Econ 413
Introduction to Econometrics

Summer 2010

(tentative)

Description of the Course

This course provides a basic working knowledge of econometrics. Emphasis is on hands-on implementation of the models covered in the course. Topics include translation of economic theory into statistical models, statistical foundations of econometrics, pre-regression analysis bivariate and multiple regression techniques, hypothesis testing, multicollinearity, specification error, errors in variables, identification, and forecasting.

Throughout the course we will be actively using the Eviews program in order to implement a series of econometrics exercises designed to provide experience with estimation procedures and various tests. The Eviews, available in the Economics Computer Lab, is extremely easy to use, yet relatively powerful in terms of the variety of econometrics tests and procedures. The data required for the computer exercises will be posted on the course website. Some of the exercises will be assigned as homework.

Instructor

Kyu Ho Kang, 347 Seigle Hall, email: khkang@khkang.edu

Time and Location

MTWTF 09:00 - 12:00, Seigle Hall 206

Course Website

www.kyukang.net

Office Hours

Tuesday and Friday 1:00-2:00 or by appointment

Textbook

Using Econometrics: A Practical Guide and EViews, 6th ed., A.H. Studenmund

Grading

There will be three homework assignments, and three quizzes in class and a take-home exam at the end of the semester. The quizzes in class will be on May 27, June 2 and 8. They will count toward the grade as follows.

Homework Assignments	$5\% \times 3$
Quizzes	$20\% \times 3$
Take-Home Exam	25%

Topics

1. Basic Concepts for Statistics
2. Classical Linear Models and Ordinary Least Squares Estimation
   (a) OLS Estimator
   (b) Gauss Markov Theorem
   (c) Residual Diagnostic Checks
3. Hypothesis Testing
   (a) Simple Hypothesis Testing
   (b) Joint Hypothesis Testing
4. Model Specification
   (a) Multicollinearity
   (b) Omitted Variables
   (c) Irrelevant Variables
5. Heteroskedasticity
6. Dummy Variables
   (a) Testing for Structural Changes in Mean and Slope
   (b) Testing for Structural changes in Variance
7. Generalized Least Squares Estimation
8. Maximum Likelihood Estimation
   (a) Property of ML Estimators
   (b) Likelihood Ratio Test
9. Time Series Analysis
   (a) Stationary Time Series
   (b) Non-stationary Time Series
10. Forecasting