

THE UNIVERSITY OF
NEW SOUTH WALES



School of Economics

Econ6002
Macroeconomic Analysis

Course Outline
Session 1, 2009

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1. STAFF CONTACT DETAILS

Course Administrator: Glenn Otto

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Consultation Times – Tuesday 1-2 and Friday 10-12 (or by appointment).

Sang-Wook (Stanley) Cho

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1.1 Communication with Staff

The lecturers are happy to be contacted initially by email with course specific inquiries. Phone calls or inquiry through Web-CT are strongly discouraged.

2. COURSE DETAILS

2.1 Teaching Times and Locations

Tuesday 5-8 Law Theatre G23

2.2 Units of Credit

The course is worth 6 units of credit.

The first 6 weeks of the course will be taught in parallel with ECON 4100.

2.3 Summary of Course

The first part of the course will deal focus on dynamic macroeconomic theory based on general equilibrium theory with added emphasis on neoclassical growth models and dynamic programming, models with uncertainty, and overlapping generation models. For each topic, we will also learn problem solving and numerical techniques and apply them in the particular topic in discussion. The second part of the course will mainly deal with dynamic general equilibrium models and with models for monetary policy analysis. In each case the emphasis will be on the basic structure of these models and their applications. We will also spend some time on technical aspects dynamic optimization and solving rational expectations models.

2.4 Course Aims and Relationship to Other Courses

This course is a graduate course (for PhD and MEc students) on advanced macroeconomics. It will build on the material that is taught in intermediate courses in macroeconomics.

2.5 Student Learning Outcomes

On completion of the course, students should be able to:

1. Explain the assumptions and structure of standard models in macroeconomics
2. Analyze and manipulate these models
3. Apply the models to interpret and analyze problems in macroeconomics

Graduate Attributes

This course contributes to your development of the following Australian School of Business Graduate Attributes, which are the qualities, skills and understandings we want you to have by the completion of your degree.

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

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 (see 3.3 below) are based on “Guidelines on Learning that Inform Teaching at UNSW.

These guidelines may be viewed at: www.guidelinesonlearning.unsw.edu.au.

Understanding and using economic models is key element in economic analysis and in undertaking research in economics. The best way to gain a deep understanding of these models is by working through the models yourself using a pen and paper. Look at the equations and write them out (or draw the diagrams). Note what variables enter into the models and make sure you can provide an intuitive explanation as to why they are there. Think about the assumptions used in the model and ask why they are used. Look at how the model is solved and then look at the solution and see if it makes economic sense. It usually takes time to build-up these skills so it is good practice to begin early in the session and do a little at a time. In the lectures we will work through important macroeconomic models, however the numerous problem sets will give you practice at working with and solving economic models and help you to acquire the necessary skills.

3.2 Learning Activities and Teaching Strategies

The examinable content of the course is defined by the material covered in lectures, tutorials and problem sets.

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

Tutorials will be concerned with discussing solutions to specific problems including the problem sets.

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; and
- make a satisfactory attempt at all the assessment tasks;

4.2 Assessment Details

Assessment Task	Weighting	Learning Outcomes assessed	ASB Graduate Attributes assessed	Length	Due Date
Problem Sets	30%	1,2,3	1,2,6	NA	See Below
Mid-Session Exam	20%	1,2,3	1,2,6	1 hour	Week 7 28 April
Final Exam	50%	1,2,3	1,2,6	2 hours	University Exam Period

Problem Sets

The problem sets will be based on the theoretical models covered in lectures. They are designed to provide students with practice in obtaining the necessary skills to analyse and solve macroeconomic models. Collaboration among classmates is encouraged, however, students must complete the problem sets individually and acknowledge any help received from other students. Failure to acknowledge will be considered plagiarism. Please see Section 5 for Academic Dishonesty and Plagiarism.

Weeks 1-6

There will be three problem sets (worth a total of 15%). Only two will be graded and taken into account for the final mark. Students may work in a group of 2 or 3, and hand in the assignment jointly. Due dates for the problem sets are Week 3, 5, and 7 (in the beginning of the lecture).

