Objective: This course is about learning how to critically assess empirical microeconomics papers. We will focus quite a lot on the “identification” of causal impacts, and on what types of empirical strategies can convincingly tease out these impacts. Although we’ll be doing this in the context of a few (interesting) programs and examples, the empirical skills are universal. A secondary goal of the course is to develop fluency in the statistical programming package Stata, and “hands on” experience working with large micro data sets.

Course Requirements: Class Participation Empirical problem (about 4)
Reorganization Project Referee Report project

Class Participation
The course will be organized in the following way: usually on Thursdays I will provide a lecture which gives a general overview of the topic. At the end of class I will assign approximately two or three papers on that topic. You are responsible for completing the assigned readings before Tuesday’s class and being ready to present your interpretation of the work. At the beginning of class on Tuesday I will ask you to write a short response for one of the assigned readings. [this may be modified for an alternate mechanism]

Problem Sets
There will be approximately 4 problem sets. I strongly encourage you to work on problem sets together. Work in teams of 2-3 people, and submit one problem set per team (clearly indicate the members of the team on the problem set). Present your answers in a clear, concise fashion. Typed answers are preferred. In your solution packet, include relevant Stata output (e.g., key regression output, key graphs, etc.) and well-annotated Stata .do files. (Do NOT include pages and pages of “undigested” Stata log files.) Place the .do files in an appendix and make clear reference to regression output and figures in your written answers.

Referee report project
The third requirement for this course is to write a referee report, which will be due approximately November 28. Early in the course, I will distribute a list of unpublished empirical public/labor/ development papers. From this list, you will choose one paper to review. 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. Said differently, it should be a critical assessment of the paper, not simply a summary.

Your completed report should be no longer than 5 (single-spaced) pages. (And by no means does it need to be this long.) 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
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 60 70 and 80 censuses. You only need to focus on the results that are based on the 1980 Census.
Your replication is due to approximately December 7. 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 may 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.

Rough Outline:
Week (Thursday and following Tuesday)
1 Problems and pitfalls of OLS in the search for causal impacts
2 Causal analysis; Experiments
3 Descriptive analysis, nonparametric regression, issues in inference
4 Differences-in-differences; Job training; Matching
5 Instrumental variables; Returns to Education
6 Returns to Education
7 Policy changes as source of variation; Ex 1: Indonesian school construction
8 Ex 2: US Medicaid expansions
9 Regression discontinuity theory and applications
10 Decompositions
(or) Social networks and externalities
(or) the Imbens framework and: IV and Differences in Differences.
(or) Structural models

Reading list
This syllabus has a moderately long reading list. Don't let that discourage you! Many of the papers listed here are simply "background" for your future reference. With the exception of the texts, most of the readings for this course can be downloaded, provided that you are using a campus computer or the library proxy service when off-campus. (Instructions on establishing proxy service are at http://www.lib.ucdavis.edu/ul/services/connect/) There will be several papers that I expect you all to read. I have marked (will mark) these with a star (*). There are some papers that I expect you all to read before class. These are (will be) marked with two stars (**). [dlm: finish the stars] Note also that there will likely be revisions/updates to the reading list – I will provide an updated list to you when these happen.

Good background material and other resources
Two great applied econometrics books:
Colin Cameron's book (Microeconometrics) is great, and as close to “required” as it gets. I like to have a set of econometrics books ranging in technical difficulty for background. The three books that I refer to most frequently are (in decreasing order of technical sophistication): Cameron and Trivedi, Johnston and DiNardo, and Kennedy.
You probably want to also buy the Deaton book if you think you will be doing empirical micro research. This is especially true if you have any interest in Development economics.
Cameron and Trivedi, Microeconometrics, 2005
Johnston and DiNardo, Econometric Methods, 1997
Peter Kennedy, A Guide to Econometrics, 2003 (I strongly advise one of the more recent editions, as they cover sampling distributions and the revolution in natural experiments)

Undergraduate Public and labor textbooks:

Other public and labor syllabi: (on CD, to be provided)

Stata resource:
Colin Cameron has a series of sample Stata code that may be useful in getting up to speed. (note however that it is for an older version of Stata.) The code can be found on his website at: http://www.econ.ucdavis.edu/faculty/cameron/stata/stata.html

Reading list
Part 1
1.1 Intro and Problems and pitfalls of OLS in the search for causal impacts
Good background material is Peter Kennedy, A Guide to Econometrics, Chapters 1-3, pp 1-59


1.2 The goals in empirical work
* Peter Kennedy, “A Guide to Econometrics”, Appendix A “Sampling distributions, the foundation of statistics” pp 418-422

Monte Carlos – experimental econometrics!

1.3 Introduction to Causal Analysis
1.3.1 Introduction to the treatment effects literature


Angrist, “Treatment Effects” for New Palgrave: http://econ-
www.mit.edu/faculty/download_pdf.php?id=1351

* C&T Chapters 2, 25

### 1.3.2 True Experiments

* C&T, pg 48-54  
* Burtless, JEP 1995  
* Heckman and Smith JEP 1995  


#### 2 Descriptive analysis, nonparametric regression, issues in inference

**2.1 Nonparametric Regression**  
* Deaton, pages169-203.  
C&T, Chapter 9  

**2.2 Issues related to Inference in descriptive and regression analysis**  
Clustered data; Bootstrapping; Monte Carlos again

* C&T, sections 24.5; 11.1; 11.2  
* Deaton pages 44-78


2.3 Weighting


3.2 Event study analysis
Jacobson LaLonde and Sullivan
Cascio
Lindo

3.3 Analysis of Job Training programs / Matching


Newer matching paper?

3.4 Issues in Instrumental Variables
Doug Miller handout.


Differential distance as an IV example?
Other good IV example?
Fish paper?

Part 4 – Human capital and measuring Returns to Education
4.1 RTE: Theory & traditional estimates
Becker, Gary S., Human Capital (The University of Chicago Press, 1983)
Card chapter?


Traditional estimates

4.2 Classic measurements of the RTE


4.3 Methodological issues inspired by the RTE literature


Newer weak IV stuff?

Part 5 – More good topics
5.1 Policy change as a source of identification
5.1.1 Indonesia and School Construction
5.1.2 Medicaid Expansions in the US, 1985-1992


J. Currie and J. Gruber. “Health Insurance Eligibility, Utilization of Medical Care, and Child Health” QJE, 1996.


5.2 Some issues with state/year panels


5.3 Regression discontinuity


Lee, David S., "Randomized experiments from non-random selection in the U.S. House elections," manuscript, UC Berkeley department of economics, September 2003.

