

# Economics 211B Winter 2017

Instructor: Carlos Dobkin

Office Hours: Monday 2:00-3:00 (E2 Room 441)

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The focus of this course is on learning to conduct high quality empirical research. You are required to complete the assigned reading before each class and to prepare a one page write up of it. Your grade will be based on class participation (10%), your write ups (20%), your homeworks (30%) and the final exam. We will use both Stata and R for analysis and SAS for data management.

The four reference texts for the course are

1. Cameron A Colin and Pravin Trivadi (2005) *Microeconometrics: Methods and Applications*. Cambridge University Press.
2. Wooldridge, Jeffrey (2002) *Econometric Analysis of Cross Section and Panel Data*. MIT Press.
3. Imbens, Guido and Jeffrey Wooldridge (2007) *What's New in Econometrics*. NBER Summer Course.
4. Angrist, Joshua and Jorn-Steffen Pischke (2008) *Mostly Harmless Econometrics: An Empiricist's Companion*. Princeton University Press.

## Syllabus

(This is subject to change depending on how rapidly we proceed)

- Lecture 1 Ordinary Least Squares and Agnostic Regression
  - \*AP Chapters 3 - 3.12
  - Geiser, Saul and Maria Veronica Santelices. ["Validity Of High-School Grades In Predicting Student Success Beyond The Freshman Year: High-School Record vs. Standardized Tests as Indicators of Four-Year College Outcomes."](#) Center for Studies in Higher Education Research and Occasional Paper Series CSHE.6.07,2007
  - CT Chapters 4.1 - 4.5
  - JW Chapter 2
- Lecture 2 Introduction to Causality and Research Design
  - \*AP Chapters 3.13 - 3.22
  - \*Holland, Paul ["Statistics and Causal Inference."](#) Journal of the American Statistical Association, 1986, 81, 945-960.
  - \*Rubin, Donald ["Statistics and Causal Inference: Comment: Which Ifs Have Causal Answers?"](#) Journal of the American Statistical Association, 1986, 81, 961-962.
  - CT Chapter 2.
  - WNE Lecture 1, Section 2
- Lecture 3 Cautionary Notes
  - \*AP Chapters 3.2.3
  - \*Lalonde, Robert. ["Evaluating Econometric Evaluations of Training Programs with Experimental Data."](#) American Economic Review, 1986, 76, 604-620.
  - \*Freedman, David. ["Statistical Models and Shoe Leather."](#) Sociological Methodology, 1991, 21,

291-313.

- Scheiber, Noam. "Freaks and Geeks: How Freakonomics is Ruining the Dismal Science." The New Republic, 2007, April 2, 27-31.
- Lecture 4 Selection on Observables: Regression Adjustment and Nonparametric Regression
  - \*AP Chapters 3.3 - 3.5
  - \*Krueger, Alan. ["How Computers Have Changed the Wage Structure: Evidence from Micro Data."](#) Quarterly Journal of Economics, 1993, 108, 33-60.
  - \*DiNardo, John and Jorn-Steffen Pischke. ["The Returns to Computer Use Revisited: Have Pencils Changed the Wage Structure Too?"](#) Quarterly Journal of Economics, 1997, 112, 291-303.
  - [WNE Lecture 1, Section 3.1.](#)
  - CT Chapters 4.1 - 4.5.
- Lecture 5 Selection on Observables: Regression Adjustment and Nonparametric Regression
  - \*Blundell, Richard and Alan Duncan. ["Kernel Regression in Empirical Microeconomics."](#) The Journal of Human Resources, 1998, 33, 62-87.
  - Yule, G. Udny. ["An Investigation into the Causes of Changes in Pauperism in England, Chiefly During the Last Two Intercensal Decades \(Part I\)."](#) Journal of the Royal Statistical Society, 1899, 62, 249-295.
  - JW Chapters 4, 18.3.1.
  - CT Chapter 9.
- Lecture 6 Selection on Observables: The Propensity Score and Dimensionality Reduction
  - \*Rosenbaum, Paul and Donald Rubin. ["Reducing Bias in Observational Studies Using Subclassification on the Propensity Score."](#) Journal of the American Statistical Association, 1984, 79, 516-524.
  - WNE Lecture 1, Sections 3.2 - 3.4 and 5 - 7.
  - CT Chapter 25.4.
  - JW Chapter 18.3.2.
- Lecture 7 Selection on Observables: The Propensity Score and Dimensionality Reduction
  - \*Dehejia, Rajeev and Sadek Wahba. ["Causal Effects in Non-Experimental Studies: Reevaluating the Evaluation of Training Programs."](#) Journal of the American Statistical Association, 94, 1999, 1053-1062.
  - Smith, Jeffrey and Petra Todd. "Does Matching Overcome LaLonde's Critique of Non-experimental Methods?" Journal of Econometrics, 2005, 125, 305-353.
  - Arceneaux, Kevin, Alan Gerber, and Donald Green. "Comparing Experimental and Matching Methods Using a Large-Scale Voter Mobilization Experiment." Political Analysis, 2006, 14, 37-62.
- Lecture 8 Selection on Unobservables Designs: Fixed Effects Models and Differences-in-Differences
  - \*AP Chapter 5
  - \*Currie, Janet and Duncan Thomas. ["Does Head Start Make a Difference?"](#) American Economic Review, 1995, 85, 341-364.
  - CT Chapters 21 and 22.
  - WNE Lecture 10.
  - JW Chapter 10.
- Lecture 9 Selection on Unobservables Designs: Fixed Effects Models and Differences-in-Differences
  - \*Ashenfelter, Orley, and Michael Greenstone. ["Using Mandated Speed Limits to Measure the Value of a Statistical Life."](#) Journal of Political Economy, 2004, 112(1), S226-67.
  - Griliches, Zvi and Jerry Hausman. "Errors in Variables in Panel Data." Journal of Econometrics, 1986, 31, 93-118.
- Lecture 10 Selection on Unobservables Designs: Fixed Effects Models and Differences-in-Differences
  - \*Chay, Kenneth, Patrick McEwan, and Miguel Urquiola. ["The Central Role of Noise in Evaluating Interventions that Use Test Scores to Rank Schools."](#) American Economic Review,

