

**Economics C142 – Applied Econometrics and Public Policy**  
**Syllabus - Updated 01/14/08**

***Course Overview and Objectives***

This course examines econometric identification issues in empirical microeconomics and public policy analysis. It supplements topics covered in Economics 140/141 with a focus on the sensible application of econometric methods to empirical problems. The course provides background on issues that arise when analyzing non-experimental social science data and a guide for tools that are useful for applied research and policy analysis. The course also emphasizes how a basic understanding of economic theory and institutions can help inform the analysis. By the end of the course, students should have a firm grasp of the types of research design that can lead to convincing analysis and be comfortable working with large scale data sets.

***Time and Place:***

Tuesday/Thursday 8-9:30, 534 Davis Hall

***Contact and Office Hours***

Professor Andrea Weber, 631B Evans, Tel 643-5272, email [webera@econ.berkeley.edu](mailto:webera@econ.berkeley.edu)

Office hours: Wednesday 9:00 – 11:00

Appointment: if you cannot make the office hours, send an email and request an appointment

***Graduate Student Instructor***

Your GSI for Econ C142 is Raymundo Campos-Vazquez

email: [rcampos1@berkeley.edu](mailto:rcampos1@berkeley.edu).

You are strongly advised to attend one of his discussion sessions.

***Course Website***

[http://emlab.berkeley.edu/users/webfac/weber/e142\\_sp08/e142.shtml](http://emlab.berkeley.edu/users/webfac/weber/e142_sp08/e142.shtml)

***Course Requirements***

Students should read assigned readings and attend all classes, as some material will not be covered in the course readings.

There will be 4-5 applied exercises, one mid term exam, and a final exam.

Exams will be closed book, closed notes exams. They cover the material presented in class and consist of short answer type questions.

No make up exams will be scheduled. Students who miss an exam must communicate with Professor Weber by email or phone on the day of the exam. Students need to have a certified certificate from a medical or legal authority to justify the reason for having missed the exam. Otherwise a missed exam counts 0 towards the final grade.

Exam Dates:

Midterm Exam: March 13, in class

Final Exam: Wednesday May, 21, 8-11 am, place to be announced

### ***Course Grading***

There are 3 grades for Problem Sets: check minus, check, check plus  
Each of the exams is graded on a scale from 0-100.

The Final Grade is composed of

Problem Sets	20%
Midterm Exam	35%
Final Exam	45%

### ***Readings***

The textbooks are available at the Cal Bookstore and on reserve at Moffitt Library. It may be useful to also review the text you used in your Econ 140 or 141 classes.

#### Required textbook:

Jeffrey Wooldridge, *Introductory Econometrics: A Modern Approach*, 3rd Edition (South-Western College Publishing).

#### Additional recommended textbook:

Jeffrey Wooldridge, *Econometric Analysis of Cross Section and Panel Data* (MIT Press).

#### Reader:

Additional readings material listed below.

### ***Additional Rules***

#### Attendance:

Attendance will be taken in the first week of sections. Students who do not show up in the first section will be dropped from the class.

#### Special Accommodation

If you require special accommodation for exams due to learning or other disabilities, please come and speak to Professor Weber. You will also need to obtain an evaluation form from the Disabled Students' Program.

#### Fire Alarm Rule

If the fire alarm is pulled during an exam, the class will move outside and finish the exam in the allotted time.

## Tentative Schedule and Reading Assignment

Week		Topic
1	Jan. 22, 24	Introduction – Overview of data, simple econometric models, “credible” inference Read: Wooldridge Chapter 1, Freedman 1991
2	Jan. 29, 31	Linear Regression Model, Review of Least Squares Estimation, Specification Problems Read: Wooldridge Chapter 2-5, Appendix D, E
3	Feb. 5, 7	Functional Form Analysis, Heteroskedasticity, Generalized Least Squares Read: Wooldridge Chapter 6-8; Krueger 1993, DiNardo & Pischke 1997
4	Feb. 12, 14	Omitted Variables Bias, Serial Correlation, Measurement Error Read: Wooldridge Chapter 9, Ashenfelter and Krueger 1994, Ashenfelter and Zimmerman 1997
5	Feb. 19, 21	Panel Data Models Read: Wooldridge Chapter 13,14; Entorf, Gollac, Kramarz (1999)
6	Feb.. 26, 28	Instrumental Variables in the estimation of returns to schooling Read: Wooldridge Chapter 15; Card 1995
7	Mar. 4, 6	The Evaluation Problem, Experiments and Quasi Experiments, Difference in Differences, Read: Ashenfelter 1987, Card 1990, Card 1992
8	Mar. 11 <b>Mar. 13</b>	Review <b>Midterm Exam</b>
9	Mar. 18, 20	Selection on Observables and Program Evaluation; Matching Methods and Propensity Score Estimation Read: Rosenbaum and Rubin 1984, Imbens 2004
	Mar. 25, 27	Spring Break
10	Apr. 1, 3	Matching Methods and Propensity Score Estimation Read: LaLonde 1986, Dehejia and Whaba 1999
11	Apr. 8, 10	Regression Discontinuity Read: Cook 1980
12	Apr. 15, 17	Regression Discontinuity Read: Angrist and Lavy 1999, Card Chetty and Weber 2006
13	Apr. 22, 24	Bianry Response Models, Duration Models Read: Wooldridge Chapter 7, 17, Card Chetty and Weber 2007
14	Apr. 29, May 1	Selection on Unobservables Read: Angrist and Krueger 1991; Angrist, Imbens and Rubin 1996
15	May 6, 8	Review
	<b>May 21</b>	<b>Final Exam, 8-11 am</b>

## Additional Reading List

Most of the articles can be downloaded at <http://www.jstor.org/>

Angrist, Joshua D. and Alan B. Krueger (1991) "Does Compulsory School Attendance Affect Schooling and Earnings?" *The Quarterly Journal of Economics*, 106, 979-1014.

