



**DIVISION OF ECONOMIC AND FINANCIAL STUDIES**

**DEPARTMENT OF ECONOMICS**

**ECON200 MICROECONOMIC ANALYSIS**  
**UNIT OUTLINE**  
**Semester 1, 2007**

**Michael Olive**  
**Lecturer in charge**

# ECON200 MICROECONOMIC ANALYSIS

Students should read this unit outline and the tutorial program at the start of the semester as they contain important information about the unit. If anything is unclear, please consult one of the ECON200 teaching staff.

## 1. ABOUT THIS UNIT

ECON200 Microeconomic Analysis is an intermediate-level course with a credit point value of four. It builds on the foundations laid in the 100-level economics units, and may in turn be seen as providing the insights and tools necessary for the study of more specialised areas in economics, accounting, finance and marketing at the 200- and 300-level. The unit places strong emphasis on developing analytical and theoretical skills as a means of encouraging rigorous and logical thinking about real-world economic questions.

Throughout this unit, a framework is developed from the standpoint of individual decision-makers that allows the economic behaviour of consumers, producers, markets and society as a whole to be analysed. A summary of the course content is as follows:

1. Introduction (1 lecture)
2. Consumer theory (13 lectures)
3. Imperfect information (4 lectures)
4. Theory of the firm (1 lecture)
5. Production, costs and profit (5 lectures)
6. Perfect and imperfect competition (6 lectures)
7. Game theory and auctions (3 lectures)
8. General equilibrium and welfare economics (2 lectures)

A more detailed course outline is given below.

## 2. ENQUIRIES

Lecturer-in-charge

**Michael Olive: E4A A414, ph. 9850 9948, email: [molive@efs.mq.edu.au](mailto:molive@efs.mq.edu.au)**

Lecturer

**Glenn Jones: E4A A415, ph. 9850 8500, email: [glenn.jones@mq.edu.au](mailto:glenn.jones@mq.edu.au)**

Tutor-in-charge

**Edwin Franks: E4A A421, ph. 9850 7076, email: [efranks@efs.mq.edu.au](mailto:efranks@efs.mq.edu.au)**

Michael Olive and Glenn Jones will present approximately half the lectures each and clarification of specific points in lectures should be directed to the appropriate lecturer. In addition, your own tutor can assist you with most unit content enquiries and a discussion group facility has been set up on the ECON200 web page. You will be notified of the consultation times for the lecturers and tutors by week 3. If you cannot contact your tutor or lecturer in person you should email them. **All enquiries concerning the administration of the unit (including tutorial arrangements) should be addressed to Edwin Franks.**

### 3. LECTURES

There are three hours of lectures each week at the following times and places:

#### Day Lectures

Tuesday	11.00 - 12.00	E7B Mason
Wednesday	13.00 - 15.00	X5BT1

#### Evening Lectures

Tuesday	18.00 - 20.00	E7BT2
Wednesday	18.00 - 19.00	E7BT2

Day and evening lectures are given in parallel, with a 10 minute break in the middle of the double lectures. Unless there are exceptional circumstances, students are asked to attend the lectures to which they have been allocated.

Please consult the Course Diary below for precise details of the currently scheduled lecture dates for the whole unit. During the semester, staffing arrangements may require the cancellation of some lectures and/or tutorials. Any changes will be announced as far as possible in advance.

### 4. TUTORIAL PROGRAMME

There are no tutorials during the first week of the semester. Students should confirm their tutorial times and locations through the online enrolment system before the beginning of the first tutorial in week 2. After this time, any requested changes in tutorial allocations must be submitted in writing to Edwin Franks. Changes will only be allowed in exceptional circumstances. If unforeseen situations cause you to miss a tutorial at some time during the semester you may attend another tutorial on a once-off basis without notification.

There are nine tutorials in total, which means that they are not held every week. The Course Diary below indicates the weeks in which tutorials are held. As anecdotal evidence suggests a high correlation between poor marks and poor tutorial attendance, a roll will be kept and students that attend fewer than seven tutorials will not be eligible for a supplementary exam. For more information on tutorials see the Tutorial Program.

### 5. WEB PAGE

The ECON200 Microeconomic Analysis web page can be found by going to the 'online' address (<http://online.mq.edu.au/>) and logging in. Students should regularly access this site as it is a major means of obtaining updated information regarding the unit (for example consultation times, exam results, timetable adjustments, etc), lecture summaries and the answers to tutorial questions.

