

HONR Seminar: Sociology of Science and Technology
Auburn University
Spring 2019

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MWF: 10 – 10:50 AM
Location: TBA

Course Description

This course will focus on the relationships between society, science, and technology. In focusing on this theme we will gain a thorough understanding of the social and cultural contexts of science and technology, the social lives of scientists and engineers, and the ways that users, citizens, and consumers relate to science and technology.

Course Goals

Based on a mix of lectures, discussions, presentations, in-class activities, and movies, this course is designed to provide an overview of the sociology of science and technology. In terms of science, after completing this course you should be able to describe the popular and sociological understandings of science, identify some problems with popular understandings of science, describe the social and cultural contexts of science, and explain how citizens relate to science. As far as technology, by the completion of this course you should be able to describe the popular and sociological understandings of technology, identify some problems with popular understandings of technology, describe the social and cultural contexts of design, invention, testing, and engineering, explain how technologies relate to risk and disaster, and explain how users and consumers relate to technologies.

Required Readings

An Introduction to Science and Technology Studies by Sergio Sismondo.

Articles and additional readings available on Canvas.

Attendance

I will randomly take attendance 5 times throughout the semester, which means each time will be worth 2 points. Every member of the class is entitled to 2 excused absences which will not result in a loss of points if it falls on a day I take attendance. It is your responsibility to sign in on the attendance roster on the days I take attendance. If you do not sign the attendance sheet, you will be marked absent.

Reading Responses

The Reading Responses will be short papers oriented to the readings assigned for a specific date on the syllabus. For the Reading Responses, it is expected that you will summarize the readings, report your thoughts about the readings, pose any questions you have about the readings, and/or describe any relationships you see between the readings and something in your everyday life. You will be required to complete 5 Reading Response papers over the semester.

Discussion Leadership

Many class sessions will be divided into two parts. During the first part, a group of class members will lead a discussion by presenting a 15-20 minute summary of the assigned reading for that day, along with describing issues and discussion questions about the readings for that day. During the second part, other class members and the instructor will join the discussion. The instructor will also supply an overview, questions, and commentary oriented to the first part of the class session as well as future class sessions.

Participation

This course will be most valuable to you when you routinely participate in class discussions and as such, participation is crucial for a successful learning experience. To this end, you should be prepared to participate in a thoughtful discussion with other class members during each class session. This means that in this class you are expected to listen to the contributions of all class members, and engage with them. Your participation will be evaluated in terms of how well your participation and the questions you pose during class demonstrates an understanding of readings and assignments. It will not be evaluated in terms of how many times you speak in class.

Paper

This class will also call on you to write one paper worth 50 points: 10 points for a rough draft and 40 points for a final draft. More specific guidelines and grading criteria on the rough and final drafts of the paper will be discussed in class.

Grading

Attendance	10
Reading Responses	75
Discussion Leadership	35
Participation	30
Paper	50
Total	200

<i>Letter Grades</i>	<i>Percentages</i>	<i>Points</i>
A	90-100%	180-200
B	80-89%	160-179
C	70-79%	140-159
D	60-69%	120-139
F	0-59%	< 120

Classroom Etiquette

To foster a learning environment in the classroom, we are expected to maintain standards of behavior appropriate to our academic setting. These include the following:

1. You are expected to turn your cell phone, PDA, iPod, iPhone, and any electronic device off before class starts. If you use any of these devices during class, you will be dismissed from class and forfeit any presentation and participation points you may have earned during class. Any use of any electronic device during a test will result in a grade of zero.
2. Disagreements should be expressed without insults or sarcasm. We can attack ideas, but not members of our class.
3. This class will be an opportunity for you to discuss and challenge ideas in a respectful way. Please be thoughtful with your comments and refrain from stereotyping and generalizing about groups of people.
4. Please do not talk or whisper while another member of the class, including the instructor, is speaking.
5. Please do not eat during class unless you have a medical condition that requires it.
6. Once class has started, you should exit and enter the room only in special circumstances.
7. If you are absent from a class for some reason, do not ask me if you missed anything important. The lectures, readings, and in-class activities are all important. If I didn't think they were important, I wouldn't include them in the course.

