POLS 7014: Intermediate Political Methodology

Spring 2021
Mondays, 3:35-6:35pm
International Affairs Building, Room 214

Course Instructor: Dr. Mollie Cohen
Office: International Affairs 311
Office Hours: Th: 3-5pm [on Zoom]
Email: mj.cohen@uga.edu

Course Description:

This course presents an introduction to commonly used statistical tools for conducting causal and descriptive inference. Chief among these is ordinary least squares (OLS) regression, one of the most commonly used methodological tools in the social sciences. We will spend most the semester building up and breaking down this foundational model, with additional time devoted to special topics. By the end of the semester, students should understand how OLS models are estimated, the assumptions on which these models rest, and the consequences of violations of these assumptions. Students should also be able to read and interpret regression tables, and to estimate multiple regression models using standard statistical software packages.

Required Readings:

Required:

- Wooldridge, JM. 2009. *Introductory Econometrics: A Modern Approach.*

Recommended:

- Angrist, Joshua D., and Jörn-Steffen Pischke. 2008. *Mostly harmless econometrics: An empiricist's companion*. Princeton university press.
- Imai, Kosuke. 2018. *Quantitative social science: An introduction*. Princeton University Press.
- Freedman, David A. 2009. *Statistical models: theory and practice*. Cambridge University Press.

Course Requirements:

Reading: You are responsible for reading all assigned material for each class period. In rare cases, readings may be adjusted during the semester.

Problem Sets and Office Hours: There are nine problem sets over the course of the semester. Problem sets are *due by 5pm on the Saturday after the class in which they are assigned*, and are worth 5 points each.

Most of the assignments in this class will require you to spend a significant amount of time computing. Trouble shooting code can be extremely frustrating and time consuming, but the best way to learn how to code is to make and fix your own errors. You should therefore plan to spend several hours on problem sets that include a coding component. You are expected to communicate and collaborate with your peers about computing challenges. Because I expect you will be trouble shooting with your group, the final code you submit may be very similar. However, ***the write up for all assignments must be yours and yours alone***. You will receive assignments in class on Monday and my **office hours** are on Thursdays. If you choose to attend office hours for help with problem sets, you must bring: 1. your complete, commented code, and 2. a detailed description of your attempts to resolve the issue.

You can also reach out to the **IA Data Helpdesk**, which is currently staffed by Linan Jia (linan.jia25@uga.edu) for help with the programming components of your problem sets, or with other questions about the content from this class.

Final Paper: There are no exams for this class. Instead, you are expected to write a 25-30-page academic paper. You may replicate and extend the analysis from an existing paper or create an original model of your own. All papers must include an introduction, theory section, a multiple regression model, tests for violations of assumptions, and a complete list of referenced work (this does not count toward the page limit). You must also turn in your complete, commented code and datasets for replication. More detailed instructions will be provided in class.

Final Presentation: During the last weeks of class, you will give a 12-minute conference-style presentation of your final paper. In addition to giving the presentation, you are expected to engage actively with comments and questions from your classmates, and to incorporate this feedback into the final paper draft. More detailed instructions will be provided in class.

Computing: Many of your problem sets will require you to use statistical computing software. During class, we will walk through examples of the skills from your problem sets using Stata. SPIA has provided you with a free, short-term Stata license for your personal computers so that you can participate in these in-class exercises and complete your problem sets from home, if necessary. You may use Stata or R, but you must include complete, commented code so that your results can be replicated by someone with no knowledge of the project.

Course Grade:

45% Problem Sets
45% Final Paper
10% Final project presentation

Late or Missed Assignments:

If you do not complete assignments, you will receive a zero for the assignment unless you have a medical excuse, religious obligation, or family emergency. Late final papers will receive an immediate deduction of half a letter grade, and an additional half letter grade per day late.

Special Considerations for Covid-19: Please take note of the below special considerations for participating in this class during the pandemic.

1. If you experience symptoms consistent with Covid-19, or are exposed to someone who has tested positive for Covid-19, ***DO NOT ATTEND CLASS.*** Report your exposure and any symptoms immediately through the Dawg Check app and seek a test as soon as possible.

   It is necessary to meet assignment deadlines in this class. However, if you are ill, you might find yourself physically unable to complete your work on time. If this happens, ***DO NOT PANIC***. Do reach out to me as soon as possible, so we can find a solution and ensure you get credit for your work as you are able to complete it.

2. The first class will be conducted online; you will receive a link via email in the week prior to the first class session. ***You will not be punished in any way for exclusively participating in this class online.***

Academic Honesty Policy:

The academic honesty policy of the university is supplemented (not replaced) by an Honor Code which was adopted by the Student Government Association and approved by the University Council May 1, 1997, and provides: "I will be academically honest in all of my academic work and will not tolerate academic dishonesty of others." All students agree to abide by this code by signing the UGA Admissions Application.

Course Outline

January 25. Why are we here?

- Reading:
  - Wooldridge, Ch. 1

February 1. Probability, t-tests, differences of means

- Reading:
  - Wonnacott & Wonnacott (Chs. 8-9) [on eLC]

Problem set 1 [due 2/13]

February 8. OLS: Simple regression model

- Reading: Wooldridge, Ch. 2

Problem set 2 [due 2/20]

February 15. OLS: Multiple regression model

- Reading: Wooldridge, Ch. 3

Problem set 3 [due 2/27]

February 22. Hypothesis Testing

- Reading: Wooldridge, Ch. 4

Problem set 4 [due 3/6]

March 1. Paper meetings I: bring your project proposal to your allotted meeting time

March 8. Paper meetings II: bring your project proposal to your allotted meeting time

March 15. Broken Assumptions (1)

- Reading: Wooldridge, Ch. 5

Problem set 5 [due 3/27]

March 22. Broken Assumptions (2)

- Reading: Wooldridge, Ch. 8

Problem set 6 [due 4/3]

March 29. Broken assumptions (3)

- Reading: TBD

Problem set 7 [due 4/10]

April 5. Interactions

- Reading: Wooldridge, Ch. 6

Problem set 8 [due 4/17]

April 12. Dummy variables

- Reading: Wooldridge, Ch. 7

Problem set 9 [due 4/24]

April 19. Special topics/ review

- Reading: TBD

April 26. Paper presentations I

May 3. Paper presentations II

Final paper due electronically May 11, by 12pm (noon)