ECON 0021: Microeconometrics  
Term 1, 2018-2019,  
Fridays 9:00 - 11:00 @ Torrington (1-19) G12

- Lecturer in week 6 - 10: Toru Kitagawa, t.kitagawa@ucl.ac.uk  
  Office Hours: Fri 14:30 - 16:00 @ Drayton 202, or appointment by email
- Lecturer in week 12 - 16: Daniel Wilhelm, d.wilhelm@ucl.ac.uk  
  Office Hours: TBA @ Drayton 223A
- Tutorial lecturer: Michele Giannola, Email: michele.giannola.12@ucl.ac.uk

1 Aims and Objectives

The main aim of this course is to develop a knowledge on the econometric methods that are useful to analyze individual level data (microdata).

The use of microdata has become common in the empirical work in economics since microdata analyzed by appropriate econometric tools can empirically answer numerous economic questions. With a particular focus on the cross-sectional and panel microdata, this course covers various extensions of regression models to nonlinear models and basic nonparametric econometric methods that are useful for policy evaluation. Topics to be covered are selected from the perspective of (a) Individual’s choice and (b) heterogeneities in policy impact. Related to these keywords, the lectures are designed for answering the following questions,

(a) What are the useful econometric techniques when the dependent variable is discrete or observed choice?

(b) What is the econometric framework to measure policy impact when the policy impact is heterogeneous among the individuals?

2 Teaching and Assessment

There will be one two hour lecture held each week, for ten weeks. The lectures will be recorded by Lecturecast (subject to proper functioning of the recording devices). There will be seven tutorial classes throughout the term, taught by the tutorial lectures. The final mark is solely based on a final exam in the third term. There will be four assignments given throughout the term, which will be graded, but not counted for the final grade. The assignments will include both analytical problems and empirical problems that will require the use of statistical software such as Stata. The coursework must be submitted online via Turnitin.

Course materials (slides, problem sets, answer keys, etc.) will be uploaded onto the Moodle course page. For those who want to quickly review how to use Stata, a Stata tutorial is available in the Moodle course page.

3 Course Outline

- Problem Set 0 (warm-up questions, optional).

**Part I: Limited Dependent Variable Models and Their Applications**

Lecture 2: Binary Response Model.
  - Problem Set 1 (Due 25 Oct).
Lecture 4: Semiparametric Binary Response Model, Multinomial Logit Model.
Lecture 5: Estimation of Game Theoretic Models.
  - Problem Set 2 (Due 15 Nov).

**Part II: Identification and Estimation of Treatment Effects** (* indicates particularly relevant text)

Lecture 6: Basic Concepts of Causal Inference and Randomized Experiments
  - Angrist and Pischke (2009, Ch. 2)*
  - Wooldridge, Jeffrey M. (2002, Ch. 18.1 and 18.2)

Lecture 7: Regression and matching
  - Angrist and Pischke (2009, Ch. 3.1-3.3)*
  - Wooldridge, Jeffrey M. (2002, Ch. 18.3)
  - Blundell and Costa Dias (2009)*
  - LaLonde (1986)*
  - Problem Set 3 (Due date TBA)

Lecture 8: Instrumental Variables
  - Angrist and Pischke (2009, Ch. 4-4.1.2, 4.4, 4.6.1)*
  - Wooldridge, Jeffrey M. (2002, Ch. 18.4)
  - Blundell and Costa Dias (2009)*
  - Angrist and Krueger (1991)

Lecture 9: Methods for repeated cross-sections and panel data
  - Angrist and Pischke (2009, Ch. 5-5.3)*
  - Wooldridge, Jeffrey M. (2009, Ch. 13)
  - Blundell and Costa Dias (2009)*
  - LaLonde (1986)*
  - Problem Set 4 (Due date TBA)

Lecture 10: Regression discontinuity design
  - Angrist and Pischke (2009, Ch. 6)*
  - Blundell and Costa Dias (2009)*
  - Angrist and Lavy (1999)*
  - Kostol and Mogstad (2012)

4 **Textbooks and Supplementary Reading**

There is no required text. There are, however, a number of textbooks that would be useful references for this course. (* indicates more advanced references) Further references and related literatures will be introduced during the class.


