

PUBPOL 528: Quantitative Analysis II

Evans School of Public Policy & Governance
University of Washington

Spring Quarter 2026

Instructor: Luis Navarro

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Class Hours: Tuesday and Thursday, 2:30–3:50 p.m.

Location: Parrington Hall, Room 360

Office Hours: Wednesday, 3:00–4:00 p.m. (or by appointment)

Schedule Meetings: <https://calendly.com/lunavarr>

Zoom: <https://washington.zoom.us/my/lunavarr>

Teaching Assistant: Mark Nepf

Quiz Sections:

- Section AA: Fridays, 1:30–2:20 p.m. (via Zoom)
- Section AB: Fridays, 2:30–3:20 p.m. (via Zoom)

Course Description and Objectives

Statistical evidence figures prominently in many policy debates. The purpose of this course is to empower students to discern whether arguments based on this type of evidence are convincing. In many cases, statistically-based arguments are accepted uncritically (“numbers don’t lie”) or dismissed as untrustworthy (“lies, damned lies, and statistics”). A sophisticated skeptic knows the right questions to ask about a statistical analysis in order to support an informed judgment regarding its validity and relevance to policy debates. By the end of the quarter, my goal is for each student to qualify as a *sophisticated skeptic*—and, for students who are so inclined, to possess the technical skills necessary to produce convincing evidence, not just consume it. As instructor, my goal is to make you glad you took this course, from today until the end of your career.

This course is the second in a two-course sequence. PUBPOL 527 introduces statistics and probability. PUBPOL 528 deepens that foundation with applied statistical modeling and the regression framework. We will discuss how to identify the appropriate statistical technique for a given question, how to estimate and interpret causal effects, and how to critically evaluate real-world policy research. We will use a mixture of real and illustrative data, and will practice applying concepts through statistical programming in Stata and through discussion of published research.

By the end of this course, you should be able to:

1. **Formulate a research question as a statistical model.** Translate a policy question into a regression framework; identify the outcome, explanatory variables, and the estimand of interest.
2. **Estimate and interpret OLS regression coefficients.** Estimate bivariate and multiple regression models; interpret slopes, intercepts, and goodness-of-fit measures in applied policy contexts.

3. **Assess the validity of the classical assumptions.** Identify and diagnose violations of OLS assumptions (omitted variable bias, heteroskedasticity, measurement error); understand their consequences for estimation and inference.
4. **Conduct and interpret hypothesis tests.** Apply t -tests and F -tests; construct and interpret confidence intervals; distinguish statistical and practical significance.
5. **Use qualitative information in regression models.** Incorporate dummy variables and interaction terms; interpret coefficients for binary regressors and interaction effects.
6. **Select appropriate model specifications.** Choose among functional forms (linear, log, quadratic); understand the consequences of omitting or including irrelevant variables.
7. **Understand and apply methods for causal inference.** Distinguish correlation from causation; understand the potential outcomes framework; apply and critically evaluate randomized controlled trials (RCTs), panel data with fixed effects, difference-in-differences, instrumental variables, and regression discontinuity designs.
8. **Critically evaluate published empirical research.** Assess internal and external validity; identify threats to causal interpretation; communicate statistical findings clearly for policy audiences.

This course builds on the material covered in PUBPOL 527. Students should be comfortable with basic statistical concepts (means, variances, hypothesis testing) and with using Stata.

While the official coding language of the class is Stata, if you have previous programming experience using R, you are free to use it. However, coding assistance in this case will be limited from the instructor and the TA.

