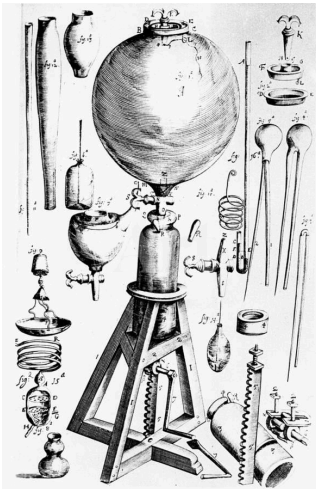
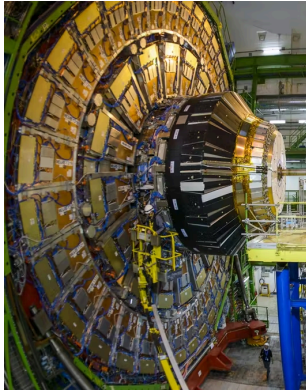


SI 710: Science of Science v1

- This is the “old” version
- **Students: refer to v2 of the syllabus (link in Canvas)**

Fall 2022, Section 127

	<p>Location Tuesdays, 4-7pm North Quad 1265 Canvas: link</p> <p>Instructor Misha Teplitskiy tepl@umich.edu Office: North Quad 3369 Office hours: Wednesdays 11am and by appointment</p>	
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The course

This doctoral seminar examines science as an institution, drawing on research from sociology, economics, history, philosophy, and interdisciplinary approaches. We will explore what, if anything, makes science a special institution that's different from others, how knowledge accumulates, what determines the rate and direction of that accumulation, how science influences the broader society and economy and how they influence science.

By the end of this course you will (hopefully!) develop a researcher-level foundation in science of science, by increasing your understanding of:

- ★ Framework(s) - how various parts of the literature fit together
- ★ Key questions in the field
- ★ How good the existing answers are
- ★ Main research designs and the problems of each
- ★ Main data sources and the problems of each

The course is designed around helping you develop a great research paper, study protocol, or another substantial piece of writing that advances your dissertation. So in addition to the learning goals above, you will develop the more general research skills of making sense of a literature, identifying a research question, and answering it.

Required readings

The only reading that is required and not easily available online is the following book:

- Robert K. Merton. in *The Sociology of Science* N. Storer (ed). University of Chicago Press, 1973.

This book is on reserve at the Shapiro Library (4-hour loan) and is also available from the Internet Archive's online "library" ([link](#)). Other readings will be provided as links or PDFs on Canvas. You may consider getting a copy of the following book, although we have online access to it:

- Stephan, Paula. *How economics shapes science*. Harvard University Press, 2015.

Course requirements and grades

Leading class discussion (15%)

Each student is responsible for leading discussion for 1 class. In Week 1, you will pick which class that will be. The first student(s) will lead a discussion in week 3.

For your selected topic you will prepare an approximately 30-minute presentation that introduces the topic and expands on the assigned readings, such as by providing more background or context for the papers, describing additional research papers not covered in class, or considering the implications of the work. Your goal is to highlight important aspects of the readings or topic and to go a bit deeper, connecting them back to other concepts from class or your own reading. If you would like to discuss the topic with me or would like feedback on your presentation ahead of time, please come to my office hours the week before your presentation (or set up another time to meet).

You will also be responsible for leading discussion during this class period. You should come prepared with several discussion questions, and you can and should also draw from your classmates' discussion questions posted in their reading responses. The discussion period will extend beyond the 30 minutes allotted for your presentation. You can weave discussion into

your presentation, or finish your presentation and then lead the discussion afterwards. Please upload your slides to Canvas before the beginning of class the day you are signed up to lead.

Mid-term paper proposal (10%)

In Week 10, you will turn in approximately 500 words summarizing what you will be writing your seminar paper about. Your proposal should include your idea and a rationale for why this topic is important to study. Also describe how it relates to your research agenda.

You will also present the idea in class to receive feedback (5 minutes each). You can use slides, but you do not have to. Aim to communicate enough details to the class to allow them to provide rich feedback that will be helpful to you.