The site will also have a discussion facility to be monitored by Michael Olive. Students are encouraged to make comments and ask questions regarding the unit using this facility. Note: it is likely that the question you are asking is a question that somebody else is thinking. Students can assist each other by commenting on the topics raised and generating discussion.

Michael will give direct answers to questions related to administration matters but is more likely to give guidance in regard to questions about unit content.

## 6. ASSESSMENT

The components of assessment in this course are as follows:

	%
Mid-semester Test 1	20
Mid-semester Test 2	20
Final exam: multiple choice	20
Final exam: essays/problems	40
Total	100

A further requirement is that **students must pass the final exam** in order to pass the course.

The Academic Senate has a set of guidelines on the distribution of grades across a range from fail to high distinction. Your final result will include one of these grades plus a standardised numerical grade (SNG). On occasion, the raw mark that you receive for the unit may not be the same as the SNG that you receive. Under the senate guidelines, results may be scaled to ensure that there is a degree of comparability across the university, so that units with the same past performances of their students should achieve similar results.

The two **multiple choice mid-semester tests** will be taken in place of the regular Tuesday lectures on April 24 and May 22. The tests will be held during the 11.00 lecture for day students and during the 18.00 lecture for evening students (with a lecture to follow). The material covered in the two mid-semester tests will be

Test 1	Lectures 1 - 14
Test 2	Lectures 15 - 26

Failure to attend a mid-semester test without the submission of a request for special consideration on the grounds of illness or unavoidable mishap together with supporting documentation will result in a **mark of zero for the missed test**. If you wish to advise of your absence from mid-semester tests or tutorials you should fill out an **Advice of Absence Form**, available from the Student Centre, and submit it together, with appropriate supporting documentation, (including an **EFS Professional Authority Advice Form**) to the Student Centre. The value of your final exam will be increased on a pro rata basis if special consideration is granted for a mid-semester test. Note that a **Special Consideration Form** needs to be filled out if special consideration for the final exam is being requested.

## 7. COURSE DIARY 2007

Week	Date	Lecture Number		Tutorial
		Day	Evening	
1	Feb 27	1	1, 2	
	Feb 28	2, 3	3	
2	March 6	4	4, 5	<b>Tutorial 1</b>
	March 7	5, 6	6	
3	March 13	7	7, 8	<b>Tutorial 2</b>
	March 14	8, 9	9	
4	March 20	10	10, 11	<b>Tutorial 3</b>
	March 21	11, 12	12	
5	March 27	13	13, 14	<b>Tutorial 4</b>
	March 28	14, 15	15	
6	April 3	16	16, 17	
	April 4	17, 18	18	
<b>MID-SEMESTER BREAK</b>				
7	April 24	<b>TEST</b>	<b>TEST</b>	
8	May 1	19	19, 20	<b>Tutorial 5</b>
	May 2	20, 21	21	
9	May 8	22	22, 23	<b>Tutorial 6</b>
	May 9	23, 24	24	
10	May 15	25	25, 26	<b>Tutorial 7</b>
	May 16	26, 27	27	
11	May 22	<b>TEST</b>	<b>TEST</b> , 28	
	May 23	28, 29	29	
12	May 29	30	30, 31	<b>Tutorial 8</b>
	May 30	31, 32	32	
13	June 5	33	33, 34	<b>Tutorial 9</b>
	June 6	34, 35	35	

## 8. TEXT AND REFERENCE BOOKS

The set texts for the course are:

**Varian, H. R. (2006) *Intermediate Microeconomics: A Modern Approach*, (7<sup>th</sup> Ed), New York: Norton.**

**Bergstrom, T. C. and H. R. Varian (2006), *Workouts in Intermediate Microeconomics*, (7<sup>th</sup> Ed), New York: Norton.**

Note: These texts will be wrapped together as a set.

### Supplementary General Texts

A good strategy when confronted by conceptually difficult material is to see how the same material is treated in other texts. The following is a list of supplementary textbooks.

#### Intermediate

Eaton, B.C., D.F. Eaton and D.W. Allen (2005) *Microeconomics*, (6<sup>th</sup> Ed) Toronto Canada: Pearson Prentice-Hall.

Frank, R. H. (2006) *Microeconomics and Behaviour*, (6<sup>th</sup> Ed) Boston: McGraw-Hill.

Irwin, Katz, M.L. and H.S. Rosen (1994) *Microeconomics*, (2<sup>nd</sup> Ed) Boston: Irwin.

