

SYA 4930 (#25600) – Sociology of Science

Fall 2025 • University of Florida • 3 Credits

Pugh Hall, Room 120

Tuesdays (T), 8th-9th Period (3:00pm-4:55pm) | Thursdays (R), 9th Period (4:05pm-4:55pm)



["Thressa Stadtman, Ph.D."](#) by [NIH Image Gallery](#), CC BY-NC 2.0

Instructor & Office Hours

Dr. Evan W. Lauteria (he/him) elauteria@ufl.edu Office Location: Turlington 3361A	Walk-ins: Thursdays Time: 1:30pm-3:30pm [no appointment needed]
	By Appointment: Mondays & Fridays Time: 11:00am-12:30pm [use link on Canvas to reserve an appointment]

Course Description & Objectives

The production, certification, and dissemination of knowledge constitute and rely on various institutions, organizations, actors, and social processes. This course introduces students to a set of concepts and theoretical/methodological approaches that will allow them to understand “science” as complex systems of knowledge production, sites of labor, and social worlds where symbolic meanings are negotiated and contested. We will also explore with how science intersects with other social systems, such as politics and the economy. Special attention will be given to the issues of inequality and power in knowledge production, epistemological authority, and the representation of science and scientists.

Course Structure & Assignments

This course has no assigned textbook, but all assigned readings (except the book your group selects for your book review) may be downloaded in PDF form from our Canvas site or accessed online.

The course covers three major themes:

- Science as Social Activity (how scientists work, how knowledge is produced, etc.)
- Science and Inequality (bias, prejudice, discrimination, oppression, etc.)
- Science in Society (intersections with other spheres of social life, citizen science, etc.)

You will be evaluated formally based on the following for this class:

Assignment	Points	Percent	Due Date
Worksheet #1: Literary Technologies	10	10%	Sept 12 th (F)
Worksheet #2: Actor-Network Analysis	10	10%	Sept 26 th (F)
Article Selection	3	3%	Oct 10 th (F)
Article Analysis Paper (Lit Tech or ANT)	25	25%	Oct 24 th (F)
Group & Book Selection Survey	2	2%	Oct 31 st (F)
Worksheet #3: Citizen Science	10	10%	Nov 14 th (F)
Group Book Review Podcast	25	25%	Dec 9th (T)
Group Podcast Team Assessment	5	5%	Dec 11th (R)
Class Attendance	5	5%	--
Class Participation	5	5%	--
TOTAL	100	100%	

Worksheets

Three times throughout the semester you will be tasked with applying content from the course lectures and readings to hands-on analysis via free-response worksheets. These worksheets cover major theoretical frames and/or concepts from the course and ask you to examine real world instances of science-in-action through such frames/concepts. Each worksheet should take approximately 2-3 hours to complete and can be submitted online or in-person, though students have until Friday (a day when our class does not meet) until 11:59pm to submit via Canvas.

Article Selection & Article Analysis Paper

For your mid-term assignment, you will be tasked with conducting a “close reading” of a published and peer-reviewed research article from a professional scientific journal (avoid review articles or pop science articles). The close reading will require you to examine either (1) the “literary technologies” employed in the article, or (2) the human/nonhuman networked activity involved in the knowledge production of the article. These approaches are the subject of worksheets #1 and #2, respectively; students will receive feedback on their comprehension of these approaches before this assignment, accordingly.

For the “Article Selection” component, you will submit a copy of the article and a 1-paragraph write-up describing the premise of the research in the article and your planned analytical approach, specifying which literary technologies or actor-network phenomena you plan to elaborate upon in the paper.

Upon approval of the selected article, you will then draft a 4- to 6-page paper (12pt font, double-spaced, 1-inch margins, ASA or APA citations) based on your close reading. In examining literary technologies, you may adopt one or many of the concepts we covered in class (virtual witnessing, modalities, metaphors, etc.) in your analysis. In exploring actor-network theory, emphasis should be placed on various actors and actants and the efforts involved in incorporating each into the science-knowledge network (i.e., not a description of humans' use of tools). Papers must adopt a *specific* thesis, ideally an analytical or expository claim, and structure the writing around that thesis. A more comprehensive grading rubric will be provided on Canvas.

Group Book Review Podcast

In groups of 2- to 4-students, you will produce a 30- to 60-minute podcast (audio only) book review of a recent book publication in the history of science. There will be a list of possible book options for the assignment listed on the Canvas assignment page. These books will largely focus on issues of stratification, discrimination, prejudice, or institutional barriers in science. The goal of this assignment is to expand your understanding of these issues by exploring a focused case, with the podcast affording you the opportunity to elaborate upon these issues using your knowledge and skills gained from the class.