Final paper (30%)

For your seminar paper, you can choose one of four options. I am happy to work with you to find a topic and approach that supports your PhD work. You should cite readings from the syllabus, but should go beyond them and cite other sources as well.

Option 1: Research paper

For this option, you would perform original research and write it as a conventional research paper. Because it is difficult to execute a full project in a semester, this option is most appropriate for those coming into the course already with some background a research question in mind.

Option 2: Literature review

For this option, you will do a ‘deep dive’ into the topic you are interested in. The majority of the text will be a well-written synthesis of the relevant literature on a particular topic. This will take the form of: “everything we know about X, within the boundaries of Y, organized around the concept of Z.” Your paper should include a rationale for why this is an important topic to study.

Option 3: Research proposal

For this option, you will first conduct a literature review (less comprehensive than in Option 2) to synthesize studies related to the research question you are interested in. Your paper should include one or more explicit research questions or hypotheses, or a paragraph that highlights the knowledge gap you have identified. Then, write a methods section that describes a study that you could feasibly do if you had some funding and time. Your paper

should include a rationale for why this is an important topic to study, why your proposed methods and approach are appropriate, and potential implications your findings would have.

Option 4: Your choice

Suggest an alternative format that will help you achieve your scholarly goals and talk to me about it before starting.

Format

The seminar paper should be approximately 12-15 pages (double-spaced, 11 or 12 pt font). Your bibliography and endnotes are not included in this page count. Your paper should use proper citation practices and have a full bibliography formatted in standard style. There is not a rough number I can give for how many references to engage with. You do not need to include an abstract. Do include a title page (not included in the page count). Please submit as a Word file unless you use something else to write, in which case a PDF is fine.

Final paper presentations (10%)

The last class is devoted to your papers. Prepare a ~10 minute presentation that includes an overview of your topic, literature review, research question(s), study design, arguments, or findings (as applicable based on which paper option you chose). You will submit your slides on Canvas. We will have some time for Q&A.

You do not need to communicate everything in your paper in this short time; think of it as a practice for the important skill of communicating the main takeaways to an audience and giving them something to think about when they walk away. Please upload your slides to Canvas before the beginning of class.

Attendance and class participation (20%)

Class participation includes attending class and participating in class discussion. If you are not present in the classroom or you are present but are mentally absent, you will not be able to participate in a meaningful way and the grade will suffer. To promote discussion we will have a policy of:

- **No laptops and phones**
- Random calling (using a ... prop!)

If there is an issue preventing you from speaking in class, feel free to talk to me about it and we may be able to find alternative ways to participate.

Reading responses (15%)

For each class (with the exception of week 1), you will post to the Discussion board on Canvas your reading responses to the week's readings. You do not need to do a response on the day you are leading discussion or presenting your project.

Responses should be posted by *1pm* on the day of class. These reading responses have **2 components**:

1. **Takeaways:** Write 2-3 paragraphs synthesizing what you see as the main take-aways from the readings as a whole, commenting on how they fit together and with readings from prior weeks.
2. **QCR** - Question, comment, or research question: Write 2-3 QCRs (1-3 sentences each). The questions and comments should relate to ideas/concepts you are excited to talk about in class! The research questions may be used in the 2nd half of class to think about designs collaboratively.

The main goal of these responses is to work through and synthesize your thoughts about the readings and topic area. We may organize class discussions around the ideas you raise. Please note that you are not expected to understand everything in the readings - take the opportunity to work through and raise questions about things that are confusing to you!

Grades

The final grade of record will be based on the following:

- ★ Class participation (20 points)
 - Note: you do not *have* to speak up in every class only to achieve the full points.
- ★ Reading responses and discussion questions (15 points – 1.5 point for each reading response)
 - Note: you may skip one response and get full points
- ★ Leading class discussion (15 points)
- ★ Paper proposal (10 points)
- ★ Seminar paper (30 points)
- ★ Seminar paper presentation (10 points)

Final grades will be recorded as letter grades using the following scale:

A+ 98 - 100

A	93 - 97
A-	90 - 92
B+	87 - 89
B	83 - 86
B-	80 - 82
C+	77 - 79
C	73 - 76
C-	70 - 72
:(<70

If you are concerned about your grade, please make an appointment to discuss the situation with me as early in the semester as possible.

