



# STS 001: Introduction to Science Studies

*Fall 2020 Course Syllabus*

**Lecture:** Tuesdays and Thursdays 3:10-4:30PM, Wellman 230

**Discussion:** Tuesdays 5:10-6:00PM (A01), 6:10-7:00PM (A02), Wickson 1038

**Professor:** Lindsay Poirier, [lnpoirier@ucdavis.edu](mailto:lnpoirier@ucdavis.edu)

**Office Hours:** M 11-12, Th 11-12, 1258 Social Sciences and Humanities

**TA:** Maya Cruz, [mmcruz@ucdavis.edu](mailto:mmcruz@ucdavis.edu)

**Office Hours:** T 2-3, Th 1-2, 1256 Social Sciences and Humanities

## What is this course about?

How do we discern the difference between science and non-science? Why are certain scientific pursuits so politically contentious? Why do we have rich scientific research on certain topics and a dearth of research on other topics? This course will introduce you to topics in the interdisciplinary field of science and technology studies. Through a series of case studies, we will consider how scientific controversies emerge and why they matter. In this course, we will discuss how public discourse and media representations of science shape what research gets funded, prioritized, legitimized, and contested.

## Why is this course important?

This course will help you think through the complex conditions that shape scientific research and the production of knowledge. In other words, it will help you unpack how and why we know what we know about our social and physical world. It will help you develop skills in media literacy and discourse analysis, and it will provide you with opportunities to practice applying these skills in written assignments.

## What should you be able to do by the end of this course?

1. Communicate how socio-cultural forces shape the production of scientific knowledge and the public's understanding of science
2. Identify the diverse beliefs, commitments, and stakes that instigate scientific controversies
3. Apply techniques in discourse analysis to examine how science gets talked about in public discourse and represented in the media
4. Evaluate opportunities for improving systems of knowledge production and techno-scientific research and design

## How will you be graded?

CRITERIA	PERCENTAGE
Essays (2)	50%
Take-home Midterm	15%
Final Exam Essay	25%
Attendance and Participation	10%

## What are the course policies?

### *Attendance*

Attendance in class and labs is required. You may miss one class or lab without penalty. After this, points will be deducted. Emergency exceptions may be made at my discretion.

### *Participation*

Thoughtful participation in class discussions is a key component of this class and requires that you come prepared to discuss the week's reading. In this course, you will be graded on the *quality* of your contributions to discussion.

### *Late Assignments*

Late assignments will receive a 10% point deduction immediately. After this, an additional 10% will be deducted for each additional day late. Emergency exceptions may be made at my discretion.

### *Academic Integrity*

As a UC Davis student, you are expected to know when and how to cite, quote, and paraphrase another individual's work correctly. If you do not, ask me or your TA for help. Please see the UC Davis Code of Conduct for more information: <http://sja.ucdavis.edu/files/cac.pdf>. On the first day of class, you should verify you understand the Code of Conduct at <https://participate.ucdavis.edu/>

### *Accommodations*

Please contact the UC Davis Student Disability Center to request accommodations. <https://sdc.ucdavis.edu/>

## What requirements does this course fulfill?

This course fulfills the **Writing Experience (WE) Literacy** requirement.

### *Aims & Expectations*

The objective of the WE is to ensure that all students become proficient writers across a range of contexts. You will be expected to produce at least 10 pages of writing through assignments that progressively develop critical thinking and model effective writing strategies.

### *Feedback*

Your TA and I will provide written feedback on all essays. The feedback provided on the first essay is intended to help you further develop your writing competencies for future essays.

### *Plagiarism*

Plagiarism violates the UC Davis Code of Conduct. Students suspected of plagiarism will be referred to Student Judicial Affairs. Please see the plagiarism document attached to the syllabus for more information. Responsible citation practices and methods for avoiding plagiarism will be addressed in class as part of the course content.

## STUDENT SUPPORT SERVICES

College life can be stressful, and attending to your physical and mental health and wellbeing should be a top priority. If you, or anyone you know, is experiencing distress, there are numerous campus resources that can provide support, including Student Health & Counseling Services (530-752-2349). If you report concerns to me, I will remind you of these resources.

