THE UNIVERSITY OF NEW SOUTH WALES



Australian School of Business School of Economics

# ECON 6001 MICROECONOMIC ANALYSIS

**Course Outline** 

Semester 1, 2009

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# **1 STAFF CONTACT DETAILS**

Lecturer-in-charge (first half of course): Suraj Prasad Room 3121, Quadrangle Building Phone No: 9385 3325 Email: s.prasad@unsw.edu.au Consultation Times – Wednesday 1:00- 4:00 pm (or by appointment)

Lecturer-in-charge (second half of course): Chris Bidner Room 3119, Quadrangle Building Phone No: 9385 5911 Email: c.bidner@unsw.edu.au Consultation Times – TBA (or by appointment)

# 1.1 Communications with staff

You should feel free to contact your lecturers about any academic matter. However, I strongly encourage, for efficiency, all enquiries about the subject material be made at lectures or tutorials or during consultation time. Discussion of course subject material will not be entered into via lengthy emails.

Email correspondence on administrative matters (e.g. advising inability to attend tutorial) will be responded to within 48 hours, but not over weekends. Please note that the lecturer has no advance notice of the date and time of the exam [the subject of many emails].

# 2 COURSE DETAILS

# 2.1 Teaching Times and Locations

Lecture: Monday: 5:00-8:00 pm Room: Australian School of Business Building 205

# 2.2 Units of Credit

The course is worth 6 units of credit. There is no parallel teaching in this course.

# 2.3 Summary of Course

This is a graduate course in microeconomics. The main aim of the course is to provide you with a set of tools to model individual behaviour and the economic outcomes that result from this behaviour. Learning these methods will help you access journal articles and help you in building your own economic models.

#### 2.4 Aims and Relationship to Other Courses

Econ 6001 is a core course in the M.Ec and Ph.D programs in economics and is a prerequisite for other elective courses in these programs. This course assumes that you have completed intermediate microeconomics and are familiar with calculus. Prerequisites are outlined in the UNSW Handbook.

The course has two central themes. The first part focuses on optimization where we model how individuals and firms make decisions. We will spend a considerable amount of time on constrained optimization techniques within the context of a consumer and then a firm. The second part of the course deals with the concept of equilibrium and looks at economic outcomes that result from individual decision making. We will study equilibrium in markets when individuals take prices as given (general equilibrium theory) and then equilibrium when individuals interact strategically with one another (game theory).

#### 2.5 Student Learning Outcomes

By successfully completing this course, you should:

- 1. learn how to use optimization techniques to model decisions by individuals and firms
- 2. know the concepts of pareto optimality and equilibrium for exchange economies
- 3. be able to model strategic interactions between individuals and predict outcomes based on various equilibrium concepts
- 4. demonstrate understanding of how contracts are used to reduce informational asymmetries

Course	ASB Graduate Attributes				
Learning					
Outcomes					
1-4	1. Critical thinking and problem solving				
1-4	2. Communication				
1-4	3. Teamwork and leadership				
1-4	4. Social, ethical and global perspectives				
1-4	5. In-depth engagement with relevant disciplinary knowledge				
1-4	6. Professional skills				

#### Graduate Attributes

# **3 LEARNING AND TEACHING ACTIVITIES**

#### 3.1 Approach to Learning and Teaching in the Course

The philosophy underpinning this course and its Teaching and Learning Strategies are based on "Guidelines on Learning that Inform Teaching at UNSW. These guidelines may be viewed at: <u>www.guidelinesonlearning.unsw.edu.au</u>. Specifically, the lectures, tutorials and assessment have been designed to appropriately challenge students and support the achievement of the desired learning outcomes. A climate of inquiry and dialogue is encouraged between students and teachers and among students (in and out of class). The lecturers and tutors aim to provide meaningful and timely feedback to students to improve learning outcome.

#### 3.2 Learning Activities and Teaching Strategies

The examinable content of the course is defined by the references given in the Lecture Schedule, the content of Lectures, and the content of the Tutorial Program.

#### Lectures

The purpose of Lectures is to provide a logical structure for the topics that make up the course; to emphasize the important concepts and methods of each topic, and to provide relevant examples to which the concepts and methods are applied.

#### **Tutorials**

The tutorials will be similar to lectures. However, you will be given a problem set every two weeks to apply concepts from the lecture and to test your level of understanding of the material. These problem sets will be posted on WebCT Vista. The problem sets will be due one week after they are handed out.

#### Out-of-Class Study

While students may have preferred individual learning strategies, it is important to note that most learning will be achieved outside of class time. Lectures can only provide a structure to assist your study, and tutorial time is limited.