Late Policy

- Paper/presentation assignments are due by class time (4:00 pm) on the date listed for that assignment.
- Reading responses are due by **1pm** on the day of class
- Any assignment submitted outside of the exact due date and time (as indicated by the Canvas timestamp) will be assessed a penalty of 10% for each 24-hour period after the time it is due.

Exceptions to the rules above will be made at the discretion of the instructor. Students must communicate with the instructor before the deadline if at all possible. If you are struggling to meet a deadline, please get in touch.

Please note: everyone in the class is expected to come to class having read the required readings for that class. If you do not do the required readings, your understanding of the course material will suffer, as will your grade and the classroom discussions. Please plan on spending about 9 hours of work outside class meeting times on course assignments and readings. Reading responses will be due on Canvas before each class session.

Schedule at a glance

(To be ordered after 1st class, based on student interest)

Week	Topic	Presenter
1: Aug 30	Introduction	

2: Sept 6	Foundations: Merton	
3: Sept 13	Foundations: Sociology of Scientific Knowledge	
4: Sept 20	Paper pitches	
5: Sept 27	Exploration vs. exploitation	
6: Oct 4	Knowledge flows: places	
7: Oct 11	Knowledge flows: texts	
8: Oct 18	Fall study break	
9: Oct 25	Collaboration	
10: Nov 1	Mid-term paper presentations	
11: Nov 8	Evaluating science	
12: Nov 15	Can we trust the literature?	
13: Nov 22	Science and the public	
14: Nov 29	Science of the future?	
15: Dec 6	Final paper presentations	

Introduction

- Syllabus, introductions
- Overview of the field
- Critique “Conform and be Funded” [link](#)
- Critiquing empirical papers, the “big 5” research designs

Foundations: Merton

- Robert K. Merton. in The Sociology of Science N. Storer (ed). University of Chicago Press, 1973.
 - "Paradigm for the Sociology of Knowledge"
 - "The Normative Structure of Science"
 - "Priorities in Scientific Discovery"
- Polanyi, Michael. 1962. "The Republic of Science: Its Political and Economic Theory." [link](#)
- Optional: Varian, Hal R. "Causal inference in economics and marketing." Proceedings of the National Academy of Sciences 113.27 (2016): 7310-7315. [Link](#)

Foundations: Sociology of Scientific Knowledge (SSK)

- Shapin, Steven. "Here and everywhere: Sociology of scientific knowledge." Annual review of sociology (1995): 289-321. [link](#)
- Latour, Bruno. "Give me a laboratory and I will raise the world." Science observed: Perspectives on the social study of science (1983): 141-170. [link](#)
- Selections from: Latour, Bruno. Science in action: How to follow scientists and engineers through society. Harvard University Press, 1987.

What is science(s)?

- Popper, Karl. "The problem of demarcation." [link](#)
- Gieryn, Thomas F. 1983. "Boundary-work and the Demarcation of Science from Non-science: Strains and Interests in Professional Ideologies of Scientists." American Sociological Review 48(6): 781-795. [link](#)
- Nelson, Richard R. 2016. "The Sciences Are Different and the Differences Matter." Research Policy 45 (9): 1692-1701. [Link](#)

- Lieberman, Stanley, and Freda B. Lynn. "Barking up the wrong branch: Scientific alternatives to the current model of sociological science." *Annual Review of Sociology* (2002): 1-19. [Link](#)

Who are “scientists?”