# Course Schedule

WEEK 1: CONTROVERSIES			
10/1	Young, Robert S. 2017. "Opinion   A Scientists' March on Washington Is a Bad Idea." Roberts, David. 2017. "Science Is Already Political. So Scientists Might as Well March." Tweet Thread (assigned on Canvas) Goldman, Gretchen. 2017. "When I March for Science, I'll March for Equity, Inclusion, and Access."	10/3	No reading
WEEK 2: PROGRESS & TECHNO-SCIENTIFIC DETERMINISM			
10/8	Marx, Leo. 1987. "Does Improved Technology Mean Progress."	10/10	Wellmon, Chad. 2012. "Why Google Isn't Making Us Stupid...or Smart."
WEEK 3: CULTURAL BOUNDARIES OF SCIENCE & UFOLOGY			
10/15	Ch. 1 Gieryn, Thomas F. 1999. Cultural Boundaries of Science: Credibility on the Line.	10/17	Eghigian, Greg. 2017. "Making UFOs Make Sense: Ufology, Science, and the History of Their Mutual Mistrust."
WEEK 4: OBJECTIVITY & ALGORITHMIC FIXES			
10/22	Introduction & Ch. 1, Porter, Theodore M. 1996. Trust in Numbers: The Pursuit of Objectivity in Science and Public Life.	10/24	"Technological Benevolence." Benjamin, Ruha. 2019. Race After Technology: Abolitionist Tools for the New Jim Code.
WEEK 5: NATURE/CULTURES & CLONING			
10/29	"Alien Nation." In Subramanian, Banu. 2014. Ghost Stories for Darwin.	10/31	Franklin, Sarah. 2002. "Dolly the World-Famous Sheep." <b>Essay 1 Due</b>
WEEK 6: EXPERTISE & THE ANTI-VAX MOVEMENT			
11/5	Epstein, Steven. 1995. "The Construction of Lay Expertise: AIDS Activism and the Forging of Credibility in the Reform of Clinical Trials."	11/7	"Analyzing Vaccine Anxieties." In Leach, Melissa, and James Fairhead. 2007. Vaccine Anxieties: Global Science, Child Health and Society. <b>Mid-term Due</b>
WEEK 7: UNCERTAINTY & CLIMATEGATE			
11/12	Wynne, Brian. 2010. "Strange Weather, Again."	11/14	Ryghaug, Marianne, and Tomas Moe Skjølsvold. 2010. "The Global Warming of Climate Science: Climategate and the Construction of Scientific Facts."
WEEK 8: IGNORANCE & THE MALE PILL			
11/19	Tuana, Nancy. 2006. "The Speculum of Ignorance: The Women's Health Movement and Epistemologies of Ignorance."	11/21	Ch. 1, Oudshoorn, Nelly. 2003. The Male Pill: A Biography of a Technology in the Making.
WEEK 9: SOCIOTECHNICAL IMAGINARIES & NUCLEAR ENERGY			
11/26	Jasanoff, Sheila, and Sang-Hyun Kim. 2009. "Containing the Atom: Sociotechnical Imaginaries and Nuclear Power in the United States and South Korea."	11/28	Thanksgiving - No Reading
WEEK 10: COURSE WRAP-UP			
12/3	<b>Final Exam Assigned (Due December 11 at 3:30)</b>	12/5	<b>Essay 2 Due</b>

# Assignments & Assessments

## Essay 1 - Application

For this first assignment, you will apply Gieryn's concept of boundary work to examine how different stakeholders have responded to the question of whether a certain field is scientific. I will randomly assign you topics for this essay, and it will be your responsibility to identify at least 5 sources (academic articles, news articles, websites, etc.) where a stakeholder takes a stance on scientificity of the field. You will then examine how the stakeholders justify what makes something scientific vs. non-scientific.

## Essay 2 - Synthesis

For the second assignment, you will synthesize ideas and arguments discussed in the Tuesday readings in order address the question: *How does scientific credibility get established?* You will analyze this question in the context of one controversy we have discussed in the course. Your essay should have a clear thesis statement and should cite specific concepts from multiple readings to advance your argument. The controversy you choose should be different from the topic you discussed in Essay 1.

## WRITING SUPPORT

UC Davis's Academic Support Center offers a number of resources to help students in their writing. You can learn more about the workshops they host, book appointments with writing specialists, and review helpful handouts and videos at <https://tutoring.ucdavis.edu/writing>. You can also drop-in to the Writing Studio from 1PM-4PM on weekdays at 2205 Dutton Hall.

## Take-home Mid-term

The take-home mid-term will consist of a mixture of short answer questions and short essays. Both will focus primarily on topics discussed in readings and lectures.

## Final Essay (Exam)

In this final essay, I would like you to outline an idea for a system or process that could be implemented to ensure that science benefits more people more of the time. Your proposal should be as specific as possible and should justify why and how the approach would intervene to make systems of knowledge production and techno-scientific development more equitable and just.

## WHO IS MY INSTRUCTOR?

I am a cultural anthropologist that studies how civic data gets produced and how communities think about and interface with data infrastructure. As a professor, I aim to provide students with opportunities to practice and hone skills in critical thinking, research, data analysis, and persuasion. My classes often include many thought exercises and hands-on group activities that apply what we are learning in class to real world applications. I try to be as accessible to students as possible via office hours and email, but depending on my schedule, it may take me up to 24 hours to respond to an email.

