**Description:** This course is designed for students who want to acquire knowledge of research methods used in empirical microeconomics. It is entitled “Empirical Methods in Public Economics”. However, the scope of the papers discussed in this course is not restricted to public economics. Rather, it is intended to address the needs of students who want to conduct research in applied microeconomics in general, including industrial organization and labor economics.

This course focuses on the application of methods, rather than their theoretical properties. That is, the emphasis of the course will be on understanding how the nature of the research question, the structure of the data, and the context together influence the design of empirical strategies.

The context of applications will often be political economy. But, you are not required to have background knowledge of political economy. Many political economy questions that we discuss in this course will be intuitive and familiar to students without knowledge of the field. The contexts also include various other fields such as labor economics, development economics, and industrial organization.

As for the methods covered, the primary emphasis will be on reduced-form methods for the first half of the semester, while it will be on structural methods for the second half of the semester. By the end of the course, you will have acquired a clear understanding of the role that institutional knowledge plays in identification of causal effects as well as the role that theoretical reasoning plays in policy simulations and welfare evaluations in empirical research.

**Pre-requisites:** There are no pre-requisites other than econometrics at the level of first-year economics Ph.D. coursework. Students who did not take the first-year Ph.D. courses in econometrics should ask for instructors’ permission before enrolling or sitting in the course.

**Instructor’s office hours:** By appointment at Uris 436

**Requirements:** All students are required to read the papers in the course outline carefully every week and actively participate in the class discussion. You will also have to do a presentation of a research paper, write a 5-page original research proposal, and present your proposal by the end of the semester. Your research proposal does not have to be on public economics. But, it should be on empirical microeconomics.

**Evaluation:** Presentation of a research paper (40%), Research Proposal and its Presentation (40%), and Class Participation (20%)

**Due dates:** A paper for presentation needs to be chosen by Feb 19. A written research proposal is due May 23.
Course Outline

Week 1 (Jan 27 & Feb 1)

Overview of Topics; Identification problem


Week 2 (Feb 3 & Feb 8)

Experiments


Week 3 (Feb 10 & Feb 22)  Note: There will be no class on Feb 17.

Natural Experiments


Week 4 (Feb 24 & Feb 29)

Weak Identification and Altonji-Elder-Taber Test


Week 5 (Mar 2 & Mar 7)

Regression Discontinuity Design


Week 6 (Mar 9 & Mar 14)

Structural Estimation of Static Models – Part I: Applications in Political Economy


Week 7 (Mar 16 & Mar 21)

Structural Estimation of Static Models – Part II: Applications in IO


Weeks 8 and 9 (Mar 23, April 4, April 6, and April 11)

Structural Estimation of Dynamic Models – Part I: Nested Fixed Point Algorithm


Week 10 (April 13)

Structural Estimation of Dynamic Models, Part II – CCP method


Week 10 and 11 (April 18, April 20 & April 25)

Structural Estimation of Dynamic Models, Part III – BBL method


  https://lim.economics.cornell.edu/main.pdf

Week 12 –14 (April 27 – May 11): Proposal Presentations