2005, 95, 1237-1258.

- Deschenes, Olivier and Michael Greenstone. "The Economic Impacts of Climate Change: Evidence from Agricultural Output and Random Fluctuations in Weather." *American Economic Review*, 2007, 97, 354-385.
- Lecture 11 Selection on Unobservables Designs: Case Studies with Synthetic Controls
  - \*Card, David and Alan Krueger. ["Minimum Wages and Employment: A Case Study of the Fast-food Industry in New Jersey and Pennsylvania."](#) *American Economic Review*, 1994, 84, 487-496.
  - \*Abadie, Alberto, Alexis Diamond and Jens Hainmueller. ["Synthetic Control Methods for Comparative Case Studies: Estimating the Effect of California's Tobacco Control Program."](#) NBER Working Paper No. W12831, 2007.
  - Card, David. "The Impact of the Mariel Boatlift on the Miami Labor Market." *Industrial and Labor Relations Review*, 1990, 43, 245-257.
  - CT Chapter 25.5.
- Lecture 12 Instrumental Variables Models: The IV Estimator
  - \*AP Chapter 4
  - \*Angrist, Joshua. ["Lifetime Earnings and the Vietnam Era Draft Lottery: Evidence from Social Security Administrative Records."](#) *American Economic Review*, 1990, 80, 313-336.
  - CT Chapter 4.8.
  - JW Chapter 5.
- Lecture 13 Instrumental Variables Models: The IV Estimator
  - \*Angrist, Joshua and Alan Krueger, ["Instrumental Variables and the Search for Identification: From Supply and Demand to Natural Experiments."](#) *Journal of Economic Perspectives*, 2001, 15, 69-86.
- Lecture 14 Instrumental Variables Models: Heterogeneous Treatment Effects
  - \*Angrist, Joshua, Guido Imbens, and Donald Rubin. ["Identification of Causal Effects Using Instrumental Variables."](#) *Journal of the American Statistical Association*, 1996, 91, 444-455.
  - CT Chapter 25.7.
  - WNE Lecture 5.
  - JW Chapter 18.4.
- Lecture 15 Instrumental Variables Models: 2SLS and Weak Instruments
  - \*Angrist, Joshua and Alan Krueger. ["Does Compulsory School Attendance Affect Schooling and Earnings?"](#) *Quarterly Journal of Economics*, 1991, 106, 979-1014.
  - CT Chapter 4.9.
  - WNE Lecture 13.
- Lecture 16 Instrumental Variables Models: 2SLS and Weak Instruments
  - \*Bound, John, David Jaeger, and Regina Baker. ["Problems With Instrumental Variables Estimation When the Correlation Between the Instruments and the Endogenous Explanatory Variable Is Weak."](#) *Journal of the American Statistical Association*, 1995, 90, 443-450.
- Lecture 17: Regression Discontinuity Designs
  - \*AP Chapter 6
  - \*Thistlethwaite, Donald and Donald Campbell. "Regression-Discontinuity Analysis: An Alternative to the Ex Post Fact Experiment." *Journal of Educational Psychology*, 1960, 51, 309-317.
  - \*Imbens, Guido and Thomas Lemieux. ["Regression Discontinuity Designs: A Guide to Practice."](#) *Journal of Econometrics*, 2008, 142, 615-635.
  - CT Chapter 25.6.
  - WNE Lecture 3.
- Lecture 18: Regression Discontinuity Designs
  - McCrary, Justin. "Manipulation of the Running Variable In the Regression Discontinuity Design:

A Density Test." Journal of Econometrics, 2008, 142, 698-714.

- Angrist, Joshua and Victor Lavy. "Using Maimonides' Rule To Estimate The Effect Of Class Size On Scholastic Achievement." Quarterly Journal of Economics, 1999, 114, 533-575.
- \*DiNardo, John and David Lee. "Economic Impacts of New Unionization on Private Sector Employers: 1984-2001." Quarterly Journal of Economics, 2004, 119, 1383-1441.
- Lecture 19: Inference
- \*AP Chapter 7