Mansfield, E. and G. Yohe (2004), *Microeconomics*, (11<sup>th</sup> Ed), New York: Norton.

Schotter, A. (2003) *Microeconomics: A Modern Approach*, (3<sup>rd</sup> Ed) New Jersey: Prentice Hall.

#### Advanced

Eatwell, J., Milgate, M. and Newman, P. (Eds) (1987) *The New Palgrave: A Dictionary of Economics*, London: Macmillan.

Gravelle, H. and R. Rees (2004) *Microeconomics*, (3<sup>rd</sup> Ed) Harlow England: Prentice Hall.

Hay, D. A. and D. K. Morris (1991), *Industrial Economics and Organisation: Theory and Evidence*, Oxford, Oxford University Press.

Varian, H.R. (1994) *Microeconomic Analysis*, (3<sup>rd</sup> Ed) New York: Norton.

#### Mathematical

Chiang, A. C. (1984) *Fundamental Methods of Mathematical Economics*, (3<sup>rd</sup> Ed), New York: McGraw-Hill.

Dowling, E. T (1992), *Introduction to Mathematical Economics*, (2<sup>nd</sup> Ed), New York: McGraw-Hill.

#### Supplementary Study Guide

Devlin, R. A. and N. T. Gallini (2005), *Problem Solving in Microeconomics: A Study Guide for Microeconomics by Eaton, Eaton and Allen*, (6<sup>th</sup> Ed) Toronto Canada: Pearson Prentice-Hall.

## **9. LECTURE OUTLINE AND READING GUIDE**

Every effort will be made to keep to the following lecture-by-lecture outline. As far as possible, changes will be notified in advance. Day and evening lectures with the same number are identical. In looking for reference material in the Library, always check Special Reserve first. The reading guide is intended as a basic guide only and further references may be given as the course proceeds.

### **1. INTRODUCTION**

#### **Lecture 1**

##### **1.1 Introduction and methodology**

- 1) What is microeconomics?
- 2) Role of economic theory
- 3) Basic elements
- 4) Rationality
- 5) Method of analysis

Varian, Ch 1

Frank, Ch 1

Gravelle and Rees, Ch 1

### **2. CONSUMER THEORY**

#### **Lecture 2**

##### **2.1 Budget constraint**

- 1) Consumption bundles
- 2) The budget constraint
- 3) The budget line
- 4) Irregular budget lines
- 5) Endowments and the budget line

Varian, Ch 2

Eaton, Eaton and Allen, Ch 2 and 3

#### **Lecture 3**

##### **2.2 Preferences**

- 1) Preference ordering
- 2) Completeness
- 3) Transitivity
- 4) Non-satiation
- 5) Continuity
- 6) Strict convexity
- 7) MRS and DMRS

Varian, Ch 3

Eaton, Eaton and Allen, Ch 2 and 3

## **Lecture 4**

### **2.3 Utility functions**

- 1) Utility functions
- 2) Marginal utility and MRS
- 3) Ordinal utility
- 4) Monotonic transformations
- 5) Common utility functions

Varian, Ch 4

Eaton, Eaton and Allen, Ch 2 and 3

## **Lecture 5**

### **2.4 Optimisation and demand**

- 1) Choice as Optimisation
- 2) Graphical analysis of utility maximisation and demand functions
- 3) Lagrange multiplier method
- 4) Cobb-Douglas utility function
- 5) Comparative statics

Varian, Ch 5

Eaton, Eaton and Allen, Ch 3; Chiang pp370 – 375

## **Lecture 6**

### **2.5 Demand and comparative statics**

- 1) Demand curves and Engel curves
- 2) Substitutes, complements, Giffen goods
- 3) Normal goods, inferior goods
- 4) Substitutes and Complements

Varian, Ch 6

Eaton, Eaton and Allen, Ch 3

## **Lecture 7**

### **2.6 Slutsky equation**

- 1) Income and substitution effects
- 2) Negative substitution effects
- 3) Compensated demand function

Varian, Ch 8

Eaton, Eaton and Allen, Ch 3 and 4; Frank Ch 4

## **Lecture 8**

### **2.7 Revealed preference**

- 1) Revealed preference
- 2) WARP
- 3) Checking WARP
- 4) SARP
- 5) Checking SARP