Possible Changes to Syllabus

The instructor reserves the right to make changes in this syllabus when necessary to meet learning objectives, to compensate for missed classes, or for similar reasons. If normal class and/or lab activities are disrupted due to illness, emergency, or crisis situation (such as an H1N1 flu outbreak), the syllabus and other course plans and assignments may be modified to allow completion of the course. If this occurs, an addendum to your syllabus and/or course assignments will replace the original materials.

Academic Integrity Policy

All portions of the Auburn University Student Academic Honesty code (Title XII) found in the Student Policy eHandbook will apply to this class. All academic honesty violations or alleged violations of the SGA Code of Laws will be reported to the Office of the Provost, which will then refer the case to the Academic Honesty Committee. Please see http://www.auburn.edu/student_info/student_policies/

Violations of the student academic honesty code include:

1. The possession, receipt, or use of any material or assistance not authorized in the preparation of any essay, laboratory report, examination, or class assignment, to be submitted for credit as a part of a course or to be submitted in fulfillment of a university requirement. The possession, receipt, or use of unauthorized material while an exam or quiz is in progress, or cheating, will be a violation of the Code;
2. Knowingly giving assistance to another person in such preparation;
3. Selling, giving, lending, or otherwise furnishing to any other person any material which can be shown to contain the questions or answers to any examination scheduled to be given at some subsequent date in any course of study, excluding questions and answers from tests previously administered and returned to a student by the instructor;
4. The submission of themes, essays, term papers, design projects, theses and dissertations, similar requirements or parts thereof that are not the work of the student submitting them. In the case of a graduate thesis or dissertation, submission is defined as the time at which the first complete draft of such is submitted to the major professor for review. When direct quotations are used, they must be indicated, and when the ideas of another are incorporated into a paper, they must be appropriately acknowledged. Plagiarism is a violation. In starkest terms, plagiarism is stealing using the words or ideas of another as if they were one's own. For example, if another person's complete sentence, syntax, key words, or the specific or unique ideas and information are used, one must give that person credit through proper documentation or recognition, as through the use of footnotes;
5. Altering or attempting to alter an assigned grade on any official Auburn University record. This violation may also be subject to review and action by the University Discipline Committee;
6. An instructor may delineate in advance and in writing other actions he or she considers a violation of the Code. For example, the teacher may consider dishonest or unethical the submission of papers substantially the same in content for credit in more than one course, unless specific permission has been given in advance. Actions so delineated must be reasonable and in the spirit of the Student Academic Honesty Code.
7. Altering or misusing a document (e.g., university forms, infirmity or doctor's excuse) for academic purposes. Associated violations may be referred by the Associate Provost for additional review and action by the University Discipline Committee.

8. Knowingly submitting a paper, report, examination, or any class assignment which has been altered or corrected, in part or in whole, for reevaluation or re-grading without the consent of the instructor.

9. Serving as or enlisting the assistance of another as a substitute in the taking of examinations.

ADA Statement

Students who need accommodations are asked to electronically submit their approved accommodations through AU Access and to arrange a meeting during office hours the first week of classes, or as soon as possible if accommodations are needed immediately. If you have a conflict with my office hours, an alternate time can be arranged. To set up this meeting, please contact me by e-mail. If you have not established accommodations through the Office of Accessibility, but need accommodations, make an appointment with the Office of Accessibility, 1228 Haley Center, 844-2096 (V/TT).

Tips for Success in this Class

1. Always take notes on the readings. Taking notes will help you better remember the readings, and it supplies you with a summary of what you read that you can then easily and rapidly refer to in the future as you study for quizzes and the paper.

2. The day the readings are listed under means that you should have those readings done before class starts on that day.

3. Take care to access the additional readings on Canvas at least 2 days before they are listed on the syllabus so that you have time to get in touch with me if you have problems accessing them, and time to read them before class.

4. If you have questions, raise your hand and ask them. If you understood everything in this class perfectly, then you wouldn't have to take this class.

