

## Data Collection and Analysis | Sociology 213 (Spring 2025) - 4 credits

Lecture: M/W 10:10-11:00a, Lederle Grad Res Tower 121

### Instructor & TAs:

Prof./Dr. Mark Pachucki (office: Thompson 934) / mpachucki@umass.edu

Student Hours: M 3-5p

(a) Stefanie Robles / sgrobles@umass.edu

Hours: W 1145-1245p, Thompson 819

(b) Jiajia Wei / jiajiawei@umass.edu

Hours: T/Th, 10-11a, Thompson 819

(c) Paige Watters / pwatters@umass.edu, Hours: M 11-12, location Thompson 10<sup>th</sup> floor E.Driver Lounge

Discussion sections (all in Lederle Grad Res Ctr A210):

A: Friday 905-955a B: Friday 1010-1100a C: Friday 1115-1205p D: Friday 1220-110p

**What this class is about:** Our field is the study of society and associated patterns of social phenomena. It will be argued that Sociology is also, deceptively, *among the most difficult of sciences*. One reason for this is that unlike some physical sciences where humans have, over hundreds of years, formulated reasonable approximations of fundamental laws related to regularities in nature (think: Gravity! the Pythagorean Theorem!  $E = mc^2$ !), Sociology is comparatively young, though, and human beings are elements in what we term complex systems. These systems – and the elements that constitute them – often behave in regular ways, but also unpredictably and have consequences that only emerge when a certain set of conditions is just so. This makes a search for ‘fundamental laws’ in social science notoriously difficult. Indeed, perhaps a fool’s errand.

But we’re no fools! Humanity has made it this far, and although life in the US in 2025 is comparatively better and easier for most of us than for most folks during the prior several centuries (in terms of average life expectancy, average freedoms, etc.), it’s still hard to connect why A *causes* B. There are usually dozens of *plausible*, if not thousands of *possible* reasons why. What separates plausible from possible? A fundamental assumption in this course is that we can learn something valuable by understanding human actions, intentions, attitudes, values, variation in attributes, and spatial patterning of human movement. To learn this, one set of tools that we use are theories of causality to understand *social mechanisms of action*. How is that we decide that A *causes* B? What evidence can help us to evaluate this? What are the most appropriate research methods to use, and what are the best kinds of data to collect?

These questions are part of what this course is about. By the end of the term, my hope for you is that you’ll have a good answer to the following questions: (1) What are some useful ways (as well as unhelpful ways) to study the social world?, and (2) What are the *limits* to what we can know about social phenomena? Your main job as a member of this class is to be relentlessly curious about these types of questions. An equally important goal is to continue to develop skills *that will transfer beyond this course*. Our learning objectives are: a) evaluating the quality of evidence on scientific claims – whether in the press or on social media; b) collecting, analyzing, and interpreting data; and c) writing and reflecting about approaches to research. The course is a mix of lecture, group-based learning in discussion sections, and practical application through data analysis. You will design your own research project in which you use (provided) existing survey data, or alternately survey/interview a sample of people of your own so that you can provide new evidence related to a research question, use that evidence to test propositions, then communicate your results.

**Grading:** Please remember that we're evaluating your performance in class, not your worth as a human being. It's easy to forget this sometimes. Weekly journal reflections, in-class quizzes, and research assignments will be evaluated on a 5-point scale (0=missing, 1/low-4/high). Exams and the final research project are on a 100-point scale. Appeals to your grade are welcome (we are all fallible humans subject to making mistakes) but appeals must be done in-person during my or your TAs' student hours in conversation, not over email or before/after class; bring justification for the correction being requested. If you request a re-grade be advised that there is a possibility we may revise your grade upward or downward.

The following weights will apply to graded material: 25% class & section participation and attendance; 20% in-class exams; 15% reading memos; 40% research project. Your final grades will be calculated according to the following scale:

A: 93-100, A-: 90-92.9, B+: 87-89.9, B: 83-86.9; B-: 80-82.9; C+: 77-79.9; C: 73-76.9; C-: 70-72.9; D+: 67-69.9, D: 60-66.9, F: 0-59.9

**Prerequisites.** You are expected to come to class and section having read the material so we can talk about it. Some of this material will (intentionally!) challenge you. However, know that the amount of reading and writing for this course are appropriate to a 4-credit course. You might be especially challenged if you haven't yet taken an 100-level Sociology course.