Varian, Ch 7

Eaton, Eaton and Allen, Ch 4



## **Lecture 9**

### **2.8 Price indices and welfare comparisons**

- 1) Index numbers in quantity and price
  - Laspeyres
  - Paasche

Varian, Ch 7

Eaton, Eaton and Allen, Ch 4

## **Lectures 10 and 11**

### **2.9 Consumer Theory with Endowments: Labour Supply & Saving/Borrowing.**

- 1) Budget constraint with endowments
  - Offer curves and demand curves
  - Slutsky equation
- 2) Labour supply
  - Time endowment
  - Full income
  - Leisure demand/labour supply
- 3) Inter-temporal consumption (Borrowing and lending)
  - Present and future value
  - Budget constraint
  - Choice and comparative statics

Varian, Ch 9 and 10

Eaton, Eaton and Allen, Ch 5 and 11

## **Lectures 12 and 13**

### **2.10 Price changes and welfare changes**

- 1) Laspeyres and Paasche measures
- 2) Consumer surplus
- 3) EV, CV, CS and the welfare effects of taxes
- 4) Equivalent and compensating variation

Varian, Ch 14

Eaton, Eaton and Allen, Ch4

## **Lecture 14**

### **2.11 Market demand**

- 1) Properties of demand functions
  
- 2) Market demand functions
- 3) Elasticities
  - Own price, cross price and income elasticities
- 4) Comparative statics applications
  - Labour supply and revenue

Varian, Ch 15

Eaton, Eaton and Allen Ch 3 and 4

### **3. IMPERFECT INFORMATION**

#### **Lectures 15, 16 and 17**

##### **3.1 Uncertainty**

- 1) Introduction
- 2) Budget set
  - Expected monetary value
  - Expected utility hypothesis
  - Prospects
- 3) Preferences
  - Continuity
  - von Neumann-Morgenstern expected utility function
  - Indifference curves
  - Risk averse / Risk neutral / Risk inclined
- 4) Choice
  - Insurance
  - Diversification
  - Risk pooling

Varian Ch 12

Eaton, Eaton and Allen, Ch 17

#### **Lecture 18**

##### **3.2 Market Failure with Uncertainty**

- 1) Asymmetric Information
- 2) Hidden characteristics
  - Adverse selection and "Lemons"
  - Signalling
  - Screening
- 3) Hidden actions
  - Moral hazard

Varian Ch 37

Eaton, Eaton and Allen, Ch 20

### **4. THEORY OF THE FIRM**

#### **Lecture 19**

##### **4.1 The Firm**

- 1) Firm organisation
- 2) Activities within the company
- 3) Traditional firm
- 4) Alternative models

Gravelle and Rees, Ch 5 pp92-95

Hay and Morris, Ch1

Katz and Rosen, Ch 7 pp230-237

## 5. PRODUCTION, COSTS AND PROFIT

### Lectures 20 and 21

#### 5.1 The production function

- 1) Inputs and outputs
- 2) Long run versus short run
  - Fixed, quasi-fixed and variable factors
- 3) Technology
  - Feasible set
  - Assumptions
- 4) Common Production functions
  - Linear, Leontief, Cobb-Douglas
- 5) Isoquants
  - Perfect substitutes
  - Perfect complements
  - Strictly convex
- 6) Marginal product and marginal rate of technical substitution
- 7) Factor intensity
- 8) Elasticity of substitution
  - CES production function
- 9) Returns to scale and homogeneous production functions
- 10) Technological change
- 11) Neoclassical short-run product curves

Varian, Ch 18

Gravelle and Rees, Ch 5

Mansfield, Ch 6

Schotter, Ch 5

### Lecture 22

#### 5.2 Profit Maximisation

- 1) Profit, revenue and cost
- 2) Accounting versus economic cost
  - Opportunity costs
  - Sunk costs
- 3) Short-run profit maximisation for a price-taking firm
  - First-order equilibrium conditions
  - Isoprofit lines
  - Comparative statics
- 4) Long-run profit maximisation for a price-taking firm
- 5) Factor demands
- 6) The production and shut-down decisions

Varian, Ch 19

Katz and Rosen, Ch 7

## **Lectures 23 and 24**

### **5.3 Cost Theory**

- 1) Long-run cost constraint
  - Isocost lines
- 2) Solving the cost minimisation problem for strictly convex isoquants
  - Graphical analysis
  - Lagrangian multiplier method
  - Derived factor demands
- 3) Comparative statics for strictly convex isoquants
  - Changes in input prices
  - Output Expansion path
  - Homothetic production functions
- 4) Cost minimisation and comparative statics for Leontief and linear production functions
- 5) Cost function, average cost, marginal cost in the long run
  - For Leontief and Cobb-Douglas production functions
  - Returns to scale, economies of scale and homothetic production functions
- 6) Cost function, average cost, marginal cost in the short run
- 7) Neoclassical long-run cost curves
- 8) Neoclassical short-run cost curves
- 9) Cost envelope