5. Do not wait until the day before the deadline to write the papers. They will be introduced early enough so that you have plenty of time to complete them. If you do wait until the last minute, you risk forfeiting all points for the paper because they are due at the beginning of class, and late papers will not be accepted.

6. Check your student email account at least once every other day because I will send announcements about quizzes, attendance, readings, and the paper to your student email address.

7. If you are academically struggling in this class with something, don't be afraid to ask me for help, and don't be afraid to ask sooner rather than later when you still have time to demonstrate academic improvement.

8. If you feel that I move too fast in lecture, or you want to review something from lecture, you will have the opportunity to access the lecture notes on Canvas. The PowerPoint lectures will be posted on Canvas for a total of 3 days, one day before the class we will discuss them in, for the whole day of each class we have a lecture, and one day after each class we have a lecture. In other words, you will have 3 days to access the lecture notes. After the third day, they will no longer be available. So access them, save them, and/or print them out if you want to review them.

9. If you like to keep track of your grades in the class by monitoring Canvas, be careful how you interpret the numbers. Don't assume that the points possible at some point in time reflect the points possible so far in our class because sometimes Canvas will omit the points possible when you have not completed an assignment. It is your responsibility to understand the grading in this class, and so make sure you understand the points available to you before you make conclusions or assumptions about your grades.

10. Email is the surest way to contact me outside office hours. During regular business hours, I usually respond to emails quickly.

11. If you email me, make sure you include your course name, number, and section in the subject line so that I know what context your question is being asked within.

Course Schedule and Required Readings***

Wednesday	1/9	<i>Introduction to the course</i> No reading
Friday	1/11	<i>The Sociological Perspective</i>
Monday	1/14	<i>What is Science?</i> Sismondo, Chapter 1
Wednesday	1/16	<i>Paradigms</i> Sismondo, Chapter 2
Friday	1/18	<i>Ready Made Science vs. Science in the Making</i> Sismondo, Chapters 3, 5, and 6
Wednesday	1/23	<i>Tacit Knowledge</i>
Monday	1/21	<i>No Class for M. L. King, Jr. Day</i>
Friday	1/25	<i>Making Scientists</i> Herzig, Rebecca. 2001. "In the Name of Science: Suffering, Sacrifice, and the Formation of American Roentgenology." <i>American Quarterly</i> 53(4):563-589.

- Monday** **1/28** *Making Science Heroes*
- Wednesday** **1/30** *Organizations*
Vaughan, Diane. 1999. "The Role of the Organization in Technoscientific Knowledge Production." *Social Studies of Science* 29(6):913-943.
- Friday** **2/1** *Boundary Crossings*
Peter Galison, "Trading Zones: Coordinating Action and Belief," in Mario Biagioli, ed., *The Science Studies Reader* (Routledge, 1999), pp. 137-60.
- Monday** **2/4** *The University Lab and the Business*
Kleinman, Daniel Lee. 1998. "Untangling Context: Understanding a University Laboratory in the Commercial World." *Science, Technology, & Human Values* 23(3):285-314.
- Wednesday** **2/6** *Cooperation*
Centellas, Smardon, Fifield. 2014. "Calibrating Translational Cancer Research: Collaboration without Consensus in Interdisciplinary Laboratory Meetings." *Science, Technology & Human Values* 39(3):311-335.
- Friday** **2/8** *How does a scientific controversy reach closure?*
Simon, Bart. 1999. "Undead Science: Making Sense of Cold Fusion after the (Arti)Fact," *Social Studies of Science*, 29(1):61-85.
- Monday** **2/11** *Introduction of Paper*
- Wednesday** **2/13** *Place*
Gieryn, Thomas. 2002. Three Truth-Spots. *Journal for the History of the Behavioral Sciences* 38(2):113-132.
- Friday** **2/15** *Talk*
- Monday** **2/18** *Anthropomorphizing Talk*
Excerpts from "From Machines to Organisms: Detectors as Behavioral and Social Beings" by Karin Knorr-Cetina in *Epistemic Cultures* by Karin Knorr-Cetina
- Wednesday** **2/20** *Retrospective Accounts*
Gilbert, G. Nigel and Michael Mulkay. 1982. "Warranting Scientific Belief." *Social Studies of Science* 12(3):383-408.
- Friday** **2/22** *Prospective Accounts*
Messori, Lisa and Janet Vertesi. 2015. "The Greatest Missions Never Flown: Anticipatory Discourse and the 'Projectory' in Technological Communities". *Technology and Culture* 56(1):54-85.