You will first complete a survey on Canvas indicating your top three book choices and your preferences for group membership. If you and at least one other classmate are interested in using a book *not* included in the list on Canvas, you must consult with the instructor (as a pre-made group) prior to completing this survey.

Once groups are finalized, you should read the book on your own time and plan to record a podcast covering the text chapter-by-chapter, drawing out important moments or highlighting interesting portions you wish to explore. Two sample podcasts of similar form will be provided. You should upload the finished podcast either as an audio file or provide a link to a media hosting platform. Podcasts will be assessed based on their engagement with the text, incorporation of innovative critical thinking and course concepts, and quality of conversation with podcast teammates. One submission will be accepted per group, but grades will be assigned individually.

Finally, you are asked to review the performance of both you and your teammate(s) in a final self-assessment, which you can complete on Canvas after uploading the podcast. This portion of the assignment will be graded purely on completion.

Class Attendance & Participation

Attendance will be taken in-class. Students may miss up to four class meetings (equal to two weeks of class) without grade penalty. Further absences will result in a 1-point reduction to a student's attendance grade, with possible negative scores for students who miss enough classes. Tardiness is permitted (please come to lecture even if you are late!), but if a student arrives after attendance has been taken, the student will be marked as absent for that day.

For information on attendance policies at the University of Florida, please visit <https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/>

Because this is an advanced sociology course, emphasis is placed on deep critical thinking and engagement with theories and concepts. Your attendance and participation in class are paramount. Students will be evaluated holistically based on their in-class verbal contributions throughout the entire semester, based both on frequency and content of what is shared. Grades will reflect this assessment, on a scale of 0 to 3 (with 3 being “excellent” participation). Students are expected to come prepared—having read the assigned material—in order to grapple with the topics of discussion presented in class.

Class Policies

Late Assignments: All assignments may be submitted up to 72 hours (3 days) late for a maximum score of 85%. This means that if you submit an assignment that would have received a 97% one day late, it will receive a score of 85%; alternatively, if the assignment would have received a 77%, there is no grade penalty.

Extra Credit: In general, I do not provide extra credit opportunities during the semester. Students should plan to perform well on the regular course assignments and assessments.

Artificial Intelligence (AI) Use Policy: As text-generative large-language models (LLMs), colloquially described as “AI” or “artificial intelligence,” become increasingly accessible and integrated into digital life, you may find use in such tools for your own learning. The general policy for this course is...

- Permitted, to improve learning and comprehension: AI may be used to assist in student comprehension, understanding, or clarification of course materials and content (as a study buddy or reference). Additionally, AI can be used to brainstorm, outline, or structure writing assignments and “jump start” the writing process, if applicable.
- Not Permitted, to minimize inaccurate representation of comprehension: AI-generated text should not be used for written assignments or worksheets; in these cases, the final explanation or communication must be from your own writing or the writing of other experts in the form of quotations and citations.

If you are uncertain if your use of an AI LLM constitutes a violation of the above policy, please speak with the instructor prior to submitting the relevant assignment. In cases where you lack time to do so, err on the side of caution and use your own words/writing.

Communication: You may contact me with questions about the course, the site, or assignments and assessments at your leisure. I request that you *please* use UFL email for communication; Canvas’s communication system is not ideal. Because I am teaching three courses this term, please be sure to indicate which class you are in when communicating with me. I will endeavor to reply as quickly as possible, usually within 72 hours. You are welcome to email a follow-up if

you have not heard from me after that three-day period. Please be aware that I do not typically check my email regularly on weekends.

Course Grading Policy: This course's grading scale for final scores, based on the assignment descriptions provided earlier in this syllabus, is as follows:

A	B+	B	B-	C+	C	C-	D+	D	F
100% to 90%	< 90% to 87%	< 87% to 84%	< 84% to 80%	< 80% to 77%	< 77% to 74%	< 74% to 70%	< 70% to 67%	< 67% to 64%	< 64% to 0%

Please take note: I do not assign A- grades in this class. In turn, I do not provide “bumps” or bonuses to final grades; please aim to perform well on all assignments throughout the term.

Further information on university grades and grading policies at the University of Florida can be found here: <https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>

Academic Policies and Resources: This course complies with all UF academic policies. For information on those policies and for resources for students, please visit <https://syllabus.ufl.edu/syllabus-policy/uf-syllabus-policy-links/>.

Students with Disabilities: The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. Students with disabilities who experience barriers to learning should request academic accommodations through the Disability Resource Center. Visit <https://disability.ufl.edu/get-started/> to begin this process. Part of the process will involve the generation of an accommodation letter; please share this letter with the instructor as early as possible in the semester. You are invited, but not required, to discuss your needs with the instructor, as well.

Changes to Syllabus: I reserve the right to make changes to this syllabus during the semester. Changes will only be to the students' benefit (that is, reducing reading load, making assignment deadline extensions, etc.), and changes will always be announced well in advance, both via Canvas announcements and in-class. No changes will be made to the overall structure of the course, such as assignment types and scores.

