Advanced Econometrics II

International Development Program
International University of Japan

Instructor: Shingo Takahashi
Office: Main Building 314
Office hours: Thursdays 2:40~4:30
Email: staka@iuj.ac.jp

Course Description: Knowledge of regression model and its extension is essential for doing empirical work in economics and other social sciences. The purpose of this course is to teach student econometric and computational skills which are necessary for data analysis. The emphasis will be placed on application of the theory from a practical point. This course's main focuses are on the repeated cross section and panel analyses, and on on limited dependent and qualitative variable models, such as probit and logit models, tobit models, and Heckman sample selection bias correction.

Required Text*: Introductory Econometrics*: A Modern Approach, by Jeffery M. Wooldridge, 5th Edition, South-Western CENGALE Learning.

Additional materials:
Econometrics Analysis, William Greene, Fifth Edition, Prentice Hall.
Limited dependent and qualitative variables in econometrics: G.S. Maddala, Cambridge University press, 1983

Computer Software: Stata

Prerequisites:
For Students enrolled in 2012:
- Statistics for Economics and Management
- Mathematics for Economics & Management (A) or Mathematics for Economics & Management (B)
- Applied Econometrics or Data Analysis

For Students enrolled in 2013:
- Statistical Methods
- Mathematical Methods or Advanced Mathematical Methods (Advanced Mathematical Methods is recommended however)
- Econometrics or Data Analysis

Outline of the lecture:

1. Pooled cross section analysis (Difference in Difference Estimation) W1

2. Simple panel analysis (First differenced model) W2

3. Advanced panel analysis (Fixed effect model) W3-4

4. The Maximum Likelihood Estimation W5

5. Probit and logit model (Ch 17 Wooldridge) W5-W7

   (a) Binary probit and logit models.
   (b) Ordered probit and logit models.
   (c) Multinomial logit model
   (d) Interpretation of the coefficients.
   (e) Applications

6. Censoring, truncation and the sample selection correction (Ch 17 Wooldridge) W8-W10

   (a) Tobit model (Censoring)
   (b) Truncation (Sample selection)
   (c) Heckman sample selection bias correction model (Heckman two step estimation)
   (d) Applications

Grading Scheme: Homework (20%), Midterm exam (35%), and Final exam (45%)

Important dates

Midterm exam: Nov 7 (Week 6)
Final exam: December 12