Syllabus

SOC 391/681

Experimental Methods in the Social Sciences

Spring 2023

MWF 1:30 – 2:20pm
BRNG 1245

Dr. Trenton Mize
tmize@purdue.edu

Updated: 2022-10-18

Syllabus Contents (click hyperlinks below to jump to a section)

Course Information

- SOC 391/681: Experimental Methods in the Social Sciences
  - CRN: 23461 / 24276
  - MWF 1:30 – 2:20pm
  - BRNG 1245
  - 3 credit hours
  - Required prerequisites: None, but permission of instructor required
- This is a cross-listed undergraduate/graduate course
  - The undergraduate class (391) requires attending the full 16-week class
  - The graduate class (681) requires attending the first 8 weeks of class; the second 8 weeks are optional for graduate students
- An updated copy of this syllabus and all other course materials is always available on Brightspace

Contact Information

- Dr. Trenton Mize
  - tmize@purdue.edu
  - Office: Stone Hall (STON) 328
  - Office hours: Fridays 2:30 – 3:30pm
    - Book an office hours appointment here
  - Preferred mode of contact: (1) When possible, attend my office hours to ask questions. If that is not possible, (2) please email me.
  - Preferred pronouns: he/him/his
  - Preferred name: Trent, Dr. Mize, or Professor Mize

Course Description

Causality is of fundamental interest to most social, behavioral, and health scientists. Theories and theoretically motivated research questions are almost always causal in nature. While many statistical advances have aided our ability to test for causality in observational data, experiments remain the "gold standard'" for causal inference. Primarily because of experiments' unrivaled ability to test for causality, use of experimental studies has grown rapidly in many social science fields such as economics, political science, and sociology.

Some experimental traditions, such as laboratory experiments, have a long and influential history within many fields. Newer methods such as field, audit, and survey experiments offer exciting possibilities to test causal ideas in newer and more diverse settings and with more diverse samples. The class will begin by covering fundamental experimental methodology and laboratory experiments. Next, we will learn about experiments conducted outside of the laboratory: from conducting audit studies on hiring managers to fielding survey experiments in nationally representative samples (and everything in between).

The first 8 weeks of the course focus on experimental methodology and design; i.e. what types of experiments are possible and how to design and conduct methodologically sound studies. The course is meant to be practical, teaching concrete best practices rather than only abstract concepts. In addition, we will read exemplar research articles throughout the semester alongside methodological pieces, illustrating the diverse and contemporary topics that are currently being studied with experimental methods.

An additional goal of the course is to introduce you to the experimental research that is currently being conducted at Purdue. Most of our Friday class periods for the first 8 weeks will be devoted to guest speakers. We will read one of their published or in-progress articles using an experimental study and then discuss the study and their research with them during the Friday class.

The second 8 weeks of the course focus on applied research in the Kernan Experimental Social Science lab (BRNG 2208). We will learn about the lab and the studies being conducted by faculty and graduate students this semester. After training each student on the studies, each student will act as a research assistant conducting the experimental studies in the lab. In addition, we will have a weekly lab meeting each Friday where we discuss the studies' progress, present results from the studies, and workshop ideas for new experiments. The class is hands on, and each student will get practical research experience conducting experimental studies.

Learning Objectives

- Identify the fundamentals of determining causal inference in the context of social science research
- Learn how to conduct rigorous, scientific, and ethical experimental research to answer social science research questions
- Be able to design experimental studies that answer substantive research questions, including being able to apply best practices for survey and experimental design

Course Design

- Weekly Readings
  - Each week has required readings. Weekly **readings should be completed before Monday's class.**
  - Most weeks we will have a guest speaker on Fridays; an additional reading (an article they authored) will be assigned for these class periods. This reading should be **completed by Thursday night.**
- Monday and Wednesday Lectures
  - Each Monday and Wednesday class is a lecture on the week's topic—usually a specific experimental method or issue in experimental research
  - The lectures will include ample discussion of the week's reading and time for questions and ideas. All students are expected to participate
- Friday Class
  - The Friday class period is unique to this class and will involve introducing you to the experimental social science research being conducted at Purdue and on ongoing studies and issues in the Kernan Experimental Social Science Lab

Required Texts, Readings, and Materials

- **Required readings**:
  - All readings will be posted to Brightspace in PDF format
- **Lecture notes/slides**:
  - All lecture notes and slides will be posted to Brightspace in PDF format