An "ideal" strategy (on which the provision of the course materials is based) might include:

- 1. Reading of the relevant chapter(s) of the text and any readings **before the lecture.** This will give you a general idea of the topic area.
- 2. Attendance at lectures. Here the context of the topic in the course and the important elements of the topic are identified. The relevance of the topic should be explained.
- 3. Attending tutorials and attempting the tutorial questions.

# 4 ASSESSMENT

#### 4.1 Formal Requirements

In order to pass this course, you must:

- achieve a composite mark of at least 50 out of 100; and
- make a satisfactory attempt at ALL assessment tasks (see below).

#### 4.2 Assessment Details

Assessment Task	Weighting	Learning Outcomes assessed	ASB Graduate Attributes assessed	Length	Due Date
6 Problem Sets (equal weight)	20%	1,2,3,4	1,2,5	2 to 6 problems	Due one week after problem set handed out
Midterm Exam	40%	1	1,2,5	2 hours	T.B.A
Final Exam	40%	2,3,4	1,2,5	2 hours	University Exam Period
	100%				

# 4.3 Problem Sets- Assessment and Format

See 4.2.

# 4.4 **Problem Sets Submission Procedure**

Submission details for problem sets will be provided in class. Problem Sets should be submitted at the beginning of the lecture in which they are due. Problem sets should include your full name and student number. It is your responsibility to keep an extra copy of the problem sets in case the original is lost or damaged.

# 4.5 Late Submission of Problem Sets

10% of the value of each problem set will be deducted for each day (24 hours) or part thereof which the electronic copy of a problem set is submitted to the course website after the deadline. Problem sets submitted more after answers have been discussed or posted will not be marked.

# 4.6 Final Exam Format

The final exam will consist of 5 to 6 problems. These problems will be based on the lectures and problem sets. As outlined in 3.2 above all material covered in the lectures and tutorial program is examinable.

# 5 ACADEMIC HONESTY AND PLAGIARISM

The University regards plagiarism as a form of academic misconduct, and has very strict rules regarding plagiarism. For UNSW's policies, penalties, and information to help you avoid plagiarism see: <u>http://www.lc.unsw.edu.au/plagiarism/index.html</u> as well as the guidelines in the online ELISE tutorial for all new UNSW students: <u>http://info.library.unsw.edu.au/skills/tutorials/InfoSkills/index.htm</u>.

# 6 COURSE EVALUATION AND DEVELOPMENT

Each year feedback is sought from students and other stakeholders about the courses offered in the School and continual improvements are made based on this feedback. UNSW's Course and Teaching Evaluation and Improvement (CATEI) Process is one of the ways in which student evaluative feedback is gathered. You are strongly encouraged to take part in the feedback process.

# 7 STUDENT RESPONSIBILITIES AND CONDUCT

Students are expected to be familiar with and adhere to university policies in relation to class attendance and general conduct and behaviour, including maintaining a safe, respectful environment; and to understand their obligations in relation to workload, assessment and keeping informed.

Information and policies on these topics can be found in the 'A-Z Student Guide': <u>https://my.unsw.edu.au/student/atoz/ABC.html</u>. See, especially, information on 'Attendance and Absence', 'Academic Misconduct', 'Assessment Information', 'Examinations', 'Special Consideration', 'Student Responsibilities', 'Workload' and policies such as 'Occupational Health and Safety'.

# 7.1 Workload

It is expected that you will spend at least **ten hours** per week studying this course. This time should be made up of reading, research, working on exercises and problems, and attending classes. In periods where you need to complete problem sets or prepare for examinations, the workload may be greater.

Over-commitment has been a cause of failure for many students. You should take the required workload into account when planning how to balance study with employment and other activities.

# 7.2 Attendance

Your regular and punctual attendance at lectures and seminars is expected in this course. University regulations indicate that if students attend less than eighty per cent of scheduled classes they may be refused final assessment.

# 7.3 General Conduct and Behaviour

You are expected to conduct yourself with consideration and respect for the needs of your fellow students and teaching staff. Conduct which unduly disrupts or interferes with a class, such as ringing or talking on mobile phones, is not acceptable and students may be asked to leave the class. More information on student conduct is available at: <a href="http://www.my.unsw.edu.au">www.my.unsw.edu.au</a>

# 7.4 Occupational Health and Safety

UNSW Policy requires each person to work safely and responsibly, in order to avoid personal injury and to protect the safety of others. For more information, see <u>https://my.unsw.edu.au/student/atoz/OccupationalHealth.html</u>.

