

University of Waterloo
Department of Economics
ECON 602
Macroeconomic Theory I
Winter 2022
Tue/Thu 8:30 – 9:50, HH 138

Instructor Information

Instructor: Derek Stacey

Office: virtual office hours via Zoom

Office Phone: 519-888-4567, ext. 46825

Office Hours: Tuesdays 10:00 – 11:00 and Thursday 2:30 – 3:30

- Virtual office hours will be held using Zoom. These meetings are listed in the Upcoming Meetings Tab in the Zoom widget on LEARN.

Email: dstacey@uwaterloo.ca

- When sending email, please put “ECON 602” in the subject line and include your full name and ID number in the message.

Course Description

The main purpose of this course is to provide students with the methodological tools that underlie dynamic equilibrium analysis of the macroeconomy. In this iteration of ECON 602, we will formally analyze the basic models used in modern macroeconomic theory and their applications to the study of various economic issues. Topics covered will include recursive methods, asset pricing, growth, business cycles, and markets with frictions.

Course Goals and Learning Outcomes

Upon completion of this course, students should be able to:

- A. Apply recursive methods to solve dynamic economic models
 - Set up and solve dynamic optimization problems using dynamic programming
 - Define a recursive competitive equilibrium for a dynamic economy
- B. Explain and interpret asset prices
 - Derive and interpret equilibrium asset pricing equations from a macroeconomic model
 - Calculate the prices of complex securities using an arbitrage approach
- C. Summarize the stylized facts related to economic growth and business cycles
 - Describe Kaldor’s growth facts, and discuss the extent to which they align with the implications of the neoclassical growth model
 - Summarize the stylized facts of real business cycles and assess how well a macroeconomic model fits the data
- D. Advance an economic model of a frictional market
 - Describe an economic environment with search-and-matching frictions
 - Solve the model to show how trading frictions affect prices and allocations

Recommended Texts

- Krueger, Dirk (2013). “Macroeconomic Theory,” unpublished manuscript.
- Ljungqvist, Lars and Thomas J. Sargent (2018). “Recursive Macroeconomic Theory,” Fourth Edition, MIT Press, Cambridge, MA.
- Jianjun Miao (2014). “Economic Dynamics in Discrete Time,” MIT Press, Cambridge, MA.

Readings Available on LEARN

Lecture slides and other course materials will be posted on LEARN. The course is divided into six topics that each span about two weeks (see *Course Outline* below for the list of topics and approximate dates). Students should check LEARN regularly for course materials and announcements.

Course Requirements and Assessment

Assessment	Due Date	Weighting
Problem Sets	TBD	20%
Midterm Exam	TBD	30%
Final Exam	TBD	50%
Total		100%

Problem Sets

Several (four or five) problem sets related to course material will be assigned during the course. Each student must complete the problem sets independently. We will use the dropbox feature on LEARN for submitting solutions to the assigned problem sets. You can submit typed or handwritten solutions, but please (i) submit all your work in one document (PDF or MS Word), (ii) check that the pages are in the correct order and properly oriented, and (iii) ensure that your work is legible. Problem sets are due by 11:59 pm (EST) on the posted due date. Late submissions will not be accepted – missing a deadline will result in a grade of zero.

Midterm and Final Exams

Exams will draw on material covered in the lectures and assigned readings. The midterm and final exams are closed-book exams. The final exam will emphasize the post-midterm material.

Alternative Arrangements for a Cancellation of In-Person Classes

In the event of a cancellation of in-person classes, additional course materials will be posted on LEARN. These additional materials may include lecture notes, short videos and practice problems.

