Course Description

This course introduces advanced techniques and topics in macroeconomic theory at a Master’s level. We will cover a range of theoretical models of business cycles, economic growth, consumption, investment, and labour markets. For each topic, we will review some empirical descriptive statistics that motivate the construction and evaluation of modern macroeconomic models.

The main objectives of the course are:

- To develop analytical skills for studying a range of dynamic general equilibrium models. By the end of the course, you should be able to solve macroeconomic models using methods of constrained optimization in discrete and continuous time.

- To understand interactions between macroeconomic theory and data. By the end of the course, you should know what insights macroeconomic models give in helping to understand business cycles, growth, consumption, investment, inflation, and unemployment.
• To highlight some important contemporary issues and policy debates in macroeconomics

**Required Text**


If available, students may also use the 4th edition of the textbook if they choose, subject to the following disclaimers. First, there may be some discrepancies between the two editions in terms of chapter (and sub-chapter) numbering. For example, it is possible that material appearing in the 5th edition under a certain chapter number appears in the 4th edition under a different number. When listing assigned readings from the textbook, I will use the numbering from the 5th edition. It is your responsibility to make sure you are reading the same material in the 4th edition, regardless of what chapter number is assigned to it.

Second, I may use end-of-chapter questions from the 5th edition for assignments and tutorials. A given question may not always also appear in the 4th edition, and if it does it may be assigned a different number there. It is your responsibility to ensure that you are answering the correct question.

**Course Website**

This course will make use of cuLearn. I will post all materials for the course on the cuLearn course website, and also use that platform as a means of communicating important information about the course. Please ensure that you are set up on cuLearn prior to the course start date.

**Course Material**

In this course, you will be exposed to the course material in two ways: lectures, and assigned readings. I will make extensive use of the board in lectures, and students will be expected to take their own notes (no lecture notes will be provided). While there will naturally be overlap between the lecture material and assigned readings, this overlap will not be 100%. In other words, lectures and assigned readings are not substitutes for one another.

**Evaluation**

Each student’s grade will be calculated as follows:

- Tutorial attendance: 5%.
- Written assignments: 24% (four assignments worth 6% of the final grade each).
• Midterm exam: 25%.
• Final exam: 46%.

Tutorials

In addition to the lecture component, this course includes scheduled tutorials during which the TA will discuss and review assignment and midterm solutions, discuss separately assigned problems, and possibly present material to reinforce or support lecture material.

Tutorials are compulsory, and attendance will be taken. 5% of your final course grade will be based on your attendance, determined as follows:

• If you miss zero or one tutorial, you will receive the full 5%.
• If you miss two tutorials, you will receive 2.5%.
• If you miss three or more tutorials, you will receive 0%.

Attendance will be taken at the start of the tutorial. Students who arrive late will not generally be given credit for that tutorial’s attendance, though exceptions may be made on a case-by-case basis in situations where (a) the student is not excessively late, and (b) the student has a valid excuse for this lateness.

Assignments

There will be four assignments, each worth 6% of the final grade. Each assignment will consist of various questions intended to support and reinforce students’ comprehension of the course material, and to provide an indication of the type of questions that will be on the exams. As such, students are encouraged to treat each assignment as a critical learning opportunity. While students are encouraged to discuss the assignment material with classmates, each student must ensure that their submitted work is their own. Please see the statement on plagiarism below.

Assignments must be submitted on the due date in the lecture/tutorial held on that day. Late assignments will not be accepted, and will receive a mark of zero.

I will post the assignments approximately two weeks in advance, and therefore only in rare cases where a student can document a compelling reason for a prolonged absence will he or she be excused from handing in an assignment. In such a rare case, the weight of that assignment will be transferred to the final exam.

While every effort will be made to return graded assignments to students in a timely manner, sometimes delays are unavoidable. It is therefore recommended that students retain some form of copy of their completed assignment when handing them in.
Midterm Exam

The midterm exam will take place during regular class time and is tentatively scheduled for Friday, March 1. I reserve the right to modify this date depending on how the semester progresses.

The midterm will be 80 minutes long, and will be conducted during the first part of the scheduled class time. Students will then be given a 20-minute break, after which we will have a shortened 60-minute lecture.

Students who can document a compelling reason for missing the midterm exam will be excused and the weight of the midterm will be automatically added to the final exam. Students must inform the instructor of such an absence in advance, if possible. There will be no deferred midterm exam.

Final Exam

The final exam will take place during the Winter term examination period at a time and place set by the University. The exam will cover content from the entire course.