- Monday** **2/25** *Creditability and Authorship*
 “What is an Author?” By Michel Foucault in *The Foucault Reader*, edited by Paul Rabinow
- Wednesday** **2/27** *Embodied Knowledge*
 Myers, Natasha. 2008. “Molecular Embodiments and the Body-work of Modeling in Protein Crystallography.” *Social Studies of Science* 38(2):163-199.
- Friday** **3/1** *The Social Organization of Technology and the Socio-Material Organization of Technology*
- Monday** **3/4** *The Social Construction of Technology*
- Wednesday** **3/6** *The Languages of Technology*
- Friday** **3/8** *Actor-Network Theory*
 Sismondo, Chapter 8
- SPRING BREAK***
- Monday** **3/18** *Co-Production of Science and Society*
 Pickersgill, Martyn. 2012. “The Co-production of Science, Ethics, and Emotion.” *Science, Technology, and Human Values* 37(6):579-603.
- Wednesday** **3/20** *Feminist Theories*
 Sismondo, Chapter 7
- Friday** **3/22** *Technological Change*
 Barley, Stephen R. 1988. “The Social Construction of a Machine: Ritual, Superstition, Magical Thinking, and Other Pragmatic Responses to Running a CT Scanner”. Pp. 497-539 in *Biomedicine Examined*, edited by M. Lock and D. Gordon. Boston, MA: Kluwer Academic Publishers.
- Monday** **3/25** *Technology and Rumors*
- Wednesday** **3/27** *Users and User Representatives*
 Trevor Pinch and Ronald Kline 1998. “Users as Agents of Technological Change: The Social Construction of the Automobile in the Rural United States,” *Technology and Culture* 37:763-95.
- Friday** **3/29** *Testing*
 Sims, Benjamin. 1999. “Concrete Practices: Testing in an Earthquake Engineering Laboratory.” *Social Studies of Science* 29(4):483-518.

- Monday** 4/1 *Technological Risk and Technological Disaster*
- Wednesday** 4/3 *Inside Japan's Nuclear Meltdown Movie*
- Friday** 4/5 *Inside Japan's Nuclear Meltdown Movie*
- Monday** 4/8 *Emotions*
Kleif, Tine and Wendy Faulkner. 2003. " 'I'm No Athlete [but] I Can Make This Thing Dance!' - Men's Pleasures in Technology." *Science, Technology, & Human Values*, 28(2):296-325.
- Wednesday** 4/10 *Technology and Identities*
- Friday** 4/12 *Making Engineers*
Excerpts from *The Machine in Me* by Gary Lee Downey
Downey, Gary Lee and Juan C. Lucena. 1997. "Engineering Selves: Hiring Into a Contested Field of Education." Pp. 117-142 in *Cyborgs and Citadels: Anthropological Interventions in Emerging Sciences and Technologies* (pp. 117-141). Santa Fe, NM: School of American Research Press.
- Monday** 4/15 *Making Inventor Heroes*
- Wednesday** 4/17 *Research Day*
- Friday** 4/19 *Research Day*
- Monday** 4/22 *Citizens as Activists*
Gusterson, Hugh. 2000. "How Not to Construct a Radioactive Waste Incinerator." *Science, Technology, & Human Values* 25(3):332-351.
- Wednesday** 4/24 *Citizens as Experts*
Epstein, Steven. 1995. "The Construction of Lay Expertise: AIDS Activism and the Forging of Credibility in the Reform of Clinical Trials." *Science, Technology, & Human Values* 20(4):408-437.
- Friday** 4/26 *Wrap Up*

***The course schedule is subject to change. However, it will never be changed without some notice ahead of time.