**Technology:** We have a strong preference for no screens at lectures except on the few days when we work with data (most data-work will happen at your section). This means computers, phones, tablets, and other kinds of screens should be put away. Our sessions together are designed as interactive and discussion-based. Taking notes, asking questions, and reviewing notes in preparation for exams are the best predictors of *deep learning* in college coursework. We're happy to point you towards numerous pieces of research that show this to be the case.

**Brief check-in.** Every student in the class is required to sign up for a 10-minute office hour meeting with your TA or Prof. Pachucki during the first 2 weeks. This is a moderately large class – but we'll all get to know each other. You'll learn that we take our jobs seriously. It helps us if we know more about your interests in the course material, and if there are ways that we can help you learn. (Pro tip: *it helps you too*. It's easier for instructors who know their students to write letters of recommendation for them for a job or scholarship opportunity. Think ahead.)

**Readings.** There is only 1 required textbook. The remaining materials are research articles that will be posted to Canvas. You can purchase any version (print or e-book) you'd like, from wherever you'd like, and print out the articles/chapters or not as you wish (I encourage you to print & take notes, though!). We'll put all the material on reserve at Du Bois as well.

Do keep in mind if you purchase the e-book or download course readings for your screen at home, that screens are discouraged in class in favor of written note-taking. We encourage everyone to keep a notebook with their reading notes and reflections handy in lectures. Staying on top of the readings and engaging in class will help you get the most out of class.

Required text(s):

- *The Art & Science of Social Research*, 2<sup>nd</sup> edition (W.W. Norton 2020)
- Research articles/chapters posted to Canvas (either 1 long, or 2 short per week) – organized into a coursepack .pdf for you to print wherever you wish.

## What we expect of you:

Active engagement (25%). Showing up to lectures (50% of this grade) and discussion section (the other 50%) are both mandatory. We'll be giving a 5-question quiz on either Mon/Wed each week as a means of regular evaluation so that *you* know whether you're getting the material. However, life happens. Each student is allowed one absence from a lecture (lowest attendance quiz will be dropped), and one absence from a discussion, no reason needed. Outside of these, get in touch for other extenuating circumstances (see "Missed work" below)

Research project (40%). This will unfold in five parts over the term. Part 1 (5%): Identifying a research question (due in section Fr. 3/7). Part 2 (5%): Choosing a research design (due in section Fr. 3/28). Part 3 (5%): Sampling frame & fieldwork/data prep (due in class Wed, 4/9). Part 4 (5%): Presentation of preliminary results (in-section the last few weeks of class). Part 5 (20%): Final printed version (6-8p double-spaced) due to Thompson 934 Wed 5/14, 9-12p.

Weekly journal reflections (15%). Either Monday or Wednesday (but not both!) your task during a 10m section of class will be to write a short response statement that takes as a starting point an important idea(s) in a chapter/article(s) and offers some of your original thoughts and reactions to it/them. What struck you as surprising? What challenged your previous thinking on the topic? Do you disagree with the author(s)? Does this connect to ideas you learned elsewhere? You have a lot of flexibility here, by design. These are quick, gut-check 'reactions'—we don't expect these to be hyper-polished (grammar/spelling) but do expect thoughtfulness. (Graded: Check-, Check, Check+)

Exams (20%). a) First short exam (10%). This 50m in-class exam on Wed, 3/10 will be multiple-choice and short-answer Qs intended to test your grasp of key ideas from Week 1-6. b) The second in-class exam (10%) is Wed, 4/23 & will cover Week 8-12.

Missed work: From the university's academic regulations:

*"Students absent due to extenuating circumstances-including jury duty, military obligations, scheduled activities for other classes, the death of a family member, or verifiable health-related incapacity-remain responsible for meeting all class requirements and contacting the faculty member in a timely fashion about making up missed work. Faculty shall offer such students reasonable assistance in making up missed classes (i.e., making arrangements for attendance at labs or discussion sections which meet at other times; providing makeup exams or labs where feasible or offer mutually agreeable alternatives to make up work)."*

If you need to miss a regular class, you'll be offered a makeup quiz/journal entry opportunity in your TA's or my office hours. In the case of serious extenuating events that might prompt you to miss an exam or submit the final paper, we're likely to coordinate with you and your Academic Dean to ensure that we're helping to support you holistically. No make-up work will be accepted past last class (Fr, 5/9).

Last, we are engaging as part of an academic community. This course asks you to be a proactive and respectful communicator. Learning to appreciate perspectives you may find disagreeable or challenging is key to your growth as a thinker. We follow the tenet in this course that while classrooms should be a place of physical and psychological safety, they needn't be a place of intellectual comfort – we should all be challenged to expand our thinking. We want you to be careful thinkers, take risks, and embrace uncertainty – as learners, this is a core part of our job. Having an unpopular opinion will never be tied to your grade; your work will be evaluated on metrics like the rigor of arguments, the quality of evidence, and the organization/coherence of writing according to rubrics that accompany the assignments.

