

**PRELIMINARY SYLLABUS: MATERIAL SUBJECT TO CHANGE**

**GOV 61**

**RESEARCH PRACTICE IN QUANTITATIVE  
METHODS**

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Location: Sever 209.

Thursdays, 12:00pm–2:45pm.

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CGIS Knafel 105

**Course Description and Objectives**

This course focuses on the application of quantitative methods to the study of political phenomena. It has two primary goals. The first goal is to introduce students to the ‘nuts and bolts’ of quantitative research in political science. The second is to prepare students to conduct original research projects using quantitative methods for their senior theses.

The course builds upon the material presented in Gov 50 and complements the material offered in Gov 62 (its qualitative analog). We will discuss the formulation of research questions, fundamental principles of research design, and the practical application of quantitative methods for questions in all fields of political science. While much of the course discusses statistical methods, the focus is very much on application: how various statistical models work, for what kinds of data they are appropriate, and how their results are interpreted. No mathematical background beyond Gov 50 is presumed or required for students to be successful in the course.

The course will culminate with students preparing an original research project. Students will identify a theoretically-informed research question, use an appropriate

research design and data to test it, and effectively apply the methods in the course to evaluate it. Students will work on the project throughout the semester and present it to the class at the end of it.

## Prerequisites

Students should have taken Government 50 and a working knowledge of the R computing environment. Students who have not taken Gov 50 should contact the instructor as soon as possible.

## Course Meetings

The course meets once per week in lecture and once in section. Attending all meetings is a natural expectation of the course and students are responsible for all assigned readings. All readings should be completed prior to the course meetings, which will be a combination of lecture, discussion, and student presentations, and students are expected to be active participants in each. Readings can be obtained via Canvas unless noted otherwise.

## Course Requirements

Your evaluation for the course will be based on the components described below. All assignments are graded on a standard A through F grading scale; the course is not offered on a pass/fail basis.

**Research project and presentation: 30%.** Due Monday, May 13 by 5pm via Canvas. Using the tools of social science inquiry, students should prepare an original research paper on an empirically testable question. The research paper should (a) identify a clear research question; (b) describe the state of the scholarly literature on this question; (c) state a hypothesis supported by relevant argumentation; (d) identify, collect, justify, and describe data appropriate to the hypothesis; (e) choose and explain appropriate methods for testing your hypothesis; (f) describe and interpret your results; and (g) discuss the implications of your analyses. Specific formatting guidelines, requirements, and benchmarks will be distributed in class. Presentations will take place in class on April 25 and will count for one-fifth of this portion of the class grade. The paper should be approximately 15 to 20 pages, double-spaced, in standard 12-point font with one-inch margins.

**Short assignments: 30%.** Students will complete the following assignments:

- February 7: Human subjects training (5%). Using this link (<https://cuhs.harvard.edu/required-ethics-training>), following the instructions for [HarvardUndergraduateResearchRequiredTraining](#) by accessing the CITI website. Once you have completed human subjects training, please send a screenshot or a PDF of the completion certificate to the instructor.
- February 14, 21, and 28 (5% each): Choose a news story (from, e.g., *New York Times*, *Washington Post*, *Wall Street Journal*, etc.) which makes a claim and discusses evidence consistent with it. In no more than 400 words, identify the claim, summarize the argument, and critically evaluate the research design used to evaluate it and the evidence it produced. Post your analysis along with a link to the story on [Yellowdig](#) (accessed through Canvas).
- March 7 (5%): Overview of research topic. Students should prepare a short memo (no more than one page, single-spaced) that identifies a research topic and motivates its importance; states and justifies a hypothesis; and provides a one-paragraph overview of the state of the literature on the research question. On the second page, students should provide full bibliographic information for ten academic sources relevant to the proposed research.
- March 28 (5%): Overview of research design and data. Students should prepare a short memo (no more than one-and-a-half pages, single-spaced) that states a clear, testable hypothesis; describes and justifies the research design they propose to use to test it; describes and justifies the data they will use; and briefly discusses any potential methodological issues they anticipate might arise.

**Data essays and reading responses: 30%.** Students will complete four assignments:

- Data essays (10% each): Two dates from March 7, 14, 28, April 11, 18 (student choice). Students will complete a data replication exercise which uses data from published research to gain experience applying the methods discussed in class. Students will generate several tables and figures and will write a two-page page (double-spaced) that interprets their analyses. *Note: these essays will be due in the week following the assigned reading.*
- Reading responses (5% each): Two dates from March 7, 14, 28, April 11, 18 (student choice). Using [Yellowdig](#), students should choose one of the applied readings for the week and write a short response to them (no more than 300 words). These reading responses should not summarize the readings, but rather

should provide a critical evaluation of the research design used in the study. How well did the research design address the challenges raised by the methods readings? How could the chosen research design be improved? These reading responses should be posted to [Yellowdig](#) by 9am on the day of class.