Assignments, Discussion Questions, and Research Assistant Participation

Discussion Questions

- Weekly readings
    - You are required to submit a discussion question each week based on that week's readings (and any related lecture content)
    - **Discussion questions are due Tuesday at midnight**; by this time you will have done the week's readings and attended Monday's lecture
        - Questions that can be answered with a yes/no answer are not acceptable.
        - Should be more general questions open to debate and discussion.
        - Can focus on methodological decisions, theoretical arguments, comparisons to other methods, scope conditions, limitations, extensions, alternative explanations, applications to other research questions, or any other question relevant to that week's readings.
        - The most effective discussion questions usually cross-cut multiple readings—placing them in dialogue with each other.
        - Discussion questions related to your own work and research interests are welcome—just make sure you make them broad enough to be applicable outside only your specific research topic.
    - As a class, we will discuss a few of the submitted discussion questions during Wednesday's class
- Guest speaker Friday readings
    - On Friday's when we have a guest speaker there will be one reading of theirs assigned
    - Students should submit a discussion question (following the guidelines above) which are **due Thursday at midnight**

Assignments

- The assignments are designed to help you design a proposal for an experimental study you could conduct to test a research question of interest to you. The assignments intentionally build on each other to help you build the proposal one step at a time. The final assignment (#4) is the full final proposal.
    - Assignment 1: Independent and dependent variables of interest
        - Due Jan 20 at midnight
    - Assignment 2: Theoretical background, hypotheses, and causal diagrams
        - Due Feb 3 at midnight
    - Assignment 3: Full methodology section of proposal
        - Due Feb 17 at midnight
    - Assignment 4: Full study proposal
        - Due March 5 at midnight

Research Assistant Participation (391 undergraduate students only)

- The second 8 weeks of the class involves hands on experience conducting experimental studies
- Students will spend roughly 6 hours per week in the lab conducting experiments
- In addition, students must attend the weekly lab meeting each Friday

Grading – 391 Undergraduate Students

Course grades refer to the number of points towards your final grade you earn from each discussion question and assignment. The points are equivalent to the percent of your final grade that each assignment is worth. E.g. An assignment worth 10 points is worth 10% of your final grade.

- Participation (9 points)
    - You are expected to participate in lectures and the discussions. This involves asking questions, answering discussion questions, etc.
- Discussion questions (26 points)
    - Each week (after the first) there is a discussion question due by Tuesday at midnight
    - In addition, in weeks when we have a guest speaker there will be an additional reading and a discussion question due on that reading
    - Thoughtful and on-topic questions will receive full credit
        - Each week's discussion Q is worth 2 points
            - (2 * 7) + (2 * 6) = 14 + 12 = 26 total points
- Assignments (25 points)
    - The first 3 assignments are worth 5 points each
    - The final (4^{th}) assignment is worth 10 points
        - 3 * 5 = 15 + 10 = 25 total points
- Research assistant participation (40 points)
    - The second 8 weeks of the class involve hands on training and experience conducting experimental studies
    - Your research assistant participation grade will be determined by the degree to which you fulfill your laboratory responsibilities in an ethical and professional manner

Grading – 681 Graduate Students

Course grades refer to the number of points towards your final grade you earn from each discussion question and assignment. The points are equivalent to the percent of your final grade that each assignment is worth. E.g. An assignment worth 10 points is worth 10% of your final grade.

- Participation (11.5 points)
  - You are expected to participate in lectures and the discussions. This involves asking questions, answering discussion questions, etc.
- Discussion questions (32.5 points)
  - Each week (after the first) there is a discussion question due by Tuesday at midnight
  - In addition, in weeks when we have a guest speaker there will be an additional reading and a discussion question due on that reading
  - Thoughtful and on-topic questions will receive full credit
    - Each week's discussion Q is worth 2.5 points
      - (2.5 * 7) + (2.5 * 6) = 32.5 total points
- Assignments (50 points)
  - The first 3 assignments are worth 10 points each
  - The final (4^{th}) assignment is worth 20 points
    - 3 * 10 = 30 + 20 = 50 total points
- One-on-one meetings (6 points)
  - Two required one-on-one meetings worth 3 points each
  - Students are expected to be prepared for the meetings with ideas ready to discuss with the professor
    - 2 * 3 = 6 points

