ECON6102
Advanced Macroeconomic Analysis

Course Outline
Semester 2, 2015

Part A: Course-Specific Information

Students are also expected to have read and be familiar with Part B Supplement to All Postgraduate Course Outlines. This contains Policies on Student Responsibilities and Support, including Special Consideration, Plagiarism and Key Dates. It also contains the Business School PROGRAM LEARNING GOALS.
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1 STAFF CONTACT DETAILS

Lecturer-in-charge (Week 1-6): Sang-Wook (Stanley) Cho
Room 406 Business School Building
Phone No: 9385 3287
Email: s.cho@unsw.edu.au
Consultation Times – Monday 3-5pm

Lecturer-in-charge (Week 7-12): Christopher Gibbs
Room Quad 3120
Phone No: 9385 3323
Email: christopher.gibbs@unsw.edu.au
Consultation Times – Wednesday 2-4pm

1.1 Communications with staff
You should feel free to contact your lecturer about any academic matter. However, we strongly encourage, for efficiency, all enquiries about the subject material be made at tutorials or during consultation time. The lecturers will hold regular office hours starting Week 2 until Week 13.

Email is the recommended means of initial communication with the teaching staff for this course. Discussion of course subject material will not be entered into via lengthy emails.

Lecturers will reply to email within 48 hours, except on weekends, with the following provisions:
- The question should require a one (or two) sentence response (maximum). If it takes more, office hours are the more appropriate venue.
- We will never answer emails that request information that can be found on the Moodle website or the syllabus.
- We will not reply to emails concerning grading. For such matters, office hours are more appropriate.
- It is also (strongly) preferable that you use an UNSW email address: Our spam filter is set to maximum. Moreover, university policy stipulates a preference for these email addresses.
- Always identify yourself and the course code in your email.
- Please do not send attachments of any kind unless requested by the lecturers.
- Please do not submit term work by email unless requested by the lecturers.

We encourage you to provide course feedback and comments via email, if you wish. Please note that the lecturer has no advance notice of the date and time of the exam.

2 COURSE DETAILS

2.1 Teaching Times and Locations
Lectures start in Week 1(to Week 12): The Time and Location are:
Monday 18:00-21:00, Business School 232.
2.2 Units of Credit
The course is worth 6 units of credit.

2.3 Summary of Course
The course is worth 6 units of credit.

2.3 Summary of Course
The course is worth 6 units of credit.

The first half of course will focus on dynamic macroeconomics based on general equilibrium theory with added emphasis on different solution methods for neoclassical growth models, numerical approaches to dynamic programming and models with uncertainty.

The second half of the course covers two topics: monetary theory and learning and expectations in macroeconomic models. The monetary theory portion of the course will focus on developing the theory underpinning the standard New Keynesian DSGE model used in most central banks for policy analysis. The second topic will introduce students to the adaptive learning framework and models of bounded rationality. The final lecture (of the first half of the course) will bring these two subjects together with a discussion of the use of bounded rationality in studying monetary phenomena.

For each topic, we will also learn problem solving and numerical techniques and apply them in the particular topic in discussion. Some data analysis is also part of the learning process.

2.4 Aims and Relationship to Other Courses
The course aims to provide benefits to students in terms of:

- The ability to use advanced economic tools in addressing economic policy questions;
- An understanding of the different ways in which economic policy issues can be tackled and the way in which economic policies affect economic performance;

This course is a 2nd part of the graduate course on advanced macroeconomics. It will build on the material that was taught in Macroeconomic Analysis (ECON6002). You must have completed ECON6002 with satisfactory grades or have completed equivalent course material. Relative to your past-level studies in economics, you will acquire an extra layer of professional knowledge and core analytical skills in advanced macroeconomics.

2.5 Student Learning Outcomes
The Course Learning Outcomes are what you should be able to DO by the end of this course if you participate fully in learning activities and successfully complete the assessment items.

The Learning Outcomes in this course also help you to achieve some of the overall Program Learning Goals and Outcomes for all students in the Business School. Program Learning Goals are what we want you to BE or HAVE by the time you
successfully complete your degree. You demonstrate this by achieving specific Program Learning Outcomes - what you are able to DO by the end of your degree.

For more information on the Postgraduate Program Learning Goals and Outcomes, see Part B of the course outline.

