

SOC 166
SOCIETY AND TECHNOLOGY

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Office Hours: Friday 10:30-12:30
location TBA
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Spring 2016
MWF 9:00-10:00
50 Birge Hall

Course Description

Technology permeates all facets of life shaping everyday interactions, social relations, inequalities, birth, death, health, families, politics, economics, social movements, international relations, and the future of the planet. This course explores the politics of science and technology. We will begin with a brief look at the emerging technologies in the 1930s and move through World War II and the Cold War, taking up key questions on the relations among science, technology, progress and democracy. Next, we will turn to developments and debates from the 1960s to the present. We will discuss the theoretical approaches available for studying the relations among science, technology and society, and employ these theories to discuss the construction, implications and politics of technology in the fields of environment, agriculture, climate change, biotechnology, health, social movements, and everyday life.

Course Goals

Goals of this course are:

- to discuss scholarly approaches to studying science and technology;
- to better understand the constitutive role of science and technology in the past and the present, and the complexities of the knowledge/information/risk society we live in;
- to explore how science and technology partake in aggravating or ameliorating various social, economic, political and environmental problems, and discuss the challenges to and opportunities for the democratic management of science and technology;
- to practice active reading, critical discussion and analytical writing.

Course Materials

All required readings are included in a course reader that can be purchased at Copy Central, 2576 Bancroft Avenue. Alternatively, students can locate (i) required articles online by using the links provided in the syllabus or in bCourses, and (ii) book chapters at Moffitt Reserve. I *strongly recommend* that you buy the course reader to have all the required readings in hard copy for active reading and participation in class discussions.

Requirements and Evaluation

Quizzes (10%):

Quizzes aim to encourage you to come to class meetings, engage with lectures and complete assigned readings on time. There will be 6 short, multiple-choice quizzes over the duration of the semester. Each quiz will be on the contents of the previous lecture and the readings due for that day. The lowest quiz grade will be discarded and the remaining five will make up 10% of the course grade.

Midterms (40%)

There will be two midterms each worth 20% of the course grade. The first midterm will be held in-class on February 19, and will consist of short essay questions. The second midterm will be a take-home exam due March 18, and will consist of two longer essay questions. Each midterm will focus on the material covered in the four weeks preceding it.

Final Exam (30%)

Final exam will be a take-home exam, asking you to write three essays integrating the material covered over the whole semester, and will be due May 9.

Research Paper (20%)

The research paper aims to give you an opportunity to read and write in some more depth on a topic of your choice. It will require you to do a few additional readings, incorporate class discussion and write one focused essay (1500-2000 words). More guidelines on the research paper will be provided in a detailed prompt.

Extra Credit (2%)

You can augment your course grade (i) by coming to meet with me during office hours (1%); (ii) by bringing a news article to class related to the topic of that day (1%). These opportunities need to be used before Spring Break to avoid clustering towards the end of the semester.

Grading

For each component, you will receive a numeric score posted on bCourses. The numeric score will be multiplied by the value of the component's weight in the overall grade, (e.g., each midterm exam score will be multiplied by 2 to represent 20% of the course grade) At the end of the semester, your scores will be totaled and converted to a letter grade based on the scale given below. Please note that points are not "rounded up" (or down).

970-1000 A+	870-899 B+	770-799 C+	670-699 D+
930-969 A	830-869 B	730-769 C	630-669 D
900-929 A -	800-829 B -	700-729 C-	600-629 D-

Exams and assignments will be graded by graduate student readers under the instructor's supervision. Readers will be available to discuss your work with you after they are returned, either during office hours or by appointment. If you have questions about a grade, you should *first* discuss it with the reader who assigned the grade. If that does not resolve the problem, then I will discuss it with the reader and meet with you.

Course Policies

Readings/Attendance/Participation

I *strongly recommend* that you purchase the course reader, read assigned materials actively, and bring your reader to class for class discussions. Students are responsible for the materials provided in class meetings, and are expected to integrate them in exams and papers. Do not enroll in this class if you will not be able to (or do not plan to) attend the class meetings regularly. All are encouraged to participate in class discussion: the more everyone participates, the more we will all learn.

Classroom Etiquette

Please be on time for class meetings. All cell phones must be silenced and put away during class. You may use laptops for taking notes or referring to readings online provided that you sit in the first five rows and refrain from browsing the internet.