Missed or late assignments; incomplete final grade

- If you expect that you will be late completing any assignment, notify me ahead of time (as soon as possible) with an explanation and plan for completion. Asking for an extension does not guarantee it will be granted; however, contacting me ahead of time greatly increases the chances that we can work out an acceptable arrangement.
- Late assignments will be accepted at my discretion and will include a percent penalty of 10% per class period late
- A grade of incomplete (I) will be given only in unusual circumstances. To receive an "I" grade, a written request via email must be submitted prior to December 1, and approved by the instructor. The request must describe the circumstances, along with a proposed timeline for completing the course work. Submitting a request does not ensure that an incomplete grade will be granted. If granted, you will be required to fill out and sign an "Incomplete Contract" form that will be turned in with the course grades. Any requests made after the course is completed will not be considered for an incomplete grade.

Grading Scale

Your final grade will be based on the sum of your grade on all assignments which can range from 0 to 100 points. Your final point total will be converted to a letter grade using the following category criteria:

- ≥ 97.00 A+
- 93.00 – 96.99 A
- 90.00 – 92.99 A-
- 87.00 – 89.99 B+
- 83.00 – 86.99 B
- 80.00 – 82.99 B-
- 77.00 – 79.99 C+
- 73.00 – 76.99 C
- 70.00 – 72.99 C-
- 67.00 – 69.99 D+
- 63.00 – 66.99 D
- 60.00 – 62.99 D-
- ≤ 59.99 F

Note your final grade percent will not be rounded. I do not change a student's final grade percent for any reason.

Academic Integrity

- Purdue's Honor Pledge states: "As a boilermaker pursuing academic excellence, I pledge to be honest and true in all that I do. Accountable together - we are Purdue."
- I encourage you to study with other students in the class, to have them read over and comment on your notes or assignments, or to provide other feedback.
    - **However, any work you turned in for a grade needs to be completed solely by the student receiving the grade.**
    - For example, while it is acceptable—and encouraged—for you to ask another student to read your final paper to give suggestions and comments, the final paper must be written entirely by the student receiving the grade.
- Incidents of academic misconduct in this course will be addressed by the course instructor and referred to the Office of Student Rights and Responsibilities (OSRR) for review at the university level. Any violation of course policies as it relates to academic integrity will result minimally in a zero grade for that particular assignment. In addition, all incidents of academic misconduct will be forwarded to OSRR, where university penalties, including removal from the university, may be considered.

Additional Policies

Welcome statement

- In this course, each voice in the classroom has something of value to contribute. Please take care to respect the different experiences, beliefs and values expressed by students and staff involved in this course. I support Purdue's commitment to diversity and welcome individuals of all ages, backgrounds, citizenships, disabilities, sexes, education levels, ethnicities, family statuses, genders, gender identities, geographical locations, languages, military experiences, political views, races, religions, sexual orientations, socioeconomic statuses, and work experiences.

Discussion etiquette

We will discuss many topics in this class—some of which may be personal for some students. When discussing topics in class, you are encouraged to comment, question, or critique an idea, but you are not to attack an individual. Our differences, some of which are outlined in the University's nondiscrimination statement above, will add richness to this learning experience. Please consider that sarcasm and humor can be misconstrued (especially in online interactions) and generate unintended disruptions. Working as a community of learners, we can build a polite and respectful course ambience. Some etiquette rules for the course:

- Do not dominate any discussion. Give other students the opportunity to join in the discussion.
- Do not use offensive language. Present ideas appropriately.
- Avoid using vernacular and/or slang language. This could possibly lead to misinterpretation.
- Keep an “open-mind” and be willing to express even your minority opinion.
- Think and edit before you push the “Send” button or make an in-class comment.
- Do not hesitate to ask for feedback from me if you are unsure about something you wish to discuss.

Preferred names and pronouns

- The overall spirit of my policy is that I respect your decision to decide how you would like to be referred to. I expect class members to be similarly respectful.
- Specifically, I will honor the names and pronouns you provide, and your request at any point to address you by your correct name and/or gender pronoun. I also expect class members to honor the names and pronouns peers provide.

