question(s) or similar ones? Whose work are you building on, and why will your research be different? Be sure to **cite** specific scholarly sources. These will be listed at the end of the proposal. You may wish to merge this section with the previous one.
- **Methods (~3 pages).** How, specifically, will you do research that addresses your question? Be as SPECIFIC as you possibly can. You will probably need to address a small slice of your major question, by doing a case study, or comparing a few case studies. Try to identify a specific research site (i.e. a company, Internet forum, set of newspapers, etc). Explain what methods you will use - for example surveys, interviews, discourse analysis, or something else entirely.
- **Conclusion (<1 page)** Restate the research contribution you hope to make. What sorts of things will we know after you've written your thesis that we didn't know before?
- **References (1-2 pages)** Full bibliographic information for all works cited in your proposal should be listed at the end of your proposal.

### **Thesis Advisors**

Your final thesis will be evaluated by both a primary advisor and secondary advisor (sometimes called a secondary reader). At least one of your advisors must be an STS Program-affiliated faculty member, and at least one advisor must be a member of the Stanford professoriate. If you have questions about a particular individual's status, feel free to ask Dr. Slayton.

Since the advisor relationship is crucial to a successful thesis, try to establish a relationship with at least one advisor by the end of the junior year, and confirm a primary advisor no later than the fall quarter of the senior year. Take time to learn about both the research methods and mentoring style of your potential advisors. Skim one or more of their publications before approaching someone you don't know yet, and try

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to understand both their methods and topic of interest. Initiate a conversation with specific questions, and use the meeting not only to gain direction in your research, but also to get a sense of an advisor's mentoring style. How often is he or she willing to meet with you? Does she or he offer a good mix of constructive criticism and original guidance? It is better to take these steps at the beginning of your project than to struggle with less-than-satisfactory advising arrangements for the duration of your thesis writing. In managing an advisor relationship, aim for a balance: take the initiative in your research and writing, but do not hesitate to ask for help, both from advisors and peers. For additional guidance, see: <http://ual.stanford.edu/OO/honors/WorkingFacultyHonorsAdvisor.html>

### Course Requirements

**STS Majors:** By the time you graduate, complete the following courses with a GPA of 3.4 or higher:

- **Core requirements of the STS Major** with a GPA of 3.4 or higher
- **Junior Honors Seminar (STS 190):** We strongly recommend that you take STS 190 in the winter quarter of the junior year. Though it is not required, STS 190 will help you develop a quality research proposal, find an advisor, and prepare for research. After completing this course, you will be prepared to apply for a major grant to conduct research. You also may petition for STS 190 to satisfy one core requirement in the major. When STS 190 is used to fulfill a core requirement, two exceptions will be granted to the general rule that all Core Courses may be taught by a member of Stanford's Professoriate.
- **Senior Honors Seminar:** During your senior year, plan to enroll in 1-5 units of STS 290 A, B, and C (fall, winter, and spring quarters) during all quarters that you are on campus. *Please note that contrary to what you may see in Axxess, this class will meet every other week, and the schedule of meetings will be set in accordance with student schedules early each quarter.* Since students sometimes graduate early or travel abroad, it is possible that you will not enroll in the entire sequence, but you should plan to participate while you are on campus. This class meets the capstone graduation requirement that would otherwise be filled by the Senior Colloquium (STS 200). Class meetings will provide opportunities to discuss progress and challenges in the research process. Additionally each student will present research-in-progress, ideally with his or her advisor present, once each quarter. Students should plan to spend 4 hours on research and writing for every unit of STS 290 (i.e. signing up for 3 units entails a 12 hour per week commitment). Final grades for this course will be assigned at the end of the year, on the basis of the final thesis grade.

