Course Syllabus – Updated December 20\textsuperscript{th} 2024
ECON 401 A01
Advanced Topics in Macroeconomic Theory
CRN 21079
Winter Session, 2023-2024 (Second Term)

Instructor Name: Marco Cozzi
Delivery mode: Face-to-face
Lectures: Monday, Thursday, 8:30am–9:50am
Location: David Strong Building, Room C126
Office Hours: Monday, Thursday 10:00am-10:45am, BEC 368 (TBC).

UVic Land Acknowledgement
We acknowledge with respect the Lekwungen peoples on whose traditional territory the University of Victoria stands, and the Songhees, Esquimalt and W̱SÁNEĆ peoples whose historical relationships with the land continue to this day.

Course Delivery
The course will be delivered in person, subject to health guidelines set by UVic and the PHO of British Columbia.

Course Description
The course discusses general equilibrium theory and introduces students to dynamic models of growth and business cycle fluctuations.
Students will learn a mix of theoretical and applied (quantitative) methods that are instrumental for the analysis of macroeconomic issues with a modern approach.
An important goal of the course is to provide the students with a set of methods useful to study dynamic economies. A large portion of the course will focus on the numerical computation of aggregate variables.

Learning Goals:
- Acquire mathematical skills useful for the study of dynamic economies (e.g., optimal control and dynamic programming).
- Apply computational and empirical methods to perform a quantitative analysis of macroeconomic outcomes.
- Analyze complex macroeconomic issues, using realistic models.
- Provide formal quantitative evaluations of policy reforms.
- Critical understanding of the recent macroeconomics literature.

Prerequisites: ECON 204; ECON 313, ECON 350, ECON 351.
Textbooks/Materials

Textbook: There is no single textbook presenting all the course topics in an accessible way. Therefore, there are (portions of) three suggested books. These books are available at the library for digital download. For some parts of the course, I will provide detailed lecture notes.


For some topics, the following books could be useful further references (the first one is available at the library for digital download):


Software
For the numerical analysis, we are going to rely heavily on Dynare (http://www.dynare.org/), a software that allows for an easy specification, numerical solution and (often) estimation of dynamic models.

Although some computer labs on campus have recent Dynare versions installed, it is a free software, and students are encouraged to install it in their own computers. Dynare relies on other platforms (Octave or Matlab) to perform the computations, so it cannot be used as a stand-alone software. Octave is a free software, but it is slow. Matlab is a more complete option, but it is also quite expensive. Currently, UVic offers free student licenses, which expire once the students graduate. Unfortunately, Dynare is not compatible with Python (yet). This is why we have to use a different programming language.

The following webpage explains how to get Matlab at UVic:

For Windows users, here you can get Octave (you must use version 8.1.0 with Dynare 5.x):

Here you can get the most recent version of Dynare:
http://www.dynare.org
Course Content
This is the first time I am teaching this course, therefore the following list is likely to change. Please ask me in due time for the detailed list of book sections that you are supposed to read.

- Math Preliminaries and Optimal Control
  Lecture notes, Mathematical Appendix in NFR, W, or BS.

- Economic Dynamics: the Basics
  H Ch. 1 and 2; DD Ch. 1 and 2; W Ch. 2 (No 2.7); BS Ch. 1; NFR Ch. 1.

- Neoclassical Growth Theory
  H Chapter 2; W Chapters 3 and 4; BS Chapters 2 and 3; NFR Chapters 2, 3 and 4.

- The OLG Growth Model
  H Chapter 3; W Chapter 4.4; BS Appendix to Chapter 3.

- Endogenous Growth Theory
  W Chapter 3.5; BS Chapter 4.

- Fiscal Policy
  H Chapters 4 and 5.

- The Empirics of Economic Fluctuations
  Lecture notes, DD Chapter 6; Lecture notes; L Chapters 2, 4, 5, 7, 10 and 11.

- Numerical Solution of DSGE Models
  Lecture notes, DD Chapter 4; NFR Chapter 5

- Calibration and Estimation of DSGE Models
  DD Chapters 11, 12 and 14; NFR Chapters 10 and 11.

- Endogenous Growth and Economic Fluctuations
  NFR Chapters 6 and 7.
**Grading Scheme**
Assignments (2): 30% (two assignments submitted, and graded, each worth 15%).
Midterm exam: 25%.
Final Project (timed): 40%.
Participation: 5% (attendance taken randomly and/or short quizzes in class).

**Assignments:** They are designed for the students to learn the course material in depth. They will be posted on Brightspace, and submitted in the dedicated assignment drop-boxes before their deadline. Students are encouraged to discuss with other classmates how to answer them. However, every student must submit their own work, independently written up, and list all people they worked with in the first page. During the term, there will be 2 assignments. All of them **must** be submitted. Answers must be submitted in specific file formats, and further details will be provided during the term. Each assignment will count 15% towards the final grade. **Note:** if caught copying other students’ answers, the assignment will receive a grade of 0, and will be counted directly in the overall grade for the course. In addition, the standard procedures pertaining Academic Integrity will be initiated.

Assignments due dates: TBA. You should expect the deadlines for the assignments to be every five weeks. **Note:** it is the student’s responsibility to submit assignments in a timely fashion. In general, there will be no flexibility on when the assignments are due (or on how they have to be submitted).

**Midterm:** The in-person midterm exam is scheduled on February 15th (TBC). More specific details will be given in due time. If you have to miss a midterm test due to illness or family affliction, please contact me by email (a make-up exam for the midterm might be organized). Should you miss an exam without approval of the instructor, you will receive a grade of zero for that exam. **Note:** whenever needed, it is the student’s responsibility to provide medical and other documentation in a timely manner.