Angrist, Joshua D., Guido W. Imbens and Donald B. Rubin (1996) "Identification of Causal Effects Using Instrumental Variables", *Journal of The American Statistical Association*, 91, 444-455.

Angrist, Joshua D. and Victor Lavy (1999) "Using Maimonides' Rule to Estimate the Effect of Class Size on Scholastic Achievement" *The Quarterly Journal of Economics*, 114, 533-575.

Ashenfelter, Orley and Alan Krueger (1994) "Estimates of the Economic Return to Schooling from a New Sample of Twins". *American Economic Review*, 84, 1157-1173.

Ashenfelter, Orley and David J. Zimmerman (1997) "Estimates of the Returns to Schooling from Sibling Data: Fathers, Sons, and Brothers", *Review of Economics and Statistics*, 79, 1-9.

Ashenfelter, Orley (1987) "The Case for Evaluating Training Programs with Randomized Trials", *Economics of Education Review*, 6, 333-338.

Card, David (1992) "Using Regional Variation in Wages to Measure the Effects of the Federal Minimum Wage", *Industrial and Labor Relations Review*, 46, 22-37.

Card, David (1990) "The Impact of the Mariel Boatlift on the Miami Labor Market", *Industrial and Labor Relations Review*, 43, 245-257.

Card, David (1995) "Using Geographic Variation in College Proximity to Estimate the Return to Schooling", in *Aspects of Labor Market Behavior: Essays in Honor of John Vanderkamp* L.N. Christofidesm E.K. Grant and R. Swidinsky (Eds.), 201-222, Toronto, University of Toronto Press. ; working paper version: NBER Working Paper No 4832

Card, David, Raj Chetty, and Andrea Weber (2007). "Cash-on-Hand and Competing Models of Intertemporal Behavior: New Evidence from the Labor Market." ), *Quarterly Journal of Economics*, 122(4), 1511-1560.

Card, David, Raj Chetty, and Andrea Weber (2007). "The Spike at Benefit Exhaustion: Leaving the Unemployment System or Starting a New Job" *American Economic Review Papers and Proceedings*, 97(2), 113-118.

Cook, Thomas and Donald Campbell, (1980) "The Regression-Discontinuity Design" in *Quasi-Experimentation, Design & Analysis Issues for Field Settings*, Houghton Mifflin, pp 137-146.

Dehejia, Rajeev H. and Sadek Wahba (1999) "Causal Effects in Nonexperimental Studies: Reevaluating the Evaluation of Training Programs" *Journal of the American Statistical Association*, 94, 1053-1062.

Del Bono, Emilia and Andrea Weber (2008), "Do Wages Compensate for Anticipated Working Time Restrictions? Evidence from Seasonal Employment in Austria", *Journal of Labor Economics*, 26(1), 181-221 *Economics*

DiNardo, John E. and Joern-Steffen Pischke (1997), "The returns to computer use revisited: Have pencils changed the wage structure too?", *Quarterly Journal of Economics* 112, 291-303.

DiNardo, John and David Lee (2004), "Economic Impacts of New Unionization on Private Sector Employers: 1984-2001", *Quarterly Journal of Economics* 119, 1383-1442.

Entorf, Hors, Michael Gollac and Francis Kramarz (1999), "New Technologies, Wages, and Worker Selection", *Journal of Labor Economics*, 17, pp. 464-491.

Freedman, David A. (1991) "Statistical Models and Shoe Leather", *Sociological Methodology*, 21, 291-313.

Garen, John (1984) "The Returns to Schooling: A Selectivity Bias Approach with a Continuous Choice Variable", *Econometrica*, 52, 1199-1218.

Imbens, Guido W. (2004) "Nonparametric Estimation of Average Treatment Effects Under Exogeneity: A Review" *Review of Economics and Statistics*, 86, 4-29

Krueger, Alan B. (1993), "How computers have changed the wage structure: Evidence from microdata, 1984-1989", *Quarterly Journal of Economics* 108, 33-60.

Lalive, Rafael, Jan van Ours, and Josef Zweimueller Forthcoming, 2007. "How Changes in Financial Incentives Affect the Duration of Unemployment." *Review of Economic Studies*.

Lalive, Rafael and Josef Zweimueller (2004) "Benefit Entitlement and Unemployment Duration: The Role of Policy Endogeneity", *Journal of Public Economics*, 2004, 88(12): 2587-2616.

LaLonde, Robert J. (1986), "Evaluating the Econometric Evaluations of Training Programs with Experimental Data", *American Economic Review* 76, 604-620.

Rosenbaum, Paul R. and Donald B. Rubin (1984) "Reducing Bias in Observational Studies Using Subclassification on the Propensity Score" *Journal of the American Statistical Association*, 79, 516-524.