Economics 709(L01): Advanced Macroeconomic Theory I

<table>
<thead>
<tr>
<th>Instructor: Aamir Rafique Hashmi</th>
<th>Lecture Location: SS423</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phone: 403-220-4604</td>
<td>Lecture Days/Time: MW 12:30 – 13:45</td>
</tr>
<tr>
<td>Email: <a href="mailto:Aamir.Hashmi@UCalgary.ca">Aamir.Hashmi@UCalgary.ca</a></td>
<td></td>
</tr>
</tbody>
</table>

Instructor Email Policy: You may ask brief questions by email
Office: SS 342
Office Hours: MW 15:00 – 16:00

Course Description:
The following is the course description as it appears on the university calendar (https://www.ucalgary.ca/pubs/calendar/current/economics.html#40309): “Introduction to the basic structure of the dynamic general equilibrium framework that forms the backbone of most modern macroeconomics research. Selected topics include growth, business cycles, and monetary and labor economics.”

I will stick close to the above description. My focus will be on dynamic optimization methods (optimal control and dynamic programming) and their applications to macroeconomic models of growth, business cycles and incomplete markets.

Course Outcomes:
After completing this course, students will be familiar with
1. Dynamic optimization methods
2. Neo-classical growth model
3. Endogenous growth models
4. Overlapping generations model
5. Stochastic general equilibrium business-cycle models
6. Stochastic general equilibrium models of incomplete markets

Course Outline:
1. Dynamic Optimization: Optimal Control
2. Neo-Classical Growth Model (as an application of Optimal Control)
3. Endogenous Growth Models (as applications of Optimal Control)
4. Dynamic Optimization: Dynamic Programming
5. Neo-Classical Growth Model (as an application of Dynamic Programming)
6. Overlapping Generations Model (as an application of Dynamic Programming)
7. Introduction to Incomplete Market Models (if time permits)
8. Introduction to Business-Cycle Models (if time permits)

Textbook and Readings: There is no required textbook for this course. I will use material from various textbooks and journal articles, which will either be accessible through the library or I will provide a copy on D2L.
Desire2Learn:
This course will make use of the Desire2Learn (D2L) platform. Students who are registered in the course can log on at http://d2l.ucalgary.ca through their student centre. Please note that D2L features a class e-mail list that may be used to distribute course-related information. These e-mails go to your University of Calgary e-mail addresses only.

Grade Determination/Assessment:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem Sets</td>
<td>20%</td>
</tr>
<tr>
<td>Midterm</td>
<td>20%</td>
</tr>
<tr>
<td>Term Project</td>
<td>20%</td>
</tr>
<tr>
<td>Final Examination</td>
<td>40%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

Grade Determination and Final Examination Details
Department of Economics Criteria for Letter Grades. Economics professors use the following criteria when assigning letter grades:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Grade Point Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>4.00</td>
<td>Outstanding</td>
</tr>
<tr>
<td>A</td>
<td>4.00</td>
<td>Excellent-superior performance, showing-comprehensive understanding of subject matter</td>
</tr>
<tr>
<td>A-</td>
<td>3.70</td>
<td>Very good performance</td>
</tr>
<tr>
<td>B+</td>
<td>3.30</td>
<td>Good performance</td>
</tr>
<tr>
<td>B</td>
<td>3.00</td>
<td>Satisfactory performance</td>
</tr>
<tr>
<td>B-</td>
<td>2.70</td>
<td>Minimum pass for students in the Faculty of Graduate Studies</td>
</tr>
<tr>
<td>C+</td>
<td>2.30</td>
<td>All grades below “B-“ are indicative of failure at the graduate level and cannot be counted toward Faculty of Graduate Studies course requirements. Individual programs may require a higher passing grade.</td>
</tr>
</tbody>
</table>

I will assign you a letter grade for each component of assessment (problem sets, midterm, project and final). I will calculate your overall grade by computing a weighted average of individual component grades.

Students must receive a passing grade on the final exam to pass the course.

There will be a department scheduled final examination, held in a classroom, lasting 2 hours. Non-programmable calculators will be allowed during the writing of the midterm and final examinations.

Tests and exams will not involve multiple choice questions.