Course Structure and Expectations

Engaging in the Classroom

1. We meet every Tuesday and Thursday in Parrington Hall, Room 360, from 2:30–3:50 p.m. **Please plan to attend every class, arrive promptly, and remain for the full session.**
2. Most sessions have a lecture-based format with applied examples and discussion. Most Thursday sessions in assignment weeks include a structured 20-minute in-class discussion of an assigned empirical paper. **Complete the assigned readings *before* attending class.**
3. You are welcome to bring a laptop or tablet for course-related activities. All technology should be used solely for this purpose during class. Please set phones and devices to silent or “do not disturb” mode.
4. Please let me know if you plan to miss a class. While attendance is not formally graded, consistent engagement is essential to performing well—especially in a course that builds concepts week by week.
5. While you may drop by during scheduled office hours, I strongly encourage you to use [Calendly](#) to book a 15-minute appointment. Sending your questions in advance helps make the most

of our time, though this is not required. For quick questions, email me at lunavarr@uw.edu—please include “PUBPOL 528” in the subject. Office hours may also be held via Zoom ([link](#)); an appointment is required in that case.

6. By registering for this course, you agree to abide by the ethical and civil discourse norms of the Evans School and the University of Washington. At the Evans School, we value and honor each person’s experiences and perspectives. As a professional school, we have a responsibility to engage with one another—inside and outside the classroom—in a manner consistent with our values of Equity, Service, and Courage. As a community, we commit to:
 - Acknowledge, reflect on, and examine individual and systemic power, injustice, privilege, and biases.
 - Work and collaborate to expand our knowledge using empirical evidence, lived experience, storytelling, and other ways of knowing.
 - Embrace discomfort, non-closure, and disagreement.
 - Be accountable for the impact of our words and actions.
 - Give and receive feedback in ways that encourage listening, learning, and personal growth.

Academic Conduct

The Evans School and the University of Washington take academic integrity very seriously. Behaving with integrity is part of our responsibility to our shared learning community. If you are uncertain whether something constitutes academic misconduct, please contact me—I am always happy to discuss any questions you may have. The [University of Washington Student Conduct Code \(WAC 478-121\)](#) defines prohibited academic and behavioral conduct and describes how the University holds students accountable as they pursue their academic goals. Allegations of student misconduct may be referred to the appropriate campus office for investigation and resolution.

The following regulations apply to this course. A single violation will result in a zero for the assignment in question. Violations on multiple assignments will result in a zero for the course.

On Canvas quizzes:

- Quizzes are designed to be attempted by students in isolation, without interaction with others.
- You may discuss quiz questions with the instructor and TA at any time.
- You may discuss class topics with fellow students, but detailed discussion of quiz content is allowed *only after* the due date. If you have received a due-date extension, you may discuss questions with fellow students only after your extended due date.
- You may not take or possess screenshots of quiz questions.

On Stata-based problem sets:

- Collaboration is encouraged.

- Submitted code (do-files) should reflect your own text entry, not code cut-and-pasted from the work of others.
- Write-ups should reflect your own text entry. Submitting AI-generated text or five or more consecutive words composed by another person constitutes plagiarism. Quotations must be marked and accompanied by a complete bibliographic citation.

On the final project (if memo-based):

- Collaboration to discuss the work being analyzed is encouraged.
- Submitted memos should reflect your own text entry. Submitting AI-generated text or five or more consecutive words composed by another person constitutes plagiarism. Quotations must be marked and accompanied by a complete bibliographic citation.

Access and Accommodations

Your experience in this class is important to me. **If you have already established accommodations with UW DRS, please communicate your approved circumstances to me at your earliest convenience so we can discuss your needs in this course.**

If you have, or think you may have, a disability (including an invisible disability such as a learning disability, a chronic health problem, or a mental health condition) that may affect your performance as a student in class, please arrange support services and/or accommodations through UW DRS staff via disability.uw.edu or uwdrs@uw.edu or by phone at 206-543-8924. DRS provides resources and coordinates reasonable accommodations for students with disabilities and those with temporary health conditions. Reasonable accommodations are established through an interactive process between you, your instructor(s), and DRS. It is the policy and practice of the University of Washington to create inclusive and accessible learning environments consistent with federal and state law.

Religious Accommodations

Washington state law requires the University of Washington to develop a policy for the accommodation of student absences, significant hardship due to faith or conscience, or organized religious activities. The UW's policy, including more information about how to request an accommodation, is available in the [Religious Accommodations Policy](#). Accommodations must be requested within the first two weeks of this course using the [Religious Accommodations Request form](#).

