

Science and Democracy

Political Science 294: Special Topics

Professor: Clark A. Miller

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Time: Tuesday and Thursday, 3:15-4:30 p.m.
Location: 150 Schwada Classroom Office Building

Course Objective

The purpose of this course is to explore the intersection of science and democracy in contemporary society. Students will acquire theoretical and analytical insights into:

- The organization of science as a human and social institution
- The role of facts and reason in the legitimacy of democratic policymaking
- Issues of trust and credibility in policy-relevant science
- The regulation of science by democratic societies
- The role of science in configuring relationships between citizens and the state
- The role of science in limiting and justifying the exercise of power in global governance

Course Grading

Grades for this course will be based on the following:

- **Exams** (50%). This course will have two mid-term exams: **Mar. 8** and **May 1**. Each will be worth 25% of your grade. Exams will take place during class and consist of identification and short answer questions. Identification questions will be drawn from the class readings. Short answer questions will be based on the course lecture.
- **Quizzes** (20%). Eight quizzes will be given during the semester. My goals for the quizzes are to encourage you: 1) to attend class, 2) to complete the assigned readings, and 3) to focus on certain parts of the readings. Quizzes will consist of a single identification question based on the reading. You will have five minutes to answer. I will select random days to give quizzes. Quizzes will be graded on a check/plus/minus system. See the handout "ID Quizzes" for more detailed information.
- **Short Papers** (30%). The course will have two short papers of three pages each. These will be due **Feb. 15** and **Apr. 24**. I will hand out specific assignments for each paper at least two weeks before the deadline. Papers are due at the beginning of class on the due date. No exceptions.

Course Readings

Course readings can be found on the course Blackboard site in folders. There is one folder for each week of the course. The week numbers are listed below on the syllabus.

General Information

I only allow make-up exams and late assignments in university-approved or dire circumstances. These include traveling with a sports team, major and documented illnesses, personal or family crises, etc. Should any of these arise, you are responsible for discussing the circumstances with me ASAP, before you miss a due date, if at all possible. I reserve the right to construct make-up exams or assignments more difficult than the work they replace.

Likewise, I only give incompletes in extraordinary circumstances. To receive an incomplete, you and I would prepare a written agreement specifying how and when you will complete all the work for the course. This agreement would have to be signed by both of us before I submit grades at the end of term.

Disabilities

If you have a significant disability condition (e.g., physical, learning, psychiatric, vision, hearing, etc.) and want to arrange reasonable accommodations, you must contact me at the beginning of the semester.

Academic Integrity

I expect you to express your ideas and to sustain arguments in your own words. Failure to do so is plagiarism. It is unethical and often illegal. Plagiarism ranges from the blatant—purchasing a term paper or copying on an exam—to the subtle—failing to credit another author with the flow of ideas in an argument.

Properly acknowledging the use of the words of others and avoiding excessive quotation of the work of others will eliminate most plagiarism problems. If you want to quote from a published work, including a Web page, you must put the passage in quotation marks and provide a citation.

Simply changing a few words from the writings of other authors does not alter the fact that you are essentially quoting from them. Paraphrasing of this sort, where you use the words of another almost verbatim without acknowledging your source, is the most common form of plagiarism among undergraduates. When you state another author's viewpoint, theory, or hypothesis—especially when it is original or not generally accepted—you must also include a reference to the published work. In general, citations are unnecessary when the information is considered common knowledge or a matter of widespread agreement. Common knowledge can often be identified by its appearance in several of the assigned readings for class.

All essays prepared outside of class must have a bibliography. This provides readers with a complete list of sources consulted, regardless of whether you quoted directly from them, and serves to acknowledge your intellectual debts to them.

Another common and related problem may arise from working with another student in studying and carrying out assignments. Such collaboration is encouraged, but the work that you submit must be in your own words, and not jointly written or copied.

Failure to maintain academic integrity in any portion of the academic work for the course shall be grounds for awarding a grade of F for that assignment.

Course Schedule

Introduction

Wk 1: Jan. 16 – Introduction to the Course

Wk 1: Jan. 18 – What is Science? What is Democracy? What is the Connection?

Michael M. Crow – “None Dare Call It Hubris: The Limits of Knowledge,”
Issues in Science and Technology, Winter 2007.

Bill Joy – “Why the Future Doesn’t Need Us.” *Wired* 8.04, April 2000.

Wk 2: Jan. 23 – Is Science Democratic?

David Guston, “On Consensus and Voting in Science,” in S. Frickel and K. Moore, eds. *The New Political Sociology of Science* (UW Press: Madison), 2006.

Wk 2: Jan. 25 – Is Democracy Rational?

Sheila Jasanoff, “Peer Review in the Regulatory Process,” *Science, Technology & Human Values* 10(3), pp. 20-32. 1985.

Giandomenico Majone, “Policy Analysis and Public Deliberation,” in R. Reich, ed. *The Power of Public Ideas* (Cambridge: Harvard University Press), 1988.

Public Reasoning

Wk 3: Jan. 30 – *Three Mile Island* Film

Wk 3: Feb. 1 – Discussion of Film: Justifying Public Choices

Loren King, “Deliberation, Legitimacy, and Multilateral Democracy,”
Governance 16(1): 23-50. 2003.