- Shapin, Steven. "Pump and circumstance: Robert Boyle's literary technology." *Social studies of science* 14.4 (1984): 481-520. [link](#)
- Shapin, Steven. From Calling to Job. (PDF on Canvas)
- Weber, Max. 1918. "Science as a Vocation." [link](#)
- Stephan, Paula. 2012. "The Market for Scientists and Engineers" (Ch. 7) in *How Economics Shapes Science*.
- Morgan, A.C., LaBerge, N., Larremore, D.B. et al. "Socioeconomic roots of academic faculty." *Nature Human Behaviour* (2022). [link](#)

How science evolves

- **Guest lecturer: Eamon Duede (University of Chicago)!**
- Kuhn, Thomas 1962. "Anomaly and the Emergence of Scientific Discoveries" and "Crisis and the Emergence of Scientific Theories" in *The Structure of Scientific Revolutions*.
- Lakatos, Imre. Sections 3A, 3B, 4 from *The Methodology of Scientific Research Programs*. [Link](#)
- Chu, Johan SG, and James A. Evans. "Slowed canonical progress in large fields of science." *Proceedings of the National Academy of Sciences* 118.41 (2021): e2021636118. [link](#)
- Nelson, Richard R. "On the uneven evolution of human know-how." *Research Policy* 32 (2003): 909-922. [Link](#)

Science, economic growth, and regulation

- Nelson, Richard R. 1962. "The Link Between Science and Invention: The Case of the Transistor." In *The Rate and Direction of Inventive Activity: Economic and Social Factors*, pp. 549-583. [link](#)
- Romer, Paul. 1996. "Why, Indeed, in America? Theory, History and the Origins of Modern Economic Growth." *American Economic Review* 86(2): 202-206. [link](#)
- Stephan, Paula. "The Relationship of Science to Economic Growth" (Ch 9) in *How Economics Shapes Science*.

- David, Paul. 1990. "The Dynamo and the Computer: An Historical Perspective on the Modern Productivity Paradox." *American Economic Review* 80 (2): 355-361. [link](#)
- Diana Rhoten and W.W. Powell (2007). "The Frontiers of Intellectual Property: Expanded Protection vs. New Models of Open Science." *Annual Review of Law and Social Science* Vol. 3. (2007). [Link](#)

Exploration vs. exploitation

- March, James G. "Exploration and exploitation in organizational learning." *Organization science* 2.1 (1991): 71-87. [link](#)
- Foster, Jacob G., Andrey Rzhetsky, and James A. Evans. 2015. "Tradition and Innovation in Scientists' Research Strategies." *American Sociological Review* 80 (5): 875-908. [link](#)
- Uzzi, Brian, et al. "Atypical combinations and scientific impact." *Science* 342.6157 (2013): 468-472. [link](#)
- Boudreau, Kevin J., et al. "Looking across and looking beyond the knowledge frontier: Intellectual distance, novelty, and resource allocation in science." *Management science* 62.10 (2016): 2765-2783. [Link](#)
- Packalen, Mikko, and Jay Bhattacharya. "NIH funding and the pursuit of edge science." *Proceedings of the National Academy of Sciences* 117.22 (2020): 12011-12016. [Link](#)
- Azoulay, Pierre, Joshua Graff Zivin, and Gustavo Manso. 2011. "Incentives and Creativity: Evidence from the Academic Life Sciences." *RAND Journal of Economics* 42(3): 527-554. [Link](#)
- Leahey, Erin, Christine M. Beckman, and Taryn L. Stanko. "Prominent but less productive: The impact of interdisciplinarity on scientists' research." *Administrative Science Quarterly* 62.1 (2017): 105-139. [Link](#)

Funding

- Partha and David 1994. "Towards a New Economics of Science." *Research Policy*. [link](#)
- Bush, Vannevar. "Science, the endless frontier." *Science, the Endless Frontier*. [link](#)
- Stephan. Paula. "Money" (Ch. 3) and "Funding for Research" (Ch. 6) in *How Economics Shapes Science*.
- Azoulay, Pierre and Danielle Li. "Scientific Grant Funding." [link](#)
- Press, William. 2013. Press, William H. "What's so special about science (and how much should we spend on it?)." *Science* 342.6160 (2013): 817-822. [link](#)
- Buck, Stuart. 2022. "The Kariko Problem." [link](#)