## What you can expect from us (professor and TAs):

To help co-create a constructive learning environment. This means being knowledgeable, prepared, and willing to puzzle through questions prompted by the material. It means helping us to take stock of where we've been each week, and where we're headed the following week. It means being as responsive to your concerns as we can reasonably be.

To be available to you outside of class. We'll take a poll as to the best times for Prof. Pachucki & your TA's office hours and we'll set times according to what works best (majority %) for your schedules. *This is because we want these office hours to be helpful for you.* For Prof. Pachucki, you can email, call (office: 413-545-7526), or meet in his office. You can expect a response to email within 24h. He checks email 1x/day during the week; and in office M-F 9-5p.

To be transparent and clear about how you are being evaluated during the term. You should know how you're doing in the class. This syllabus gives you an overview of how your grade is calculated. We will be providing additional grading rubrics for response memos and research project assignments during the semester. You can check your grade anytime on the Canvas website at week's end (it lets you project your grade), or see your TA for more info. We will also post a grade calculator spreadsheet in the "Class documents" folder on Canvas so you can manually forecast what your grade will be if you were to get [X] points on assignment [Y].

## COURSE SCHEDULE

**w/o Jan 30: no section yet!**

### **Week 1: Class overview: How do we know what we know? (w/o Feb 3)**

Mon, Feb 3: come to class having read syllabus, reviewed Canvas page, and listened to the first 8 minutes of this podcast: [This American Life, Episode 850](#) ("Prologue: Ira talks to Chris Benderev, whose high school years were completely upended by an impromptu thing his teacher said.").

Wed, Feb 5:

- Chapter 1 *Art & Science of Social Research (A&S)* – Introduction
- Hume, David. 1740. Abstract of "*A Treatise of Human Nature*" (Canvas)

### **Week 2: Linking Theory & Research (w/o Feb 10) – Defense of Free Speech Week**

Mon, Feb 10: Chapter 2 *A&S* – Research Foundations

Wed, Feb 12:

- Popper, Karl R. 1963. "Science as Falsification." (Canvas)
- Pearl, Judea & Dana Mackenzie. 2018. "From buccaneers to guinea pigs: The genesis of causal inference." Chapter 2, *The Book of Why: The New Science of Cause & Effect*. (Canvas)

### **Week 3: Ethical issues and Human Subjects (w/o Feb 17)**

*No class Mon 2/17 for president's day – we'll have class Thursday instead.*

Wed, Feb 19: Chapter 3 *A&S* – Ethical Issues

Thurs, Feb 20 (following a Monday schedule):

- Hennell, Kath, Mark Limmer, and Maria Piacentini. 2020. "Ethical dilemmas using social media in qualitative social research: A case study of online participant observation." *Sociological research online* 25(3): 473-489.

### **Week 4: Building blocks of research (w/o Feb 24)**

Mon, Feb 24:

- Chapter 4 *A&S* – Hypotheses, Operationalization, Measurement
- Lieberman, S. and Lynn, F.B., 2002. "Barking up the wrong branch: Scientific alternatives to the current model of sociological science." *Annual Review of Sociology*, 28(1), pp.1-19. (Canvas)

Wed, Feb 26: Chapter 5 *A&S* – Reliability and Validity

### **Week 5: Identifying a Research Question (w/o March 3)**

Mon, March 3: Chapter 6 *A&S* – Sampling strategies

Mon, March 5:

- Kim, David A., Alison R. Hwang, Derek Stafford, D. Alex Hughes, A. James O'Malley, James H. Fowler, and Nicholas A. Christakis. "Social network targeting to maximise population behaviour change: a cluster randomised controlled trial." *The Lancet* 386, no. 9989 (2015): 145-153.