Course Schedule

Week 1 – Course Introduction [August 21st]

[Thursday]

No readings (first day of class)

Week 2 – Norms in/and/of Science [August 26th & 28th]

[Tuesday]

Merton, Robert K. [1942] 1973. "The Normative Structure of Science." Pp. 267-278 in *The Sociology of Science*. Chicago, IL: University of Chicago Press.

Mitroff, Ian I. 1974. "Norms and Counter-Norms in a Select Group of the Apollo Moon Scientists: A Case Study of the Ambivalence of Scientists." *American Sociological Review* 39(4): 579-595.

[Thursday]

Mulkay, Michael. 1976. "Norms and Ideology in Science." *Social Science Information* 15(4-5): 637-656.

Week 3 – Experimentation and Observation [September 2nd & 4th]

[Tuesday]

Shapin, Steven, and Simon Schaffer. 1985. "Seeing and Believing: The Experimental Production of Pneumatic Facts." Pp. 22-79 in *Leviathan and the Air-Pump: Hobbes, Boyle, and the Experimental*. Princeton, NJ: Princeton University Press.

[Thursday]

Latour, Bruno. 1983. "Give Me a Laboratory and I will Raise the World." Pp. 141-170 in *Science Observed: Perspectives on the Social Study of Science*, edited by K. Knorr-Cetina and M.J. Mulkay. London, UK: Sage Publications.

Week 4 – Science Rhetoric [September 9th & 11th]

[Tuesday]

Latour, Bruno. 1987. "Literature." Pp. 21-62 in *Science in Action: How to Follow Scientists and Engineers Through Society*. Cambridge, MA: Harvard University Press.

[Thursday] (Select One)

Martin, Emily. 1991. "The Egg and the Sperm: How Science Has Constructed a Romance Based on Stereotypical Male-Female Roles." *Signs: Journal of Women and Culture* 16(3): 485-501.

Larson, Brendon. 2011. Excerpts from *Metaphors for Environmental Sustainability: Redefining Our Relationship with Nature*. New Haven, CT: Yale University Press.

~~ Worksheet #1, Literary Technologies: Due Friday, September 12th ~~

Week 5 – Scientific Knowledge Construction [September 16th & 18th]

[Tuesday]

Knorr-Cetina, Karin D. 1981. "The Scientist as a Practical Reasoner: Introduction to a Constructivist and Contextual Theory of Knowledge." Pp. 1-32 in *The Manufacture of Knowledge: An Essay on the Constructivist and Contextual Nature of Science*.

Rheinberger, Hans-Jörg. 2003. "Scripts and Scribbles." *MLN* 118(3): 622-636.

[Thursday]

Dumit, Joseph. 1999. "Objective Brains, Prejudicial Images." *Science in Context* 12(1):173-201.

Week 6 – Actor-Network Theory [September 23rd & 25th]

[Tuesday]

Callon, Michel. 1984. "Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fishermen of St. Brieuc Bay." *The Sociological Review* 32(1_suppl): 196-233.

Star, Susan Leigh, and James R. Griesemer. 1989. "Institutional Ecology, 'Translations' and Boundary Objects: Amateurs and Professionals in Berkeley's Museum of Vertebrate Zoology, 1907-39." *Social Studies of Science* 19: 387-420.

[Thursday]

Carroll, Patrick. 2012. "Water and Technoscientific State Formation in California." *Social Studies of Science* 42(4): 489-516.

~~ Worksheet #2, Actor-Network Theory: Due Friday, September 26th ~~

Week 7 – Paradigms and Sociology of Scientific Knowledge [September 30th & October 2nd]

[Tuesday]

Kuhn, Thomas. 1962. "The Priority of Paradigms" and "The Response to Crisis." Pp. 43-51 & 77-91 in *The Structure of Scientific Revolutions*. Chicago, IL: University of Chicago Press.

Gieryn, Thomas F. 1983. "Boundary Work and the Demarcation of Science from Non-Science: Strains and Interests in the Professional Ideologies of Scientists." *American Sociological Review* 48(6): 781-795.

[Thursday]

Bloor, David. 1976. "A Naturalistic Approach to Mathematics" Pp. 84-106 in *Knowledge and Social Imagery*. Chicago, IL: University of Chicago Press.

Week 8 – Sexism in Science [October 7th & 9th]

[Tuesday]

Shattuck, Sharon, and Ian Cheney. 2020. *Picture a Scientist*. Uprising Production. [Access Online via Alexander Street](#) (requires UF IP address, VPN, or proxy).

Niewoehner-Green, Jera E., Mary T. Rodriguez, and Summer R. McLain. 2022. "The Gendered Spaces and Experiences of Female Faculty in Colleges of Agriculture." *Rural Sociology* 87(2): 427-453.