Knowledge flows: places

- Shapin, Steven. "The house of experiment in seventeenth-century England." *Isis* 79.3 (1988): 373-404. [Link](#)
- Collins, Harry M. 1974. "The TEA Set: Tacit Knowledge and Scientific Networks." [link](#)
- Solomon, Miriam. "Scientific rationality and human reasoning." *Philosophy of Science* 59.3 (1992): 439-455. [link](#)
- Hounshell, David. "The evolution of industrial research in the United States." *Engines of Innovation, US Industrial Research at the End of an Era* (1996). [link](#)
- Catalini, Christian. "Microgeography and the direction of inventive activity." *Management Science* 64 (9) (2018): 4348-4364. [Link](#)

Knowledge flows: texts

- Edge, David. "Quantitative measures of communication in science: A critical review." *History of science* 17.2 (1979): 102-134. [link](#)
- Gentil-Beccot, Anne, Salvatore Mele, and Travis C. Brooks. 2009. "Citing and Reading Behaviours in High-Energy Physics." [link](#)
- Teplitskiy, Misha, et al. "How status of research papers affects the way they are read and cited." *Research Policy* 51.4 (2022): 104484. [Link](#)
- Thompson, Neil, and Douglas Hanley. "Science is shaped by wikipedia: Evidence from a randomized control trial." (2018). [Link](#)
- Wu, Lingfei, et al. "Metrics and mechanisms: Measuring the unmeasurable in the science of science." *Journal of Informetrics* 16.2 (2022): 101290. [Link](#)

Teams and collaboration

- Wuchty, Stefan, Benjamin F. Jones, and Brian Uzzi. 2007. "The Increasing Dominance of Teams in Production of Knowledge." *Science* 316(5827): 1036-1039
- Leahey, Erin. "From sole investigator to team scientist: Trends in the practice and study of research collaboration." *Annual review of sociology* 42 (2016): 81-100. [link](#)
- Ahmadpoor, Mohammad, and Benjamin F. Jones. 2019. "Decoding Teams and Individual Impact in Science and Invention." *Proceedings of the National Academy of Sciences* 116 (28): 13885-13890. [link](#)
- Boudreau, Kevin J., et al. "A field experiment on search costs and the formation of scientific collaborations." *Review of Economics and Statistics* 99.4 (2017): 565-576. [Link](#)

- Azoulay, Pierre, Joshua Graff Zivin, and Jialan Wang. 2010. "Superstar Extinction." *Quarterly Journal of Economics* 125 (2): 549-589
- Wu, Lingfei, Dashun Wang, and James A. Evans. "Large teams develop and small teams disrupt science and technology." *Nature* 566.7744 (2019): 378-382. [Link](#)

Evaluating science and scientists

- "Peer Review" by Melinda Baldwin. [link](#)
- Zuckerman, Harriet and Robert K. Merton. "Institutionalized Patterns of Evaluation in Science." In *The Sociology of Science*, N. Storer (ed). University of Chicago Press, 1973.
- Zuckerman, Ezra W. "Construction, Concentration, and (Dis) Continuities in Social Valuations." *Annual Review of Sociology* 38 (2012): 223-245. [link](#)
- Lamont, Michèle. "Toward a Comparative Sociology of Valuation and Evaluation." *Annual Review of Sociology* 38 (2012): 201-221. [link](#)
- Begley, Sharon. "The maddening saga of how an Alzheimer's 'cabal' thwarted progress toward a cure for decades." *STAT* (2019). [Link](#)

Discrimination and bias

- Small, Mario L., and Devah Pager. "Sociological perspectives on racial discrimination." *Journal of Economic Perspectives* 34.2 (2020): 49-67. [Link](#)
- Phelps, Edmund S. "The statistical theory of racism and sexism." *The American Economic Review* 62.4 (1972): 659-661. [link](#)
- Traag, V. A., and L. Waltman. "Causal foundations of bias, disparity and fairness." *arXiv preprint arXiv:2207.13665* (2022). [link](#)
- Li, Danielle. "Expertise versus Bias in Evaluation: Evidence from the NIH." *American Economic Journal: Applied Economics* 9.2 (2017): 60-92. [Link](#)
- Zinovyeva, Natalia, and Manuel Bagues. 2015. "The Role of Connections in Academic Promotions." *American Economic Journal: Applied Economics* 7 (2): 264-292.