Use of Artificial Intelligence and Collaboration Policy

The use of generative AI tools (such as ChatGPT, Claude, Copilot, or similar) is not permitted when completing individual assignments in this course. Such use will be considered academic misconduct and subject to investigation under the University of Washington Student Conduct Code. The assignments in this course are designed to develop your ability to read empirical research critically, interpret statistical output, and write about quantitative evidence clearly. Using AI to generate these outputs deprives you of the core learning experience.

Collaboration with peers is permitted and encouraged for conceptual discussion—talking through ideas, clarifying readings, or studying together for exams. However, all submitted work must represent your own independent analysis and writing. **Sharing files, draft text, or completed**

work with other students is strictly prohibited. If you have questions about what constitutes appropriate collaboration, please contact me before submitting.

Assessments

The evaluation is divided into four components: assignments (40%), class participation (5%), midterm exam (25%), and final project (30%).

1. **Assignments (40% total; 8% each):** Five individual assignments submitted via Canvas. Each assignment is released on Monday and due the following Tuesday before class time (2:00 p.m. PT). Assignments combine Canvas quiz questions (multiple-choice and short answer), and in some cases, Stata-based data analysis and questions based on a reading (different from the one discussed in class).
 - Assignment 1 Released: Mon. Mar. 30 Due: Tue. Apr. 14
 - Assignment 2 Released: Mon. Apr. 6 Due: Tue. Apr. 21
 - Assignment 3 Released: Mon. Apr. 13 Due: Tue. Apr. 28
 - Assignment 4 Released: Mon. May 11 Due: Tue. May 26
 - Assignment 5 Released: Mon. May 18 Due: Tue. Jun. 2
2. **Class Participation (5%):** Beginning Week 2, each Thursday of an assignment week opens with a 20-minute structured discussion of an assigned empirical paper. Students sign up on Canvas for one week during the quarter to serve as discussion leaders. Discussion leaders are responsible for introducing the paper, posing questions to the class, and helping facilitate the conversation. All students are expected to have read the assigned paper *before* class. Participation grades reflect both discussion leadership and ongoing engagement throughout the quarter.
3. **Midterm Exam (25%):** An in-person, paper-based exam held during class on **Thursday, May 7, 2026**. It covers all material from Weeks 1–5. A one-sided cheat sheet (8.5 × 11 in.) is permitted.
4. **Final Project (30%):** Released on **Tuesday, May 26, 2026** and due on **Tuesday, June 9, 2026** by midnight. Students choose one of two formats: (a) a data analysis project focused on applying econometric methods, or (b) a critical review of empirical studies that test the lessons from the course. Details will be released after the midterm.

Late Submission Policy: Late assignments will be subject to the following deductions. Waivers require instructor authorization and will only be granted in exceptional circumstances.

- 1–7 days late: –10% of total points.
- 8–14 days late: –20% of total points.
- 15–21 days late: –30% of total points.
- More than 21 days late: –50% of total points.

Grade Conversion

Your weighted average will be converted to a numeric Grade Point Average (GPA) using the UW scale below. The grade scale will not be adjusted to achieve a more favorable GPA. Your final grade is based solely on your performance on the graded components listed above. If you believe a grading error has occurred, please contact me within two weeks of receiving the grade.

- Above 96.0% → 4.0
- 94.0%–95.9% → 3.9
- 92.0%–93.9% → 3.8
- 90.0%–91.9% → 3.7
- 88.0%–89.9% → 3.6
- 86.0%–87.9% → 3.5
- 84.0%–85.9% → 3.4
- 82.0%–83.9% → 3.3
- 80.0%–81.9% → 3.2
- 78.0%–79.9% → 3.1
- 76.0%–77.9% → 3.0
- 74.0%–75.9% → 2.9
- 72.0%–73.9% → 2.8
- 70.0%–71.9% → 2.7
- Below 69.9% → 2.0