**Participation: 10%.** Students are expected to actively engage with the material in the course and their classmates. Sections will meet for one hour weekly beginning in the third week of class (February 11). Students are expected to attend and be active participants in their and their classmates' learning. Participation will be assessed via attendance, contributions to discussion, and with occasional short quizzes.

## Late assignments

Late assignments are extremely discouraged and will be heavily penalized without a note from a doctor or resident dean. Written assignments will be penalized two-thirds of a letter grade (e.g., from B+ to B-) for every day late. Students will be unable to make up the exams without documentation from a doctor or university official.

## Academic integrity

You are responsible for understanding and adhering to the Harvard College Honor Code (<https://honor.fas.harvard.edu/honor-code>). There are no excuses for failure to uphold academic integrity. For more information about upholding academic integrity, please visit the Harvard College Handbook for Students (<https://handbook.fas.harvard.edu/book/academic-integrity>). Students are also encouraged to consult the Harvard Guide to Using Sources (<https://usingsources.fas.harvard.edu/>), which makes available several anonymous open-learning tools.

## Collaboration

Collaboration, discussion, and the exchange of ideas is essential to the course and to academic research more generally. You are permitted and in fact encouraged to discuss the material from the course with classmates and others. However, all submitted work must be your own; not only should it avoid plagiarism, but your written work must also reflect your own ideas and your own writing.

## Accessibility

Students needing academic adjustments or accommodations because of a documented disability must present their Faculty Letter from the Accessible Education Office (<http://www.aeo.fas.harvard.edu>) and speak with the professor by the end of the second week of the term. Failure to do so may result in the instructor's inability to respond in a timely manner. All discussions will remain confidential.

## Resources for writing

We all need help with our writing. Fortunately, the Writing Center (<http://www.fas.harvard.edu/~wricntr>) is available for just this purpose — but it is vastly underutilized. Please do not hesitate to contact the Writing Center if you would like assistance with developing or communicating your ideas for the course's written assignments.

## Technology in the classroom

Depending on how it is used, technology can be an important classroom resource. It can also hinder your learning and your classmates' learning. All cell phones must be set to silent in class lectures and section meetings. Texting, emailing, Facebooking, etc. during class is also not permitted via cell phone, laptop, iPad, or any other device. The use of laptops and iPads is permitted for the purposes of taking notes and accessing course materials. However, you should be aware that growing evidence shows that laptop use is associated with significantly worse classroom performance for users (see, e.g., <http://www.sciencedirect.com/science/article/pii/S0272775716307129>); it can also distract your classmates and detract from their learning experience. The instructor reserves the right to prohibit the use of all electronic materials at his discretion if such a ban appears warranted.

## Course readings

There is no required textbook for the course. All course readings are available from the *Files* section of the course Canvas site. Readings should be completed in advance of the class meeting for which they are listed. Completing the reading prior to class will enable students to get the most from that day's lecture. A sound understanding of the assigned readings is also critical for effective class discussions.

## Course schedule

January 31. Introduction; forming research questions.

Gerring, John. 2012. *Social Science Methodology: A Unified Framework*. New York: Cambridge University Press. Chapter 2.

King, Gary, Robert O. Keohane, and Sidney Verba. 1994. *Designing Social Inquiry: Scientific Inference in Qualitative Research*. Princeton: Princeton University Press. Chapter 1. *Note: available online through HOLLIS.*

February 7. Modes of inference; developing hypotheses.

Dixon, Jeffrey C., Royce A. Singleton, Jr., and Bruce C. Straits. 2016. *The Process of Social Research*. New York: Oxford University Press. Chapter 4.

King, Gary, Robert O. Keohane, and Sidney Verba. 1994. *Designing Social Inquiry: Scientific Inference in Qualitative Research*. Princeton: Princeton University Press. Chapter 2. *Note: available online through HOLLIS.*

February 14. Causation and research design.

Angrist, Joshua D., and Jörn-Steffen Pischke. 2009. *Mostly Harmless Econometrics: An Empiricist's Companion*. Princeton: Princeton University Press. Chapter 2. *Note: available through HOLLIS.*

King, Gary, Robert O. Keohane, and Sidney Verba. 1994. *Designing Social Inquiry: Scientific Inference in Qualitative Research*. Princeton: Princeton University Press. Chapter 3. *Note: available online through HOLLIS.*

February 21. Concepts and measurement.

Adcock, Robert, and David Collier. 2001. "Measurement Validity: A Shared Standard for Qualitative and Quantitative Research." *American Political Science Review* 95: 529-541.

Gerring, John. 2012. *Social Science Methodology: A Unified Framework*. New York: Cambridge University Press. Chapter 5.

King, Gary, Robert O. Keohane, and Sidney Verba. 1994. *Designing Social Inquiry: Scientific Inference in Qualitative Research*. Princeton: Princeton University Press. Pages 151-168. *Note: available online through HOLLIS.*

February 28. Surveys, sampling, and selection.

Dixon, Jeffrey C., Royce A. Singleton, Jr., and Bruce C. Straits. 2016. *The Process of Social Research*. New York: Oxford University Press. Chapters 6 and 8.