**Other Majors:** By the time you graduate, complete at least one course in each of the following categories, with a GPA of 3.4 or higher. Please note that the following list is not exhaustive:

- **Science, Technology, and Contemporary Society:** STS 101 or 101Q
- **Philosophical/Ethical perspectives:** STS 110, 112, 114; ENGLISH 176
- **Historical perspectives:** STS 190, STS 128; CLASSGEN 123, 133; ECON 116; HISTORY 41A/141A, 140A, 208A; POLISCI 116
- **Social Science perspectives:** ANTHRO 82, 180; COMM 120, 169; ECON 113; MS&E 181, 185, 193; POLISCI 114S, 116; SOC 114
- **STS Honors Preparation:** Either STS 190 (typically taken in the winter quarter of the junior year) or admittance to and full participation in the STS Honors College (before fall quarter of the senior year)
- **Senior Honors Seminar:** STS 290 A, B, and C (fall, winter, and spring), taken for 1-5 units each quarter (see description above).

Each quarter a supplementary list of course options will be emailed and available in the STS office.

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If you believe that a class not listed above should fulfill the requirements of one of these categories, you may contact the Honors Program Director, Rebecca Slayton <rslayton@stanford.edu>, to petition for approval.

### **Completing STS Honors**

To graduate with honors, you must ultimately write a 50-100 page, double-spaced, thesis on a subject in Science, Technology, and Society, and a present your findings publicly, prior to graduation. When the honors project involves a strong non-written component, e.g., creation of an original artifact such as a computer program or a computer music composition, a substantial written explanation or exegesis of the work must accompany the submitted artifact.

Students take a variety of paths to completing STS Honors; there is no single timeline for finishing the thesis. However, research and writing is very much a social process. Regardless of what quarter in which you graduate, or the number of years you take to complete the thesis, you should plan to finish your thesis in conversation with the cohort graduating in the same academic year. In general, you will be notified of admittance to the honors program by September of the year in which you apply to graduate. During your final year, as long as you are on-campus, enroll in 1-5 units of STS 290 A, B, and C (fall, winter, and spring quarters of the senior year). *Note that contrary to what you may see in Axess, this class will meet every other week, at a time chosen to suit everyone's schedule.* This will enable the STS Honors contingent to meet together regularly throughout the year, and will offer support in the thesis writing process. The traditional process is outlined below.

### **Thesis Writing**

#### **Fall Quarter**

The *research phase*: In STS 290A, we will focus on research and analysis. Our quarterly goal will entail writing approximately a third of the draft thesis, focusing especially on the literature review.

#### **Winter Quarter**

The *writing phase*: In STS 290B, we will work to more fully analyze and discuss research results in writing. By the end of the quarter, each student will have a thesis draft, though the form may vary. Some students may have two-thirds of the thesis written in near-final form, while others may have a full draft that is in need of significant revision

#### **Spring Quarter**

The *revision phase*: In STS 290C we will revise, reformulate, and finish without panic. Plan to finish early, to ensure plenty of time for advisor evaluation, thesis formatting, printing, copying and binding.

### **Honors Day**

Near the end of the senior year, each thesis writer will present a synopsis of his/her thesis. Students, faculty, family and friends are welcome to attend both the presentations and the celebration that will

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follow. You will have about 10 minutes to present, leaving 5-10 minutes for questions. For a 10-minute presentation, don't prepare more than 10 slides. Limit your introductory remarks to no more than a few short sentences. Leave out of your presentation the technical details, tangential points, and references that are more appropriate for the written report.

### Honors Designation and Awards

The final thesis is due on June 8, 2010. Additionally, if your thesis is printed and handed in by May 22, 2010 it will receive consideration for a *Firestone Award or Golden Medal*. These are University-wide prizes given to no more than the top 10% of senior honors theses. Firestone and Golden awards are presented at a public ceremony held the day before graduation, and receive a cash prize.

Both advisors evaluate the final thesis, and the primary advisor takes both evaluations into account in the assignment of a final grade. The grade awarded to the thesis will replace any grades of N (continuing) given for STS 195A, B, or C. All students must earn a grade of at least "B" on the honors thesis. If the above requirements are met, the designation "Honors Program in Science, Technology, and Society" will be affixed to the student's permanent academic transcript and will appear in the graduation program. **On graduation day, you will be publicly recognized and receive more than one well-deserved congratulations for graduating with Honors in Science, Technology, and Society!**

### Additional Resources

Students are strongly advised to learn about the following opportunities and research requirements before applying:

- **STS Honors College.** Honors College meets for 2-3 weeks in September before the fall quarter, and offers students a set of resources for getting an early start on their thesis work (see <http://ual.stanford.edu/OO/honors/BingHonors.html> ). The STS Honors College is not required, but students who participate in are more likely to complete their projects. If you are interested in participating, please be prepared to register in late May of your junior year. If admitted, all expenses (room, board, and earnings replacement) will be paid.
- **Grants for undergraduate research.** If you will need to travel or pay other research-related expenses, consider applying for a grant from the Undergraduate Research and Advising Program. For application deadlines see [http://ual.stanford.edu/OO/research\\_opps/Grants.html](http://ual.stanford.edu/OO/research_opps/Grants.html)
- **Human subjects research.** If your research will involve people (interviews, questionnaires, experimental situations) you need to comply with University Policies on Research and may need to obtain approval of a research protocol. See <http://humansubjects.stanford.edu/research/nonmedical/nonmedical.html> for more information.
- **Other help for undergraduate research.** See <http://ual.stanford.edu/OO/honors/Honors.html> for tips on advisors, preparing for fieldwork, conducting human subjects research and more.

## STS Honors Program Application Form

Please fill out the following information as fully as possible, and submit this form, with your research proposal, to Rebecca Slayton <rslayton@stanford.edu> and Colleen Connors <connors@stanford.edu>.

Name: \_\_\_\_\_

Student ID Number: \_\_\_\_\_

E-Mail: \_\_\_\_\_

Expected Graduation Qtr/Yr: \_\_\_\_\_

### **I. Honors Research Proposal**

Please attach a research proposal following the guidelines provided in the STS Honors Program description (<http://www.stanford.edu/group/STS/honors.html> ). If you submit a proposal for a URP Major grant to enable you to carry out research for your honors project, you may submit your URP proposal in lieu of this proposal.

### **II. Thesis Advisor(s)**

Please note that at least one of your thesis advisors must be an STS Program-affiliated faculty member, and at least one advisor must be on the full academic senate at Stanford (the same person may or may not fulfill both requirements). You would be wise to consult STS faculty members as you are researching and writing to ensure that your proposal and final thesis have sufficient STS character. If you have questions about which faculty meet these requirements, please contact Rebecca Slayton <rslayton@stanford.edu>.

**Please check any and all of the following which apply.**

My advisor has read and approved of my research proposal. \_\_\_\_\_

I have spoken with my advisor about my research interests and he/she is willing to help me complete an honors research project. \_\_\_\_\_

I do not yet have a research advisor, but have consulted with one or more faculty about my research proposal (provide names). \_\_\_\_\_

Primary Advisor Name and Affiliation \_\_\_\_\_

Secondary Advisor Name and Affiliation (if known) \_\_\_\_\_

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### III. Course Work

**All Students:** Have you, or will you, register for Honors College by the University deadline? If so, please briefly indicate how you plan to spend your time there.

**STS Majors:** please file your most up-to-date curriculum form with Colleen Connors <connors@stanford.edu>. You are required to complete all STS core courses with a GPA of 3.4 or higher.

**Non Majors:** please fill out the following fields. You are required to complete one course in each of the following categories. Your GPA for these courses must be 3.4 or higher. If you would like a non-listed course to satisfy a requirement in one of the categories, please specify the course number and obtain the approval of the Honors Program Director, Rebecca Slayton <rslayton@stanford.edu>.

Course	Quarter, Year	Grade
Foundational Course (STS 101, 101Q)	_____	_____
Philosophical/Ethical perspectives (STS 110, 112, 114; ENGLISH 176)	_____	_____
Historical perspectives (STS 128; CLASSGEN 123, 133; ECON 116; HISTORY 41A/141A, 140A, 208A; POLISCI 116)	_____	_____
Social scientific perspectives (ANTHRO 82, 180; COMM 120, 169; MS&E 181, 185, 193; POLISCI 114S, 116; SOC 114)	_____	_____
Junior Honors Seminar (STS 190)	_____	_____
Senior Honors Seminar (STS 290A)	_____	_____
Senior Honors Seminar (STS 290B)	_____	_____
Senior Honors Seminar (STS 290C)	_____	_____