\*\*\*\*\* Research Project Part 1 (Identifying a research Q) due Fr, 3/7 in section & Canvas \*\*\*\*\*

### **Week 6: Research approaches – Survey methods (w/o March 10)**

Mon, March 10: Chapter 7 *A&S* – Survey Research

Wed, March 12: Exam 1

## **Week 7: Spring break – no classes (w/o March 17)**

## **Week 8: Research approaches – Experimental research (w/o March 24)**

Mon, March 24:

- Chapter 8 A&S – Experimental Research

Wed, March 26:

- Pager, D., 2003. The mark of a criminal record. *American Journal of Sociology*, 108(5), pp.937-975. (Canvas)

\*\*\*\*\* Research Project Part 2 (Choosing a Research Design) due Fr, 3/28 in section \*\*\*\*\*

## **Week 9: Research approaches - ethnography (w/o March 31)**

Mon, March 31:

- Chapter 10 A&S – Ethnography
- Geertz, C., [1973] 2008. "Thick description: Toward an interpretive theory of culture." In *The Cultural Geography Reader* (pp. 41-51). Routledge. (Canvas)

Wed, April 2:

- Small, M.L., 2009. "How many cases do I need?' On science and the logic of case selection in field-based research." *Ethnography*, 10(1), pp.5-38. (Canvas)

## **Week 10: Research approaches – in-depth interviewing (w/o April 7) –**

Mon, April 7: Chapter 11 A&S – In-depth interviewing

Wed, April 9:

- Wingfield, Adia Harvey, and Koji Chavez. 2020. "Getting in, getting hired, getting sideways looks: Organizational hierarchy and perceptions of racial discrimination." *American Sociological Review* 85(1): 31-57.

Optional: Lamont, Michèle, and Ann Swidler. 2014. "Methodological pluralism and the possibilities and limits of interviewing." *Qualitative Sociology* 37(2): 153-171.

\*\*\*\*\* Research Project Part 3 (Sampling frame & fieldwork/data prep) due 4/9 in lecture & to Canvas \*\*\*\*\*

Note: part of this assignment is to show us that you're ready to start collecting data responsibly; we'll review quickly and your TA will return their "green light" to you in section 4/11. If revisions are required prior to you starting data collection, we will let you know.

## **Week 11: Analyzing & presenting results, Part 1 (w/o April 14)**

Mon, April 14: Chapter 12 A&S – Materials-based methods

Wed, April 16: Chapter 13 A&S – Univariate/bivariate analysis of quantitative data, Part 1

- Asynchronous activity in lieu of in-person class this day.

Fri, April 18: Chapter 13 A&S – Univariate/bivariate analysis of quantitative data, Part 2

Note: Fr, 4/18 class is a makeup for Monday's Patriot's Day holiday; the university will follow a Monday schedule. There will be no sections today.

## **Week 12: Analyzing & presenting results, Part 2 (w/o April 21)**

Mon, April 21: No class, Patriot's Day (class made up Fr 4/18)

Wed, April 23: Exam 2, covering Weeks 8-12



**Week 13: An intentional circling back to *social mechanisms, social processes, and causality* so that these important concepts are on your mind while you're in the last stages of your research and starting to write up your results (w/o April 28)**

Mon, April 28: Hedstrom, P. and Bearman, P., 2009. "What is analytical sociology all about? An introductory essay." *The Oxford handbook of analytical sociology*, pp.3-24. (Canvas)

Wed, April 30: Chapter 14 A&S – Communicating findings

Friday, May 2 (section): Flash presentations of initial project findings, Part 1 (up to 10/section)

- Your presentation order will be determined by randomized selection.
- Students who aren't presenting will be giving targeted feedback to the presenter to improve their research project – 2 minutes!

**Week 14: Concluding thoughts: Being good thinkers & scientific citizens (w/o May 5)**

Mon, May 5: Abend, Gabriel. "Making Things Possible." *Sociological Methods & Research* (2020). (Canvas)

Wed, May 7:

- West, Jevin D., and Carl T. Bergstrom. 2021. "Misinformation in and about science." *Proceedings of the National Academy of Sciences* 118(15): e1912444117. (Canvas)
- Brooks, Arthur. 2023 "Three ways to tell if research is bunk". *Atlantic Magazine*. (Canvas)
- Last class & final paper guidance

Friday, May 9 (section): Presentations of initial project findings, Part 2 (up to 10/section)

- Your presentation order will be determined by randomized selection.
- Students who aren't presenting will be giving targeted feedback to the presenter to improve their research project – 2 minutes!