You are welcome to ask questions any time. You may not always agree with findings or views expressed in class materials or discussion, but are expected to be respectful and kind. We all come to class from different avenues of life and our coming together is a precious opportunity for learning with and from one another.

Communication/Office Hours

You can email me about urgent issues. If you have a question that needs a detailed response, please come to my office hours (sign up at <https://www.wejoinin.com/elifkale>) or email for an appointment. I encourage all to come to office hours even just to say “hi” but definitely if you are having trouble with the course.

Lateness/Academic Dishonesty

Exams and papers must be turned in on time. Late exams and papers will be graded down by one third of a grade for each day they are late. If you were late due to sickness or another emergency, you need to bring documentation within the week after the occurrence.

Students are encouraged to study together, discuss readings and assignments, but all exams and papers you turn in **MUST** be 100% your own. Suspected violations will be reported to the university administration.

Be aware of plagiarism. If you use ideas or phrases from another author, publication or website, you must cite them properly. Plagiarism will result in a failing grade on the paper with no opportunity to rewrite. For additional information: <http://gsi.berkeley.edu/gsi-guide-contents/academic-misconduct-intro/plagiarism/>

Materials posted in bCourses (syllabus, slides, exam and paper guidelines) are for the use of students enrolled in the class only; enrolled students only; please **DO NOT** reproduce or post them online.

Accommodations

If you need accommodations for a disability, university athletics, or have a conflict due to the observance of religious holidays, please email or speak with me early in the semester to discuss appropriate arrangements. For officially requesting disability-related academic accommodations, students may contact the Disabled Students' Program @ <http://dsp.berkeley.edu/>.

Course Schedule (subject to change)

Acronyms: R: Reader // bC: bCourses // MoffR: Moffitt Reserve

Week 1 1/20, 22 Introduction

Bix, Amy. 2009. "Spectacle, Symbol, Strain, and Showpiece: Americans and Technology in the 1930s". *History Publications*. Paper 14 (pp. 185-205)
R & bC & http://lib.dr.iastate.edu/history_pubs/14

Week 2 1/25, 27, 29 Theoretical Approaches (I)

Merton, Robert K. [1938] 2001. *Science, Technology & Society in Seventeenth-Century England*. New York: Howard Fertig. Ch. 7, 8, 9 (pp. 137-198) R & MoffR

Heilbroner, Robert L. 1967. "Do Machines Make History?" *Technology & Culture* 8(3): 335-45.
R & bC & <http://www.jstor.org/stable/pdf/3101719.pdf?acceptTC=true>

Week 3 2/1, 3, 5 Big Science

Hughes, Jeff. 2002. *The Manhattan Project: Big Science and the Atomic Bomb*. Columbia University Press. Ch. 1-9 (pp. 1-121) R & MoffR

Moore, Kelly. 2008. *Disrupting Science: Social Movements, American Scientists and the Politics of the Military, 1945-1975*. Princeton, NJ: Princeton University Press. Ch. 2 (pp. 22-53)
R & bC & <http://site.ebrary.com/lib/berkeley/detail.action?docID=10312601>

Week 4 2/8, 10, 12 Environmentalism

Carsons, Rachel. [1962] 2002. *Silent Spring*. New York: Houghtin & Mifflin. Intro, Ch. 1-4
R & MoffR

Yearley, Steven. 1992. "Green Ambivalence about Science: Legal-Rational Authority and the Scientific Legitimation of a Social Movement." *British Journal of Sociology* 43(4): 511-532.
R & bC & <http://www.jstor.org/stable/591338>

Week 5 2/17, 19 Review & Midterm
February 15 President's Day Holiday - NO CLASS
February 17 Review & Overview of research papers
February 19 Midterm I (in-class)

Week 6 2/22, 24, 26 Theoretical Approaches (II)

Kuhn, Thomas S. [1962] 2012. *The Structure of Scientific Revolutions*. Chicago: University of Chicago Press Ch 2, 9, 10. (pp. 10-22, 92-134) R & MoffR

Winner, Langdon. 1980. "Do Artifacts Have Politics?" *Daedalus* 109 (1): 121-136.
R & bC & <http://www.jstor.org/stable/pdf/20024652.pdf>

