

Econ 570
Econometrics -
Economic Applications of Statistical Analysis
Fall 2014

Instructor: Ju Hyun Kim

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Office Hours: Tues 1:55-2:55 pm & Thurs 10:55-11:55 am

Classes: Tu, Th 9:30 – 10:45 am in Gardner 209

Prerequisite:

The pre-requisites are Econ 400 (Statistics), Econ 410 and 420 (Intermediate Microeconomics and Macroeconomics), and at least one semester of differential calculus.

Course Description:

Econometrics is the application of statistical methods and economic theory to the problem of identifying, estimating, and testing models of economic behavior. This course covers concepts and methods used in empirical economic research. Students will learn how to conduct and how to critique empirical studies in economics. Accordingly, the emphasis of the course is on various empirical applications. Topics include classical single-equation regression model, multiple regression models, discrete dependent variables, time series methods, and the pooling of time-series, and cross-section data. We will discuss many examples from microeconomics, macroeconomics, and financial economics.

Grading:

Your final grade will be based on three midterm exams (10+10+10=30%), final exam (50%), and weekly problem sets (20%). There will be no make-up exams for the midterms. If you miss a midterm exam because of a medical or family emergency, the weight assigned to that midterm will be distributed evenly to the other midterm and the final exam. Otherwise, you will receive a score of zero for the missed midterm.

Midterms and final:

Individual cheat sheets are NOT allowed (therefore, of course closed book) I will provide formulae sheets in each exam. You are allowed (actually encouraged) to use your own calculator (but not laptop/phone/any type of tablet) in the exam. The level of difficulty and the format of the exam will be very similar to weekly problem sets. The final exam will cover everything discussed in class throughout this semester.

Problem sets:

There will be weekly problem sets, each of which involves empirical analysis. You should hand in your homework assignments at the beginning of class the day they are due.

Late problem sets (but before answers are posted) will be marked down by 50%. Solutions will be posted on the course Web site on Wednesday evening after 9 pm. Assignments handed in after that will receive no credit, no exceptions. Students are welcome to work in groups on their problem sets, but each student must write up answers separately. Please append your STATA "log" files to your assignments whenever needed.

Statistical Software:

Weekly problem sets will include empirical questions that require the use of statistical software. The software used in this class is STATA. STATA is available in UNC computer labs. You can also purchase a student version of STATA.

Textbook:

Introduction to Econometrics, Third Edition Update, Stock, James H. and Mark W. Watson. Addison-Wesley, 2014.

Course Outline

(Contents may change during the course of the semester. However, exam dates will not change)

1. Review of basic statistic concepts (Ch. 1,2,3)
2. Linear regression with one regressor (Ch 4,5)

Midterm 1: Sep 16

3. Linear regression with multiple regressors (Ch 6,7)
4. Nonlinear regression (Ch 8)

Midterm 2: Oct. 14

5. Internal and external validity (Ch 9)
6. Panel data models (Ch 10)
7. Limited dependent variable models (Ch 11)

Midterm 3: Nov. 13

8. Instrument Variables (Ch 12)
9. Time series models and economic forecasting (Ch 14)

Final exam: Dec. 9 (Tues) 8-11am