# 7.5 Keeping Informed

You should take note of all announcements made in lectures, tutorials or on the course web site. From time to time, the University will send important announcements to your university e-mail address without providing you with a paper copy. You will be deemed to have received this information. It is also your responsibility to keep the University informed of all changes to your contact details.

# 8 STUDENT RESOURCES AND SUPPORT

The University and the ASB provide a wide range of support services for students, including:

• ASB Education Development Unit (EDU) (<u>www.business.unsw.edu.au/edu</u>) Academic writing, study skills and maths support specifically for ASB students. Services include workshops, online and printed resources, and individual consultations. EDU Office: Room GO7, Ground Floor, ASB Building (opposite Student Centre); Ph: 9385 5584; Email: <u>edu@unsw.edu.au</u>

• UNSW Learning Centre (<u>www.lc.unsw.edu.au</u>)

Academic skills support services, including workshops and resources, for all UNSW students. See website for details.

- Library training and search support services: <u>http://info.library.unsw.edu.au</u>
- UNSW IT Service Desk: Technical support for problems logging in to websites, downloading documents etc. Library, Level 2; Ph: 9385 1333. Website: www.its.unsw.edu.au/support/support home.html

• UNSW Counselling Service (<u>http://www.counselling.unsw.edu.au</u>) Free, confidential service for problems of a personal or academic nature; and workshops on study issues such as 'Coping With Stress' and 'Procrastination'.

Office: Level 2, Quadrangle East Wing ; Ph: 9385 5418

• **Student Equity & Disabilities Unit** http://www.studentequity.unsw.edu.au) Advice regarding equity and diversity issues, and support for students who have a disability or disadvantage that interferes with their learning. Office: Ground Floor, John Goodsell Building; Ph: 9385 4734

#### 9 COURSE RESOURCES

The website for this course is on WebCT Vista.

The main text for the course is

# Microeconomic Theory by Andreu MasColell, Michael D. Whinston and Jerry R. Green. Oxford University Press, 1995. (S338.5/165)

The main text is available in the book store and the call number in the library is given above. Henceforth, I refer to the text as MWG.

Two other text books that you may find useful are:

# Advanced Microeconomic Theory by Geoffrey A. Jehle and Philip J. Reny. 2nd Edition, Addison-Wesley, 2001. (S338.5/192)

and

# Game Theory for Applied Economists by Robert Gibbons. Princeton University Press, 1992. (S330.015193/4)

In addition, Ariel Rubinstein has an excellent set of lecture notes on his website that are downloadable for free.

#### Lecture Notes in Microeconomic Theory by Ariel Rubinstein.

A good text book on mathematical methods used in the course is

# Mathematics for Economists by Lawrence E. Blume and Carl P. Simon. Norton, 1991

# **10 LECTURE SCHEDULE**

#### Week 1 – 9 March: Preferences and Utility Representation

MWG- Chapter 1, Sections 1.A, 1.B, Chapter 3, Section 3.A

#### Week 2 – 16 March: Demand Functions and their Properties

MWG- Chapter 3, Sections 3. B, 3.D

#### Week 3 – 23 March: Kuhn-Tucker and Computing Demand Functions

MWG- Mathematical Appendix, Sections M.J M.K

# Week 4 – 30 March: Expenditure Minimization and Slutsky Decomposition Theorem

MWG- Chapter 3, Sections 3.E, 3.G

#### Week 5 – 6 April: Production

MWG- Chapter 5, Sections 5.A, 5.B, 5.C, 5.D

#### Week 6 – 20 April : Choice under Uncertainty and Risk Aversion

MWG- Chapter 6, Sections 6.A, 6.B, 6.C, 6.D

#### Week 7 – 27 April: General Equilibrium in an Exchange Economy

MWG- Chapter 16, Sections 16.A, 16.B, 16.C, 16.D

#### Week 8 – 4 May: Normal Form Games (Dominance and Nash Equilibrium)

MWG- Chapter 7, Sections 7.A, 7.B, Chapter 8, Sections 8.A, 8.B, 8.C, 8.D

#### Week 9 – 11 May: Extensive Form Games

MWG- Chapter 7, Section 7.C

#### Week 10 – 18 May: Games of Incomplete Information

MWG- Chapter 8, Section 8.E, Chapter 9, sections 9.B, 9.C, 9.D

#### Week 11 – 25 May: Adverse Selection and Signalling

MWG- Chapter 13

#### Weeks 12 – 1 June : Moral Hazard

1. MWG- Chapter 14