Week 7 2/29, 3/2, 4 Science, Technology and Democracy

McCormick, Sabrina. 2007. "Democratizing Science Movements: A New Framework for Mobilization and Contestation" *Social Studies of Science* 37 (4): 609-623.
R & bC & <http://sss.sagepub.com/content/37/4/609.full.pdf+html>

Jasanoff, Sheila. 2009. "Governing Innovation: The Social Contract and the Democratic Imagination" *Seminar* May
R & bC & http://www.india-seminar.com/2009/597/597_sheila_jasanoff.htm

Week 8 3/7, 9, 11 Food, Agriculture

Henke, Christopher R. 2008. "Changing Ecologies: Science and Environmental Politics in Agriculture" Ch. 8 in *The New Political Sociology of Science: Institutions, Networks and Power* edited by Scott Frickel and Kelly Moore. Madison, WI: Wisconsin University Press. (pp. 215-243) R & MoffR

Kinchy, Abby. 2012. *Seeds, Science and Struggle: The Global Politics of Transgenic Crops*. Cambridge, MA: MIT Press. Ch. 5, 6, 7 (pp. 101-164) R & MoffR

Week 9 3/14, 16, 18 Energy, Climate Change

Lahsen, Myanna. 2005. "Technocracy, Democracy and U.S. Climate Politics: The Need for Demarcations" *Science, Technology and Human Values* 30(1): 137-169.
R & bC & <http://sth.sagepub.com/content/30/1/137.full.pdf+html>

Schelly, Chelsea. 2014. "Transitioning to Renewable Sources of Electricity: Motivations, Policy and Potential" Ch. 5 in *Controversies in Science and Technology: From Sustainability to Surveillance* (Volume 4) edited by Daniel Lee Kleinman et al. New York, NY: Oxford University Press. (pp. 62-72) R & MoffR

March 16 Review

March 18 Midterm II (take-home) due

SPRING BREAK

Week 10 3/28, 30, 4/1 Biotechnology

Hilgartner, Stephen. 2015. "Biotechnology" *International Encyclopedia of the Social and Behavioral Sciences*. (pp. 676-682)
R & bC & <http://www.sciencedirect.com/science/article/pii/B9780080970868850461>

Hughes, Sally Smith. 2001. "Making Dollars out of DNA: The First Major Patent in Biotechnology and the Commercialization of Molecular Biology, 1974-1980" *Isis* 92(3): 541-575
R & bC & <http://www.jstor.org/stable/pdf/3080733.pdf?acceptTC=true>

Week 11 4/4, 6, 8 Biotechnology

Benjamin, Ruha. 2013. *People's Science: Bodies and Rights on the Stem Cell Frontier*. Stanford, CA: Stanford University Press. Ch. 3-4 (pp. 79-134)
R & bC & <http://site.ebrary.com/lib/berkeley/detail.action?docID=10731954>

Week 12 4/11, 13, 15 Technology & Politics

Garrett, Kelly R. 2006. "Protest in an Information Society: A Review of Literature on Social Movements and the new ICTs" *Information, Communication & Society* 9(2): 202-224.
R & bC & <http://www.tandfonline.com/doi/pdf/10.1080/13691180600630773>

Howard, Philip N. and Muzammil Hussain. 2011. "Digital Media and the Arab Spring." *Journal of Democracy* 22 (3): 35-48.
R & bC & https://muse.jhu.edu/journals/journal_of_democracy/v022/22.3.howard.pdf

April 15 Research Paper Due

Week 13 4/18, 20, 22 Technology & Social Relations

Turkle, Sherry. 2011. *Alone Together: Why We Expect More from Technology and Less from Each Other*. New York, NY: Basic Books. Ch. 8, 9, 10, 14 and Conclusion (pp. 151-210, 265-296)
R & bC & <http://site.ebrary.com/lib/berkeley/detail.action?docID=10464324>

Week 14 4/25, 27, 29 Wrap-up & Review

Wetmore, Jameson M. 2007. "Amish Technology: Reinforcing Values and Building Community" *IEEE Technology and Society Magazine* Summer 2007: 10-21.
R & bC & <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=4233104>

May 9 Final Exam (take-home) Due