Re-grading

Any request for the remarking of a midterm exam or assignment must be submitted in writing within one week of that exam/assignment first being returned to the class. The request should contain a detailed explanation of why you feel you should receive a higher mark. Please note that remarking will apply to the entire assignment/exam, not just the contentious question. As a result, the revised mark maybe higher than, lower than, or the same as the original mark. Exams or assignments completed in pencil or erasable ink will not be regraded.

Documenting Absences

As noted above, in order to be excused from an assignment or midterm, students must provide official documentation of their (prolonged, in the case of assignments) absence, such as a doctor’s note or police report. This documentation may be subject to verification, and as such must be accompanied by a “Consent to Release Information to a Third Party” form (available on cuLearn).

Final Course Grade

Students must fulfill both the midterm and final exam course requirements in order to achieve a passing grade (D- or higher). Failure to write the midterm examination without a documented compelling reason or the final examination will result in a grade of F. Application to write a deferred final examination must be made at the Registrar’s Office.

Standing in a course is determined by the course instructor subject to the approval of the Faculty Dean.
This means that grades submitted by the instructor may be subject to revision. No grades are final until they have been approved by the Dean.

**Plagiarism**

Please be aware that plagiarism is a serious offence at Carleton and should be recognized and avoided. For further information on how to do so, please see Pamphlet on Plagiarism and Paraphrasing.

**Treatment of Course Materials**

Student, teaching, assignment or professor materials created for this course (including but not limited to lecture slides, presentations and posted notes, labs, case studies, assignments, exams and solutions to assignments and exams) remain the intellectual property of the author(s). They are intended for personal use and may not be reproduced or redistributed without prior written consent of the author(s).

**Course Outline and Schedule**

The outline below lists the topics that we will cover,\(^1\) and the related readings (in parentheses).

1. Dynamic Macroeconomic Models (parts of DR Ch. 5)
   - Discrete-time models
   - Representative agent
   - Budget constraints
   - Complete markets
   - Contemporaneous and inter-temporal trade-offs
   - Rational expectations
   - Stochastic difference equations

2. Consumption and Asset Pricing (DR Ch. 8)
   - The permanent income hypothesis (PIH)
   - The random-walk (RW) hypothesis
   - Saving and the interest rate
   - Consumption and risky assets
   - The equity premium puzzle

\(^1\)Please note that I reserve the right to make modifications to the list of contents as the term proceeds. If I make a modification, I will provide advance warning either in class or through cuLearn.
• Precautionary savings
• Liquidity constraints
• Asset bubbles

3. Business Cycles (DR Ch. 5)
• Real business cycle (RBC) theory
• Shocks and propagation
• Generalizations, limitations, and critiques

4. Business Cycles under Real and Nominal Frictions (parts of DR Ch. 6-7)
• Imperfect information
• Incomplete nominal adjustment
• Incomplete credit markets
• Monetary and fiscal policies

5. Labour Markets in Macroeconomic Models (parts of DR Ch. 11)
• Theories of unemployment
• Search and matching models

6. Economic Growth (parts of DR Ch. 1-3)
• The Solow growth model
• The Ramsey-Cass-Koopmans (neoclassical) growth model
• Endogenous growth models

Requests for Academic Accommodation

You may need special arrangements to meet your academic obligations during the term. For an accommodation request, the processes are as follows:

Pregnancy obligation

Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit the Equity Services website: carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf.
Religious obligation

Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit the Equity Services website: carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf

Academic Accommodations for Students with Disabilities

If you have a documented disability requiring academic accommodations in this course, please contact the Paul Menton Centre for Students with Disabilities (PMC) at 613-520-6608 or pmc@carleton.ca for a formal evaluation or contact your PMC coordinator to send your instructor your Letter of Accommodation at the beginning of the term. You must also contact the PMC no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with your instructor as soon as possible to ensure accommodation arrangements are made. carleton.ca PMC

Survivors of Sexual Violence

As a community, Carleton University is committed to maintaining a positive learning, working and living environment where sexual violence will not be tolerated, and is survivors are supported through academic accommodations as per Carleton’s Sexual Violence Policy. For more information about the services available at the university and to obtain information about sexual violence and/or support, visit: carleton.ca/sexual-violence-support

Accommodation for Student Activities

Carleton University recognizes the substantial benefits, both to the individual student and for the university, that result from a student participating in activities beyond the classroom experience. Reasonable accommodation must be provided to students who compete or perform at the national or international level. Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. carleton.ca/senate/wp-content/uploads/Accommodation-for-Student-Activities-1.pdf

For more information on academic accommodation, please contact the departmental administrator or visit: students.carleton.ca/course-outline