POLS 7010: Research Design

Fall 2025 Tuesdays: 3:55-6:40pm, Baldwin 101D

Prof. David Cottrell Office: 380D Baldwin Hall Office Hours: By appointment Email: David.Cottrell@uga.edu

Course Description

Description: The goal of this course is to deepen your understanding of how research is conducted in political science and to provide a foundation for designing your own projects as you progress in your career. We will focus on developing your intuition about what constitutes good political science research and how to carry it out effectively. Central to the course is the challenge of making valid causal inferences. You will learn why causal inference matters, what makes it difficult, and how political scientists address these challenges through a range of research strategies. The course introduces a variety of empirical methods, including experiments, instrumental variables, difference-in-differences, matching, regression discontinuity, and fixed effects designs. By the end of the course, you will be familiar with multiple research designs and better equipped to evaluate and improve the validity of your own empirical work.

Required Course Materials

Readings: Each week, you will be assigned a set of readings on a design-related topic. Typically you will be assigned a chapter from a textbook as well as a related journal article. Most readings are available to you for free via google scholar, a dedicated website, or through the university library, at http://gilfind.uga.edu/. Readings that are not available through these sources will be made available on the course's eLC page. The only exception to this is Angrist and Pischke (2013). You will need to purchase this text independently.

We will engage extensively with the following textbook over the course of the semester:

- (NHK) Huntington-Klein, N. (2025). *The Effect: An Introduction to Research Design and Causality* (2nd ed.). Chapman & Hall/CRC
- (SCU) Cunningham, S. (2021). Causal inference: The mixtape. Yale University Press.
- (A&P) Angrist, J. D., & Pischke, J.S. (2014). *Mastering 'Metrics: The Path from Cause to Effect*. Princeton University Press.
- (K&W) Kellstedt, P. M., & Whitten, G. D. (2013). *The Fundamentals of Political Science Research* (3rd ed.). Cambridge University Press.
- (KKV) King, Gary, and Robert O. Keohane, and Sidney Verba. (1994). *Designing Social Inquiry:* Scientific Inference in Qualitative Research. Princeton University Press.

Assessment and Grading

Attendance/participation: Attendance and participation is foundational to graduate courses. You are expected to attend each class having completed all assigned readings and ready to ask questions and discuss course material. You will be graded on the frequency of your attendance, contributions to discussions, and completion of any in-class assignments. If you are unable to attend a class for whatever reason, please inform me prior to the start of class. You will be responsible for any material that you miss.

Research Design Paper and PowerPoint Presentation: Write a research design paper using one of the designs we have discussed in the course. The research design can either be experimental (a lab experiment, survey experiment, field experiment, or natural experiment) or observational (regression, matching, discontinuity, instrumental variables, or difference-in-difference). The design should be written as a 7-10 page research paper and a 7-slide PowerPoint presentation. The paper and presentation should have the following seven sections:

- 1. Research question
- 2. Theory/literature review
- 3. Hypothesis
- 4. Data and measurement
- 5. Proposed Test (along with the pros and cons of the test)
- 6. Expected findings
- 7. Caveats

Everyone will present their PowerPoint presentations during the last two weeks of the semester. The research design paper will be due by the last day of finals week.

Grades: Final grades will be calculated as follows:

Research paper: 50% Participation: 50%

Course Statements & Policies

UGA student honor code:

Please adhere to the university's standards for academic honesty and integrity. Procedures for handling cases of suspected dishonesty, can be found at www.uga.edu/ovpi.

Accommodation for disabilities:

If you plan to request accommodations for a disability, please register with the *Accessibility & Testing*. They can be reached by visiting Clark Howell Hall, calling 706-542-8719 (voice) or 706-542-8778 (TTY), or by visiting https://accessibility.uga.edu/.

Preferred names/pronouns

Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, culture, religion, politics, sexual orientation, gender, gender variance, and nationalities. Class rosters are provided to the instructor with the student's legal name. I am eager to address you by your preferred

name and/or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records.