Counseling and psychological services (CAPS)

- Purdue University is committed to advancing the mental health and well-being of its students. If you or someone you know is feeling overwhelmed, depressed, and/or in need of support, services are available. For help, such individuals should contact Counseling and Psychological Services (CAPS) at (765)494-6995 and http://www.purdue.edu/caps/ during and after hours, on weekends and holidays, or by going to the CAPS office of the second floor of the Purdue University Student Health Center (PUSH) during business hours.

Disability Resource Center

- Purdue University strives to make learning experiences as accessible as possible. If you anticipate or experience physical or academic barriers based on disability, you are welcome to let me know so that we can discuss options. You are also encouraged to contact the Disability Resource Center at: drc@purdue.edu or by phone: 765-494-1247. More details are available on our course Brightspace under Accessibility Information.

Course Schedule

Note that exact topics, readings, dates, and other aspects of the course schedule are subject to change. Always reference the syllabus on Brightspace for the most up to date version of the Course Schedule.

Required readings

- All required weekly readings are to be completed **before class on Monday**
- In addition, when we have a guest speaker on Friday there will be one additional reading which must be completed **by Thursday night**

Course schedule for Weeks 1 – 8 (required of all students)

Week 1 (Jan 9 – 13)

- **Required weekly readings** due before Monday's class
  - Webster Jr, Murray and Jane Sell. 2007. "Why Do Experiments?". Pp. 5-23 in *Laboratory Experiments in the Social Sciences.*
  - Shadish, Cook, and Campbell chapters 1 and 8 of *Experimental and quasi-experimental designs for generalized causal inference*
- **Mon:** Lecture on course design and introduction to experimental methods
- **Wed:** Lecture on causality
- **Fri:** Lecture on theory testing, hypotheses, and validity

Week 2 (Jan 18 – 20)

- **Required weekly readings** due before Monday's class
  - Mize, Trenton D. and Bianca Manago. 2022. "The past, present, and future of experimental methods in the social sciences." *Social Science Research.*
  - Lucas, Jeffery W. 2003. "Theory Testing, Generalization, and the Problem of External Validity." *Sociological Theory.*
- **Mon:** *No class; MLK day*
- **Tues:** Discussion question on weekly readings due by midnight
- **Wed:** Lecture on basics of experimental design and the ethics of experimental research; class discussion of student discussion questions
- **Fri:** Lecture on theory testing, hypotheses, and validity

Week 3 (Jan 22 – 27)

- **Required weekly readings** due before Monday's class
    - Willer, Robb, Ko Kuwabara, and Michael W. Macy. 2009. "The false enforcement of unpopular norms." *American Journal of Sociology.*
    - Manago, Bianca and Trenton D. Mize. 2022. "The status and stigma consequences of mental illness labels, deviant behavior, and fear." *Social Science Research*.
- **Mon:** Lecture on behavioral laboratory experiments
- **Tues:** Discussion question on weekly readings due by midnight
- **Wed:** Lecture on common behavioral experiment paradigms; class discussion of student discussion questions
- **Thurs:** Discussion question on guest speaker reading due by midnight
- **Fri:** Guest speaker TBD (Tara Grillos?)
    - Reading from guest speaker TBD (economic games experiment?)

Week 4 (Jan 31 – Feb 3)

- **Required weekly readings** due before Monday's class
    - Wetts, Rachel and Robb Willer. 2018. "Privilege on the Precipice: Perceived Racial Status Threats Lead White Americans to Oppose Welfare Programs." *Social Forces.*
    - Doan, Long and Natasha Quadlin. 2019. "Partner characteristics and perceptions of responsibility for housework and child care." *Journal of Marriage and Family*.
- **Mon:** Lecture on survey experiments
- **Tues:** Discussion question on weekly readings due by midnight
- **Wed:** Lecture on population-based survey experiments and questionnaire design; class discussion of student discussion questions
- **Thurs:** Discussion question on guest speaker reading due by midnight
- **Fri:** Guest speaker TBD (Josh Doyle?)
    - Reading from guest speaker TBD (Online survey experiment?)