Weeks 7-12

There will be two problem sets (worth a total of 15%). The first will be due in Week 9 (during the lecture) and the second in Week 12 (during the lecture). Students will need to submit answers to each problem set.

Mid-Session Exam

The mid-session exam will be 1 hour in length and will be held in the 1st hour of the Week 7 lecture (Tuesday 28 April, 5-6 pm). The location of the mid-session will be announced in lectures and will be posted on WebCT Vista .

All students are expected to attempt the mid-session exam. The exam will cover materials covered in lectures and tutorials during Weeks 1-6 (inclusive), and will consist of short-answer questions. It will test students understanding the models covered in lectures and the problem sets and their ability to solve, analyse and interpret these.

Final Exam

The final exam will be held during the University examination period with the date and time determined by the University. It will be 2 hours long and will cover materials considered in lectures, tutorials and problem sets in both parts of the course, although greater emphasis will be given to material covered in Weeks 7-12. There will be some choice of questions. Further information on the content of the Final Exam will be provided towards the end of session.

Examples of previous problem sets, mid-session exams and final exams are provided in WebCT Vista.

4.3 Assessment Format

There is no special format for the problem sets although answers should be neatly set out and legible if handwritten.

4.4 Assignment Submission Procedure

The problem sets should be submitted at the beginning of the lecture in the relevant week. Students should keep a copy of all work submitted for assessment and keep returned marked assignments.

4.5 Late Submission

Late problem sets will have marks deducted for each day they are late.

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: <http://www.lc.unsw.edu.au/plagiarism/index.html> as well as the guidelines in the online ELISE tutorial for all new UNSW students: <http://info.library.unsw.edu.au/skills/tutorials/InfoSkills/index.htm>.

6. COURSE RESOURCES

There is no prescribed textbook for this course. Students may find the following graduate textbooks (available in the UNSW library) useful for some parts of the course.

Weeks 1-6

Lars Ljungqvist and Thomas J. Sargent, *Recursive Macroeconomics Theory*, 2nd edition, The MIT Press (2004)

Nancy L. Stokey and Robert E. Lucas, with Edward C. Prescott, *Recursive Methods in Economic Dynamics*, Harvard University Press (1989)

Thomas Cooley, *Frontiers of Business Cycle Research*, Princeton University Press (1995)

Weeks 7-12

David Romer, *Advanced Macroeconomics*, 2nd edition, McGraw-Hill, 2001.

Carl Walsh, *Monetary Theory and Policy*, MIT Press, 1998.

Maurice Obstfeld and Ken Rogoff, *Foundations of International Macroeconomics*, MIT Press, 1996.

Blanchard, Olivier J., and Stanley Fischer, *Lectures on Macroeconomics*, MIT Press, 1989.

Chiang, Alpha C., *Fundamental methods of mathematical economics*, 1984

A good intermediate text is:

Mankiw G. N., *Macroeconomics*, last edition.

7. 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. Based on previous comments by students we are providing students with more opportunities to practice their problem solving skills.

8. 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': <https://my.unsw.edu.au/student/atoz/ABC.html>. 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'.

8.1 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 assignments 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.

8.2 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.

8.3 Special Consideration and Supplementary Examinations

UNSW Policy and Process for Special Consideration

(see <https://my.unsw.edu.au/student/atoz/SpecialConsideration.html>)

- Applications for special consideration (including supplementary examinations) must go through UNSW Central administration (within 3 working days of the assessment to which it refers) – applications will **not** be accepted by teaching staff;
- Applying for special consideration does not automatically mean that you will be granted additional assessment or that you will be awarded an amended result;
- If you are making an application for special consideration (through UNSW Central Administration) please notify your Lecturer in Charge;
- Please note that a register of applications for Special Consideration is maintained. History of previous applications for Special Consideration is taken into account when considering each case.

8.4 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: www.my.unsw.edu.au

8.5 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 <https://my.unsw.edu.au/student/atoz/OccupationalHealth.html>.

8.6 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.