\*\*\*\*\* *Final research projects (printed version) due to Thompson Hall 934 (Pachucki) on Wednesday, May 14 between 9-12n; also upload to canvas as backup. \*\*\*\*\**

## **Accommodations statement**

The University of Massachusetts Amherst is committed to providing an equal educational opportunity for all students. If you have a documented physical, psychological, or learning disability on file with Disability Services (DS), you may be eligible for reasonable academic accommodations to help you succeed in this course. If you have a documented disability that requires an accommodation, please notify me within the first two weeks of the semester so that we may make appropriate arrangements. For further information, please visit Disability Services (<https://www.umass.edu/disability/>)

## **Academic Honesty Statement**

Since the integrity of the academic enterprise of any institution of higher education requires honesty in scholarship and research, academic honesty is required of all students at the University of Massachusetts Amherst. Academic dishonesty is prohibited in all programs of the University. Academic dishonesty includes but is not limited to: cheating, fabrication, plagiarism, and facilitating dishonesty. Appropriate sanctions may be imposed on any student who has committed an act of academic dishonesty. Instructors should take reasonable steps to address academic misconduct. Any person who has reason to believe that a student has committed academic dishonesty should bring such information to the attention of the appropriate course instructor as soon as possible. Instances of academic dishonesty not related to a specific course should be brought to the attention of the appropriate department Head or Chair. Since students are expected to be familiar with this policy and the commonly accepted standards of academic integrity, ignorance of such standards is not normally sufficient evidence of lack of intent ([http://www.umass.edu/dean\\_students/codeofconduct/acadhonesty/](http://www.umass.edu/dean_students/codeofconduct/acadhonesty/))

## **Class AI Policy**

In terms of the above clause that “other sources of information or knowledge be appropriately credited”, please be advised that AI-generated content is severely frowned upon in this course, though there is a rich debate about its place in our society. Here’s the ultimate position of this course: (a) your engagement with and understanding of the material is one of the primary ways for you to learn about the world; circumventing this with AI will slow your intellectual growth; (b) a major objective of college is to help you to get better at writing so that when you enter the workforce, you’re equipped to succeed. For most of us, this will involve making mistakes and learning from them.



### **Sexual Harassment, Sexual Assault, and Relationship Violence at UMass**

In accordance with Title IX of the Education Amendments of 1972 that prohibits gender-based discrimination in educational settings that receive federal funds, the University of Massachusetts Amherst is committed to providing a safe learning environment for all students, free from all forms of discrimination, including sexual assault, sexual harassment, domestic violence, dating violence, stalking, and retaliation. This includes interactions in person or online through digital platforms and social media. Title IX also protects against discrimination on the basis of pregnancy, childbirth, false pregnancy, miscarriage, abortion, or related conditions, including recovery. There are resources here on campus to support you. A summary of the available Title IX resources (confidential and non-confidential) can be found at the following link:

<https://www.umass.edu/titleix/resources> . You do not need to make a formal report to access them. If you need immediate support, you are not alone. Free and confidential support is available 24 hours a day / 7 days a week / 365 days a year at the SASA Hotline 413-545-0800.

## Department of Sociology Statement of Values

The Department of Sociology at the University of Massachusetts Amherst is committed to creating and maintaining an inclusive and equitable department. We ask that all members of the Sociology community -- faculty, staff, and students -- be mindful of our responsibility to create an environment that is welcoming to all, and where each person feels accepted, included, seen, heard, valued, and safe. We recognize that learning how to be inclusive and respectful is an iterative process and sometimes we all act in imperfect ways. As sociologists, we are aware that we are all inheritors of systems of inequality, whether to our advantage or our disadvantage. We also acknowledge that we each are privileged in various ways. We strive to create safe spaces to encourage productive dialogue with the goal of learning from our mistakes and changing for the better.

We strive for excellence in all we do. True excellence requires each individual to be able to work and learn in an atmosphere of respect, dignity, and acceptance. Our commitment to equity and inclusion requires each of us to continuously ensure that our interactions are respectful. We recognize that marginalized groups of people have unique experiences in the Pioneer Valley and within the larger society. We are committed to making our department a place that counteracts, to the best of our abilities, those processes of marginalization, and that inspires academic freedom and creativity.

Whenever and wherever possible, our department will affirm this commitment to values that oppose racism, sexism, homophobia, xenophobia, transphobia, classism, and hatred based on religious identity publicly and explicitly. As a department dedicated to social justice, we will take very seriously reports, formal or informal, of harassment and discrimination. We will make every effort to ensure that this commitment manifests in our department's policies, programs, and practices.

In the Department of Sociology, we:

- Value equity, inclusion, and dignity for all.
- Insist on a culture of respect and recognize that words and actions matter. The absence of action and words also matter.
- Encourage respectful expression of ideas and perspectives.
- Will not tolerate sexism, racism, homophobia, transphobia, xenophobia, and other overt and covert forms of prejudice and discrimination.
- Share in the responsibility to create a positive culture and to safeguard equity, inclusion, dignity, respect, and safety for all. Each member of our community - faculty, staff, and students - should be a role model for others.
- Will take action when we observe people being treated unfairly or in a demeaning manner.
- Envision and strive to foster an inclusive, welcoming department.