Course description: The goal of this course is to provide an overview of modern empirical tools for conducting research in labor economics and related fields. Since most applied economic research examines questions with direct policy implications, this course will focus on methods for estimating causal effects. You should emerge from this course with a solid understanding of applied econometric techniques used in policy analysis. An additional goal of the course is to gain fluency in the statistical package Stata. You are welcome to use the statistical program of your choice for assignments, but all answer keys and other support I can offer will be relevant only for Stata. If you do not own Stata you can run it on the FRE departmental server, or Stata/IC can be rented for 6 months by students from the Stata website (do not rent Small Stata).

The readings in the class will be a combination of references that cover the technical details of the different methods we will be learning about and applications from the literature in labor, public, and development economics. We will make heavy use of Angrist and Pischke’s book Mostly Harmless Econometrics (MHE). Other helpful references include:

- Imbens, Guido and Jeffrey Wooldridge. “What’s New in Econometrics?” (WNE in the reading list). [http://www.nber.org/minicourse3.html](http://www.nber.org/minicourse3.html). This is a set of lecture notes, slides, and videos describing many of the tools we will be using in the class.

Many other useful sources of information on Stata can be found by searching online. I also recommend joining the Stata listserv: [http://www.stata.com/statalist](http://www.stata.com/statalist)

Course requirements:

**Class participation (20%)**: Every Thursday I will provide an overview of a different methodological issue in applied policy analysis. You will prepare by reading an assigned chapter from MHE (or another assigned source) with the option to read additional background material.

At the end of Thursday’s class I will assign up to three empirical papers relevant to our current discussion. On Tuesdays one of you will volunteer (or risk being called upon) to start the discussion of one of the assigned papers. You should approach your comments on the paper as if you had been asked to be a discussant at a conference. Here are some clues as to what that means:
http://chrisblattman.com/2010/02/22/the-discussants-art/. To this list of suggestions I would add “be brief.” Given the nature of this course, you should always be able to state the hypothesis being tested in a given paper and the identification strategy employed by the authors.

**Empirical problem sets (25%)**: There will be around 4 empirical problem sets that involve applications of the methods discussed in class. You are encouraged to work together on the problem sets but you must turn in your own work. All problem set solutions should be accompanied by your Stata log file. The log file should include enough comments so that I can easily find the section of code and output that correspond to any given section of your problem set.

**Referee report project (25%)**: The third class requirement is to write a referee report, which is due April 17th. Early in the semester I will distribute a list of unpublished papers from labor/public/development economics. In general, the purpose of a referee report is to assist a journal editor in deciding whether to pursue publication of a paper, and if so, which revisions to request. Your report should therefore detail—in your own words—the paper’s contribution to the literature, key weakness(es), and thoughts on/recommendations for future improvement. Your completed report should be no longer than 3 (single-spaced) pages including references, size 12 font with 1 inch margins. Please work on your report independently. (You can consult with me; however, do not consult with your classmates.) I will give you sample referee reports to assist in this project.

**Replication project (30%)**: This project will be to replicate (as best possible) the key results in Angrist and Krueger, “Does Compulsory School Attendance Affect Schooling and Earnings?” Quarterly Journal of Economics, 106, 979-1014. This paper uses data from compulsory schooling laws (which they provide in an appendix) and from the 1960, 1970, and 1980 US censuses. You only need to focus on the results that are based on the 1980 Census. Your replication is due April 22. Because extracting and cleaning data takes time, you should start on this project as soon as possible. Early in the course, I will distribute a list of dates by which you should have accomplished various aspects of the project. Successful completion of the project will require that you submit evidence of your progress on these dates.

If you wish to do an alternate data-based project, talk to me within the first two weeks of class about this option. I am open to students pursuing their own projects, but want to make sure the ball gets rolling quickly.

**Course outline**:

**Week 1**: Introduction to the Rubin Causal Model and the program evaluation approach to causal inference

**Week 2**: Randomized experiments

**Week 3**: Estimation of average treatment effects using linear regression

**Week 4**: Matching methods; matching versus regression

**Week 5**: Instrumental variables: the basics

**Week 6**: Instrumental variables: local average treatment effects

**Week 7**: Difference-in-differences and fixed effects methods

**Week 8**: Dynamic difference-in-differences and synthetic case control methods

**Week 9**: Regression discontinuity designs

**Week 10**: Issues in statistical inference: clustering and adjusting for multiple hypotheses

**Week 11**: Quantile methods and quantile treatment effects

**Week 12**: Conclusion
Tentative reading list:

* = Required

1. Introduction to the Rubin Causal Model and the program evaluation approach to causal inference
   a. *MHE Chapter 1 – 2

2. Randomized experiments

3. Estimation of average treatment effects using linear regression
   a. *MHE Chapter 3

4. Matching methods; matching versus regression
   c. WNE, lecture 1

5. Instrumental variables: the basics
   a. *MHE Chapter 4, Sections 4.1 – 4.3

6. Instrumental variables: Local Average Treatment Effects (LATE)
   a. *MHE Chapter 4, Sections 4.4 – 4.6
   b. WNE, lecture 5


7. Difference-in-differences and fixed effects methods

a. *MHE Chapter 5


c. WNE, lecture 10.


8. Dynamic difference-in-differences and synthetic case control methods


9. Regression discontinuity designs

a. *MHE Chapter 6

b. WNE, lecture 3


10. Issues in Statistical Inference: clustering and adjusting for multiple hypotheses
11. Quantile methods and quantile treatment effects
   a. *MHE Chapter 7

12. Conclusion
Miscellaneous:

UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.” The Honor Code (http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor in this class.

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at: https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx.

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, www.dso.ufl.edu/drc/) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

University grading policy: https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at: https://evaluations.ufl.edu
Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at: https://evaluations.ufl.edu/results