9. ADDITIONAL STUDENT RESOURCES AND SUPPORT

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

- **ASB Education Development Unit (EDU)** (www.business.unsw.edu.au/edu)
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: edu@unsw.edu.au
- **UNSW Learning Centre** (www.lc.unsw.edu.au)
Academic skills support services, including workshops and resources, for all UNSW students. See website for details.
- **Library training and search support services:** <http://info.library.unsw.edu.au>
- **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** (<http://www.counselling.unsw.edu.au>)
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

10. COURSE SCHEDULE

Part I. Instructor: Stanley Cho

Week 1 & 2 Microeconomic Foundations in Dynamic Macroeconomics – Competitive Equilibrium and Pareto Optimality

1. Lecture notes (provided courtesy of Professor Dirk Krueger)
2. Ljungqvist and Sargent, Chapter 8
3. Kehoe, T. (1989): “Intertemporal General Equilibrium Models,” in F. Hahn (ed.) *The Economics of Missing Markets, Information and Games*, Claredon Press, 363-393.
4. Negishi, T. (1960): “Welfare Economics and Existence of an Equilibrium for a Competitive Economy,” *Metroeconomica*, 12, 92-97.

Weeks 3 & 4: Introduction to Neoclassical Growth Model and Dynamic Programming

1. Lecture notes
2. Ljungqvist and Sargent, Chapter 3-5
3. Stokey and Lucas, Chapter 2-4
4. Cooley, Chapter 1-2
5. Kydland, F.E. and E.C. Prescott (1982): “Time to Build and Aggregate Fluctuations,” *Econometrica*, 50, 1345-1370.

Weeks 5: Overlapping Generations Model

1. Lecture notes
2. Samuelson, P.A. (1958): “An Exact Consumption Loan Model of Interest, With or Without the Social Contrivance of Money,” *Journal of Political Economy*, 66, 467-482.
3. Barro, R. (1974): “Are Government Bonds Net Wealth?” *Journal of Political Economy*, 82, 1095-1117.
4. Diamond, P. (1965): “National Debt in a Neo-Classical Growth Model,” *American Economic Review*, 55, 1126-1150.
5. Ljungqvist and Sargent, Chapter 9-10

Week 6: Further Topics in Dynamic Macroeconomics (time permitting)

1. Models with Uncertainty
2. Ricardian Equivalence and Topics in Fiscal Policies
3. Models with Heterogeneous Agents

Part II. Instructor: Glenn Otto

Week 7: Introduction to Dynamic Models

1. Lecture notes.
2. Obstfeld and Rogoff – Chapter 1

3. Real business cycle theory: the intertemporal substitution hypothesis. Romer, D., *Advanced Macroeconomics*, McGraw-Hill, New York, 1996, Chapter 4, sections 4.2, 4.3, 4.4.

Weeks 8 & 9: Dynamic Stochastic General Equilibrium (DSGE) Models

Covers the structure and solution of the basic DSGE (real business cycle) models. Asset pricing implications.

1. Romer, Ch. 4
2. Campbell, J. "Inspecting the mechanism: an analytical approach to the stochastic growth model," *Journal of Monetary Economics*, 33 (June) 1994, 463-506.
3. Lecture Notes

Week 10: Introduction to the New Keynesian Model

A non-technical treatment of the basic elements of the New Keynesian policy model.

1. Romer, Ch, 10
2. Walsh, C. "Teaching inflation targeting: an analysis for intermediate macro," *Journal of Economic Education* 33(4): 333-347.
3. Carlin and Soskice, "The 3-equation New Keynesian Model – a graphical exposition," *Contributions to Macroeconomics*, Berkley Electronic Press, <http://www.bepress.com/bejm>

Weeks 11 & 12: A small forward-looking model: derivation, solution concepts and optimal policy

A formal treatment of the New Keynesian model.

1. Walsh, Ch. 2, 5 & 8.
2. McCallum and Nelson, An Optimizing IS-LM Specification for Monetary Policy and Business Cycle Analysis, Available at <http://papers.nber.org/papers/w5875>
3. Clarida, R., J. Gali and M. Gertler, 1999, The Science of monetary policy, *Journal of Economic Literature* 37, 1661-1707. Available at: <http://papers.nber.org/papers/w7147>
4. Ball, Efficient Rules for Monetary Policy, <http://papers.nber.org/papers/w5952>