# B.E. International Program

Faculty of Economics, Thammasat University

## Course Outline

## EE 311 Microeconomics Theory

**Semester:** 2/2011 (January 9 – May 20, 2012)

**Instructor:** **Assoc. Prof. Dr. Chayun Tantivasadakarn**
Office: Room #8 Fourth floor, 60th Anniversary Building
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**Class Schedule:** Wednesdays and Fridays at 9.30 – 11.30 hrs.

**Class Room:** 206, Faculty of Economics

*Prerequisites:* *EE 211 and MA 216*

**Course Description:** Demand and supply analysis, consumer behavior and demand theory, production and cost of production, different types of product market structures, price determination in factor markets, decision-making over time, general equilibrium analysis, and introductory welfare economics and public policy.

**Method of Instruction:** There are a total of 60 class-hours for this course or 4 hours per week. Class activities in each week will consist of three hours of lectures, and one hour of discussions, exercises and quizzes. Students are expected to work on about four 15-minute quizzes during class hours, and participate in class discussions.

**Student Evaluation:**

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|---|---|
| Class participation and quizzes | 5% |
| Mid-term examination | 35% (**Friday Mar 2nd, 2012 at 9:30 – 11:30 hrs.**) |
| Final examination | 60% (**Friday May 4th, 2012 at 09:00 – 12:00 hrs.**) |

**Holidays:**

Wed. 7th March, 2012
Fri. 13th April, 2012

**Remarks:**

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|---|---|
| ♦ Second semester begins | Jan. 9, 2012 |
| ♦ Period of withdrawal without “W” | Jan. 9-23, 2012 |
| ♦ Mid-Term Examination | Feb. 27 – March 3, 2012 |
| ♦ Last day of withdrawal with “W” | March 21, 2012 |

- Last day of class Apr. 29, 2012
- Final Examination May 4 - 20, 2012

**Main Textbooks**

There are several textbooks that cover similar material. The first three books will be used extensively, but, for many topics, they can be used interchangeably with the other listed books. It is important to realize, however, that no single textbook contains **all** the material covered in this course. It is therefore essential that you read several sources, and that you review the concepts listed under "REVIEW" on your own, so that our time can be more valuably spent on new topics.

1) Pindyck, Robert S. and Daniel E. Rubinfeld. *Microeconomics,* (7th ed.), New Jersey: Prentice -Hall, 2008.
2) Besanko, David, and Ronald R. Braeutigam, *Microeconomics: An Integrated Approach*, New York:John Wiley& Sons, 2002.
3) Salvatore, Dominick, *Microeconomics,* (4th ed.), New York: Oxford University Press. 2003.
4) Frank, Robert H. (6th ed.). *Microeconomics and Behavior*, New York: McGraw-Hill, 2005.
5) Perloff, *Microeconomics*, ( 3rd ed.) Boston: Addison-Wesley, 2004.
6) Miller, R.L., and R.P.H. Fishe. *Microeconomics: Price Theory in Practice,*New York: Harper Collins, 1995.
7) Hirshleifer, Jack *Price Theory and Applications* (6th ed.), New Jersey: Prentice - Hall, 1998.
8) Griffiths, Alan and Stuart Wall, *Microeconomics: Theory & Applications,* London: Longman, 1996.
9) Nicholson, Walter, *Intermediate Microeconomics and Its Application,* (8th ed.), Dryden Press, 2002.
10) Varian, Hal *Intermediate Microeconomics,* (5th ed.) New York: Norton, 1999.

Note: additional readings will be assigned during the semester, and readings on specific topics are given in the "boxes" under "Teaching Plan".

**Supplementary Reading** (for fun)**:**

Levitt, Steven D. and Stephen J. Dubner, *Freakonomics,* New York: Harper Torch, 2006.

Harford, Tim**,** *The Undercover Economist: Exposing Why the Rich Are Rich, the Poor Are Poor--and Why You Can Never Buy a Decent Used Car!*, Oxford University Press, 2006.

