

PSCI 3300: Political Science Research Methods

Fall 2026

MoWe, 11:10 AM-12:30 PM
Wooten Hall 115

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Description

During the 2016 presidential election, a poll conducted by USC and the *Los Angeles Times* suggested that Donald Trump had substantially more support among Black voters than Republican presidential candidates typically receive. That estimate, however, was heavily influenced by the response of [one young Black Trump supporter in Illinois](#) who received an unusually large statistical weight in the poll. In the end, national exit polls estimated that Trump received just [8% of the Black vote](#) in the election — in line with other pre-election polls and past Republican performance.

Seemingly straightforward relationships in data can also be misleading. For example, cities with more police officers tend to have more crime, suggesting that adding more police officers might increase crime. But cities often hire more police precisely *because* they have more crime. Once researchers use methods designed to separate these two possibilities, they reach a very different conclusion: [increasing the number of police officers tends to reduce crime](#). Together, these two cases illustrate a key lesson: whether we can trust conclusions drawn from data depends on how those data are collected and analyzed.

This course introduces students to the tools needed to critically evaluate the political claims they encounter every day and to conduct basic analyses of their own. We will start with the basic logic of social science research: how to ask a good research question, develop a testable theory, design a study, and measure the concepts you care about. From there, we

will learn how to evaluate cause and effect, describe and visualize data, work with surveys and samples, and use regression and statistical inference to draw conclusions with appropriate confidence. We will conclude with a brief introduction to qualitative research methods. Class meetings will consist of either lecture and discussion or hands-on exercises in R using real-world political and policy data. Throughout the semester, we will emphasize not only how to produce statistical results, but also how to interpret them carefully, communicate them clearly, and recognize their limits.

You are almost certainly taking this course because it is required for political science majors. Statistics probably are not what drew you to the field — some of you may even have chosen political science because you thought it would not involve math. Fair enough. Two points are worth emphasizing. First, no background in statistics or programming is required to do well in this course. Second, many of the questions that made you want to study politics in the first place — such as why people vote the way they do or why nations go to war — *cannot* be answered without data and, often, statistical analysis. After completing this course, you will be better equipped to study the political questions you care about and will have gained analytical skills useful no matter what career path you take.

Materials

Students are required to rent or purchase the following textbook:

Llaudet, Elena, and Kosuke Imai. 2022. *Data Analysis for Social Science: A Friendly and Practical Introduction*. Princeton: Princeton University Press.

Students must also download R and RStudio to their personal computer. Instructions are available on Canvas.

Assignments and Grades

Your final grade will be based on the following:

- Assessment Quiz (5%). All students in PSCI 3300 are required to complete a common assessment quiz measuring core skills and concepts from the course. The quiz will be administered on Canvas and must be completed by **December 5**.
- Attendance (10%). I will take attendance at the end of each class via QR code. Each non-exam class is worth one attendance point; your attendance grade will be based on the percentage of available attendance points you earn. If you are feeling ill or have a legitimate reason to miss class (e.g., a family emergency or religious holiday), please email me in advance, and your absence will be excused.
- Problem Sets (10%). There will be four problem sets throughout the semester. These assignments will provide practice working with political data in R, conducting statistical analyses, and interpreting the results. Your lowest problem set grade will be

dropped. The due dates are **September 21**, **October 7**, **October 19**, and **November 16**.

- **Research Design Critique (15%).** Students will evaluate a series of research designs, identify their key strengths and weaknesses, and propose ways to improve them. Particular attention should be paid to the quality of the comparison being made, potential threats to causal inference, and the feasibility and ethics of alternative designs. It is due on **November 2**.
- **Data Analysis Memo (20%).** Students will be given an empirical claim about politics or public policy and a dataset with which to evaluate it. Using R, you will conduct appropriate analyses and determine whether the evidence supports the claim. You will be evaluated on your choice of analyses and interpretation of the results. Students will have time to work on their analysis during the last two class periods. Your findings will be presented in a 4-6 page, double-spaced memo due on **December 5**.
- **Exams (40%).** There will be two in-person exams on **September 23** and **October 21**, each worth 15%. Exams will consist primarily of multiple choice and short answer questions drawn from the lectures, readings, labs, and assigned exercises. The exams are not cumulative and are closed note. A study guide will be provided one week before each exam. A review session will be held during the class period immediately preceding each exam.

Final grades will be assigned as follows:

Letter Grade	Percentage Grade
A	90-100%
B	80-89%
C	70-79%
D	60-69%
F	0-59%

Final percentage grades will be rounded to the nearest whole number before letter grades are assigned.

Policies and Resources

Contacting Me

The fastest way to reach me is via email. I will typically respond within 24 hours. When emailing me, please include “PSCI 3300” followed by a brief description of your question or concern in the subject line of the email. Your email should be professional and should include a greeting such as “Dear Professor Hamel” or “Hello Dr. Hamel.” You are also encouraged to visit during my office hours. If you are unavailable during my office hours, please email me to schedule an appointment, either in-person or on Zoom. I welcome the opportunity

to meet you, learn about your background and interests, and help in any way that I can. If you read this before class begins on August 17, please email me what you are hoping to learn from this course and your favorite Taylor Swift song. Doing so will earn you two extra percentage points on your final grade.

