

Syllabus

PSC 405/504 - Causal Inference

Professor & Term: Anderson Frey, Spring 2020

Room & Time: HARK 329, TR 9:40-10:55am

Office & Hours: HARK 320B, TR 1:30-2:30pm

Email: anderson.frey@rochester.edu

Teaching Assistant: Varun Karekurve Ramac

Office & Hours: TBD

Email: varun@rochester.edu

Overview The goal of this course is to give students a comprehensive toolbox for reading and producing cutting-edge applied empirical research, with focus on the theory and practice behind causal inference in social sciences. We will cover methods such as experiments, differences-in-differences,

Most commonly, referee reports also address the article's fit for the journal, and its contribution to the literature. This is not necessary for the purpose of this assignment.

Assignments The assignments consist of a mix of computer simulations, data analysis, and paper replications. All sufficiently attempted work will be graded on a (+, -) scale. Assignments should be typed on the computer. I strongly advise students to use Latex, as it has a much better handling of mathematical equations than the average word processor.

Final Project Students will write a short empirical paper that applies methods learned in this class to a research question of their choice. The paper should be 5-10 pages in length and focus on the research question, data, empirical strategy, results, and conclusions. You also need to submit a copy of your code, allowing me to replicate the main results. Students are free to choose any topic they want, as long as they have a clear research question that concerns the causal effect of some institution, policy, or event on some outcome of interest. If you decide write a replication paper, you should go beyond the original analysis in some significant way by applying the techniques learned in the course. Students will present their project to the class. Two days before the presentation, students should email the first draft of the project to the entire class. Everyone is expected to read all these submissions prior to the student presentations that follow. After the presentations, there will be time for questions and discussion.

Books

- Angrist, Joshua D. and Jorn-Steen Pischke. 2008. *Mostly Harmless Econometrics: An Empiricist's Companion*. Princeton University Press.
- Morgan, Stephen L. and Christopher Winship. 2014. *Counterfactuals and Causal Inference: Methods and Principles for Scientific Research*. Cambridge University Press.