Textbooks and Materials

Main Textbook: Studenmund, A.H. *Using Econometrics: A Practical Guide*, 7th Edition, Pearson. [S]

Supplementary: Stock, J.H. & Watson, M.W. *Introduction to Econometrics*, 4th Edition, Pearson. [SW]

Optional: Wooldridge, J.M. *Introductory Econometrics: A Modern Approach*, 7th Edition, Cengage. [W]

Online (free): Huntington-Klein, N. *The Effect: An Introduction to Research Design and Causality*. theeffectbook.net [TE]

Online (free): Cunningham, S. *Causal Inference: The Mixtape*. mixtape.scunning.com [CM]

All readings will be made available via Canvas. If you wish to acquire a hard copy of the main textbook, any recent edition of Studenmund works well. The supplementary and optional texts are useful for deeper understanding but are not required for purchase.

Course Outline and Readings

The course is organized in two parts. **Part I: Foundations of Regression Analysis (Weeks 1–5)** covers the mechanics and assumptions of OLS regression, inference, and model specification. **Part II: Causal Inference (Weeks 7–9)** introduces the tools used to identify causal effects from observational data. For Weeks 7–10, I may assign additional readings of academic papers specific to each research design we study; these will be shared via Canvas as the quarter progresses. Week 6 is the Midterm. Week 10 is a project workshop and wrap-up. Week 11 is Finals Week.

Important: This outline is preliminary and subject to revision throughout the quarter.

Part I: Foundations of Regression Analysis (Weeks 1–5)

Week 1: Introduction and Bivariate Regression

Session 1: From Policy Questions to Statistical Models

Tuesday, March 31, 2026

Session Goals:

- Explain what regression analysis is and why it is useful for policy analysis.
- Distinguish between descriptive, predictive, and causal uses of regression.
- Introduce the idea of a data-generating process and the role of the error term.

Required:

- [S] Chapter 1 (Sections 1.1–1.4): An Overview of Regression Analysis
- [SW] Chapter 4 (Section 4.1): Linear Regression with One Regressor

Session 2: Linear Regression and OLS

Thursday, April 2, 2026

Session Goals:

- Derive and interpret the OLS estimator geometrically and algebraically.
- Interpret the slope, intercept, and R^2 in applied settings.
- Identify fitted values and residuals; explain what OLS minimizes.

Required:

- [S] Chapter 2 (Sections 2.1, 2.3–2.5): Ordinary Least Squares
- [SW] Chapter 4 (Sections 4.2–4.5): OLS Estimator; Measures of Fit; Least Squares Assumptions

Week 2: Multiple Regression

Session 3: Multiple Regression

Tuesday, April 7, 2026

Session Goals:

- Extend the bivariate model to multiple explanatory variables.
- Interpret partial regression coefficients (“holding other factors constant”).

Required:

- [S] Chapter 2 (Section 2.2), Chapter 3 (Sections 3.1–3.2): Multiple Regression
- [SW] Chapter 6 (Sections 6.2–6.4): Linear Regression with Multiple Regressors

Session 4: OLS Assumptions

Thursday, April 9, 2026

Session Goals:

- State and explain the assumptions required for OLS to be estimated and to be causally interpreted.
- Identify which assumptions are most likely to fail in policy data and what the consequences are.

Required:

- [S] Chapter 4: The Classical Assumptions
- [SW] Chapter 6 (Section 6.5): Least Squares Assumptions for Causal Inference

Discussion 1: Bahl, R., & Duncombe, W. (1993). State and Local Debt Burdens in the 1980s: A Study in Contrast. *Public Administration Review*, 53(1), 31–40. [UW Library link]

Week 3: Inference and Dummy Variables

Session 5: Inference and Hypothesis Testing

Tuesday, April 14, 2026

Session Goals:

- Conduct and interpret t -tests for regression coefficients.
- Construct and interpret confidence intervals.
- Conduct F -tests for joint significance; distinguish statistical from practical significance.

