This course is the second course in the statistical methods sequence for policy analysis. The course provides a foundation in regression analysis and causal inference. The course will balance conceptual material with empirical and data applications, with a particular focus on regression analysis using Stata.

Comfort with algebra and calculus is assumed. A solid background in applied probability and statistical inference is necessary for this course.

Course materials such as problem sets, problem set solutions, example exams, etc, will be posted on the CCLE course website.

Course Grading:
Problem sets (25%). You will be assigned approximately 6 problem sets during the semester. You may (and are encouraged) to discuss problem sets with classmates, but you expected to submit your own work. Working with your classmates can be one of the best ways to learn, but only if you earnestly work through the material on your own first. You may drop your lowest homework grade. In exchange for this option, requests for late submissions will not be considered.

Midterm Exam (25%): 80 minute in-class closed-book exam. The midterm will take place on Tuesday February 10, 2015.

Final Exam (50%): 180 minute closed-book exam. The Registrar’s Office has set our final exam for Wednesday, March 18, 11:30a-2:30 p.m.

TA Sessions and Office Hours
TA sessions and office hours are integral part of the course. Your teaching assistant for the course is Xiaoman Luo, who will discuss sessions twice a week. I’ll hold office hours twice a week. Times are listed at the top of the syllabus

Text and Reading:
The course will mainly follow mainly from lecture notes. The best reference text for the course is Jeffrey Wooldridge’s Introductory Econometrics: A Modern Approach. It is well written, clear and concise, and offers many empirical examples. I’ll also provide
additional empirical applications in lecture. It does NOT matter which edition you use, so please do not hesitate to purchase an older edition of the textbook.

I’ll post datasets used for the class and problem sets on CCLE. Note also that datasets used in the book can be downloaded for free along the left margin of the publisher’s textbook resource website:
http://www.cengage.com/cgi-wadsworth/course_products_wp.pl?fid=M20bI&product_isbn_issn=9781111531041

**Important Class Dates**

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<thead>
<tr>
<th>Date</th>
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<tbody>
<tr>
<td>01/06/15</td>
<td>First class</td>
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<tr>
<td>02/10/15</td>
<td>Midterm</td>
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<td>03/12/15</td>
<td>Last Class</td>
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<tr>
<td>03/18/15</td>
<td>Final Exam 11:30a-2:30p</td>
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**General Course Outline**

**Topic 1:** Bivariate Linear Regression (Wooldridge Chapter 2.1-2.5)

**Topic 2:** Multivariate Regression

- Estimation (Wooldridge Chapter 3.1-3.5)
- Inference (Wooldridge Chapter 4.1-4.5, and 5.1-5.3)

**Topic 3:** Specifications and Functional Form

- Functional Form (Wooldridge Chapter 2 and 6)
- Dummy variables (Wooldridge Chapter 7.1-7.6)

**Topic 4:** Heteroskedasticity (Wooldridge Chapter 8.1-8.3)

**Topic 5:** Panel Data (Wooldridge Chapters 13 and 14)

**Topic 6:** Two-Stage Least Squares (Wooldridge Chapter 15.1-15.4)

**Topic 7:** Natural Experiments and Randomized Control Trials

**Topic 8:** Limited Dependent Variables Models (Wooldridge Chapter 17.1-17.3)