Alternative Arrangements for a Cancellation of an In-Person Exam

In the event of a cancellation of the midterm exam, the exam will be replaced by an additional problem set. All problem sets (including the exam alternative) will be reweighted such that (i) the problem sets have equal weight, and (ii) the course assessment weightings sum to 100%. For example, if there are four regular problem sets and the midterm exam is cancelled due to a short-term (e.g. one-week) cancellation of in-person classes, a fifth problem will be assigned in lieu of the midterm exam, and each of the five problem sets will have a weighting of 10%. The same alternative arrangements will be implemented in the event of a cancellation of the final exam, with the additional reweighting of the in-person midterm

exam to 50%. If both exams are cancelled, the course assessments will consist of six equally-weighted problem sets.

Course Outline

Week	Date	Topic	Readings
1	Jan 5 –	Recursive Methods I	LS ch. 3 & 4; K ch. 4 & 5; M ch. 5, 6 & 7
2	Jan 12 –	Recursive Methods II	
3	Jan 19 –	Competitive Equilibrium I	LS ch. 8 & 12; K ch. 2; M ch. 13
4	Jan 26 –	Competitive Equilibrium II	
5	Feb 2 –	Asset Pricing I	Supplementary Materials
6	Feb 9 –	Asset Pricing II	
	Feb 16 –	Reading Week	
7	Feb 23 –	Growth I	K ch. 3; M ch. 14
8	Mar 2 –	Growth II	
9	Mar 9 –	Real Business Cycles I	K ch. 6; Supplementary Materials
10	Mar 16 –	Real Business Cycles II	
11	Mar 23 –	Markets with Frictions I	LS ch. 6, 29, & 30; Supplementary Materials
12	Mar 30 –	Markets with Frictions II	

Intellectual Property

Students should be aware that this course contains the intellectual property of their instructor, TA, and/or the University of Waterloo.

Intellectual property includes items such as:

- Lecture content, spoken and written (and any audio/video recording thereof);
- Lecture handouts, presentations, and other materials prepared for the course (e.g., PowerPoint slides);
- Questions or solution sets from various types of assessments (e.g., assignments, quizzes, tests, final exams); and
- Work protected by copyright (e.g., any work authored by the instructor or TA or used by the instructor or TA with permission of the copyright owner).

Course materials and the intellectual property contained therein, are used to enhance a student's educational experience. However, sharing this intellectual property without the intellectual property owner's permission is a violation of intellectual property rights. For this reason, it is necessary to ask the instructor, TA and/or the University of Waterloo for permission before uploading and sharing the intellectual property of others online (e.g., to an online repository).

Permission from an instructor, TA or the University is also necessary before sharing the intellectual property of others from completed courses with students taking the same/similar courses in subsequent terms/years. In many cases, instructors might be happy to allow distribution of certain materials. However, doing so without expressed permission is considered a violation of intellectual property rights.

Please alert the instructor if you become aware of intellectual property belonging to others (past or present) circulating, either through the student body or online. The intellectual property rights owner deserves to know (and may have already given their consent).

Chosen/Preferred First Name

Do you want professors and interviewers to call you by a different first name? Take a minute now to verify or tell us your chosen/preferred first name by logging into [WatiAM](#).

Why? Starting in winter 2020, your chosen/preferred first name listed in WatiAM will be used broadly across campus (e.g., LEARN, Quest, WaterlooWorks, WatCard, etc). Note: Your legal first name will always be used on certain official documents. For more details, visit [Updating Personal Information](#).

Important notes

- If you included a preferred name on your OUAC application, it will be used as your chosen/preferred name unless you make a change now.
- If you don't provide a chosen/preferred name, your legal first name will continue to be used.

Mental Health Support

All of us need a support system. The faculty and staff in Arts encourage students to seek out mental health support if they are needed.

On Campus

Due to COVID-19 and campus closures, services are available only online or by phone.