Required:

- [S] Chapter 5: Hypothesis Testing and Statistical Inference
- [SW] Chapter 5 (Sections 5.1–5.3), Chapter 7 (Sections 7.1–7.4): t -tests; Confidence Intervals; F -tests

Note: Assignment 1 is due Tuesday, April 14.

Session 6: Dummy Variables

Thursday, April 16, 2026

Session Goals:

- Incorporate binary and categorical variables into regression models.
- Interpret coefficients on dummy variables as differences relative to a reference group.

Required:

- [S] Chapter 3 (Section 3.3), Chapter 7 (Section 7.4): Dummy Variables; Interactions
- [SW] Chapter 8 (Sections 8.2–8.3): Nonlinear Functions; Interactions and Binary Variables

Discussion 2: Carpenter, C. S., Feir, D., Pendakur, K., & Warman, C. (2026). Nonbinary and Transgender Identities and Earnings: Evidence from a National Census. *American Economic Review: Insights*, 8(1), 36–52. [UW Library link]

Week 4: Standard Errors and Validity

Session 7: Standard Errors

Tuesday, April 21, 2026

Session Goals:

- Explain heteroskedasticity: what it is, how to detect it, and its consequences for inference.
- Understand robust (heteroskedasticity-consistent) standard errors and when to use them.
- Introduce the concept of clustered standard errors for grouped data.

Required:

- [S] Chapter 10: Heteroskedasticity

- [SW] Chapter 5 (Section 5.4): Heteroskedasticity and Homoskedasticity; Robust Standard Errors
- [CM] Sections 2.25–2.27 (Online)

Note: Assignment 2 is due Tuesday, April 21.

Session 8: Internal, External, and Construct Validity; Data Problems Thursday, April 23, 2026

Session Goals:

- Define internal and external validity; identify common threats to each.
- Understand construct validity and the challenge of measuring abstract concepts.
- Discuss common data problems: measurement error, missing data, sample selection, and outliers.

Required:

- [SW] Chapter 9 (Sections 9.1–9.2): Internal and External Validity; Threats to Internal Validity
- [W] Chapter 9 (Sections 9.1–9.2): More on Specification and Data Problems (Measurement Error; Missing Data)

Discussion 3: Borge, L.-E., Tovmo, P., & Falch, T. (2008). Public Sector Efficiency: The Roles of Political and Budgetary Institutions, Fiscal Capacity, and Democratic Participation. *Public Choice*, 136(3), 475–495. [UW Library link]

Week 5: Model Specification

Session 9: Model Specification: Choosing the Right Variables Tuesday, April 28, 2026

Session Goals:

- Understand the consequences of including irrelevant variables or omitting relevant ones.
- Apply the omitted variable bias formula to assess the direction of bias in specific applications.
- Diagnose and handle multicollinearity; distinguish it from omitted variable bias.

Required:

- [S] Chapter 6: Model Specification—Choosing the Right Variables; Chapter 8: Multicollinearity
- [SW] Chapter 6 (Section 6.1): Omitted Variable Bias

Note: Assignment 3 is due Tuesday, April 28.

Session 10: Model Specification: Functional Form

Thursday, April 30, 2026

Session Goals:

- Compare linear, log-linear, log-log, and quadratic functional forms; choose among them based on theory and fit.
- Interpret slope coefficients when variables are in logarithms (elasticities).
- Understand interaction terms and how they allow effects to differ across groups.

Required:

- [S] Chapter 7 (Sections 7.1–7.3, 7.5): Choosing a Functional Form
- [SW] Chapter 8: Nonlinear Regression Functions; Polynomials and Logarithms

Discussion 4: Mustard, D. B. (2001). Racial, Ethnic, and Gender Disparities in Sentencing: Evidence from the U.S. Federal Courts. *Journal of Law & Economics*, 44(1), 285–314. [UW Library link]

Midterm (Week 6)

Week 6: Midterm

Session 11: Midterm Review

Tuesday, May 5, 2026

Note: Comprehensive review of Sessions 1–10. No new reading. Bring questions. We will work through practice problems and clarify concepts from Part I.

