Economics 194a: Econometrics Research Practicum  
Fall 2014

Professor Brainerd                     Office hours:  
Sachar 126, x64816                    Wednesdays,  
ebrainer@brandeis.edu                     10:00 am - 12:00 noon

Course description: This course provides practical experience using econometric methods to test economic theory and analyze microeconomic data. Students will learn a set of statistical tools and research designs that are useful in conducting high-quality empirical research on topics in applied microeconomics and related fields.

The class will meet once a week. Each class will cover an econometric technique (or techniques) and will discuss the use of the technique in the context of one or more economics journal articles that employs that technique. Students are expected to read the journal articles and be prepared to discuss them in class.

A key component of the course will be the completion of an original econometrics research paper and presentation of the results by each student.

Learning goals: upon successful completion of the course you will:
- Understand and be able to implement a variety of econometric techniques for estimating causal effects
- Be able to critically assess empirical studies in economics and other professional journals
- Have proficiency using Stata
- Have completed an original econometrics research paper.

Prerequisites: Econ 184b (or equivalent); basic knowledge of Stata.

Course materials: Course readings are primarily from academic journals and econometrics textbooks. There is no textbook for this course, but it will be useful to have an econometrics textbook such as Wooldridge’s *Introductory Econometrics* or Stock and Watson’s *Econometrics* for reference.

Course requirements: Students will be evaluated on the basis of class participation, a journal article presentation, short written exercises (components of the research paper), an in-class presentation, and a completed 15-18 page empirical research paper:

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<tr>
<th>Component</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Class participation and attendance</td>
<td>10%</td>
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<tr>
<td>Written exercises</td>
<td>10%</td>
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<td>Journal article presentation</td>
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<td>In-class presentation</td>
<td>10%</td>
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<tr>
<td>Research paper</td>
<td>60%</td>
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Research paper: The research paper is a 15-18 page paper which addresses a topic in applied economics using micro data. Appropriate areas of investigation and strategies for selecting a
The paper will be written in stages throughout the course. The components of the research paper are as follows:

- Research proposal (due in week 3)
- Review of relevant literature (due in week 5)
- Data description and table of means (due in week 7)
- Estimation strategy and econometric specification (due in week 9)
- Final paper (due on the last day of class)

Further information on how to write the research paper will be provided early in the semester.

Journal article presentation: Each class will discuss an econometric technique, including published research using that technique. While all students are expected to be familiar with the paper prior to class, each student will be responsible for presenting one paper during the course of the semester.

**Special accommodations:** If you are a student with a documented disability on record at Brandeis University and wish to have a reasonable accommodation made for you in this class, please see me immediately. Please keep in mind that reasonable accommodations are not provided retroactively.

**Academic honesty:** You are expected to be familiar with and to follow the University’s policies on academic integrity (see [http://www.brandeis.edu/studentlife/sdje/ai/](http://www.brandeis.edu/studentlife/sdje/ai/)). Instances of alleged dishonesty will be forwarded to the Office of Campus Life for possible referral to the Student Judicial System. Potential sanctions include failure in the course and suspension from the University. If you have any questions about my expectations, please ask. Academic dishonesty will not be tolerated.
**Brief course outline, readings and due dates**

Week 1: Introduction and Stata review  
Wooldridge, “Carrying Out an Empirical Project”

Week 2: Identification and empirical strategies in economics  
*Stata exercise due*  

Week 3: Binary response and count data  
*Research paper: proposal due*  
Reading: TBA

Week 4: Panel data  

Week 5: Instrumental variables  
*Research paper: literature review due*  

Week 6: Natural experiments  

Week 7: Differences-in-differences  
*Research paper: data description and table of means due*  

**Week 8:** Regression discontinuity designs


**Week 9:** Field experiments

*Research paper: Estimation strategy and econometric specification due*


**Week 10:** Nonparametric regression; quantile regression


**Week 11:** Duration models

*Reading: TBA*

**Week 12:** Student presentations of research papers

**Week 13:** Student presentations of research papers

*Research paper due*