I. The Course

This course examines science as an institution, drawing primarily on research from sociology, but also economics, philosophy, history and interdisciplinary approaches. We will examine the culture and practice of science, the many-layered organization of scientific activity, ways in which the scientific system draws inputs from society (e.g., money, students) and produces outputs for it (e.g., technologies, scientists and engineers, articles, certainty), the role of science in governments and economies, and the influence of these and other institutions on the evolution of scientific knowledge. (Although the course will touch on areas in the sociology of scientific knowledge and the broader arena of science studies, more attention will be given these fields in the graduate Introduction to Science Studies course taught by Johns and Knorr in Fall, 2010; and by me and Johns in Fall, 2011.)

II. Required Readings

Students should purchase the following two books, both available at the Seminar Coop (although they will not be available before the first day of class).


In addition, several of the readings, where indicated in the reading list below, are available on the World Wide Web. Additional readings will be available through the course chalk website, through library e-reserves, and for copy.

I also invite you to keep yourself informed of new developments in the world of science by means of a major newspaper or periodical (e.g., the *New York Times*, *The Economist*, *The New Yorker*, *New Scientist*, *Scientific American*, *Science* and *Nature*s front sections about relevant science news and policy, etc.)

III. Course Requirements
The requirements for sociology 20148 and 30148 are identical for undergraduates and masters students. Ph.D. students enrolled in Sociology 30148 will be expected to write a research proposal instead of the final exam listed for undergraduates and masters students. Masters students may choose to do the research proposal instead of the final exam, but must clear this with me. Students must complete all assignments to receive a passing grade in the course.

A. DISCUSSIONS (30%)

Students are expected to attend each class and to read and reflect on the assigned readings before class to facilitate a seminar-like atmosphere. Students will be responsible for presenting and summarizing the readings for the class for one session during the quarter and will aid me in facilitating discussion on those days. The day that students present, they will also prepare a 5-7 page memo. These memos should contain a table with an analytic summary, then focus on points of convergence and divergence across the readings, developing theoretical or empirical arguments, and raising questions for discussion. These memos must be distributed to members of the class no later that 9pm the night before the course in question. Students not responsible for the reading presentation will come to class with three prepared questions and with a comment about the relevance (or irrelevance) of the issues posed by the readings to a case of science in society other than the ones described.

B. SHORT ESSAY. (30%)

A short (5-7 page) paper is due on May 3. This should be an analysis of an issue or subject raised in the first half of the course. Email me a half-page paper “pitch” or miniproposal by no later than April 26.

C1. FINAL EXAM (40%)

A final take-home examination will be posted to the course website by Wednesday, June 2. This must be completed and turned in by 5pm, Friday, June 11. Take-home exams are open-book; therefore more sophisticated answers are expected than if the exam was written in class. No collaboration, including the discussion of questions and answers, is allowed on these exams. Exams are to be word-processed.

C2. RESEARCH PROPOSAL (50%; SHORT ESSAY 20%)

Ph.D. students (and optionally Masters students) enrolled in Sociology 30148 will be expected to produce a 15-20 page research proposal which puts forward and justifies an empirical project within the broad purview of the sociology of science. The proposal should clearly describe a research question, justify the significance and originality of the question (based primarily on course readings), detail how you plan to examine it, provide some preliminary data sources you will use to do this (based on research beyond course readings), and include some (very) basic pilot research relevant to the proposed question or anticipated answer. Pilot research might include a preliminary interview; nonparticipant observation of a research or conference setting; assemblage and analysis of archival data (e.g., papers or advertisements from scientific journals or conference proceedings); the organization and analysis of a small sample of count data. These proposals are intended to link the course
more tightly with the research interests of doctoral students and to provide practice for the many proposals you will be required to construct within and beyond graduate school. Students must approve the topics of their proposals with me by May 17. Completed proposals are due on June 11 at 5pm. Any papers turned in by May 31 in class I will return with feedback for revision.
IV. Calendar of Lecture and Discussion Topics and Reading Assignments 
(in one of the required books)

Mar 29. Introduction: Course outline and a prehistory of the sociology of science  
Course syllabus

Mar 31. Preliminaries  

Apr 5. Institutional origins of science: professions, politics and scientific growth  
http://www.jstor.org/stable/116885  

Apr 7. No class.

Apr 12. Institutional origins of science: culture  
http://proquest.umi.com/pqdlink?index=7&eid=504057981&SrchMode=3&uid=1104640629&aid=1  
c. Latour, Bruno. 1983. “Give me a laboratory and I can raise the world.”**

Apr 14. Norms of Science  

Apr 19. Incentives of Science  

Apr 21. The Khunian Revolution

James A. Evans

Apr 26. Critical Responses

Apr 28. Credibility: Culture

May 3. Credibility: Social Structure

May 5. Labor Markets and Careers
a. Fox, Mary Frank. “Careers of Young Scientists: Preferences, Prospects and Realities by Gender and Field.” http://links.jstor.org/sici?sici=0306-3127%2828200102%2931%3A1%3C0%3AOYSP%3E2.0.CO%3B2-F

May 10. Organization of Science

May 12. Communication and Knowledge Transfer
May 17. **Science on Economics**


May 19. **Economics on Science**


May 24. **Science in the Economy**


May 26. **Science on Politics**


May 31. **Memorial Day (no class)**

June 2. **Politics on Science**

a. Sheila Slaughter & Gary Rhoades “The Emergence of a Competitiveness Rationale.”

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James A. Evans


References


David, Paul. 2004. “From Keeping ‘Nature’s Secrets’ to the Institutionalization of ‘Open Science’.” (a cleaner but substantively similar version is the following):


Latour, Bruno. 1983. “Give me a laboratory and I can raise the world.”


Kuhn, Thomas 1962. “Anomaly and the Emergence of Scientific Discoveries” and “Crisis and the Emergence of Scientific Theories” in *The Structure of Scientific Revolutions.*


Sokal, Alan. 1997. “What the Social Text Affair does and does not prove”


Owen-Smith, Jason. 2001. “Managing Scientific Laboratory Work through Skepticism.”


Fox, Mary Frank. “Careers of Young Scientists: Preferences, Prospects and Realities by Gender and Field.”

Stern, Scott. 1999 “Do Scientists pay to be scientists?”


Diana Crane. 1972. *Invisible Colleges*, 22-84;


*James A. Evans*


Jasanoff, Sheila. 1990. The Fifth Branch. Chapters 2, 8, 11


Sheila Slaughter & Gary Rhoades “The Emergence of a Competitiveness Rationale.”

Epstein, Steven. Excerpt from Impure Science: AIDS, Activism and the Politics of Knowledge, Introduction and conclusion.

Stokes, Ronald. 1997. Pasteur’s Quadrant, TBA.


Nowotny, Helga, Peter Scott and Michael Gibbons 2001. Re-Thinking Science: Knowledge and the Public in an Age of Uncertainty, TBA.


Nowotny, Helga, Peter Scott and Michael Gibbons. 2000. "Re-thinking Science: From Reliable Knowledge to Socially Robust Knowledge"


Etzkowitz, Henry and Loet Leydesdorff: "The dynamics of innovation: from National Systems and "Mode 2" to a Triple Helix of university-industry-government relations".