UGA well-being resources

UGA Well-being Resources promote student success by cultivating a culture that supports a more active, healthy, and engaged student community. Anyone needing assistance is encouraged to contact Student Care & Outreach (SCO) in the Division of Student Affairs at 706-542-8479 or visit sco.uga.edu. Student Care & Outreach helps students navigate difficult circumstances by connecting them with the most appropriate resources or services. They also administer the Embark@UGA program which supports students experiencing, or who have experienced, homelessness, foster care, or housing insecurity. UGA provides both clinical and non-clinical options to support student well-being and mental health, any time, any place. Whether on campus, or studying from home or abroad, UGA Well-being Resources are here to help.

- Well-being Resources: well-being.uga.edu
- Student Care and Outreach: sco.uga.edu
- University Health Center: healthcenter.uga.edu
- Counseling and Psychiatric Services: caps.uga.edu or CAPS 24/7 crisis support at 706-542-2273
- Health Promotion/ Fontaine Center: <u>healthpromotion.uga.edu</u>
- Accessibility & Testing: https://accessibility.uga.edu/

Additional information, including free digital well-being resources, can be accessed through the UGA app or by visiting https://well-being.uga.edu.

Course Schedule

Week 1. Introduction/Syllabus

August 19

Week 2. Science and designing research to answer interesting questions

August 26

- KKV, "Chapter 1: The Science in Social Science"
- NHK, "Chapter 1: Designing Research"
- NHK, "Chapter 2: Research Questions"
- Clark, W.R. (2020). "Asking interesting questions." In The SAGE Handbook of Research Methods in Political Science and International Relations (Vol. 2, pp. 7-25).

Week 3. Descriptive inference, operationalization and measurement September 2

- KKV, "Chapter 2: Descriptive Inference."
- K&W, "Chapter 5: Measuring Concepts of Interest"
- McDonald, M.P., & Popkin, S.L. (2001) The Myth of the Vanishing Voter. *American Political Science Review*. 95(4): 963-974.

Week 4. Causal inference and the fundamental problem

September 9

- KKV. "Chapter 3: Causal Inference."
- SCU. "Chapter 4: Potential Outcomes Causal Model." (Section 1 only)
- Mukamal K.J. (2020). A safe level of alcohol consumption: the right answer demands the right question (Review). *J Intern Med* 288: 550–559.

Week 5. Experiments: lab, survey, field, and natural experiments.

September 16

- A&P. "Chapter 1: Randomized trials"
- Gerber, A. S., Green, D. P., & Larimer, C. W. (2008). Social Pressure and Voter Turnout: Evidence from a Large-Scale Field Experiment. *American Political Science Review*, 102(1), 33–48.

Week 6. Regression

September 23

- A&P "Chapter 2: Regression"
- Dale, S. B., & Krueger, A. B. (2002). Estimating the payoff to attending a more selective college: An application of selection on observables and unobservables. The Quarterly Journal of Economics, 117(4), 1491–1527.

Week 7. Instrumental variables

October 30

- A&P. "Chapter 3: Instrumental Variables"
- Acharya, A., Blackwell, M., & Sen, M. (2016). The political legacy of American slavery. *The Journal of Politics*, 78(3), 621–641

Week 8. Regression Discontinuity

October 7

- A&P. "Chapter 4: Regression Discontinuity Designs"
- Lee, D. S., Moretti, E., & Butler, M. J. (2004). Do voters affect or elect policies? Evidence from the U.S. House. The Quarterly Journal of Economics, 119(3), 807–859.

Week 9. Difference-in-differences

October 14

- A&P. "Chapter 5: Difference-in-Differences"
- Grumbach, J. M., & Hill, C. (2022). Rock the registration: Same day registration increases turnout of young voters. The Journal of Politics, 84(1), 405–417.

Week 10. Matching

October 21

• NHK "Chapter 14: Matching"

• Boyd, C.L., Epstein, L. and Martin, A.D. 2010, Untangling the Causal Effects of Sex on Judging. *American Journal of Political Science*, 54: 389-411

Week 11. Fixed effects

October 28

- NHK "Chapter 16: Fixed Effects"
- Kaplan, E., & Yuan, H. (2020). Early voting laws, voter turnout, and partisan vote composition: Evidence from Ohio. American Economic Journal: Applied Economics, 12(1), 32–66.

Week 12. No Class

November 4

Week 13. Putting it all together

November 11

• A&P. "Chapter 6: The Wages of Schooling"

Week 14. Presentations and Feedback

November 18

Week 15. Presentations and Feedback

November 25