Gender

- Ceci, Stephen J., et al. "Women in academic science: A changing landscape." *Psychological Science in the Public Interest* 15.3 (2014): 75-141. [link](#)
- Valerie Michelman and Lucy Miall. "Sex, Drugs, and R&D: Missing Innovation from Regulating Female Enrollment in Clinical Trials." [link](#)

- Moss-Racusin, Corinne A., et al. "Science faculty's subtle gender biases favor male students." *Proceedings of the national academy of sciences* 109.41 (2012): 16474-16479. [link](#)
- Ross, Matthew B., et al. "Women are credited less in science than men." *Nature* 608.7921 (2022): 135-145. [link](#)

Status

- Sorenson, Olav. "Status and reputation: synonyms or separate concepts?." *Strategic Organization* 12.1 (2014): 62-69. [link](#)
- Merton, Robert K. "The Matthew Effect in Science: The reward and communication systems of science are considered." *Science* 159.3810 (1968): 56-63. [Link](#)
- Simcoe, Timothy S., and Dave M. Waguespack. "Status, quality, and attention: What's in a (missing) name?." *Management Science* 57.2 (2011): 274-290. [link](#)
- Li, Danielle, and Leila Agha. "Big names or big ideas: Do peer-review panels select the best science proposals?." *Science* 348.6233 (2015): 434-438. [link](#)
- Way, Samuel F., et al. "Productivity, prominence, and the effects of academic environment." *Proceedings of the National Academy of Sciences* 116.22 (2019): 10729-10733. [link](#)

Can we trust scientists? Publication bias, citation bias, and reproducibility

- Ioannidis, John PA. "Why most published research findings are false." *PLoS medicine* 2.8 (2005): e124. [link](#)
- Greenberg, Steven A. "How citation distortions create unfounded authority: analysis of a citation network." *Bmj* 339 (2009). [link](#)
- Franco, Annie, Neil Malhotra, and Gabor Simonovits. "Publication bias in the social sciences: Unlocking the file drawer." *Science* 345.6203 (2014): 1502-1505. [link](#)
- Elson, Malte, Markus Huff, and Sonja Utz. "Metascience on peer review: Testing the effects of a study's originality and statistical significance in a field experiment." *Advances in Methods and Practices in Psychological Science* 3.1 (2020): 53-65. [Link](#)
- Nosek, Brian A., et al. "Replicability, robustness, and reproducibility in psychological science." *Annual review of psychology* 73 (2022): 719-748. [Link](#)

Can we trust scientists? Special interests, fraud, retractions

- Lucier, Paul. 2020. Can Marketplace Science Be Trusted? *Nature*. [link](#)

- Holman, Bennett, and Justin Bruner. "Experimentation by industrial selection." *Philosophy of Science* 84.5 (2017): 1008-1019. [Link](#)
- <https://fivethirtyeight.com/features/the-easiest-way-to-dismiss-good-science-demand-sound-science/>
- Kearns, Cristin E., Laura A. Schmidt, and Stanton A. Glantz. "Sugar industry and coronary heart disease research: a historical analysis of internal industry documents." *JAMA internal medicine* 176.11 (2016): 1680-1685. [Link](#)
- Ong, Elisa K., and Stanton A. Glantz. "Constructing "sound science" and "good epidemiology": tobacco, lawyers, and public relations firms." *American journal of public health* 91.11 (2001): 1749-1757. [link](#)
- Bhattacharjee, Yudhijit. "The mind of a con man." *The New York Times* 28 (2013). [link](#)
- Piller, Charles. "Blots on a field?." *Science (New York, NY)* 377.6604 (2022): 358-363. [link](#)
- Jin, Ginger Zhe, et al. "The reverse Matthew effect: Consequences of retraction in scientific teams." *Review of Economics and Statistics* 101.3 (2019): 492-506. [Link](#)

Future science

- Anderson. WIRED. "The End of Theory: The Data Deluge Makes the Scientific Method Obsolete". [link](#)
- Duede, Eamon. "Deep Learning Opacity in Scientific Discovery." arXiv preprint arXiv:2206.00520 (2022). [Link](#)