Session 12: Midterm Exam

Thursday, May 7, 2026

Note: In-person, paper-based exam. Covers all material from Sessions 1–10 (Weeks 1–5). One cheat sheet (one side of a standard 8.5 × 11 in. sheet) is permitted.

Part II: Causal Inference (Weeks 7–9)

Week 7: Binary Outcomes and Causal Inference

Session 13: Binary Dependent Variables

Tuesday, May 12, 2026

Session Goals:

- Explain why OLS may be inadequate when the outcome is binary.
- Interpret the Linear Probability Model (LPM); understand its limitations.
- Introduce probit and logit models; interpret marginal effects.

Required:

- [S] Chapter 13: Dummy Dependent Variable Techniques

- [SW] Chapter 11: Regression with a Binary Dependent Variable

Note: Assignment 4 is due Tuesday, May 26. Released Monday, May 11.

Session 14: Causal Inference: Randomized Controlled Trials Thursday, May 14, 2026

Session Goals:

- Introduce the potential outcomes framework and the fundamental problem of causal inference.
- Explain why randomization identifies the average treatment effect (ATE).
- Critically evaluate an RCT study: threats to internal validity, attrition, and compliance.

Required:

- [S] Chapter 16 (Section 16.1): Introduction to Causal Inference
- [SW] Chapter 13 (Sections 13.1–13.2): Potential Outcomes; Causal Effects; Randomized Controlled Experiments

Discussion 5: Baicker, K., Taubman, S. L., Allen, H. L., Bernstein, M., Gruber, J. H., Newhouse, J. P., Schneider, E. C., Wright, B. J., Zaslavsky, A. M., & Finkelstein, A. N. (2013). The Oregon Experiment—Effects of Medicaid on Clinical Outcomes. *New England Journal of Medicine*, 368(18), 1713–1722. [UW Library link]

Week 8: Panel Data and Differences-in-Differences

Session 15: Panel Data and Fixed Effects

Tuesday, May 19, 2026

Session Goals:

- Explain what panel data are and why they are valuable for causal inference.
- Understand how fixed effects remove time-invariant confounders.
- Distinguish within-unit from between-unit variation; interpret fixed-effects estimates.

Required:

- [S] Chapter 16 (Sections 16.2–16.3): Panel Data; Fixed vs. Random Effects
- [SW] Chapter 10 (Sections 10.1–10.5): Regression with Panel Data; Fixed Effects; Two-Way Fixed Effects

Note: Assignment 5 is due Tuesday, June 2. Released Monday, May 18.

Session 16: Differences-in-Differences

Thursday, May 21, 2026

Session Goals:

- Explain the DiD estimator and the parallel trends assumption.
- Implement DiD in a regression framework; interpret the interaction coefficient.

- Assess threats to DiD validity: parallel trends violations, spillovers, anticipation effects.

Required:

- [SW] Chapter 13 (Sections 13.4–13.5): Quasi-Experiments; Differences-in-Differences
- [W] Chapter 13 (Sections 13.1–13.3): Pooled Cross Sections; Difference-in-Differences
- [CM] Chapters 8–9 ([Online](#))

Discussion 6: Alpert, A., Powell, D., & Pacula, R. L. (2018). Supply-Side Drug Policy in the Presence of Substitutes: Evidence from the Introduction of Abuse-Deterrent Opioids. *American Economic Journal: Economic Policy*, 10(4), 1–35. [[UW Library link](#)]

Week 9: Instrumental Variables and Regression Discontinuity

Session 17: Instrumental Variables

Tuesday, May 26, 2026

Session Goals:

- Explain the problem of endogeneity and why OLS fails in that setting.
- State the two conditions for a valid instrument (relevance and exclusion).
- Understand the two-stage least squares (2SLS) estimator and its interpretation.