Week 5 (Feb 6 – 10)

- **Required weekly readings** due before Monday's class
  - Stepanikova, Irena. 2012. "Racial-Ethnic Biases, Time Pressure, and Medical Decisions." *Journal of Health and Social Behavior.*
  - Pedulla, David S. 2014. "The Positive Consequences of Negative Stereotypes: Race, Sexual Orientation, and the Job Application Process." *Social Psychology Quarterly.*
- **Mon:** Lecture on generalizability and intersectionality
- **Tues:** Discussion question on weekly readings due by midnight
- **Wed:** Lecture on sampling; class discussion of student discussion questions
- **Thurs:** Discussion question on guest speaker reading due by midnight
- **Fri:** Guest speaker TBD (Vasu Kaul?)
  - Reading from guest speaker TBD (US vs Germany comparative experiment?)

Week 6 (Feb 13 – 17)

- **Required weekly readings** due before Monday's class
  - Coffman et al. 2016. "The Size of the LGBT Population and the Magnitude of Antigay Sentiment are Substantially Underestimated." *Management Science.*
  - Castilla, Emilio J. and Stephen Benard. 2010. "The Paradox of Meritocracy in Organizations." *Administrative Science Quarterly.*
- **Mon:** Lecture on social desirability and studying sensitive topics
- **Tues:** Discussion question on weekly readings due by midnight
- **Wed:** Lecture on heterogeneous treatment effects and cultural consensus; class discussion of student discussion questions
- **Thurs:** Discussion question on guest speaker reading due by midnight
- **Fri:** Guest speaker TBD (Robin Stryker?)
  - Reading from guest speaker TBD (Survey experiment on political incivility?)

Week 7 (Feb 20 – 24)

- **Required weekly readings** due before Monday's class
  - Petts, Amy L. 2020. "It's all in the definition: Color-blind interpretations of school diversity." *Sociological Forum*.
  - Kincaid, Reilly. 2022. Status, masculinity, and femininity at the intersection of age and gender. *Social Science Research.*
- **Mon:** Lecture on factorial experiments and interaction effects
- **Tues:** Discussion question on weekly readings due by midnight
- **Wed:** Lecture on conjoint experiments; class discussion of student discussion questions
- **Thurs:** Discussion question on guest speaker reading due by midnight
- **Fri:** Guest speaker TBD (Reilly Kincaid?)
  - Reading from guest speaker TBD (Factorial design on status beliefs?)

Week 8 (Feb 27 – March 3)

- **Required weekly readings** due before Monday's class
  - Baldassarri, Delia and Maria Abascal. 2017. "Field experiments across the social sciences." *Annual Review of Sociology.*
  - Salganik, Matthew J., Peter Sheridan Dodds, and Duncan J. Watts. 2006. "Experimental Study of Inequality and Unpredictability in an Artificial Cultural Market." *Science.*
- **Mon:** Lecture on audit studies and hiring experiments
- **Tues:** Discussion question on weekly readings due by midnight
- **Wed:** Lecture on field experiments; class discussion of student discussion questions
- **Thurs:** Discussion question on guest speaker reading due by midnight
- **Fri:** Guest speaker TBD (Kyle Haynes?)
  - Reading from guest speaker TBD

Graduate student (681) requirements end after Week 8; graduate students can optionally continue to participate in the class (e.g., are encouraged to attend the weekly Friday lab meetings)

Course schedule for Weeks 9 to 15 continues on next page …

Course Schedule for Weeks 9 – 15 (only required of undergraduate [391] students)

Week 9 (March 6 -10)

- **Mon:** RA work in the lab
- **Wed:** RA work in the lab
- **Fri:** Lab meeting

Spring Break (March 13 – 17)

- *No class; spring break*

Week 10 (March 20 – 24)

- **Mon:** RA work in the lab
- **Wed:** RA work in the lab
- **Fri:** Lab meeting

Week 11 (March 27 – 31)

- **Mon:** RA work in the lab
- **Wed:** RA work in the lab
- **Fri:** Lab meeting

Week 12 (April 3 – 7)

- **Mon:** RA work in the lab
- **Wed:** RA work in the lab
- **Fri:** Lab meeting

Week 13 (April 10 – 14)

- **Mon:** RA work in the lab
- **Wed:** RA work in the lab
- **Fri:** Lab meeting

Week 14 (April 17 – 21)

- **Mon:** RA work in the lab
- **Wed:** RA work in the lab
- **Fri:** Lab meeting

Week 15 (April 24 – 28)

- **Mon:** RA work in the lab
- **Wed:** RA work in the lab
- **Fri:** Lab meeting