



B.E. International Program

Faculty of Economics, Thammasat University



Course Outline

EE 325 Introductory Econometrics (Section 046401)

Semester 1/2012 (August 14 – December 1, 2012)

Number of credits: 3 credits

Lecture Time: Wednesdays and Fridays, 12.30 – 14.00 hrs

Lecture Venue: Room 303, Faculty of Economics

Instructor: Dr. Kaewkwan Tangtipongkul

Office: Room 458, Faculty of Economics

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Office hours: by appointment

Course Description:

Application of statistical and economic theories in analyzing economic data, with emphases on parameter estimation techniques and applications of simple and multiple regression models to economic analyses. Use of computer application in practice is also covered.

Prerequisites: EE211, EE212, MA216 (or MA211) and ST216 (or ST211)

Course Objectives:

To provide a good start and understanding on applying econometric tools for economic analysis.

Textbooks:

***Gujarati, D.N. (2009) *Basic Econometrics*. 5th ed. Singapore, McGraw-Hill. (G)

Wooldridge, J.M. (2006) *Introductory Econometrics: A Modern Approach*. 3rd ed. Thomson South-Western. (W)

*** **Main Textbook**

Teaching Plan:

Tentative Course Outline

1. The Nature of Econometrics and Economic Data (1.5 hours)

- What is Econometrics?
- Methodology of Econometrics
- The Structure of Economic Data

Reference: G: intro & ch. 1; W: ch. 1

2. A Review of Some Statistical Concepts (7.5 hours)

- Summation and Product Operators
- Sample Space, Sample Points, and Events
- Probability and Random Variables
- Probability Density Function (PDF)
- Some Important Theoretical Probability Distributions
- Statistical Inference: Estimation
- Statistical Inference: Hypothesis Testing

Reference: G: Appendix A; W: Appendix A, B, and C

3. **The Simple Regression Model**

(9 hours)

- Two-Variable Regression Analysis
 - Concept of Population Regression Function (PRF) & The Sample Regression Function (SRF)
 - Method of Ordinary Least Squares
 - The Classical Linear Regression Model: The Assumptions Underlying the Method of Least Squares
 - Precision or Standard Errors of Least-Squares Estimates
 - The Coefficient of Determination

Reference: G: Ch. 1-3; W: Ch.2

- Two-Variable Regression: Interval Estimation and Hypothesis Testing
 - Classical Normal Linear Regression Model (CNLRM)
 - Interval Estimation and Hypothesis Testing

Reference: G: Ch. 4&5; W: Ch.3&4

4. **Multiple Regression Analysis**

(13.5 hours)

- Multiple Regression Analysis

Reference: G: Ch. 7; W: Ch.3

- Multiple Regression Analysis: The Problem of Inference

Reference: G: Ch. 8; W: Ch.4 &6

- Extensions of the Two-Variable Linear Regression Model
 - Regression through the origin
 - Scaling and units of measurement
 - Functional Forms of Regression Models

Reference: G: Ch. 6; W: Ch. 6

5. **Dummy Variable**

(1.5 hour)

Reference: G: Ch. 9; W: Ch. 7

6. **Relaxing the Assumptions of the Classical Model**

(10.5 hour)

- Multicollinearity
- Heteroscedasticity
- Autocorrelation

Reference: ch 10 – 12; W: Ch 3, 4, 8 & 12

Evaluation

Quizzes	10 %
Homework Assignments	10%
Midterm Exam	35 % (October 5, 2012, 12.30 – 14.00 hrs)
Final Exam	45 % (December 13, 2012, 9.00 – 12.00 hrs)

Note: The mid-term and final exams are closed books and closed notes. Midterm and final exam dates are not changed due to the official schedule from BE program. Only physical condition with approval medical document is allowed for postponing the exam.

Quizzes: There will be 6 random equally weighted quizzes. The lowest quizzes score will be dropped. There are no make-up quizzes.

Homework Assignments: There will be equally weighted homework assignments. Late homework will be graded based on 50% of full credit. More than two-day late homework will not be accepted.

Academic Honesty:

You are expected to be honest in all of your academic work. Copying is plagiarism and will be treated as an honor code violation. Potential sanctions include failure in the course and suspension from the university.

Important Dates:

Class Begins	August 14, 2012
Adding and Dropping Course	August 14-18, 2012
Midterm Exam Period	October 1-October 6, 2012 (No Lectures)
Midterm Exam	October 5, 2012
Course Withdrawal	October 17-22, 2012
Class Ends	November 29, 2012
Final Exam	December 13, 2012