Fine print

Student Mental Health and Wellbeing

University Students may experience stressors that can impact both their academic experience and their personal well-being. These may include academic pressures and challenges associated with relationships, mental health, alcohol or other drugs, identities, finances, etc. If you are experiencing concerns, seeking help is a courageous thing to do for yourself and those who care about you. If the source of your stressors is academic, please contact me so that we can find solutions together. Ashley Ewearitt, a Counseling and Psychological Services (CAPS) counselor, is embedded in UMSI, schedule an appointment with her by copying and pasting the following url into your browser: <https://bit.ly/Ewearitt-CAPS-UMSI>

For personal concerns, U-M offers a variety of resources, many which are listed on the [Resources for Student Well-being](#) webpage. You can also search for additional well-being resources on that website.

Academic Integrity

Unless otherwise specified in an assignment, all submitted work must be the work of each individual student's own, original work. If students are referencing others' work, put it in quotes. If students are directly quoting or building on others' writing, provide a citation. See the [Doctoral Student Handbook](#) for the definition of plagiarism, and associated consequences. Violations of academic and professional integrity will be reported to UMSI Student Affairs. Consequences impacting assignment or course grades are determined by the faculty instructor; additional sanctions may be imposed by the assistant dean for academic and student affairs.

Plagiarism. All written submissions must be your own, original work. Original work cannot be mere paraphrasing of someone else's completed work. You must not share written answers with each other at all. At most, you should be working from notes you took while participating in a study session. Largely duplicate copies of the same assignment will receive an equal division of the total point score from the one piece of work.

You may incorporate selected excerpts, statements or phrases from publications by other authors, but they must be clearly marked as quotations and must be attributed. If you build on the ideas of prior authors, you must cite their work. You may obtain copy editing assistance, and you may discuss your ideas with others, but all substantive writing and ideas must be your own, or be explicitly attributed to another. See the [Doctoral Student Handbook](#) for the definition of plagiarism, resources to help you avoid it, and the consequences for intentional or unintentional plagiarism.

Disability Statement

The University of Michigan recognizes disability as an integral part of diversity and is committed to creating an inclusive and equitable educational environment for students with disabilities. Students who are experiencing a disability-related barrier should contact [Services for Students with Disabilities](#) <https://ssd.umich.edu/>; 734-763-3000 or ssdoffice@umich.edu). For students who are connected with SSD, accommodation requests can be made in Accommodate. If you have any questions or concerns please contact your SSD Coordinator or visit SSD's Current Student webpage. SSD considers aspects of the course design, course learning objects and the individual academic and course barriers experienced by the student. Further conversation with SSD, instructors, and the student may be warranted to ensure an

accessible course experience. The instructional team will treat any information that you provide in as confidential a manner as possible.

Class Recordings

We will be doing audio and video recording of all sessions to enable those who cannot attend class in person on a given day to access the content. These recordings will not be made available publicly. Recordings of all sessions will be available on Canvas only to students registered for this class. As part of your participation in this course, you may be recorded. If you do not wish to be recorded, please contact the professor during the first week of class to discuss alternative arrangements. The camera only picks up the front of the room (instructor and slides), but this may require you to sit in a particular place in the room, outside the cameras' view. Our classroom, 1269 should have a ceiling mic that picks up student voices, in addition the instructor's microphone records audio in the room. Students may not copy and share the lecture videos with those not in the class, or upload them to any other online environment (this is a violation of the Federal Education Rights and Privacy Act (FERPA)).

Personal recordings are prohibited except with permission. Students are prohibited from recording/distributing any class activity without written permission from the instructor, except as necessary as part of approved accommodations for students with disabilities. Any approved recordings may only be used for the student's own private use.

Acknowledgments

This syllabus draws heavily on those from the following courses:

- Oliver Haimson, "Gender, Sexuality, and Technology."
- James Evans, "Introduction to Sociology of Science."
- Erin Leahey, "Sociology of Knowledge"
- Scott Stern and Pierre Azoulay, "Economics of Ideas, Innovation, and Entrepreneurship"