The course will introduce students to the fundamentals of research design in the social sciences. We start by examining how to formulate research questions within a “research cycle” (the sequence of steps undertaken in research). We then examine the concept of causality and what it means for relationships to be causal in nature. We then spend some time talking about how concepts can be measured, how data can be acquired/colllected, and how a systematic analysis can be conducted (using regression). We then move into the study of specific research designs, starting with randomized experiments and then several quasi-experimental designs that use observational data: instrumental variables (IVs), difference-in-differences (DiD), and regression discontinuity designs (RDDs). We conclude by discussing the benefits of doing multi-method (quantitative and qualitative) research and how case studies can be integrated with quasi-experimental designs.

Prerequisites

There are no formal prerequisites for this class, although it is restricted to first-year PhD students. A statistical background is helpful, but not required. The concepts are meant to be primarily intuitive. All students should be able to follow the reading (again, on an intuitive level) and contribute to class discussion. The readings will involve foundations (using books designed as texts) and (increasingly as we move along in the semester) applications of common research designs in the social sciences.

Course Requirements

(1) You must come to class prepared, which means that you have done all of the week’s readings in advance. You are also expected to participate in class discussion. Participation is what makes a seminar a useful learning experience – you learn as much from the in-class discussion as you do from the readings themselves. Moreover, given that this is your chosen vocation, you should take an active role in fostering your own professional development.

(2) While I will spend some time (informally) lecturing, my main role each week will be to moderate, provide background context, and steer the discussion in various directions. This is a seminar; thus, each student will be expected to contribute to in-class discussion.

(3) The course grade will be a function of class participation (20%), a set of four short papers/exercises (40%), and a final paper (40%). The timing and specifics for the final paper will
be discussed in more detail in class. But you will write an initial research design (a pre-analysis plan). You will propose a clear research question, synthesize the relevant literature, and outline a theory and at least two falsifiable hypotheses. You will then identify a means – an experiment or quasi-experiment and data-collection plan – to test your hypotheses. Ideally, you would pursue this project in subsequent classes, resulting in a paper that could – with some revisions – be sent out for publication consideration to a journal.

Learning Objectives

The major objective of this course is to introduce you to the process of conducting original, doctoral-level research. “Research design” – how research is put together from start to finish – is a crucial learning objective for any would-be academic. In the course of the semester, students will learn that a range of decisions (by the researcher) have to be made along the way, based on a range of assumptions, all of which can be critiqued. In pursuing such an assessment, students will learn – among other things – that no research is perfect or immune to criticism, even those studies done by the very best scholars. This realization should offer students encouragement and (hopefully) make it easier for them to do their own research.

Course Materials

We will be reading some or all of the following books:

Bueno de Mesquita, Ethan, and Anthony Fowler. 2021. Thinking Clearly with Data: A Guide to Quantitative Reasoning and Analysis. (PDF will be made available.)

Cirone, Alexandra. 2017-2018. Math and Statistics Pre-Arrival Module. (PDF will be provided.)


Huntington-Klein, Nick. 2021. The Effect: An Introduction to Research Design and Causality. (PDF will be made available. Also see: https://theeffectbook.net)


Seawright, Jason. 2016. Multi-Method Social Science: Combining Qualitative and Quantitative Tools. Cambridge: Cambridge University Press. (Available online at CUP webpage.)

Most of the journal articles assigned are available electronically, usually at JSTOR or the journal’s webpage (for more recent publications). For those articles that are not available electronically, I will provide copies, which will be sent to you roughly a week before such readings are covered in class.
In addition, here are a few supplementary books to consider, if you find this material interesting:


Gertler, Paul J., Sebastian Martinez, Patrick Premand, Laura B. Rawlings, and Christel M. J. Vermeersch. 2016. *Impact Evaluation in Practice*, 2nd Edition. This is a good, practical guide to causality and the various research designs we’ll be covering in class (Weeks 10-13). Freely available: [https://openknowledge.worldbank.org/handle/10986/25030](https://openknowledge.worldbank.org/handle/10986/25030)

Below is a week-by-week list of required reading assignments. I reserve the right to change some readings if I find better ones. If I do, I will alert you at least a week in advance.