Technology in Class

You may use a laptop during class to take notes. **Know, however, that taking notes with a laptop has a negative effect on learning and course performance.** I strongly encourage that you take notes in class using a pen and paper. You will thank me later. Laptops will be required during lab periods.

Late Work

You will be penalized for late assignments unless you have a valid, documented excuse. The penalty for unexcused late work is 5 percentage points per day. For example, if the quality of your work would have earned a 95, but the assignment is submitted two days late without an approved excuse, you will receive an 85. Valid excuses include illness, serious family emergencies, and religious holidays. I am generally willing to be flexible and to accommodate reasonable requests for extensions, but you must contact me in advance.

Grade Disputes

You must wait a minimum of 24 hours after receiving a graded assignment before contacting me regarding your grade. If you wish to dispute your grade, you must do so via email within one week of the date that grades are made available to the class. Grade disputes will not be considered if submitted past the one-week statute of limitations. When requesting reconsideration of a grade, you should provide a clear explanation as to why a different grade is in order. When work is reviewed for a grade dispute, the grade may be left unchanged, raised, or lowered.

Use of Course Materials

Course materials, including my presentations, study guides, and exams, are protected by U.S. copyright law and university policy. You may take notes and make copies of course materials for your own use, and you may share those materials with another student who is registered and enrolled in this course. However, you may not reproduce or distribute course materials outside the course without my express written permission. This includes uploading course materials to study sites such as Course Hero, Koofers, and Quizlet. Unauthorized dissemination of course materials may be subject to academic disciplinary action. If you wish to record classroom lectures, you must ask the instructor for permission in advance.

Academic Integrity

According to UNT Policy 06.003, Student Academic Integrity, academic dishonesty occurs when students engage in behaviors including, but not limited to cheating, fabrication, facilitating academic dishonesty, forgery, plagiarism, and sabotage. A finding of academic dishonesty may result in a range of academic penalties or sanctions ranging from admonition to expulsion from the University.

Use of Generative AI

Generative AI tools, including but not limited to ChatGPT, may be used in limited ways to support your learning in this course. For example, you may use AI to help interpret an R error message, explain a programming concept, or troubleshoot code that you have written yourself. You may not use AI to generate code for an assignment, conduct statistical analyses, interpret results on your behalf, or write or revise any portion of work that you submit for a grade.

You are responsible for understanding all code and analyses you submit. You are welcome to use functions, techniques, or approaches that we have not discussed in class, whether you learned them elsewhere or taught yourself. However, if I have questions about whether submitted code is your own work, you may be asked to explain the code and analysis to me, including what each line does and why you used it. An inability to explain submitted code or analytical choices may be considered when evaluating whether the work complies with this policy.

Unless otherwise stated by the instructor, any submitted work that is generated or substantially completed by AI will be treated as a violation of the University's academic integrity policy.

Accommodations for Disabilities

UNT makes reasonable academic accommodation for students with disabilities. Students seeking accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide a student with an accommodation letter to be delivered to faculty to begin a private discussion regarding one's specific course needs. Students may request accommodations at any time, however, ODA notices of accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of accommodation for every semester and must meet with each faculty member prior to implementation in each class. For additional information see the ODA website at disability.unt.edu.

Emergency Notification and Procedures

UNT uses a system called Eagle Alert to quickly notify students with critical information in the event of an emergency (i.e., severe weather, campus closing, and health and public safety

emergencies like chemical spills, fires, or violence). In the event of a university closure, please refer to the UNT Learning Management System (LMS) for contingency plans for covering course materials.

Mental Health Services

Mental health challenges can significantly hinder learning. UNT can support you in overcoming these obstacles. You can learn more about the broad range of confidential mental health services available on campus [here](#) and [here](#).

Writing Services

Writing well takes practice. UNT's Writing Center can help at any stage of the writing process, including with organization, clarity, grammar, punctuation, and citation styles. Support is available for any written assignment, with both in-person and online appointments. To schedule an appointment, call 940-565-2563 or email WritingCenter@unt.edu. Additional information is available at writingcenter.unt.edu.

Schedule

Tentative and subject to change.

