Introductory Econometrics (Undergraduate)
Department of International Business,
National Chengchi University
Spring 2012
Ryuichi Yamamoto
Class Hours: Tuesday 9:10am-12:00pm

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OVERVIEW: This course is designed for undergraduates who have completed one semester of undergraduate statistics. The course will cover various topics from econometrics with an emphasis on fundamental methods of statistical analysis in economics. Specific topics covered will include: simple and multiple linear regressions, techniques on heteroskedasticity, autocorrelation, multicolinearity, dummy variables, and introduction to time series analysis. Excel will be used for empirical exercises. The instructions for using Excel will be given during the semester.

Prerequisites: one semester of college statistics or consent of instructor. It is assumed that students are familiar with basic knowledge of economics and statistics. For example, students should be familiar with the concepts of probability, random variables and probability distributions, interval estimation, hypotheses testing, and so on.

Required Reading:
G.S. Maddala, Introduction to Econometrics, 3rd Edition

• Read strategically! Part of your education here concerns time management. While looking at chapters, ask yourself: What am I supposed to learn from this? Most key lessons can be summarized in a few sentences.

Recommended Reading:
Wooldridge, Jeffrey M., Introductory Econometrics: A Modern Approach
Kennedy, Peter, A Guide to Econometrics

Course Work: The course will be lecture based.

Grading:  
Class Participation: 5%
Homework 20%
1 Midterm: 30%
1 Final exam: 45%
**Homework Assignments**

Purpose: review what we learn in the class and provide practice in applying concepts learned in class. You can’t learn without practice.

- Doing homeworks is important for getting good scores on the exams.
- Those questions are assigned beforehand.
- Write up your answers **individually**. This should ensure you understand your answers.
- I will collect your answers, i.e., your assignments will be graded for your final grade. I will give you the answers after each deadline.
- The homework questions should be considered as sample questions for the exams.

**One Midterm and one Final Exam**

Purpose: Help you become sufficiently comfortable with key concepts that you can think with them and converse intelligently about them.

- Closed book: You must remember certain key things.
- All are in-class tests.
- **All tests will be cumulative.** Cumulative tests provide opportunities to learn the material more deeply, and commit it to long-term memory.
- Some of the questions in a midterm and final exam will be from homeworks while some of them will be from lectures.
- You will have a Mid-term exam on **April 17, 2012. YOU MUST BE THERE. NO EXCEPTIONS except for dire medical emergencies.**
- Final exam: It is held in the morning on **June 12, 2012. There is NO ALTERNATIVE for any cases.** I will explain more on this in the first class.

**Class Participation:**

Participation in class discussion is critical. This does not require that you stun your classmates with insight. Sharing relevant experiences is very valuable. Clarification questions are also highly valued (if it’s not clear to you, chances are it’s not clear to others). Good class participation also involves (i) arriving on time, (ii) remaining seated until class is over, and (iii) remaining quiet and attentive unless contributing to class discussion.

**Class Mailing List**

Once you register for this class, you are automatically included to the list. You will receive all emails sent through the mailing list. However, you may not receive any as a result of some restrictions on receiving emails. In particular, please remove some if your registered email address is the one of hotmail or yahoo.

Some Things You Must Do

- Attend every single class.
- Participate in class discussions (**intelligently**!).
- Language of instruction for this class is English. You have to write all of your answers and talk to me in English.

Some Things You Must NOT Do

- Collaborate on the exams.
Quote your group-mates or anyone else on homework assignments. Though you may collaborate on coming to understand the answers, the actual written answers to assignments must be composed independently.

Course Outline

Part 1: Introduction and the Linear Regression Model

1. What is Econometrics?: Ch.1
2. Statistical Background: Ch.2
3. Simple Regression: 3.1-3.5, 3.7
4. Excel instruction: Handout
5. Multiple Regression: 4.1-4.11

Part 2: Violation of the Assumptions of the Basic Model

6. Heteroskedasticity: 5.1-5.5
7. Autocorrelation: 6.1-6.7
8. Multicollinearity: 7.1-7.4, 7.7-7.8

Part 3: Special Topics