Wk 4: Feb. 6 – Progress and Public Goods

Leo Marx, “Does Improved Technology Mean Progress?” *Technology Review* 90, 1987.

Wk 4: Feb. 8 – Expert Advice

Stephen Hilgartner, *Science on Stage* (Stanford: Stanford University Press), 2000, chaps. 1 and 3.

Sheila Jasanoff, *Science at the Bar* (Cambridge: Harvard University Press), 1995, chap. 3.

Wk 5: Feb. 13 – Trust and Credibility

Steven Shapin, “Cordelia’s Love: Credibility and the Social Studies of Science,”
Perspectives on Science 3(3): 255-75.

Wk 5: Feb. 15 – Cross-National Comparisons

Paper 1 Due

Regulating Science

Wk 6: Feb. 20 – Why Democracies Regulate Science: Process

Jason Owen-Smith, “Commercial Imbrolios: Proprietary Science and the Contemporary University,” in S. Frickel and K. Moore, eds. *The New Political Sociology of Science* (UW Press: Madison), 2006.

Wk 6: Feb. 22 – Why Democracies Regulate Science: Content

Ira Carmen, *Politics in the Laboratory* (Madison: UW Press), 2004, chap. 4.
Sheila Jasanoff, *Science at the Bar* (Cambridge: Harvard University Press), 1995, chap. 7.

Wk 7: Feb. 27 – Democratizing Science

Dorothy Nelkin, “Science and Technology Policy and the Democratic Process,” in J. Petersen, ed. *Citizen Participation in Science Policy* (Amherst: University of Massachusetts Press), 1984.

Sheldon Krimsky, “Beyond Technocracy: New Routes for Citizen Involvement in Social Risk Assessment,” in J. Petersen, ed. *Citizen Participation in Science Policy* (Amherst: University of Massachusetts Press), 1984.

Wk 7: Mar. 1 – Public Protests

Jayanta Bandyopadhyay and Vandana Shiva, “The Legitimacy of People’s Participation in the Formulation of Science and Technology Policy,” in J. Petersen, ed. *Citizen Participation in Science Policy* (Amherst: University of Massachusetts Press), 1984.

Steven Epstein, *Impure Science: AIDS, Activism, and the Politics of Knowledge* (Berkeley: UC Press), 1996, chap. 6.

Wk 8: Mar. 6 – Science and Accountability

Hans Bethe, with Donald McDonald, “Science and Morality,” in H. Bethe, ed. *The Road from Los Alamos* (New York: Simon & Schuster), 1991.

Carl Sagan, *The Demon-Haunted World* (New York: Ballantine), 1996, chap. 16.

Mar. 8 – **Hour Exam I**

Mar. 13 and 15 – No class. Spring Break.

Science, Citizens, and the State

Wk 10: Mar. 20 – *Minority Report* Film

Wk 10: Mar. 22 – *Minority Report* Film (continued)

Wk 11: Mar. 27 – Discussion of Film: Science and Social Control

Geof Bowker and S. Leigh Star, *Sorting Things Out: Classification and Its Consequences* (Cambridge: MIT Press), 1999, chap. 6.

Wk 11: Mar. 29 – Classification Systems

Ian Hacking, *Historical Ontology* (Cambridge: Harvard University Press), 2003, chap. 6.

Wk 12: Apr. 3 – Social Institutions

Benedict Anderson, *Imagined Communities* (New York: Verso), 1992, chap. 11.
James Scott, *Seeing Like a State* (New Haven: Yale), 1998, chap. 1.

Wk 12: Apr. 5 – Participation and Classification

Steven Epstein, “Institutionalizing the New Politics of Difference in US Biomedical Research,” in S. Frickel and K. Moore, eds. *The New Political Sociology of Science* (UW Press: Madison), 2006.

Jenny Reardon, “Creating Participatory Subjects,” in S. Frickel and K. Moore, eds. *The New Political Sociology of Science* (UW Press: Madison), 2006.

Wk 13: Apr. 10 – Data Mining, Surveillance, and Security

Adam Penenberg, “Surveillance Society,” *Wired* 9(12), 2001.

Wk 13: Apr. 12 – Merit Systems

John Carson, “The Science of Merit and the Merit of Science,” in S. Jasanoff, ed. *States of Knowledge* (London: Routledge), 2004.

Wk 14: Apr. 17 – *Making Babies* Film

Wk 14: Apr. 19 – Discussion of Film: Human enhancement

Bill McKibben, *Enough* (New York: Times Books), 2003, chap. 5.

Arthur Caplan, “Is it wrong to try to improve human nature?” in P. Miller and J. Wilsdon, eds. *Better Humans?* (London: Demos), 2006.

Science and Global Power

Wk 15: Apr. 24 – Science and Empire

Sheila Jasanoff, “Biotechnology and Empire,” in J. Krige and K. Henrik-Barthes, *Global Power Knowledge: Osiris* 21, 2006.

Paper 2 Due

Wk 15: Apr. 26 – Global Democracy

Clark Miller, “Knowledge, Reason, and the Constitution of Democratic Order in International Governance,” *Governance*, forthcoming.

Wk 16: May 1 – **Hour Exam II**