This graduate seminar is designed to provide newcomers with an overview of and entry point into the exciting field of Science & Technology Studies (STS). Upon taking this class, you will be able to:

- **Understand** and **contextualize** some of the major concepts, themes, and sensibilities that have shaped the field;
- **Challenge** and **unpack** entrenched assumptions about science, technology, and knowledge;
- **Critically reflect upon** and **contribute to** old and new debates and controversies in STS;
- **Write** and **present** concise and effective analyses and reports of original research.

As an overview of the field, this seminar is inevitably partial – both in the sense of being incomplete and in the sense of prioritizing some topics over others. Our goal is to give you a good enough sense of the field to recognize these partialities and make them productive for your own work.

**Work required**

In order to facilitate discussion and learning, the following activities are required.

- **Weekly reading responses**: 20%
- **Seminar leadership and participation**: 20%
- **Book report and presentation**: 20%
- **Term paper**: 40%

**Weekly reading responses**: You will be expected to produce 2-3 pages of reading notes that engage key arguments, insights, and findings of the weekly readings. While some will use these to produce
concise summaries, others will explore specific thoughts, questions, or concerns. Whatever you do, the main goal is to use the notes to engage the readings in a more sustained and incisive way. Reading notes are **due 6pm the day before class**. Please post them to the Reading Response section on Blackboard. You are encouraged to review the notes of other students before the seminar.

**Seminar leadership:** Twice during the semester, you (working in groups of 2-3) will be responsible for introducing and leading the discussion of the weekly reading sets. You will sign up for groups using a Google Doc link available in Blackboard. Groups will have two primary responsibilities:

1. **Produce a 2-3 page thought piece** that pulls out what you as a group find most interesting, useful, or provocative about the readings. The piece shouldn't be a mere summary; rather, there should be some organizing principle(s) or question(s) that can ground, guide, and provoke our group discussions. The thought piece should be posted, along with your questions, to Blackboard no later than 6 pm the day before class.
2. **Introduce the readings and topics in class,** drawing on the thought piece. Groups will be strictly limited to 15 minutes for this. The goal is to spark an engaging discussion.

Discussion leads are NOT required to produce individual reading notes in addition to the thought piece.

**Book report and presentation:** Each student will be asked once during the semester to prepare a book report and presentation, covering a book-length text related to the weekly readings and/or broader themes of the course. You will sign up for books using a Google Doc link available in Blackboard. These books are to be selected from the list of relevant texts following each weekly reading set. The book report should be 1,500-2,000 words in length (that’s around 6-8 pages double-spaced), and should do each of the following:

a. succinctly summarize or convey the author’s main arguments, and how they go about making them;

b. engage critically with those arguments (including pointing to particular strengths and contributions, along with potential limits or weaknesses, of the author’s main points); and

c. point to particular contributions or connections between the book and other readings and themes of the course.

In addition, you will be asked to prepare a 15-minute conference-quality presentation that addresses the same three points. By way of calibration, we’d encourage you to allot 10 minutes to presenting key arguments and findings (recall that your classmates won’t generally have read the book), and 5 minutes to discussing limits, problems, and implications for STS scholarship. We’ll likely allow 5 additional minutes for questions and discussion by the class. Your written review should be posted to the discussion section of the class site by no later than 9 p.m. of the day before the seminar. Other students are encouraged to read the review before class and bring questions or comments.

**Term paper:** Towards the end of the seminar, you will be asked to produce a term paper of about 5,000 words. The paper should engage with some of the issues encountered in the course, and bring them to bear on a topic of your choosing. By November 2nd, we’d like to see a formal paper proposal, including a 1-2 paragraph description of the main argument or question; an outline of the anticipated structure of the paper; and a list of 5-10 published sources you plan to cite or draw on in making your argument.
Resources

The library’s e-journals collection can be used for many required articles on the syllabus, while copies of other required readings (and some additional sources that are not required) will be available through Blackboard: http://blackboard.cornell.edu/.

For books, it would be a good idea to purchase copies online or through the bookstore. Recommended books and articles will not be distributed for the class, but should be available through the library.

Academic Integrity

Academic integrity is crucial to your personal scholarly identity. Your rights and responsibilities in this area are outlined in the Cornell University Code of Academic Integrity: http://www.theuniversityfaculty.cornell.edu/AcadInteg/.

Violations of the code of conduct include but are not limited to:

- Submitting work in this class that has also been submitted for a grade in another course without prior permission of both instructors.
- Using, obtaining, or providing unauthorized assistance on examinations, papers, or any other academic work.
- Misrepresenting another person's work as your own.

You are responsible for obeying the Code of Academic Integrity. Ignorance of the code is not an excuse.

The most common problem for many students is plagiarism, which will not be tolerated and will be sanctioned by failure of the course. Students from cultures outside the United States should be especially aware that American standards of acknowledgement and use of material prepared by others (especially one’s professors) can be much different than those in other cultures. More information about plagiarism is available at http://plagiarism.arts.cornell.edu/tutorial/index.cfm.

If you have any questions about how to interpret the Code in the context of assignments or activities in this class (especially any that involve collaboration with your colleagues), please feel free to contact the instructors or the University Ombudsman.

