Course Description

This course will provide an introduction to the modern micro-founded and dynamic approach to modeling and understanding the macroeconomy. We will develop several micro-founded theoretical models and then study the implications of these models for the behaviour of the macroeconomy, primarily with regard to business cycles. A particular focus of the course will be in developing a dynamic, general equilibrium model of the macroeconomy using two-period and/or infinite horizon frameworks.

The course will help broaden students’ understanding of modern approaches to macroeconomics beyond the traditional IS/LM style frameworks that they may have encountered previously. Moreover, for students planning on pursuing macroeconomics at the graduate level, the course will provide an intuitive and theoretical foundation for studying more complex macroeconomic models in typical graduate programs.

Prerequisites

ECON 2102 with a grade of C+ or higher; ECON 2103 with a grade of C+ or higher; ECON 3001 (or MATH 2000 or MATH 2004) with a grade of C+ or higher; and ECON 2220 (or equivalent, or STAT 2605 or STAT 3502), which may be taken concurrently with ECON 4021. Students who believe they have taken a similar background course or courses from another university must
provide appropriate documentation to the Department of Economics Undergraduate Administrator, Amanda Wright. DEF(erred final grade) status at the end of this course precludes (continued) registration in any other course for which the former is a prerequisite.

**Recommended Text**


The Williamson text provides a good introduction to the micro-founded and dynamic approach to macroeconomics for students whose previous exposure to macroeconomics may have revolved around traditional IS/LM-type frameworks. The text may be used at different intellectual levels depending on the nature of the course and the treatment of the instructor. A typical chapter in the text contains both graphical and mathematical treatment of a topic, and is accompanied by a mathematical appendix which approaches the problems using intertemporal optimization and expands the treatment of the core chapter. While for a given topic we will use the graphical/descriptive material in the body of the chapters to initially develop our intuition and understanding, our level of analysis in the course will focus on the mathematical treatments in the body of the chapters and the material in the mathematical appendices. In many instances I will provide supplementary lecture notes where we go beyond the analysis in the textbook or where the presentation in the appendices is too brief.

**Course Website**

This course will make use of cuLearn. I will post all materials for the course, including lecture slides, assignments and reading exclusions, on the cuLearn course website. Please ensure that you are set up on cuLearn prior to the course start date.

**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. I will announce the specific requirements during the term through cuLearn.
Evaluation

Each student's grade will be calculated as follows:

Final grade = max(Scheme A, Scheme B), where Scheme A and B are defined as follows:

**Scheme A:**
- Three written assignments 9% (3% each assignment)
- Midterm exam 31%
- Final exam 60%

**Scheme B:**
- Three written assignments 9% (3% each assignment)
- Midterm exam 21%
- Final exam 70%

**Assignments**

The tentative assignment due-dates are as follows:

- Assignment 1 due: Tuesday, October 2, 2018
- Assignment 2 due: Tuesday, October 30, 2018
- Assignment 3 due: Tuesday November 29, 2018

Each assignment will consist of various analytical questions primarily 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. The assignments may include short-answer questions, mathematical derivations/calcuations, true/false and numerical calculations. While students are permitted 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 class** (the Economics Department is no longer using the Drop-Box for regular assignment submissions). Late assignments will receive a mark of zero.

Students should retain some form of copy of each assignment when handing them in.

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 students be excused from handing in an assignment. In such a rare case, the weight of the assignment will be transferred to the final exam.
**Midterm exam**

The midterm exam will take place during regular class time on **Thursday November 1, 2018**. 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. There will be no deferred midterm exam. The documentation provided by students for a missed midterm - ie a doctor’s note or police report - may be subject to verification.

**Final exam**

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

**Final Course Mark**

Students must fulfill both the midterm and final exam course requirements in order to achieve a passing grade (D- or higher) in the course. Failure to write the mid-term examination (without a documented compelling reason) will result in a grade of F. No course grades are final until approved by the Faculty Dean. Application to write a deferred final examination must be made at the Registrar’s Office.

**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” at [www.carleton.ca/economics/courses/writing-preliminaries](http://www.carleton.ca/economics/courses/writing-preliminaries).

**Treatment of Course Materials**

Student, teaching assistant 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).
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. https://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
Course Outline and Schedule

The outline below lists the topics that we will cover, the related reading sources, and the approximate timing of each topic. Where there are exclusions to the chapter readings I will note them during the term in cuLearn.

1. Introduction
   a. Modern approach to macroeconomics
      • Ch.1
   b. Business Cycle Facts and Measurement
      • Ch. 3

2. A One-Period Model of the Macroeconomy
   a. Introduction: A simple (static) Robinson Crusoe model
      • Supplementary lecture notes
   b. Consumer and firm behaviour
      • Ch. 4 & Appendix to Ch.4
   c. A Closed-Economy One-Period Model
      • Ch.5 & Appendix to Ch.5
   d. Throughout:
      • Review of: constrained optimization; consumer’s problem; total differentiation and comparative statics
      • In-class notes and supplementary lecture notes
   e. Finale: A dynamic Robinson Crusoe model with no storage

3. Intertemporal Models of the Macroeconomy
   a. Introduction: A dynamic Robinson Crusoe endowment model
   b. Endowment Economies
      • Two-period real model
         • Ch. 9 & Appendix to Ch.9
      • Infinite-horizon real endowment model
         • Class notes
   c. Production Economies
      • Two-period real model with investment
         • Ch. 11 & Appendix to Ch. 11
      • Infinite-horizon real production model (“RBC model”)
         • Class notes
   d. Monetary Economies
      • Infinite-horizon MIU monetary model
         • Class notes

4. Models of the Business Cycle
   a. Market-clearing models of the business cycle
• Ch. 13
  b. New Keynesian economics: sticky prices
  • Ch. 14
5. Search and Unemployment (time-permitting)
  a. A model of search and unemployment
  • Ch. 6
6. Money, Inflation and Banking (time-permitting)
  a. Money and inflation
     • Ch. 17
  b. Financial intermediation and the Diamond-Dybvig Banking Model
     • Ch. 17

*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 through cuLearn.