**Week 1 (August 23):** Course Overview and Discussion of the Syllabus

**Week 2 (August 27):** Philosophy of Science

Okasha, *Philosophy of Science*. All.


**Week 3 (September 6):** NO CLASS – Labor Day

**Week 4 (September 13):** Designing Research & Research Questions


EBDM and Fowler, *Thinking Clearly with Data*, Chapter 1.


Week 5 (September 20): Causality & Causal Inference, Part I


EBDM and Fowler, *Thinking Clearly with Data*, Chapters 2 & 3.


Week 6 (September 27): Causality & Causal Inference, Part II

KKV, *Designing Social Inquiry*, Chapter 4.


EBDM and Fowler, *Thinking Clearly with Data*, Chapter 4.


Week 7 (October 4): Measurement

KKV, *Designing Social Inquiry*, Chapter 5


Week 8 (October 11): Data Collection


Week 9 (October 18): Regression (and Its Limitations)

EBDM and Fowler, *Thinking Clearly with Data*, Chapters 5-10


**Week 10 (October 25): Randomized Experiments: The Gold Standard?**

EBDM and Fowler, *Thinking Clearly with Data*, Chapter 11


Kellstedt and Whitten, *The Fundamentals of Political Science Research*, Chapter 4 (4.2)


**Week 11 (November 1): Instrumental Variables**

Review section in EBDM and Fowler, *Thinking Clearly with Data*, Chapter 11


**Week 12 (November 8): Difference-in-Differences**

EBDM and Fowler, *Thinking Clearly with Data*, Chapter 13


**Week 13 (November 15): Regression Discontinuity**

EBDM and Fowler, *Thinking Clearly with Data*, Chapter 13


Week 14 (November 22): Multiple Methods

EBDM and Fowler, *Thinking Clearly with Data*, Chapter 17


Week 15 (November 29): Open week

May include content, may offer a “breather” (in this spot or moved up somewhere in the syllabus) for overworked students! We’ll see.
Statement on Academic Conduct and Support Systems

Academic Conduct:

Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in SCampus in Part B, Section 11, “Behavior Violating University Standards” policy.usc.edu/scampus-part-b. Other forms of academic dishonesty are equally unacceptable. See additional information in SCampus and university policies on scientific misconduct, policy.usc.edu/scientific-misconduct.

Support Systems:

Counseling and Mental Health - (213) 740-9355 – 24/7 on call studenthealth.usc.edu/counseling
Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

National Suicide Prevention Lifeline - 1 (800) 273-8255 – 24/7 on call suicidepreventionlifeline.org
Free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week.

Relationship and Sexual Violence Prevention Services (RSVP) - (213) 740-9355(WELL), press “0” after hours – 24/7 on call studenthealth.usc.edu/sexual-assault
Free and confidential therapy services, workshops, and training for situations related to gender-based harm.

Office of Equity and Diversity (OED) - (213) 740-5086 | Title IX – (213) 821-8298 equity.usc.edu, titleix.usc.edu
Information about how to get help or help someone affected by harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants.

Reporting Incidents of Bias or Harassment - (213) 740-5086 or (213) 821-8298usc-advocate.symplicity.com/care_report
Avenue to report incidents of bias, hate crimes, and microaggressions to the Office of Equity and Diversity |Title IX for appropriate investigation, supportive measures, and response.

The Office of Disability Services and Programs - (213) 740-0776 dsp.usc.edu
Support and accommodations for students with disabilities. Services include assistance in providing readers/notetakers/interpreters, special accommodations for test taking needs, assistance with architectural barriers, assistive technology, and support for individual needs.
USC Campus Support and Intervention - (213) 821-4710
campussupport.usc.edu
Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

Diversity at USC - (213) 740-2101
diversity.usc.edu
Information on events, programs and training, the Provost’s Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

USC Emergency - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call
dps.usc.edu, emergency.usc.edu
Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

USC Department of Public Safety - UPC: (213) 740-6000, HSC: (323) 442-120 – 24/7 on call
dps.usc.edu
Non-emergency assistance or information.