Disabilities

Cornell University (as an institution) and we (as human beings and as instructors of this course) are committed to full inclusion in education for all persons. Services and reasonable accommodations are available to persons with temporary and permanent disabilities when conditions cause barriers to equal educational opportunity. The Office of Student Disability Services (http://sds.cornell.edu/index.html) determines the eligibility of students to receive formal accommodations and works collaboratively with
the student and university faculty and staff to recommend appropriate accommodations. Please visit the Student Disabilities Services site for more information about accessibility at Cornell.

Acknowledgements

We would like to thank several colleagues whose syllabi have provided ideas for us: Steve Jackson’s INFO 6210 at Cornell (book review assignment); Janet Vertesi’s SOC 356 at Princeton (keyword mechanics); and, most importantly, all previous instructors of this course at Cornell.
Schedule

Aug 26  Origins
Sep 2  Discoveries
Sep 9  Laboratories
Sep 16  Networks
Sep 23  Communities [n.b., Yom Kippur, Bruce will be absent]
Sep 30  Technologies
Oct 7  Objectivities
Oct 14  Experts
Oct 21  Publics
Oct 28  Knowledges
Nov 4  Politics [n.b., Malte may leave early]
Nov 11  Interventions
Nov 18  Peer review session

– No class (Nov 25 – Thanksgiving) –

Dec 2  Futures
1 | Origins

We shall familiarize ourselves with key themes and concerns of the seminar and discuss course mechanics. What are the opportunities and challenges of entering and organizing a diverse, multi-/inter-/trans-/post-/anti-/new-disciplinary, fast-growing, and somewhat unruly field of study?

- No readings today.

Further readings


Websites: A partial selection of professional and informational websites includes:


European Association for the Study of Science and Technology (EASST), http://easst.net/

History of Science Society, http://hssonline.org/

Section on Science, Knowledge, and Technology, American Sociological Association, http://www.asanet.org/sections/SKAT.cfm

Sociedad Latinoamericana de Estudios Sociales de la Ciencia y la Tecnología (ESOCITE), http://www.escyt.org/

Society for Medical Anthropology, http://www.medanthro.net/

Society for the History of Technology (SHOT), http://www.historyoftechnology.org/

Society for the Social Studies of Science (4S), http://www.4sonline.org/

STS Wiki, http://stswiki.org/
What is science and how to think about it? What are some similarities and differences between historical, philosophical, and sociological understandings of science? How useful are these distinctions or “origin stories”? How far can we understand science without understanding the content of scientific knowledge?


Books for review


Further reading


See also: Joan Cadden ed. (2006) *Getting Back to The Death of Nature: Rereading Carolyn Merchant*, Special Issue of Isis 97(3).


Where do science and technology take place and what happens there? How can we study the work of scientists, engineers, and doctors? What are the politics and pitfalls of foregrounding the everyday practice of scientific and technological work?


**Books for review**


**Further reading**


Joan Fujimura (1987) 'Constructing doable problems in cancer research,' *Social Studies of Science* 17: 257-293.


What happens when objects become relations? What are the strengths and weaknesses of actor-network approaches? Are we dealing with not more than a new form of distributed essentialism?


Books for review


Further reading


5 | Communities

How do technoscientists police and transgress their borders? What are “boundary objects” and what is interesting about them as a concept? What modes of engagement and disagreement have been prominent in both science and science studies?


Books for review


Further reading


How did technology become an object of interest for science studies? What is technology and how to think about? In what sense can technology be said to be political?


Books


Saetnan, Ann Rudinow, Oudshoorn, Nelly, & Kirejczyk, Marta Stefania Maria. (2000). *Bodies of technology: women’s involvement with reproductive medicine*. Columbus: Ohio State University Press.
7 | Objectivities

What counts as knowledge and for whom? Where does the concern with “objectivity” come from and what are generative ways of thinking about it? In one particular debate: What do people associate with the label “feminist” science studies and how useful is this?


**Books for review**


**Further reading**


Who, which, or what counts as an expert? How so? Why do people distinguish between lay and technoscientific expertise, and how useful is this? What are the politics of expertise – does it need to be protected?


**Books**


**Further reading**


What do we mean by “public understanding of science”? Or is it “science literacy”? Or is it “public engagement in science”? Or is it “citizen science”? And what about “scientists’ understanding of publics”? How have science and technology been portrayed in public life? Should we worry?


**Books for review**


**Further reading**


10 | Knowledges

What about knowledge in a global context? How do conceptions of “Western” (or “Non-Eastern”?) knowledge relate to other categories like colonial, postcolonial, and global knowledge? What are the politics behind these concepts?


*Books for review*


*Further reading*


11 | Politics

How can STS help our understanding of politics? How do scientists reconcile their work with global networks of power and politics? What does it mean to be political in a world of science, technology, and knowledge? How adequate is the governance of science and technology?


Books for review


Further reading


Is it possible or even desirable to make a difference when doing research? Do we have to chose between “detached” sociological scholarship and “engaged” social science? How have people gone about it? What might alternative forms of scholarly production look like?


Books for review


Further reading


13 | Peer review session

We shall use this session for a peer review workshop. Everybody will prepare and give feedback on two extended abstracts. Also, this is a good opportunity to catch up with open questions and things we did not get to so far.
What is the future of STS as a field of scholarship? What have we learned? What are your partialities?

- Steve Woolgar, Catelijne Coopmans and Daniel Neyland (2009) ‘Does STS Mean Business?,’ *Organization* 16 (1): 5–30. [check out the other articles in this Special Issue, too!]

**Books for review**


**Further reading**