Schaeffer, Nora Cate, and Stanley Presser. 2003. "The Science of Asking Questions." *Annual Review of Sociology* 29: 65-88.

#### March 7. Field, Survey, and Natural Experiments.

Kellstedt, Paul M., and Guy D. Whitten. 2013. *The Fundamentals of Political Science Research*. New York: Cambridge University Press. pages 69-81.

Gerber, Alan S., Donald P. Green, and Christopher W. Larimer. 2008. "Social Pressure and Voter Turnout: Evidence from a Field Experiment." *American Political Science Review* 102: 33-48.

Ladd, Jonathan McDonald, and Gabriel S. Lenz. 2009. "Exploiting a Rare Communication Shift to Document the Persuasive Power of the News Media." *American Journal of Political Science* 53: 394-410.

Tomz, Michael. 2007. "Domestic Audience Costs in International Relations: An Experimental Approach." *International Organization* 61: 821-840.

#### *Optional:*

Dunning, Thad. 2008. "Improving Causal Inference: Strengths and Limitations of Natural Experiments." *Political Research Quarterly* 61: 282-293.

Gaines, Brian J., and James H. Kuklinski. 2007. "The Logic of the Survey Experiment Reexamined." *Political Analysis* 15: 1-20.

#### March 14. Causal inference with observational data.

Angrist, Joshua D., and Jörn-Steffen Pischke. 2015. *Mastering 'Metrics: The Path from Cause to Effect*. Princeton: Princeton University Press. Chapters 4 and 5.

Kellstedt, Paul M., and Guy D. Whitten. 2013. *The Fundamentals of Political Science Research*. New York: Cambridge University Press. pages 81-88.

Bechtel, Michael, and Jens Hainmueller. 2011. "How Lasting Is Voter Gratitude? An Analysis of the Short- and Long-Term Electoral Returns to Beneficial Policy." *American Journal of Political Science* 55: 852-868.

Berry, Christopher R., Barry C. Burden, and William G. Howell. 2010. "The President and the Distribution of Federal Spending." *American Political Science Review* 104: 783-799.

Hall, Andrew B. 2015. "What Happens When Extremists Win Primaries?" *American Political Science Review* 109: 18-42.

Mummolo, Jonathan. 2018. "Modern Police Tactics, Police-Citizen Interactions, and the Prospects for Reform." *Journal of Politics* 80: 1-15.

March 21. SPRING BREAK.

March 28. Mechanisms, mediators, and moderators.

Baron, Reuben M., and David A. Kenny. 1986. "The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations." *Journal of Personality and Social Psychology* 51: 1173-1182.

Hainmueller, Jens, Jonathan Mummolo and Yiqing Xu. 2018. "How Much Should We Trust Estimates from Multiplicative Interaction Models? Simple Tools to Improve Empirical Practice." *Political Analysis*.

Miller, Joanne M., Kyle L. Saunders, and Christina E. Farhart. 2016. "Conspiracy Endorsement as Motivated Reasoning: The Moderating Roles of Political Knowledge and Trust." *American Journal of Political Science* 60: 824-844.

Morgan, Stephen L., and Christopher Winship. 2015. *Counterfactuals and Causal Inference: Methods and Principles for Social Research*. New York: Cambridge University Press. Chapter 10.

April 4. NO CLASS – WORK ON YOUR RESEARCH PROJECTS.

April 11. Binary, ordered, and nominal dependent variables.

Alvarez, R. Michael and Jonathan Nagler. 1995. "Economics, Issues and the Perot Candidacy: Voter Choice in the 1992 Presidential Election." *American Journal of Political Science* 39: 714-744.

Barnes, Tiffany D., and Emily Beaulieu. 2019. "Women Politicians, Institutions, and Perceptions of Corruption." *Comparative Political Studies* 52: 134-167.

Djupe, Paul A., Jacob R. Neihsel, and Anand E. Sohkey. 2018. "Reconsidering the Role of Politics in Leaving Religion: The Importance of Affiliation." *American Journal of Political Science* 62: 161-175.

April 18. Count and duration models.

Berliner, Daniel. 2014. "The Political Origins of Transparency." *Journal of Politics* 76: 479-491.

- Box-Steffensmeier, Dino Christenson, and Alison W. Craig. 2019. "CueTaking in Congress: Interest Group Signals from Dear Colleague Letters." *American Journal of Political Science* 63: 163-180.
- Hultman, Lisa, Jacob Kathman, and Megan Shannon. 2013. "United Nations Peacekeeping and Civilian Protection in Civil War." *American Journal of Political Science* 57: 875-891.
- Potter, Rachel Augustine. 2017. "Slow-Rolling, Fast-Tracking, and the Pace of Bureaucratic Decisions in Rulemaking." *Journal of Politics* 79: 841-855.

April 25. Research project presentations.

**RESEARCH PAPERS: DUE 5PM ON MAY 13.**