Required:

- [S] Chapter 14 (Sections on IV): Instrumental Variables
- [SW] Chapter 12 (Sections 12.1–12.4): Instrumental Variables Regression; Two-Stage Least Squares; Weak Instruments
- [CM] Chapter 7 ([Online](#))

Session 18: Regression Discontinuity Designs

Thursday, May 28, 2026

Session Goals:

- Explain the logic of regression discontinuity: a threshold rule creates quasi-random assignment.
- Distinguish sharp from fuzzy RD; understand the local average treatment effect (LATE).
- Assess validity: continuity of the running variable, density tests, and placebo checks.

Required:

- [SW] Chapter 13 (Section 13.4): Regression Discontinuity Designs
- [CM] Chapter 6 ([Online](#))

Discussion 7: Paper TBD. Details to be announced via Canvas. **Final project released Tuesday, May 26.**

Weeks 10–11: Wrap-Up and Finals

Week 10: Wrap-Up

Session 19: Optional Topic or Project Workshop

Tuesday, June 2, 2026

Note: This session will be used for an optional advanced topic or a project workshop, depending on course progress. No new required reading. Assignment 5 is due today.

Session 20: Wrap-Up

Thursday, June 4, 2026

Note: Course review and open Q&A. We will revisit the key ideas from each part of the course and discuss how they connect to your work as policy analysts. No new reading.

Week 11: Finals Week

Session 21

Tuesday, June 9, 2026

Note: Finals week. **Final project due by midnight (11:59 p.m. PT).** Submitted via Canvas.

Session 22

Thursday, June 11, 2026

Note: Finals week. No class meeting.

Session-by-Session Overview

The following list summarizes each session in order, with its date, topic, and required readings. Sessions are numbered consecutively across the quarter. **Important: This overview is preliminary and subject to change throughout the quarter.**

Part I: Foundations of Regression Analysis (Weeks 1–5)

1. **Mar. 31** — From Policy Questions to Statistical Models
Required: [S] Ch. 1 (Sec. 1.1–1.4); [SW] Ch. 4 (Sec. 4.1)
2. **Apr. 2** — Linear Regression and OLS
Required: [S] Ch. 2 (Sec. 2.1, 2.3–2.5); [SW] Ch. 4 (Sec. 4.2–4.5)
3. **Apr. 7** — Multiple Regression
Required: [S] Ch. 2 (Sec. 2.2), Ch. 3 (Sec. 3.1–3.2); [SW] Ch. 6 (Sec. 6.2–6.4)
4. **Apr. 9** — OLS Assumptions [*Discussion 1: Bahl & Duncombe (1993)*]
Required: [S] Ch. 4; [SW] Ch. 6 (Sec. 6.5)
5. **Apr. 14** — Inference and Hypothesis Testing [*Assignment 1 due*]
Required: [S] Ch. 5; [SW] Ch. 5 (Sec. 5.1–5.3), Ch. 7 (Sec. 7.1–7.4)
6. **Apr. 16** — Dummy Variables [*Discussion 2: Carpenter et al. (2026)*]
Required: [S] Ch. 3 (Sec. 3.3), Ch. 7 (Sec. 7.4); [SW] Ch. 8 (Sec. 8.2–8.3)
7. **Apr. 21** — Standard Errors [*Assignment 2 due*]
Required: [S] Ch. 10; [SW] Ch. 5 (Sec. 5.4); [CM] Sec. 2.25–2.27 (Online)
8. **Apr. 23** — Internal, External, and Construct Validity; Data Problems [*Discussion 3: Borge, Tovmo, & Falch (2008)*]
Required: [SW] Ch. 9 (Sec. 9.1–9.2); [W] Ch. 9 (Sec. 9.1–9.2)
9. **Apr. 28** — Model Specification: Choosing the Right Variables [*Assignment 3 due*]
Required: [S] Ch. 6, Ch. 8; [SW] Ch. 6 (Sec. 6.1)
10. **Apr. 30** — Model Specification: Functional Form [*Discussion 4: Mustard (2001)*]
Required: [S] Ch. 7 (Sec. 7.1–7.3, 7.5); [SW] Ch. 8