Marshall Jevons, *Murder at the Margin,* New Jersey: Princeton University Press, 1978, 1993.
*The Fatal Equilibrium,* New York: Balantine Books, 1985.
*A Deadly Indifference*, New Jersey: Princeton University Press, 1995.

**Movies:**

**Interactive Excel Exercises:**

There are 11 Interactive Excel Exercises located in
ftp://econ.tu.ac.th/class/archan/CHAYUNT/EC311/

Each exercise contains a mathematical model in which the user can change some parameters that determine the behavior of model to change the equilibrium results and answer accompanies questions. Each exercise also includes a short explanation worksheet to help the user to understand the underlying theory related to the exercise. Where available, the name of the relevant interactive excel exercise will be given in "boxes" under "Teaching Plan".

**Teaching Plan:**
"A Beautiful Mind" Universal Studios, 2001.
"An Inconvenient Truth", 2006.
"Inside Job", 2010.

## 1. Introduction

1.1 Why Study Microeconomics? (6 hours)

Application of Demand and Supply concepts: government intervention

> **Review**: Concepts of consumer and producer surplus.
> **Read**: Pindyck & Rubinfeld Chs. 2 and 9, Frank Ch. 2, Salvatore Ch.2, Perloff Chs.2,3,9, Miller & Fishe Ch. 3, Besanko & Braeutigam Chs. 2 & 9, and newspaper articles!
> **Do:** The Interactive Excel Exercise in "01Tax&Subsidy.xls" file.

## 2. Consumer Behavior and Demand Theory

2.1 Indifference Curve Analysis (1.5 hours)

- assumptions
- analysis of goods, bads, neuters

> **Review**: Properties of indifference curves.
> **Read**: Pindyck & Rubenfeld Ch. 3, Salvatore Ch.3 (3.1-3.2), Perloff Ch.4 & App. 4A, Frank Ch.3, Hirshleifer Ch. 3(pp.70-73), Miller & Fishe Ch.5, Besanko & Braeutigam Ch. 3 & 4. Griffiths & Wall Ch.1 (pp.-33)

2.2 Consumption equilibrium and changes in equilibrium (7.5 hours)

- consumption equilibrium and duality
- changes in income
- changes in price: income effect and substitution effect
- compensated and uncompensated demand curves
- market demand
- network externalities
- application: vouchers vs. income transfers
- revealed preferences, index numbers, and welfare changes

> **Review**: Construction of demand curves, elasticities.
> **Read**: Pindyck & Rubenfeld Ch. 4, Appendix; Salvatore Ch 3 (3.4-3.5) Chs.4 -5, Perloff Ch. 5, Frank Ch.4-5, Appendix; Hirshleifer Ch.4,Ch.5 (pp.117-152), Besanko & Braeutigam Ch. 5 Miller & Fishe Ch.4 (pp.119-120); Appendix 5A and Ch.6, Griffiths and Wall Ch.1 (pp.33-50), Ch.2, (pp.55-68) , Varian Ch. 7.8 & Ch. 8.
> **Do:** The Interactive Excel Exercise in "02IncomeSubstitutionEffect.xls" and "03IndexNumber.xls" files.

2.3 Intertemporal consumption (consumption overtime) (4 hours)

- time preference and time value of money
- cases: regular income, productive opportunities, inheritance
- supply of saving
- consumption and pricing of durable goods and non-renewable resouces

> **Read**: Salvatore Ch.16, Frank Ch.15 Appendix, Perloff Ch. 16, Hirshleifer Ch.14, Miller & Fishe Ch.5 (pp.617-632), Pindyck & Rubinfeld Ch.15, Varian Ch. 10.
> **Do:** The Interactive Excel Exercise in "04Intertemp.xls" file.

