

Course Syllabus  
Health Economics (ECON 850)  
Department of Economics  
University of South Carolina  
Spring 2018

**Class Information**

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*Lectures*

Time: Mondays, 9:40am – 12:40pm  
Location: DMSB 110

*Instructor*

Name: Lindsey Woodworth  
E-Mail: lindsey.woodworth@moore.sc.edu  
Office Hours: Tuesdays, 1:00 – 3:00pm (or by appointment)  
Office: DMSB 452E (southwest corner of the building)

**Required Texts**

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“Mostly Harmless Econometrics: An Empiricist's Companion”,  
by Joshua D. Angrist & Jorn-Steffen Pischke

“Mastering 'Metrics: The Path from Cause to Effect”,  
by Joshua D. Angrist & Jorn-Steffen Pischke

**Materials**

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You will need a copy of Stata for this course. Any version of Stata is fine. It would be helpful if you can install Stata on a laptop that you can bring to class. If you are unable to install Stata on a laptop, please let Professor Woodworth know as soon as possible so alternative arrangements can be made.

**Course Description**

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This course will focus on how to draw valid statistical inference when the question of interest relates to health/healthcare. Typically, it is very difficult for researchers to draw causal inference (i.e., estimate causal effects) when considering health-related questions because (i) there are strong selection biases, and (ii) treatment cannot safely or feasibly be randomized across individuals. Yet, causal inference is especially important in health-related studies; there are significant, and potentially life-threatening, ramifications that may come from misguided estimates. As such, this course will have an “applied micro” flavor. The goal of the course is to fill the student’s toolbox with an array of quasi-experimental study design tools that they can correctly apply to answer a variety of empirical questions, including those within the field of health economics.

## **Learning Objectives**

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- Students will be able to implement various quasi-experimental study designs, including instrumental variables estimation, regression discontinuity, and difference-in-differences designs
- Students will be able to judge the quality of research ideas and investigators' proposed (and implemented) empirical/identification strategies
- Students will gain proficiency in academic writing
- Students will gain proficiency in presenting scholarly work

## **Grading**

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Grades will be based on participation, assigned work, presentations, and the quality of research ideas as perceived by classmates (more information on this to come). No exams will be administered. Letter grades will be assigned using the following rubric:

A	90-100%
B+	87-89.9̄%
B	80-86.9̄%
C+	77-79.9̄%
C	70-76.9̄%
D+	67-69.9̄%
D	60-66.9̄%
F	0-59.9̄%

Students wishing to appeal a grade should refer to the Darla Moore School of Business' grade grievance policy for correct protocol:

<http://moore.sc.edu/studentlife/studentrightsandresponsibilities/grievanceprocess.aspx>

## **Academic Honesty and Classroom Behavior**

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Students caught cheating will be given a zero.

The community of scholars at the University of South Carolina is dedicated to personal and academic excellence. Choosing to join the community obligates each member to the Carolinian Creed. Academic dialogue and civil discourse are the cornerstone of the educational system and crucial to individual growth. Students are encouraged to practice personal and academic integrity, respect the rights and dignity of all persons, respect the rights and property of others, discourage bigotry, while striving to learn from differences in people, ideas, and opinions, and demonstrate concern for others, their feelings, and their need for conditions which support their work and development.

If you are unclear about the activities that constitute cheating, please refer to the University of South Carolina Honor Code Policy: <https://www.sa.sc.edu/academicintegrity/honor-code-policy-information/>

## **Special Accommodations**

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If you are in need of special accommodations for a disability (or other reason), please let me know as soon as possible and I am happy to make arrangements.

If you have a documented disability, you should contact the Student Disability Resource Center at 777-6142 to arrange appropriate accommodations.

## **Course Outline**

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The course content will tentatively progress in the following order:

1. Sampling and the Pitfalls of OLS
2. Randomized Control Trials – The “Gold Standard”
3. Instrumental Variables Estimation
4. Regression Discontinuity Designs
5. Difference-in-Differences Estimation

## **Class Meetings**

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Monday, January 22 – *EARLY DISMISSAL FOR JOB MARKET SEMINAR*

Monday, January 29

Monday, February 5

Monday February 12

Monday, February 19

Monday, February 26

Monday, March 5

Monday, March 12 – *SPRING BREAK*

Monday, March 19

Monday, March 26

Monday, April 2

Monday, April 9

Monday, April 16

Monday, April 23

Monday, April 30

## Useful Reading

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*(The specific papers that have to be read will be announced as the semester progresses.)*

### RCT Papers

- “Health Insurance and the Demand for Medical Care: Evidence from a Randomized Experiment” (AER, 1987) [Link](#)
- “Does Free Care Improve Adults’ Health?” (NEJM, 1983) [Link](#)
- “The RAND Health Insurance Experiment, Three Decades Later.” (J Econ Pers, 2013) [Link](#)
- “The Oregon Health Insurance Experiment: Evidence from the First Year.” (QJE, 2012) [Link](#)
- “The Oregon Experiment – Effects of Medicaid on Clinical Outcomes.” (NEJM, 2013) [Link](#)
- “Sixty Years after the Magic Carpet Ride: The Long-Run Effect of the Early Childhood Environment on Social and Economic Outcomes.” (ReStud, 2011) [Link](#)

### RD Papers

- “After Midnight: A Regression Discontinuity Design in Length of Postpartum Hospital Stays.” (AEJ: Policy, 2011) [Link](#)
- “The Effect of Education on Adult Mortality and Health: Evidence from Britain.” (AER, 2013) [Link](#)
- “The Impact of Nearly Universal Insurance Coverage on Health Care Utilization: Evidence from Medicare” (AER, 2008) [Link](#)
- “Does Medicare Save Lives?” (QJE, 2009) [Link](#)
- “Measuring Marginal Returns to Medical Care: Evidence from At-Risk Newborns.” (QJE, 2009) [Link](#)
- “Saving Babies? Revising the Effect of Very Low Birthweight Classification.” (QJE, 2011) [Link](#)

### IV Papers

- “The Benefits of Prenatal Care: Evidence from the PAT Bus Strike.” (J of Econometrics, 2005) [Link](#)
- “Measuring Returns to Hospital Care: Evidence from Ambulance Referral Patterns.” (JPE, 2015) [Link](#)
- “The War on Drugs: Methamphetamine, Public Health, and Crime.” (AER, 2009) [Link](#)
- “Income and Health Spending: Evidence from Oil Price Shocks.” (ReStat, 2013) [Link](#)
- “Multiple Experiments for the Causal Link Between the Quantity and Quality of Children.” (JOLE, 2010) [Link](#)

### DD Papers

- “Public Health Insurance, Labor Supply and Employment Lock.” (QJE, 2014) [Link](#)
- “The Incidence of Mandated Maternity Benefits.” (AER, 1994) [Link](#)
- “Is More Information Better? The Effects of “Report Cards” on Health Care Providers.” (JPE, 2003) [Link](#)
- “Water for Life: The Impact of the Privatization of Water Services on Child Mortality.” (JPE, 2005) [Link](#)
- “What Does a Deductible Do? The Impact of Cost-Sharing on Health Care Prices, Quantities, and Spending Dynamics.” (QJE, 2017) [Link](#)
- “Semiparametric Difference-in-Differences Estimators.” (ReStud, 2005) [Link](#)
- “Welfare Reform and Health.” (JHR, 2005) [Link](#)