I will announce the date of the midterm exam during the first week of classes.
Absence from a Test/Exam

THERE WILL BE NO MAKEUP OR DEFERRED QUIZZES under any circumstances, nor may the quizzes be written early. Students unable to write the quizzes because of documented illness, family emergency, religious observance, or university-sanctioned event will have the weight shifted to the final examination; otherwise a grade of zero will be assigned. If a student cannot write their final exam on the date assigned by the Department, they need to arrange for a deferred exam with the department.

Reappraisal of Grades:
For Reappraisal of Graded Term Work, see Calendar I.2
http://www.ucalgary.ca/pubs/calendar/current/i-2.html

For Reappraisal of Final Grade, see Calendar I.3
http://www.ucalgary.ca/pubs/calendar/current/i-3.html

Academic Misconduct:
Academic Misconduct refers to student behavior that compromises proper assessment of students’ academic activities and includes: cheating; fabrication; falsification; plagiarism; unauthorized assistance; failure to comply with an instructor’s expectations regarding conduct required of students completing academic assessments in their courses; and failure to comply with exam regulations applied by the Registrar.

Student committing academic misconduct during the final exam will not receive a passing grade for the course.

For information on the Student Academic Misconduct Policy, Procedure and Academic Integrity, please visit: https://www.ucalgary.ca/pubs/calendar/current/k-3.html

Academic Accommodations:
Students seeking an accommodation based on disability or medical concerns should contact Student Accessibility Services. SAS will process the request and issue letters of accommodation to instructors. Students who require an accommodation in relation to their coursework based on a protected ground other than disability should communicate this need in writing to their instructor. The full policy on Student Accommodations is available at
https://www.ucalgary.ca/legal-services/university-policies-procedures/accommodation-students-disabilities-procedure

Freedom of Information and Protection of Privacy (FOIP) Act:
Personal information is collected in accordance with FOIP. Assignments can only be returned to the student and will be accessible only to authorized faculty and staff. For more information, see
https://www.ucalgary.ca/legal-services/access-information-privacy

Copyright Legislation:
See the University of Calgary policy on Acceptable Use of Material Protected by Copyright at
https://www.ucalgary.ca/legal-services/university-policies-procedures/acceptable-use-material-protected-copyright-policy Students who use material protected by copyright in violation of this policy may be disciplined under the Non-Academic Misconduct Policy.

Course materials created by instructors (including presentations and posted notes, labs, case studies, assignments and exams) remain the intellectual property of the instructor. These materials may NOT be reproduced, redistributed or copied without the explicit consent of the instructor. The posting of course
materials to third party websites such as note-sharing sites without permission is prohibited. Sharing of extracts of these course materials with other students enrolled in the course at the same time may be allowed under fair dealing.

Recording of Lectures:
Recording of lectures is prohibited, except for audio recordings authorized as an accommodation by SAS or an audio recording for individual private study and only with the written permission of the instructor. Any unauthorized electronic or mechanical recording of lectures, their transcription, copying, or distribution, constitutes academic misconduct. See https://www.ucalgary.ca/pubs/calendar/current/e-6.html.

Important Dates:
Please check: http://www.ucalgary.ca/pubs/calendar/current/academic-schedule.html

Student Organizations:
Faculty of Grad Studies website: https://grad.ucalgary.ca/
Graduate Students Association: http://gsa.ucalgary.ca/
Professional Development for Grad Students
Workshops and resources can be found at http://www.ucalgary.ca/mygradskills/
Economics Graduate Association: http://econ.ucalgary.ca/ega/

Student Support and Resources:
- See https://www.ucalgary.ca/registrar/registration/course-outlines for information on campus mental health resources, the Student Ombuds Office, Student Success Centre, Safewalk, and Emergency Evacuation and Assembly.
- Online writing resources are available at https://ucalgary.ca/student-services/student-success/writing-support.
- For registration (add/drop/swap), paying fees and assistance with your Student Centre, contact Enrolment Services at 403-210-ROCK [7625] or visit them in the MacKimmie Tower.

Notes:
Students are responsible for all assigned material, e.g., supplementary material posted on D2L, regardless of whether or not the material was covered in class.

Aamir Rafique Hashmi
August 12, 2022