2.4 Consumption under uncertainty (3 hours)

- expected utility
- preference toward risk
- gambling and insurance

**Read**: Pindyck & Rubinfeld Ch.5, Salvatore Ch.6, Perloff Ch.17 (17.1-17.2), Frank Ch.6 (pp.198-210) Miller & Fishe Ch.5 (pp.644-649), Griffiths & Wall Ch.3 (pp.102-113) Besanko & Braeutigam Ch. 15 (15.1-15.4), Varian Ch. 12

**3. Transactions Costs and Institutional Economics** (3 hours)

- costs of market exchange
- components of transactions costs
- optimal search
- meaning of "institutions"
- origin of firms, an example of an institution
- rules, behavior and objectives of the firm
  - profit maximization
  - utility maximization and satisficing

**Read**: Miller & Fishe Ch.7, Frank Ch.6 Appendix, Griffiths and Wall Ch.5, Baumol W.J.Economic Theory and Operations Analysis, 4 th ed.(Prentice – Hall) 1977, Ch.15, Kreps, A Course in Microeconomic Theory, (Harvester Wheatsheaf) 1990, Ch. 20, Coase "The Nature of the Firm", Economica, 4:386-405, 1937, Stigler, "The Economics of Information", Journal of Political Economy, 69:3, 1961.

**4. Production and Costs** (3 hours)

4.1 Production equilibrium

- least cost combination
- duality in production
- relationship between product curves and cost curves

4.2 Production functions and costs

- homogeneous production functions and their properties
- returns to scale
- elasticity of substitution

**Review**: All product and cost curves; e.g. AP, MP, TP, TC, AC, MC.
**Read**: Pindyck & Rubinfeld Chs.6-7, Salvatore Chs. 7-8, Perloff Ch.6-7, Frank Chs.9-10 Miller & Fishe Chs.8-9, Griffiths & Wall Ch.4, Besanko & Braeutigam Ch. 6-8
**Do:** The Interactive Excel Exercise in "05Prod&Cost.xls" file.

**5.Product Markets**

5.1 Perfectly competitive markets (1 hour)

- long-run equilibrium and efficiency

**Review**: Characteristics of perfectly competitive markets, price and output under perfect competition.
**Read**: Pindyck & Rubinfeld Ch.8, Hirshleifer & Glazer Ch.7 (pp.175-186), Salvatore Ch.9, (pp.240-248), Frank Ch.11, Miller and Fishe Ch.10, Griffiths and Wall Ch.6, Perloff Ch. 8, Besanko & Braeutigam Ch. 9.
**Do:** The Interactive Excel Exercise in "06Competitve.xls" file.

5.2 Monopoly (6.5 hours)

- meaning of market power

- price and output determination
- monopoly and resource allocation
- regulation of monopolies and contestable markets
- other pricing strategies
  - price discrimination: degrees and hurdles
  - two-part tariffs and other strategies
- multi-plant monopoly

**Review**: Simple monopoly
**Read:** Pindyck & Rubinfeld Ch.10 (10.1-10.4 and 10.7) & Ch.11, Perloff Ch.11,12; Salvatore Ch.10 & Ch.13, Frank Ch.12, Miller & Fishe Ch.11-12, Hirshleifer Ch.8, Griffiths and Wall Ch.7, Besanko & Braeutigam Ch. 11.1-11.6 & 12.
**Do:** The Interactive Excel Exercise in "07Price Discrim.xls" file.

5.3 Monopolistic competition (1.5 hours)

- characteristics of monopolistic competition
- equilibrium price and output in the short run and long run
- implications on resource allocation

**Read**: Frank Ch.13, Pindyck & Rubinfeld Ch.12.1, Perloff 13.7, Besanko & Braeutigam Ch. 13.5 Miller & Fishe Ch.13 (pp.515-523), Salvatore Ch. 11 (11.1-11.2)

5.4 Oligopoly (9 hours)

- meaning of oligopoly
- various models of oligopoly:
  - kinked demand
  - price leadership or dominant firm
  - Cournot, Bertrand and Stackelberg
  - collusion and cartel
- game theory and its application to oligopolistic markets
  - introduction
  - equilibrium: Dominant strategy, Nash equilibrium, Maximin
  - Prisoners' dilemma
  - sequential games
  - Strategic moves: entry deterrence