The following table shows how your Course Learning Outcomes relate to the overall Program Learning Goals and Outcomes, and indicates where these are assessed:

<table>
<thead>
<tr>
<th>Program Learning Goals and Outcomes</th>
<th>Course Learning Outcomes</th>
<th>Course Assessment Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>This course helps you to achieve the following learning goals</td>
<td>On successful completion of the course, you should be able to:</td>
<td>This learning outcome will be assessed in the following items:</td>
</tr>
<tr>
<td>1 Knowledge</td>
<td>Explain the assumptions and structure of standard models in macroeconomics Analyse and manipulate these models Use statistical skills to present data relevant to problems in macroeconomics.</td>
<td>• Assignments • Exams</td>
</tr>
<tr>
<td>2 Critical thinking and problem solving</td>
<td>Use the standard models of advanced macroeconomics to interpret and analyse real problems in macroeconomics</td>
<td>• Assignments • Exams</td>
</tr>
<tr>
<td>3a Written communication</td>
<td>Construct written work which is logically and professionally presented.</td>
<td>• Assignments</td>
</tr>
<tr>
<td>3b Oral communication</td>
<td>Communicate ideas in a succinct and clear manner.</td>
<td>• In-class participation and presentation</td>
</tr>
<tr>
<td>4 Teamwork</td>
<td>Work collaboratively to complete a task.</td>
<td>• Not assessed</td>
</tr>
<tr>
<td>5a. Ethical, environmental and sustainability considerations</td>
<td>Identify and assess environmental and sustainability considerations in problems in international macroeconomics.</td>
<td>• Assignments • Exams</td>
</tr>
<tr>
<td>5b. Social and cultural awareness</td>
<td>Not specifically addressed in this course.</td>
<td>• Not assessed</td>
</tr>
</tbody>
</table>

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: www.guidelinesonlearning.unsw.edu.au. 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.
An effective learning strategy (on which the course materials are based) is the following:

- Prior to attending a lecture, download the lecture notes, read them and the relevant material from the textbook, bring the notes with you to the lecture.

- Attend the lecture. The relevant material from the textbook forms the basis for the lecture. Key concepts will be emphasised and demonstrated through worked examples.

- Assignments: do not be discouraged if you cannot answer all of the questions as some questions are more difficult than others. Attempting the assigned questions will provide a self-test of your understanding of particular topics and identify those topics which may require further attention.

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. In some cases, you will should work through the data and convince yourself that the model is an appropriate specification. 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 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 emphasise the important concepts and methods of each topic, and to provide relevant examples to which the concepts and methods are applied. As not all topics will be presented extensively, students should refer to the textbook for further details and be sure to attempt the tutorial exercises.

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.
4 ASSESSMENT

4.1 Formal Requirements
To be eligible for a passing grade in this course, students must:
- Achieve a composite mark of at least 50 per cent;
- Satisfactorily complete all assessment tasks or submit appropriate documentation relating to your failure to complete a task to the Lecturer in Charge.

4.2 Assessment Details

Part 1 (Week 1 – 6)

<table>
<thead>
<tr>
<th>Assessment Task</th>
<th>Weighting</th>
<th>Length</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignment 1 and 2</td>
<td>20%</td>
<td>See section 4.3</td>
<td>See section 4.3</td>
</tr>
<tr>
<td>Mid-session Exam</td>
<td>30%</td>
<td>Take home</td>
<td>See section 4.4</td>
</tr>
<tr>
<td>Total</td>
<td>50%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Part 2 (Week 7 – 12)

<table>
<thead>
<tr>
<th>Assessment Task</th>
<th>Weighting</th>
<th>Length</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignment 3 and 4</td>
<td>20%</td>
<td>See section 4.3</td>
<td>See section 4.3</td>
</tr>
<tr>
<td>Replication</td>
<td>15%</td>
<td>See section 4.3</td>
<td>See section 4.3</td>
</tr>
<tr>
<td>Final Exam</td>
<td>15%</td>
<td>Take home</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>50%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.3 Assignments

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 economic models. Collaboration among classmates is encouraged, however, students must acknowledge any help received from other students. Failure to acknowledge will be considered plagiarism.

Part 1 (Week 1 – 6)

There will be 2 assignments due on week 3 and 5. Students are encouraged to self-organize into groups of 2-3 members each and hand in one assignment per group. All assignments must be written in Latex.
Part 2 (Week 7 - 12)
There will be 2 assignments due beginning of week 9 and week 11. Students are encouraged to self-organize into groups of 2-3 members each and hand in one assignment per group. **All assignments must be written in Latex.**

The replication assignment requires that you select a published journal article that is related explicitly to monetary theory and replicate a portion of the results. There must be a theoretical component to the replication as this is a theory course. The selection of the paper is due in class in week 8 and the final replication is due Friday of week 13. More information about this assignment will be given on the first day of class.

4.4 Midsession Exam
The midsession exam is a take home and will be comprehensive of the material covered in weeks 1-6.

4.5 Final Exam
The final examination will test material covered in Weeks 7 to 12.

Further information on the content of the Final Exam will be provided towards the end of session. The purpose of the final examination is to assess knowledge of basic macroeconomic concepts and theory covered in the second half.

4.6 Quality Assurance
The Business School is actively monitoring student learning and quality of the student experience in all its programs. A random selection of completed assessment tasks may be used for quality assurance, such as to determine the extent to which program learning goals are being achieved. The information is required for accreditation purposes, and aggregated findings will be used to inform changes aimed at improving the quality of Business School programs. All material used for such processes will be treated as confidential and will not be related to course grades.