Week 6: Midterm

11. **May 5** — Midterm Review (no new reading)
12. **May 7** — **Midterm Exam** (covers Sessions 1–10)

Part II: Causal Inference (Weeks 7–9)

13. **May 12** — Binary Dependent Variables [*Assignment 4 released*]
Required: [S] Ch. 13; [SW] Ch. 11

14. **May 14** — Causal Inference: RCTs [Discussion 5: Baicker et al. (2013)]
Required: [S] Ch. 16 (Sec. 16.1); [SW] Ch. 13 (Sec. 13.1–13.2)
15. **May 19** — Panel Data and Fixed Effects [Assignment 5 released]
Required: [S] Ch. 16 (Sec. 16.2–16.3); [SW] Ch. 10 (Sec. 10.1–10.5)
16. **May 21** — Differences-in-Differences [Discussion 6: Alpert, Powell, & Pacula (2018)]
Required: [SW] Ch. 13 (Sec. 13.4–13.5); [W] Ch. 13 (Sec. 13.1–13.3); [CM] Ch. 8–9 (Online)
17. **May 26** — Instrumental Variables [Assignment 4 due; Final project released]
Required: [S] Ch. 14; [SW] Ch. 12 (Sec. 12.1–12.4); [CM] Ch. 7 (Online)
18. **May 28** — Regression Discontinuity [Discussion 7: TBD]
Required: [SW] Ch. 13 (Sec. 13.4); [CM] Ch. 6 (Online)

Weeks 10–11: Wrap-Up and Finals

19. **Jun. 2** — Optional Topic or Project Workshop [Assignment 5 due]
20. **Jun. 4** — Wrap-Up (no new reading)
21. **Jun. 9** — **Finals Week. Final project due (midnight)**
22. **Jun. 11** — Finals Week. No class meeting.

Papers for In-Class Discussion

1. **Discussion 1** (Thu. Apr. 9) — Bahl, R., & Duncombe, W. (1993). State and Local Debt Burdens in the 1980s: A Study in Contrast. *Public Administration Review*, 53(1), 31–40. <https://doi.org/10.2307/977274>
[UW Library permalink](#)
2. **Discussion 2** (Thu. Apr. 16) — Carpenter, C. S., Feir, D., Pendakur, K., & Warman, C. (2026). Nonbinary and Transgender Identities and Earnings: Evidence from a National Census. *American Economic Review: Insights*, 8(1), 36–52. <https://doi.org/10.1257/aeri.20240571>
[UW Library permalink](#)
3. **Discussion 3** (Thu. Apr. 23) — Borge, L.-E., Tovmo, P., & Falch, T. (2008). Public Sector Efficiency: The Roles of Political and Budgetary Institutions, Fiscal Capacity, and Democratic Participation. *Public Choice*, 136(3), 475–495.
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4. **Discussion 4** (Thu. Apr. 30) — Mustard, D. B. (2001). Racial, Ethnic, and Gender Disparities in Sentencing: Evidence from the U.S. Federal Courts. *Journal of Law & Economics*, 44(1), 285–314. <https://doi.org/10.1086/320276>
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5. **Discussion 5** (Thu. May 14) — Baicker, K., Taubman, S. L., Allen, H. L., Bernstein, M., Gruber, J. H., Newhouse, J. P., Schneider, E. C., Wright, B. J., Zaslavsky, A. M., & Finkelstein,

A. N. (2013). The Oregon Experiment—Effects of Medicaid on Clinical Outcomes. *New England Journal of Medicine*, 368(18), 1713–1722. <https://doi.org/10.1056/NEJMsa1212321>
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6. **Discussion 6** (Thu. May 21) — Alpert, A., Powell, D., & Pacula, R. L. (2018). Supply-Side Drug Policy in the Presence of Substitutes: Evidence from the Introduction of Abuse-Deterrent Opioids. *American Economic Journal: Economic Policy*, 10(4), 1–35. <https://doi.org/10.1257/pol.20170082>
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7. **Discussion 7** (Thu. May 28) — TBD. Details will be announced via Canvas.