PP 480
CGU Public Policy
Nature of Inquiry: Introduction to Data and Research Design in Social Science
Fall 2022

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Class Schedule
Semester start/end dates: August 30-December 13
Meeting day, time: Tuesdays 1-3:50 PM
Class Location: Burkle 22

Important dates
Midterm: Week of October 18
Thanksgiving Break: November 22
Final: Week of December 13

Instructor Feedback and Communication
The best way to get in touch with me is email. I will do my best to respond to email within 1 business day.

Course Description
The main goal of this course is to introduce students to interpreting and collecting data to answer social science questions. With respect to interpretation, students will learn how to define correlations and causal effects. This overview will include an introduction to the idea of regression and the basics of design-based causal inference. With respect to collecting data, students will survey fundamental concepts of measurement. The course will proceed in four units: establishing common definitions and concepts, learning how to describe relationships, what it means to establish causality and common methods to do so, and issues of measurement.
This is a foundational course for any Ph.D. in social science.
Credit/Units: 4

Background Preparation (Prerequisites)
Prerequisites: None

Student Learning Outcomes

Upon success completion of this course, you will be able to:

1. Find and describe relationships in quantitative data
2. Understand the difference between a correlation and causation
3. Identify whether or not a trend is causally identified

4. Interpret findings in cutting-edge social science research
5. Design a data collection plan for your own research ideas

Texts and Journal References

We will rely heavily on Thinking Clearly with Data: A Guide to Quantitative Reasoning and Analysis by Ethan Bueno de Mesquita and Anthony Fowler. It is available here.

All materials will be provided online through Canvas. Check the "Files" section of Canvas. Required materials will also be linked within the syllabus.

Unit	Session	Date	Topic	Reading/Assignments due
Definitions	1	8/30	Introductions, datasets, and the unit of analysis	Thinking Clearly with Data (TCD) Chapter 1
	2	9/6	Correlation	TCD Chapter 2 and 4
	3	9/13	Causation	Homework #1 due, beginning of class TCD Chapter 3
Describing relationships	4	9/20	The regression line, tabulation, visualization	TCD Chapter 5 Edward Tufte, "Visual and Statistical Thinking: Displays of Evidence for Making Decisions."
	5	9/27	Sampling and uncertainty	Homework #2 due, beginning of class TCD Chapter 6
	6	10/ 4	External validity and case selection	Barbara Geddes, Paradigms and Sand Castles, pp. 89-114 TCD Chapter 8
Establishing causation	7	10/11	Counterfactuals and bias	Homework #3 due, beginning of class TCD Chapter 9
	8	10/18	Midterm	
	9	10/25	Controlling for confounders and matching	TCD Chapter 10 Jasjeet S. Sekhon. "Opiates for the matches: Matching methods for causal inference." Annual Review of Political Science, 2009.
	10	11/1	Experiments	Homework #4 due, beginning of class TCD Chapter 11

				Macartan Humphreys and Jeremy Weinstein, "Field Experiments and the Political Economy of Development." Annual Review of Political Science, 2009.
	11	11/8	Natural experiments	Thad Dunning, Natural Experiments in the Social Sciences pp. 1-21, 48- 62, 235-43, 300-2 Jasjeet Sekhon and Rocio Titiunik, "When Natural Experiments Are Neither Natural nor Experiments," American Political Science Review, 2012. JSTOR.
	12	11/15	Regression discontinuity	Homework #5 due, beginning of class TCD Chapter 12 Dunning, Thad. 2012. Natural Experiments in the Social Sciences, pp. 63-87
		11/22	Thanksgiving, no class	
	13	11/29	Difference-in-differences	TCD Chapter 13
Measurement	14	12/6	Measurement	Homework #6 due, beginning of class Phillips Schively. The Craft of Political Research. Chs. 4-5 TCD Chapter 16
	15	12/13	Final	

Assignments and Assessments

You will complete 6 homework assignments throughout the semester (due dates listed in the schedule). You may complete the assignments in groups, but each individual student must turn something in. Please list who you have worked with at the top of each assignment. Assignments should be submitted online through Canvas.

There will also be a Midterm (week of October 18) and a Final (week of December 13). You will have 48 hours to complete these assessments. The exams will be open book.

Active participation is a fundamental component of this class. There are many ways to participate. You can ask questions or respond to my queries in class. Most sessions will include group exercises, and you can participate by working with your partners or presenting your findings to the class.

Another option for participation is the Methodology Forum. Post questions about methodology that come up in this class or in your readings for other classes. I will attempt to answer these questions at the beginning of every session. These questions can be anything, including how to read a table, the meaning of a term, or why an author used a specific methodology.

Expectations and Logistics

Each of the class sessions will be backed by the readings included in the schedule. You can decide whether to tackle the readings before or after class. It may be most effective to do both.

Please submit assignments through Canvas. Assignments submitted in any other way will not be graded.

Late assignments will typically incur a half grade letter penalty per day unless you have a reasonable excuse.

You can expect feedback on your assignments in XX days.

Grading Plan

Class Element	Weight
Participation	20%
Homework assignments	30%
Midterm	25%
Final	25%

University Resources for Students

Access to university resources and policies can be found in Canvas using the left navigation menu.

Final Grades

Your grade will be calculated using the following scale. Grades with plus or minus designations are at the professor's discretion.

Letter Grade	Grade Point	Description	Learning Outcome
A	4.0	Complete mastery of course material and additional insight beyond course material	Insightful
B	3.0	Complete mastery of course material	Proficient
C	2.0	Gaps in mastery of course material; not at level expected by the program	Developing
U	0.0	Unsatisfactory	Ineffective

In exceptional circumstances (e.g., illness) that prevent a student from completing assigned coursework, and provided that the student's work to date is satisfactory, the instructor may assign an I (Incomplete) grade along with a date for successful submission of course assignments and requirements.

Continual matriculation at CGU requires a minimum grade point average (GPA) of 3.0 in all coursework taken at CGU. Students may not have more than two incompletes at one time.

CGU policies on grades, including incomplete grades, registration and enrollment can be found on the Registrar's webpage: http://www.cgu.edu/registrar.