

NATIONAL CHUNG CHENG UNIVERSITY
Graduate Institute of International Economics

Econometrics I

Instructor: Wei-Ming Lee
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Fall 2006
272-0411 ext. 34119

This course is designed for first-year Ph.D. and Master students majoring in economics. The classical least squares theory and related topics are the main topics of this course. As asymptotic properties of various estimation and testing methods have received much attention in past decades, the topics such as the asymptotic theory and the asymptotic least squares theory will also be discussed in detail. The prerequisite of this course is Quantitative Method I (Matrix Algebra).

Required Reading

Kuan, C.-M., *Introduction to Econometric Theory*, Lecture notes, (the pdf files are available at www.sinica.edu.tw/~ckuan).

Recommended Reading

Matrix Algebra

1. Scott, J. R., *Matrix Analysis for Statistics*, Wiley, 1997.
2. Searle, S. R. and L. S. Willett, *Matrix Algebra for Applied Economics*, Wiley, 2001.

Econometrics

1. Cameron, A. C. and P. K. Trivedi, *Microeconometrics: Methods and Applications*, Cambridge University Press, 2005.
2. Davidson, R. and J. G. Mackinnon, *Econometric Theory and Methods*, Oxford University Press, 2004.
3. Greene, W. H., *Econometric Analysis*, fifth ed., Prentice Hall, 2003.
4. Hayashi, F., *Econometrics*, Princeton University Press, 2000.

Asymptotic Theory

1. Davidson, J., *Stochastic Limit Theory*, Oxford University Press, 1994.
2. White, H., *Asymptotic Theory for Econometricians*, revised ed., Academic Press, 2001.

Office Hours

Thursday 4:00-6:00 p.m. or by appointment

Teaching Assistant

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Course Outline

1. Classical Least Squares Theory (Kuan, Chap. 3)
2. Generalized Least Squares Theory (Kuan, Chap. 4)
3. Asymptotic Theory (Kuan, Chap. 5)
4. Asymptotic Least Squares Theory: Consistency and Asymptotic Normality (Kuan, Chap. 6)
5. Asymptotic Least Squares Theory: Hypothesis Testing (Kuan, Chap. 6)*
6. Asymptotic Least Squares Theory: Nonstationary Time Series (Kuan, Chap. 7)*

Grading

Ph.D. students: Pretest (10%), Midterm (40%), Final (40%), Homework (10%).

Master students: Your course grade will be based on the following formula:

$$\max(M, F) \times 40\% + \min(M, F) \times 30\% + H \times 20\% + P \times 10\%,$$

M: Midterm, F: Final, H: Homework, P: Pretest

Note: No late homework will be accepted!