ECONOMETRICS (I) Syllabus Fall 2009

Instructor: Ming-Yuan Chen
Office: B941
Phone: 26215656 ext. 3348
E-mail: mychen@mail.tku.edu.tw

DESCRIPTION:

The course will introduce the linear regression model and discuss statistical inference under standard assumptions, as well as when these assumptions are relaxed. Students will be assumed to have some background in probability theory, statistics, and linear algebra. The topics will cover:

- Linear Least Squares
- Linear Squares Algebra – Partial Regression
- Regression Algebra and Fit Measure; Restricted Least Squares
- Finite Sample Properties of the Least Squares Estimator and Restricted Least Squares
- Hypothesis Testing in the Linear Regression Model
- Asymptotic Distribution Theory
- Asymptotic Results for the Classical Regression Model
- The Generalized Regression Model: Heteroscedasticity, Autocorrelation, GARCH
- Instrumental Variables Estimation

Other topics such as linear models for panel data, seemingly unrelated regressions model, simultaneous-equations model, maximum likelihood estimation and its applications, GMM estimation, models for discrete choice, limited dependent variable models, sample selection model, and introductory time series data will be discussed in the second semester..

READINGS:

The texts for the course are “Econometric Methods” (1997) by Jack Johnston and John DiNardo, “Econometric Analysis” (2006) by William H. Greene, and “A Course in Econometrics” (1991) by Arthur S. Goldberger. I will include relevant materials selected from three books in my lecture notes. A complete set of my lecture notes will be given in the class.

EVALUATION:

Final grades will be based on a midterm (40%), a final exam (40%), and problem sets (20%). Problem sets will require the use of GAUSS/LIMDEP software.