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

Lecturer
Glenn Jones: E4A A415, ph. 9850 8500, email: glenn.jones@mq.edu.au

Tutor-in-charge
Edwin Franks: E4A A421, ph. 9850 7076, email: 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/](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:

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<tr>
<td>Mid-semester Test 1</td>
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<td>Mid-semester Test 2</td>
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<td>Final exam: multiple choice</td>
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<td>Final exam: essays/problems</td>
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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

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<thead>
<tr>
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8. TEXT AND REFERENCE BOOKS

The set texts for the course are:


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**

**Advanced**

**Mathematical**

**Supplementary Study Guide**
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
   Prefect 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
3) Inefficiency of monopoly
4) Sources of monopoly
   Franchise
   Patents
   Resource supplies
   Cartels and anti-competitive behaviour
   Natural monopoly
5) Regulatory responses to monopoly
   Taxes
   Price ceiling
   Average cost pricing
   Rate of regulation
   Anti-trust legislation

6) Price Discrimination
   First, second and third degree price discrimination

5) 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
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