**Read**: Pindyck and Rubinfeld Ch.12.2-12.6 & Ch.13, Hirshleifer Ch.10, Salvatore Ch.11 (11.3-11.8) Ch. 12 , Frank Ch.13, Miller & Fishe Ch.13 (pp.526-557), Perloff Ch. 13,14; Besanko & Braeutigam Ch. 13.1-13.4 & 14 Chiang, Fundamental Methods of Mathematical Economics, Ch. 21.
**Do:** The Interactive Excel Exercise in "08Duopoly.xls" file.
**Watch:** "A Beautiful Mind"

## 6. Factor Markets

6.1 Competitive factor markets (3 hours)

- demand for a factor ( cases of one variable input and several variable inputs )
- supply of inputs to a firm and market supply of inputs
- price and quantity of factor employed

**Read**: Pindyck & Rubinfeld Ch.14.1-14.2,Hirsheifer Ch.11, Salvatore Ch. 14, Frank Ch.14, Miller & Fishe Ch.14 (pp.565-592),Griffiths & Wall Ch.9 (pp.379-383), Perloff Ch.5 (5.5), 15 (15.1).

6.2 Factor Markets with Monopoly and Monopsony Power (2 hours)

- marginal revenue product
- marginal and average factor cost
- price and quantity of factor employed

**Read**: Pindyck and Rubinfeld Ch. 10.5-10.6 & Ch.14.3, Hirshleifer Ch.11 (pp.333-341), Frank Ch.14, Miller & Fishe Ch.14 (pp.595-599), Griffiths & Wall Ch.9 (pp.383-385), Salvatore Ch.15, Perloff Ch. 15 (15.2, 15.3); Besanko & Braeutigam Ch. 11.7.
**Do:** The Interactive Excel Exercise in "10Monopsony.xls" file.

6.3 Factor Markets with Monopoly Power of Seller of Input (2 hours)

- monopoly power over the wage rate
- price and quantity of factor employed
- bilateral monopoly

**Read**: Pindyck & Rubinfeld Ch.14.4, Hirshleifer Ch.12 (12.4) (pp.356-363), Salvatore Ch.15, Miller & Fishe Ch.14 (pp.599-606)

6.4 Economic Rent (1 hour)

- meaning of economic rent
- rent-seeking behavior and resource allocation

**Read**: Pindyck and Rubinfeld Ch.14 (pp.529-532), Frank Ch.15 (pp.569-70), Hirshleifer Ch.12 (12.7), Miller & Fishe Ch.14 (pp.588-589), Griffiths & Wall Ch.9 (pp.400-404), Besanko & Braeutigam Ch. 9.5

## 7. General Equilibrium Analysis and Welfare Economics

7.1 General Equilibrium: consumption, production, and exchange (3 hours)

- welfare criteria
- Pareto optimum and efficiency
- perfect competition and Pareto optimum
- welfare maximization and Pareto optimum conditions

**Read**: Pindyck & Rubinfeld Ch.16 (16.1-16.4, 16.6), Hirshleifer Ch.15 (15.2), Miller & Fishe Ch.16, Salvatore Ch.17, Frank Ch.16, Griffiths & Wall Ch.9 (pp.421-433), Perloff Ch. 10; Besanko & Braeutigam Ch. 16.1-16.4.
**Do:** The Interactive Excel Exercise in "11EdgeworthBox.xls" file.

7.2 Market Failure and Imperfections (5 hours)

- imperfect competition, externalities, public goods, and asymmetric information
- correction of failure and imperfections: government or private sector

**Read**: Pindyck & Rubinfeld Ch.16 (16.7) & Chs.17-18, Hirshleifer Ch.15 (15.3), Miller & Fishe Ch.17, Salvatore Chs.18-19, Frank Chs.17-18, Griffiths & Wall Ch.9 (pp.433-437) & Ch.11, Perloff Ch. 18,19 Besanko & Braeutigam Ch. 17
**Watch:** "An Inconvenient Truth", "Inside Job"

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