



**DIVISION OF ECONOMIC AND FINANCIAL STUDIES**

**DEPARTMENT OF ECONOMICS**

**ECON200 MICROECONOMIC ANALYSIS  
UNIT OUTLINE  
2006**

**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 (5 lectures)
4. Theory of the firm (1 lecture)
5. Production, costs and profit (6 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	E7B Mason
Wednesday	13.00 - 15.00	X5BT1

#### **Evening Lectures**

Tuesday	18.00 - 20.00	C5CT2
Wednesday	18.00	C5CT2

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 address is as follows:

<http://www.econ.mq.edu.au/courses/econ200>

In order to access student information you will need to enter your password and username before 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 and Edwin Franks. Students are encouraged to make comments and ask questions regarding the unit and its material 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. Teaching staff will give direct answers to questions related to administration matters but are 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 two **multiple choice mid-semester tests** will be taken in place of the regular Tuesday lectures on April 4 and May 23. 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 2005

Week	Date	Lecture Number		Tutorial
		Day	Evening	
1	Feb 28	1	1, 2	
	March 1	2, 3	3	
2	March 7	4	4, 5	<b>Tutorial 1</b>
	March 8	5, 6	6	
3	March 14	7	7, 8	<b>Tutorial 2</b>
	March 15	8, 9	9	
4	March 21	10	10, 11	<b>Tutorial 3</b>
	March 22	11, 12	12	
5	March 28	13	13, 14	<b>Tutorial 4</b>
	March 29	14, 15	15	
6	April 4	<b>TEST</b>	<b>TEST, 16</b>	
	April 5	16, 17	17	
7	April 11	18	18, 19	
	April 12	19, 20	20	
<b>MID-SEMESTER BREAK</b>				
8	May 2	21	21, 22	<b>Tutorial 5</b>
	May 3	22, 23	23	
9	May 9	24	24, 25	<b>Tutorial 6</b>
	May 10	25, 26	26	
10	May 16	27	27, 28	<b>Tutorial 7</b>
	May 17	28, 29	29	
11	May 23	<b>TEST</b>	<b>TEST, 30</b>	
	May 24	30, 31	31	
12	May 30	32	32, 33	<b>Tutorial 8</b>
	May 31	33, 34	34	
13	June 6	35	35, 36	<b>Tutorial 9</b>
	June 7	36, 37	37	

## 8. TEXT AND REFERENCE BOOKS

The set texts for the course are

**Varian, H. R. (2003) *Intermediate Microeconomics: A Modern Approach*, (6<sup>th</sup> Ed), New York: Norton.**

**Bergstrom, T. C. and H. R. Varian (2003), *Workouts in Intermediate Microeconomics*, (6<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 The 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 Consumer 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

Varian, Ch 4

Eaton, Eaton and Allen, Ch 2 and 3

## **Lecture 5**

### **2.4 Consumer choice**

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

Varian, Ch 5

Eaton, Eaton and Allen, Ch 3

Chiang pp370 – 375

## **Lecture 6**

### **2.5 Consumer demand**

- 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

## **Lectures 7 and 8**

### **2.6 Revealed preference**

- 1) Revealed preference
- 2) Index numbers in quantity and price  
Laspeyres  
Paasche

Varian, Ch 7

Eaton, Eaton and Allen, Ch 4

## **Lecture 9**

### **2.7 Substitution**

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

Varian, Ch 8



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

## **Lectures 10 and 11**

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

- 1) Budget constraint with endowments  
Offer curves and demand curves
- 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**

### **2.9 Consumer Welfare Measurement**

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

Varian, Ch 14

Eaton, Eaton and Allen, Ch4

## **Lecture 14**

### **2.10 Market demand**

- 1) Market demand functions
- 2) Elasticities  
Own price, cross price and income elasticities
- 3) Comparative statics applications  
Excise tax versus a lump sum tax  
Rationing  
Indexation
- 4) Properties of demand functions

Varian, Ch 15

Eaton, Eaton and Allen Ch 3 and 4

### **3. IMPERFECT INFORMATION**

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

##### **3.1 Choice under Imperfect Information**

- 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
  - Gambling
  - Risk pooling
  - Insurance
  - Risk spreading
  - Diversification

Varian Ch 12

Eaton, Eaton and Allen, Ch 17

#### **Lectures 18 and 19**

##### **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 36

Eaton, Eaton and Allen, Ch 20

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

#### **Lecture 20**

##### **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

### Lecture 21, 22

#### 5.1 The production function

- 1) Inputs and outputs
- 4) 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 23

#### 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

## **Lecture 24, 25, 26**

### **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 27 and 28**

#### **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 29 and 30**

### **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 31 and 32**

### **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 33 and 34

#### 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 35

#### 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 36 and 37

#### 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 30

Eaton, Eaton and Allen, Ch 13