Varian, Ch 20 and 21

Eaton, Eaton and Allen, Ch 6 and Ch7; Gravelle and Rees, Ch 6 pp126-131

## **6. PERFECT AND IMPERFECT COMPETITION**

### **Lectures 25 and 26**

#### **6.1 The Theory of Perfect Competition**

- 1) Market Environment
  - Technological and market constraints
  - Equilibrium in the competitive market
- 2) Assumptions of perfect competition
- 3) Appropriate market structure
- 4) Short-run supply of the competitive firm
  - Supply decision
  - Inverse supply function
  - Shutdown condition
  - Profit versus producer surplus
- 5) Long-Run supply of the competitive firm
- 6) Short-run industry supply
- 7) Aggregate producer and consumer surplus
- 8) Long-run industry supply
  - Constant, increasing and decreasing cost industries
  - Firm and market adjustment for a shift in demand
- 9) The incidence of taxes in a constant cost industry

Varian, Ch 16, 22 and 23

Katz and Rosen, Ch 11 pp344-359

## **Lectures 27 and 28**

### **6.2 Monopoly and monopoly behaviour**

- 1) Monopoly assumptions
- 2) Monopoly price and output
- 2) Inefficiency of monopoly
- 3) Sources of monopoly
  - Franchise
  - Patents
  - Resource supplies
  - Cartels and anti-competitive behaviour
  - Natural monopoly
- 4) Regulatory responses to monopoly
  - Taxes
  - Price ceiling
  - Average cost pricing
  - Rate of regulation
  - Anti-trust legislation
- 5) Price Discrimination
  - First, second and third degree price discrimination
- 6) Monopolistic Competition
  - Assumptions
  - Appropriate market structure
  - Short and long-run equilibrium

Varian, Ch 24 and 25

Eaton, Eaton and Allen, Ch 10

Katz and Rosen, Ch 14

## **Lectures 29 and 30**

### **6.3 Oligopoly**

- 1) Assumptions
- 2) Appropriate market structure
- 3) Non-collusive oligopoly
  - Conjectural variations
  - Cournot model
  - Stackelberg quantity-leadership model
  - Price leadership
  - Bertrand model
  - Conjectural variations and reaction functions
- 4) Collusive oligopoly
  - Cartels

Varian, Ch 27

Katz and Rosen, Ch 15

## 7. GAME THEORY AND AUCTIONS

### Lectures 31 and 32

#### 7.1 Game Theory

- 1) Rules, payoffs and strategies
- 2) Normal form games
  - Prisoner's dilemma
  - Dominant strategy
  - IEDS
  - Nash equilibrium
- 3) Repeat games
  - Enforcing a cartel
- 4) Constant-sum games
  - Maxmin
  - Minmax
- 5) Mixed strategies
- 6) Extensive form games with perfect information
  - Backward induction
  - Credible threats
  - IEDS
  - Subgame perfect (Nash) equilibria
  - Bargaining

Varian, Ch 28 and 29

Schotter, Ch 7

### Lecture 33

#### 7.2 Auctions

- 1) Auctions and competitive markets
- 2) Other auction institutions
  - Classifications
  - Bidding rules
  - Auction design
  - Revenue equivalence theorem
  - Problems with auctions

Varian, Ch 17

Schotter, Ch 13 pp502-518

Klemperer, P. (2002), "How (not) to run auctions: The European 3G telecom auctions", *European Economic Review* **46**, 829-845.

## **8. GENERAL EQUILIBRIUM AND WELFARE ECONOMICS**

### **Lectures 34 and 35**

#### **8.1 General equilibrium and welfare economics**

- 1) A pure exchange economy
  - The Edgeworth box
  - The contract curve and Pareto efficiency
  - Trade
  - Market trade and market equilibrium
  - First theorem of welfare economics
  - Second theorem of welfare economics
- 2) Production and consumption
  - The production possibilities frontier
  - Efficiency in the product mix

Varian, Ch 31

Eaton, Eaton and Allen, Ch 13