[Thursday]

PBS. 2003. *Secret of Photo 51*. PBS Nova. *Video Accessible on Canvas*.

~~ Article Selection: Due Friday, October 10th ~~

Week 9 – Race and Racializing Science [October 14th & 16th]

[Tuesday]

TallBear, Kimberly. 2004. "DNA, Blood and Racializing the Tribe." Pp. 123-130 in *'Mixed Race' Studies*, edited by J.O. Ifekwunigwe. London, UK: Routledge.

Zarrugh, Amina, and Luis Romero. 2025. "Genetic Racialization: Ancestry Tests and the Reification of Race." *Social Problems* 72(2): 391-407.

[Thursday]

Shim, Janet K. 2005. "Constructing 'Race' across the Science-Lay Divide: Racial Formation in the Epidemiology and Experience of Cardiovascular Disease." *Social Studies of Science* 35(3): 405-36.

Week 10 – Eugenics [October 21st & 23rd]

[Tuesday]

PBS. 2018. "The Eugenics Crusade." *The American Experience*. Aired October 16, 2018. Access online via PBS's YouTube Page: <https://www.youtube.com/watch?v=vmRb-0v5xfI>.

Stern, Alexandra Minna. 2005. "Race Betterment and Tropical Medicine in Imperial San Francisco". Pp. 27-56 in *Eugenic Nation: Faults and Frontiers of Better Breeding in Modern America*. Berkeley, CA: University of California Press.

[Thursday]

No class (finish up your papers! I'll be in my office for walk-ins)

~~ Article Analysis Paper: Due Friday, October 24th ~~

Week 11 – Feminist and Indigenous Epistemologies [October 28th & 30th]

[Tuesday]

Haraway, Donna. 1988. "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective." *Feminist Studies* 14(3): 575-599.

Fausto-Sterling, Anne. 2000. "Sexing the Brain: How biologists make a difference." Pp. 115-145 in *Sexing the Body: Gender Politics and the Construction of Sexuality*. New York, NY: Basic Books.

[Thursday]

Chambers, David Wade, and Richard Gillespie. 2000. "Locality in the History of Science: Colonial Science, Technoscience, and Indigenous Knowledge." *Osiris* 15: 221-240.

~~ Group & Book Selection Survey: Due Friday, October 31st ~~

Week 12 – Publics, Social Movements, and Citizen Science [November 4th & 6th]

[Tuesday]

Yearley, Steven. 1999. "Computer Models and the Public's Understanding of Science: A Case-Study Analysis." *Social Studies of Science* 29(6): 845-866.

Milburn, Colin, and Melissa Wills. 2021. "Citizens of the Future: Science Fiction and the Games of Citizen Science." *Science Fiction Film and Television* 14(2): 115-144.

[Thursday] (Select One)

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.

Schurman, Rachel. 2004. "Fighting 'Frankenfoods': Industry Opportunity Structures and the Efficacy of the Anti-Biotech Movement in Western Europe." *Social Problems* 51(2): 243-268.

Week 13 – Science Identity [November 13th]

[Tuesday]

No class (Veteran's Day)

[Thursday]

Stets, Jan E., Philip S. Brenner, Peter J. Burke, and Richard T. Serpe. 2017. "The Science Identity and Entering a Science Occupation." *Social Science Research* 64: 1-14.

~~ Worksheet #3, Citizen Science: Due Friday, November 14th ~~

Week 14 – Capitalism and Corporate Science [November 18th & 20th]

[Tuesday]

Hess, David. 2006. "Antiangiogenesis Research and the Dynamics of Scientific Fields: Historical and Institutional Perspectives in the Sociology of Science." Pp. 122-147 in *The New Political Sociology of Science: Institutions, Networks, and Power*, edited by S. Frickel and K. Moore. Madison, WI: University of Wisconsin Press.

Sismondo, Sergio. 2021. "Epistemic Corruption, the Pharmaceutical Industry, and the Body of Medical Science." *Frontiers in Research Metrics and Analytics* 6: 601143.

[Thursday]

Kleinman, Daniel Lee. 1998. "Untangling Context: Understanding a University Laboratory in the Commercial World." *Science, Technology, & Human Values* 23(3): 285-314.

~~ Thanksgiving Break, November 22nd-30th ~~

Week 16 – Science Governance [December 2nd]

[Tuesday]

Macfarlane, Allison. 2003. "Underlying Yucca Mountain: The Interplay of Geology and Policy in Nuclear Waste Disposal." *Social Studies of Science* 33(5): 783-807.

~~ Group Book Review Podcast: Due Tuesday, December 9th ~~

~~ Group Podcast Team Assessment: Due Thursday, December 11th ~~