

Syllabus for ECON 502: Econometric Methods Fall 2009

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Course Web Page: Visit Blackboard

Office Hours: Tue 1:15– 2:15 p.m.; Fri 10:00 – 12:00 noon.

TA office hours/discussion session: TBA

This is an introductory course in econometrics. “Econometrics is the application of statistical and mathematical methods to the analysis of economic data, with a purpose of giving empirical content to economic theories and verifying and refuting them.” So a course in econometrics – even this introductory one – involves both theory and application. Of course, application is the fun part. In this course you learn to use STATA software to estimate econometric models. But believe me, knowing the theory behind your results/computer outputs is also important - even in the context of a real life job situation (or to defend your thesis). You need to understand the theory to explain your results to your boss - or to your client (or to your thesis supervisor). Hence the objective of this course is two fold. On the one hand, I try to familiarize you with some basic theories of econometric methods – the rationale of your chosen estimation methodology and implication of your results; on the other hand, you learn hands-on to estimate econometric models using STATA and then to interpret your results.

Prerequisites:

Statistical methods or equivalent.

This is a serious prerequisite. I will work with the assumption that you have a basic knowledge of the theory and methods of statistics. I will NOT review statistics in class. It is your responsibility to reacquire the knowledge if it is rusty. The appendices of the text books are helpful for this purpose.

Resources:

***Basic Econometrics* by Damodar N. Gujarati (G)**

***Introductory Econometrics* by Jeffrey M. Wooldridge (W)**

Course Outline: (tentative)

- I. Introduction (Introduction)**
 - a. What is Econometric
 - b. Econometric Methodology

- II. Two-variable Regression Analysis**
 - a. The Concept
 - b. Estimation
 - c. Hypothesis Testing
 - d. Additional Notes

- III. Multiple Regression Analysis**
 - a. Estimation
 - b. Hypothesis Testing
 - c. Dummy Variable Regression Models

- IV. Violation of the Assumptions of the Basic Model**
 - a. Multicollinearity
 - b. Heteroskedasticity
 - c. Autocorrelation
 - d. Specification Error and Measurement Error

- V. Other Topic/s of Interest.**

Introduction to STATA : Set aside three Friday afternoons in September (11, 18 & 25) for introduction to STATA in a computer lab. I will provide more details in the class.

Grades: Your final grade in this course will be based on your grades in **homework** grades (20%), **two mid-term examinations** (20% + 25%), and **final examination** (35%). Both the second mid-term and the final exams are cumulative in content.

Exams and Exam dates:

Mid-term Exam 1 – October 1

Mid-term Exam II – November 5

Final – TBA

CLASS POLICY REGARDING MAKE-UP EXAMS: There will be no make-up mid-term examinations. If you miss a mid-term due to a legitimate reason

(e.g., severe personal illness, or death in the family), your grade in the final exam will serve as your grade in the missed mid-term. But you have to inform me (in person or via phone or e-mail) *before* the mid-term. If you do not inform me before the mid-term or if you miss the mid-term without a legitimate reason, you will get a zero/F in the missed mid-term. I will allow make-up final exam only for documented personal illness or family emergency. Again, you have to notify me *before* the exam.

Homework:

Weekly/bi-weekly homework assignments will be handed out in class / posted on Blackboard and will be due in class on the due dates. **LATE HOMEWORK WILL NOT BE GRADED. THERE WILL BE NO MAKE-UPS FOR MISSED HOMEWORK.**

You can work in groups to discuss and solve problems. But remember that during the exams you are on your own. Copying somebody else's homework will not get you a good grade in the course or help you understand the subject. So brainstorm with your friends if that helps you but finally do/re-do the problems on your own.

Other Class Policies:

- I will utilize the BU Blackboard facility pretty intensively in this course to facilitate dissemination of information. So visit Blackboard every day.
- Academic dishonesty on an examination or on a written assignment will result in a score of zero.
- The student must petition in writing for a grade change on a homework or examination within 10 days of receiving the grade.
- Incompletes will be granted when I think the "student is unable to complete a course for what...is a compelling reason." (Bulletin 1999-2000, page 74-75) I will not give incompletes to keep you from failing the course!
- I do not permit extra credit assignments.