Monday, August 17: Introduction

Wednesday, August 19: The Scientific Study of Politics

Read:

- King, Gary, Robert O. Keohane, and Sidney Verba. 1994. “The *Science* in Social Science.” In *Designing Social Inquiry: Scientific Inference in Qualitative Research*, 1–33. Princeton, NJ: Princeton University Press

Monday, August 24: Research Questions, Theories, and Hypotheses

Read:

- Geddes, Barbara. 2003. “Big Questions, Little Answers: How the Questions You Choose Affect the Answers You Get.” In *Paradigms and Sand Castles: Theory Building and Research Design in Comparative Politics*, 27–88. Ann Arbor: University of Michigan Press
- Plutzer, Eric. 2002. “Becoming a Habitual Voter: Inertia, Resources, and Growth in Young Adulthood.” *American Political Science Review* 96 (1): 41–56

Wednesday, August 26: Research Design: Cases and Comparisons

Read:

- Geddes, Barbara. 2003. “How the Cases You Choose Affect the Answers You Get: Selection Bias and Related Issues.” In *Paradigms and Sand Castles: Theory Building and Research Design in Comparative Politics*, 89–130. Ann Arbor: University of Michigan Press

Monday, August 31: Concepts and Measurement

Read:

- Ansolabehere, Stephen, and Eitan Hersh. 2012. “Validation: What Big Data Reveal About Survey Misreporting and the Real Electorate.” *Political Analysis* 20 (4): 437–459
- Konnikova, Maria. 2016. “Politics and Personality: Most of What You Read Is Malarkey.” *The New Yorker*, August 23

Wednesday, September 2: No Class — Professor Hamel at a conference

Monday, September 7: No Class — Labor Day

Wednesday, September 9: R and Reproducible Data Analysis

Read:

- *DSS*, Chapter 1

Monday, September 14: Causality and Randomized Experiments

Read:

- *DSS*, Chapter 2
- Butler, Daniel M., and David E. Broockman. 2011. “Do Politicians Racially Discriminate Against Constituents? A Field Experiment on State Legislators.” *American Journal of Political Science* 55 (3): 463–477

Wednesday, September 16: Lab #1: Analyzing Randomized Experiments

Monday, September 21: Exam #1 Review

Due:

- Problem Set #1

Wednesday, September 23: Exam #1

Monday, September 28: Describing Data

Read:

- *DSS*, §§ 3.3–3.5

Wednesday, September 30: Visualizing Data

Read:

- Schwabish, Jonathan A. 2014. “An Economist’s Guide to Visualizing Data.” *Journal of Economic Perspectives* 28 (1): 209–234
- Fry, Hannah. 2021. “When Graphs Are a Matter of Life and Death.” *The New Yorker*, June 14

Monday, October 5: Lab #2: Summarizing and Visualizing Data

Wednesday, October 7: Sampling and Survey Research

Read:

- *DSS*, §§ 3.1–3.2
- Kennedy, Courtney. 2018. “What Are Nonprobability Surveys?” *Pew Research Center*, August 6.

Due:

- Problem Set #2

Monday, October 12: Bivariate Regression

Read:

- *DSS*, Chapter 4

Wednesday, October 14: Lab #3: Bivariate Regression in R

Monday, October 19: Exam #2 Review

Due:

- Problem Set #3

Wednesday, October 21: Exam #2

Monday, October 26: Causal Inference with Observational Data

Read:

- *DSS*, §§ 5.1–5.3.1, 5.4.1, and 5.5
- Card, David, and Alan B. Krueger. 1994. “Minimum Wages and Employment: A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania.” *American Economic Review* 84 (4): 772–793

Wednesday, October 28: Multivariate Regression

Read:

- *DSS*, §§ 5.3.2 and 5.4.2
- [Are University Admissions Biased? | Simpson's Paradox Part 2](#)
- Fearon, James D., and David D. Laitin. 2003. "Ethnicity, Insurgency, and Civil War." *American Political Science Review* 97 (1): 75–90

Monday, November 2: Lab #4: Multivariate Regression in R

Due:

- Research Design Critique

Wednesday, November 4: Probability

Read:

- *DSS*, §§ 6.1–6.4

Monday, November 9: No Class — Professor Hamel at a conference

Wednesday, November 11: Sampling Variability and Inference

Read:

- *DSS*, §§ 6.5
- Mercer, Andrew, Arnold Lau, and Courtney Kennedy. 2018. "Variability of Survey Estimates." In *For Weighting Online Opt-In Samples, What Matters Most?* Pew Research Center, January 26.
- Dapena, Kara, and Paul Overberg. 2024. "Election Polls Are Fuzzy. We Explain With Kittens." *The Wall Street Journal*, August 24.

Monday, November 16: Confidence Intervals and Hypothesis Testing

Read:

- *DSS*, Chapter 7
- Lenz, Gabriel S., and Alexander Sahn. 2021. "Achieving Statistical Significance with Control Variables and Without Transparency." *Political Analysis* 29 (3): 356–369

Due:

- Problem Set #4

Wednesday, November 18: Qualitative Methods

Read:

- Collier, David. 2011. “Understanding Process Tracing.” *PS: Political Science & Politics* 44 (4): 823-830
- Cramer Walsh, Katherine. 2012. “Putting Inequality in Its Place: Rural Consciousness and the Power of Perspective.” *American Political Science Review* 106 (3): 517-532

Monday, November 23: No Class — Thanksgiving Break

Wednesday, November 25: No Class — Thanksgiving Break

Monday, November 30: Data Analysis Memo Workshop

Wednesday, December 2: Data Analysis Memo Workshop

Saturday, December 5:

Due at 12:30 PM:

- Data Analysis Memo
- Assessment Quiz