Econometrics I

University of Tsukuba
Graduate School of International Political Economy

3rd Trimester, 2003
Daiji Kawaguchi

Class: Tu 10:00 – 12:40 at 3K318
Office: 3K 314
Office Hour: Tue 14:00-15:00 or by appointment.

You should send an e-mail to set up an appointment for the time other than office hour.
E-mail: kawaguch@sk.tsukuba.ac.jp
Webpage: http://www.sk.tsukuba.ac.jp/~kawaguch/index.html

Course Description:
This course covers standard graduate materials in econometrics. You should be able to understand the theory of ordinary least squares and instrumental variable estimation. I will also briefly cover panel methods. All the models covered in this class are linear models. I will clearly state assumptions that validate those estimation methods and discuss the behavioral and economic implications for those assumptions. In this sense, this class is very applied oriented without sacrificing mathematical rigor. I assume your knowledge in Stata in class assignments but I naturally cannot offer technical assistance for its usage.

Course Prerequisites
Prerequisites consist of undergraduate statistics and econometrics. You should be comfortable with basic statistical inferences.

Required Text
Jeffery M. Wooldridge (2001) "Econometric Analysis of Cross Section and Panel Data," MIT press.

Supplementary Text:
If you are not familiar with basic materials, following book by the same author is strongly recommended.
Jeffery M. Wooldridge (2002) "Introductory Econometrics: A Modern Approach 2nd Edition," South-Western Publisher.

Following books are other undergraduate textbooks of econometrics. Both are very well written.
James H. Stock and Mark W. Watson (2003) "Introduction to Econometrics," Pearson Education.
Orley Ashenfelter, Phillip B. Levine and David J. Zimmerman (2003) "Statistics and Econometrics: Methods and Applications," John Wiley and Sons.

Grading:
Your final course grade is determined by 4 graded home works (counts 40 percent for the final grade), the midterm examination (counts 30 percent for the final grade), the final examination (counts 30 percent for the final grade). You will usually be given two weeks to complete a problem set. Problem sets typically require you to analyze data using Stata. (Data sets will be provided in Stata format). I will not accept any late submission after the deadline.
The midterm examination will be given on March 2nd (Tuesday) in the same class room and the same time as usual class. This examination covers material up to the date of the examination. The final examination will be comprehensive but put more emphasis on the materials covered after the midterm examination. This final examination will be given on November 25th. The place and time for the final examination is same as the usual class.

Tentative Schedule:
Related Chapter(s) in Wooldridge (2001) is in parenthesis.

1. 12/2/2003
   - Introduction, Conditional Expectation, and Asymptotic Theory (Chapters 1 – 3)
   - Homework 1 Distributed
2. 12/9/2003
   - OLS Estimation (Chapter 4)
3. 12/16/2003
   - OLS Estimation, continued (Chapter 4)
   - Homework 1 Due
   - Homework 2 Distributed
4. 1/13/2003
   - Instrumental Variable Estimation (Chapter 5)
   - Homework 2 Due
   - Homework 3 Distributed
5. 1/20/2003
   - Midterm Examination
6. 1/27/2003
   - IV Estimation, continued (Chapter 5)
   - Homework 3 Due
   - Homework 4 Distributed
7. 2/3/2003
   - Topics related to OLS and IV (Chapter 6)
8. 2/10/2003
   - Panel Estimation (Chapter 10)
   - Homework 4 Due
9. 2/17/2003
   - Panel Estimation, continued (Chapter 11)
10. 3/2/2003
    - Final Examination