5 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.

6 COURSE RESOURCES
The website for this course is on UNSW Moodle at: [http://moodle.telt.unsw.edu.au](http://moodle.telt.unsw.edu.au)
Additional materials such as solutions to the tutorial exercises, lecture notes, slides, etc. will be provided through the course website on UNSW Moodle.

**Weeks 1-6**
There is no prescribed textbook for the second half of course. Students may find the following graduate textbooks (available in the UNSW library) useful for some parts of the course.


**Weeks 7-12**
There is no required text book for second half of the course, but it is recommended that students purchase copies of

Walsh, C. E. (2010). *Monetary theory and policy*. MIT press. – *(This is the reference for the third edition. The reference in the Course Schedule is for the second addition. There are no substantive changes for the chapters covered.)*


In addition a number of journal articles will be posted to Moodle throughout the term to supplement lecture as necessary.
## 7 COURSE SCHEDULE

### 7.1 Lecture and Tutorial Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>Competitive Equilibrium and Pareto Optimality – Concepts and Solutions using Negishii Method</td>
<td>Lecture notes (provided courtesy of Professor Dirk Krueger)</td>
</tr>
<tr>
<td>27 July</td>
<td></td>
<td>Ljungqvist and Sargent, Ch. 8</td>
</tr>
<tr>
<td>Week 2</td>
<td>Introduction to Neoclassical Growth Model and Dynamic Programming</td>
<td>Lecture notes</td>
</tr>
<tr>
<td>3 August</td>
<td></td>
<td>Ljungqvist and Sargent, Ch. 3-5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Stokey and Lucas, Ch. 2-4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cooley, Ch. 1-2</td>
</tr>
<tr>
<td>Week 3</td>
<td>Introduction to Matlab and Practical Dynamic Programming – Numerical Solutions using Value Function Iteration</td>
<td>Lecture notes</td>
</tr>
<tr>
<td>10 August</td>
<td></td>
<td>Ljungqvist and Sargent, Ch. 3-5</td>
</tr>
<tr>
<td>Week 4</td>
<td></td>
<td>Stokey and Lucas, Ch. 2-4</td>
</tr>
<tr>
<td>17 August</td>
<td></td>
<td>Adda and Cooper, Ch. 2-3</td>
</tr>
<tr>
<td>Week 5</td>
<td>Calibration of the Neoclassical Growth Model</td>
<td>Lecture notes</td>
</tr>
<tr>
<td>24 August</td>
<td></td>
<td>Cooley, Ch. 1-2</td>
</tr>
<tr>
<td>Week 6</td>
<td>Stylized Facts of Monetary Economics</td>
<td>Walsh, C. E. (2003). Monetary theory and policy. MIT press, chapters 1, 2, 3; Various journals articles which will be provided in Moodle.</td>
</tr>
<tr>
<td>31 August</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Week 7</td>
<td>Money, Output, and Inflation in the Short Run</td>
<td>Walsh, C. E. (2003). Monetary theory and policy. MIT press, chapter 5; Various journals articles which will be provided in Moodle.</td>
</tr>
<tr>
<td>7 September</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Week 8</td>
<td>Money, Output, and Inflation in the Short Run</td>
<td>Walsh, C. E. (2003). Monetary theory and policy. MIT press. Chapter 5; Various journals articles which will be provided in Moodle.</td>
</tr>
<tr>
<td>14 September</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Week 9</td>
<td>Money, Output, and Inflation in the Short Run</td>
<td>Walsh, C. E. (2003). Monetary theory and policy. MIT press. Chapter 5; Various journals articles which will be provided in Moodle.</td>
</tr>
<tr>
<td>21 September</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mid-semester break: Saturday 26 September - Monday 5 October inclusive</td>
<td></td>
</tr>
<tr>
<td>Week 10</td>
<td>Learning and Expectations in Macroeconomics (LEM) - Overview</td>
<td>Evans, G. W., &amp; Honkapohja, S. (2001). Learning and expectations in macroeconomics. Princeton University Press.; Various journals articles which will be provided in Moodle.</td>
</tr>
<tr>
<td>5 October</td>
<td></td>
<td></td>
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<tr>
<td>Week 11</td>
<td>LEM – Cycles, Sunspots, and Misspecification Learning</td>
<td>Evans, G. W., &amp; Honkapohja, S. (2001). Learning and expectations in macroeconomics. Princeton University Press.; Various journals articles which will be provided in Moodle.</td>
</tr>
<tr>
<td>12 October</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 As 5 October is a public holiday, there will be a make-up class.
| Week | LEM – Monetary and Fiscal Policy and the ZLB | Evans, G. W., & Honkapohja, S. (2001). *Learning and expectations in macroeconomics*. Princeton University Press.; Various journals articles which will be provided in Moodle. |