- Counselling Services: counselling.services@uwaterloo.ca / 519-888-4567 ext. 32655
- [MATES](#): one-to-one peer support program offered by the Waterloo Undergraduate Student Association (WUSA) and Counselling Services

Off campus, 24/7

- [Good2Talk](#): Free confidential help line for post-secondary students. Phone: 1-866-925-5454
- Grand River Hospital: Emergency care for mental health crisis. Phone: 519-749-4300 ext. 6880
- [Here 24/7](#): Mental Health and Crisis Service Team. Phone: 1-844-437-3247
- [OK2BME](#): set of support services for lesbian, gay, bisexual, transgender or questioning teens in Waterloo. Phone: 519-884-0000 extension 213

Full details can be found online on the Faculty of Arts [website](#)

Download [UWaterloo and regional mental health resources \(PDF\)](#)

Download the [WatSafe app](#) to your phone to quickly access mental health support information.

Territorial Acknowledgement

We acknowledge that we are living and working on the traditional territory of the Attawandaron (also known as Neutral), Anishinaabe and Haudenosaunee peoples. The University of Waterloo is situated on

the Haldimand Tract, the land promised to the Six Nations that includes ten kilometres on each side of the Grand River.

For more information about the purpose of territorial acknowledgements, please see the [CAUT Guide to Acknowledging Traditional Territory](#).

Academic freedom at the University of Waterloo

[Policy 33, Ethical Behaviour](#) states, as one of its general principles (Section 1), “The University supports academic freedom for all members of the University community. Academic freedom carries with it the duty to use that freedom in a manner consistent with the scholarly obligation to base teaching and research on an honest and ethical quest for knowledge. In the context of this policy, 'academic freedom' refers to academic activities, including teaching and scholarship, as is articulated in the principles set out in the Memorandum of Agreement between the FAUW and the University of Waterloo, 1998 (Article 6). The academic environment which fosters free debate may from time to time include the presentation or discussion of unpopular opinions or controversial material. Such material shall be dealt with as openly, respectfully and sensitively as possible.” This definition is repeated in Policies 70 and 71, and in the Memorandum of Agreement, Section 6

Institutional-required statements:

Academic Integrity

In order to maintain a culture of academic integrity, members of the University of Waterloo are expected to promote honesty, trust, fairness, respect and responsibility. Check the [Office of Academic Integrity webpage](#) for more information.

Discipline

A student is expected to know what constitutes academic integrity, to avoid committing academic offences, and to take responsibility for their actions. Check [the Office of Academic Integrity](#) for more information. A student who is unsure whether an action constitutes an offence, or who needs help in learning how to avoid offences (e.g., plagiarism, cheating) or about “rules” for group work/collaboration should seek guidance from the course professor, academic advisor, or the Undergraduate Associate Dean. When misconduct has been found to have occurred, disciplinary penalties will be imposed under Policy 71 – Student Discipline. For information on categories of offenses and types of penalties, students should refer to [Policy 71 - Student Discipline](#). For typical penalties check [Guidelines for the Assessment of Penalties](#).

Grievance

A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read [Policy 70 - Student Petitions and Grievances](#), Section 4. When in doubt, please be certain to contact the department’s administrative assistant who will provide further assistance.

Appeals

A decision made or penalty imposed under Policy 70 - Student Petitions and Grievances (other than a petition) or Policy 71 - Student Discipline may be appealed if there is a ground. A student who believes they have a ground for an appeal should refer to [Policy 72 - Student Appeals](#).

Note for Students with Disabilities

The [AccessAbility Services](#) office, located on the first floor of the Needles Hall extension (NH 1401), collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please register with the AS office at the beginning of each academic term.

If Using Turnitin in your Course

Turnitin.com: Text matching software (Turnitin®) may be used to screen assignments in this course. Turnitin® is used to verify that all materials and sources in assignments are documented. Students' submissions are stored on a U.S. server, therefore students must be given an alternative (e.g., scaffolded assignment or annotated bibliography), if they are concerned about their privacy and/or security. Students will be given due notice, in the first week of the term and/or at the time assignment details are provided, about arrangements and alternatives for the use of Turnitin in this course.

It is the responsibility of the student to notify the instructor if they, in the first week of term or at the time assignment details are provided, wish to submit alternate assignment.