**Participation:** at the beginning of the course, I will give details on this component.

**Final Project:** Given the time demands of writing the Honours thesis, the final project will not be a full-blown research paper. It will be a timed project, akin to take-home exams, taking place in the April examination period. It will be handled via Brightspace. From the moment it will be circulated, the students will have at most two days to complete it. It will deal with the topics presented in the whole course. It will be open-book, but you must work by yourselves on each of its components. UVic’s rules about cheating and plagiarism do apply. The printouts of the codes used to generate the results must be submitted, and students might be asked to briefly explain them in dedicated Zoom meetings. Unless agreed otherwise, the final exam scheduled by the University will be the day when the projects have to be submitted. The project must be submitted in a specific format, and further details will be provided later in the course. Without formal documented illness or affliction, no extensions will be granted on the final project. If the final project is submitted late, points will be deducted per minute past the due date/time. The quality of both the codes and the economic interpretation of the numerical results will form the basis for the assessment of the project. Since most economics students get jobs based on the quality of their analysis, correct codes paired with comments that are lacking cannot receive very high marks.
Grade concerns should be brought to the instructor as soon as possible. The grades of each assessment component are final after one week of being distributed. Students requesting to view their final projects must do so in writing, and must request it within one week of the grades being posted.

**Mandatory Course Components:** Submitting all assignments is mandatory. Also, failure to submit the final project will result in a grade of N, regardless of the cumulative percentage on the course. N is a failing grade and factors into GPA as a value of 0.

This course uses the standard Department of Economics grading scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>90-100</td>
</tr>
<tr>
<td>A</td>
<td>85-89</td>
</tr>
<tr>
<td>A-</td>
<td>80-84</td>
</tr>
<tr>
<td>B+</td>
<td>77-79</td>
</tr>
<tr>
<td>B</td>
<td>73-76</td>
</tr>
<tr>
<td>B-</td>
<td>70-72</td>
</tr>
<tr>
<td>C+</td>
<td>65-69</td>
</tr>
<tr>
<td>C</td>
<td>60-64</td>
</tr>
<tr>
<td>D</td>
<td>50-59</td>
</tr>
<tr>
<td>F or N</td>
<td>0-49</td>
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</tbody>
</table>

Students should review the University’s more detailed [summary of grading](#).

**Brightspace and Zoom**

- Brightspace and Zoom are used extensively for the course. All students are expected to be fully functional with these systems.
- All course materials and announcements will be posted on Brightspace.
- For support with technical issues, please get in touch with the Computer Help Desk: helpdesk@uvic.ca

**E-mail:** mcozzi [@] uvic.ca

- You should contact me by email primarily on matters that relate to your personal participation, e.g. you have a medical condition that prevents you from taking an exam. General administrative matters, such as the arrangement and the format for the assignments or exams, will not be addressed via e-mail.
- E-mail is a terribly inefficient way of communicating regarding course material. Any clarifying questions about the syllabus and/or course content have to be asked before/during/after class, or during office hours.
- If you contact me at my UVic e-mail address, please include your legal name (the name in the university records) and student number. The course title should appear in the subject of your e-mail. Without such information, it is sometimes hard for the instructor to understand the nature of your queries. The standard format for writing a letter must be used. This means it should begin with a salutation (e.g. Dear…) and include full sentences. Text message lingo should not be used.

**Copyright**

All course content and materials are made available by instructors for educational purposes and for the exclusive use of students registered in their class. The material is protected under copyright law, even if not marked with a ©. **Any further use or distribution of materials to others requires the written permission of the instructor**, except under fair dealing or another exception in the Copyright Act. Violations may result in disciplinary action under the Resolution of Non-Academic Misconduct Allegations policy (AC1300).
Course Experience Survey (CES)
I value your feedback on this course. Towards the end of term you will have the opportunity to complete a confidential course experience survey (CES) regarding your learning experience. The survey is vital to providing feedback to me regarding the course and my teaching, as well as to help the department improve the overall program for students in the future. When it is time for you to complete the survey, you will receive an email inviting you to do so. If you do not receive an email invitation, you can go directly to http://ces.uvic.ca. You will need to use your UVic NetLink ID to access the survey, which can be done on your laptop, tablet or mobile device. I will remind you nearer the time, but please be thinking about this important activity, especially the following three questions, during the course.
1. What strengths did your instructor demonstrate that helped you learn in this course?
2. Please provide specific suggestions as to how the instructor could have helped you learn more effectively.
3. Please provide specific suggestions as to how this course could be improved.

Course Policies
This course adheres to the Undergraduate Course Policies of the Department of Economics that deal with the following issues:
• Academic concessions
• Academic integrity (plagiarism and cheating)
• Attendance
• Grading
• Inclusivity and diversity
• Late adds
• Late assignments
• Repeating courses
• Review of an assigned grade
• Sexualized violence prevention and response
• Students with a disability
• Term assignments and debarment from examinations
• Travel plans
• Waitlists

The following policies are explicitly included because of their importance.

Examinations
Attendance at all scheduled examinations is mandatory. Consideration for missed examinations will be given only on the basis of documented illness, accident or family affliction, and for no other reasons. In the event of a missed final examination, students are advised to follow the procedures outlined in the University Calendar.

Students are advised not to make work or travel plans until after the examination timetable has been finalized. Students who wish to finalize their travel plans early should book flights that depart after the end of the examination period. There will be no special accommodation if travel plans conflict with the examinations.
University Policy on Human Rights, Equity and Fairness
The University is committed to promoting, providing and protecting a positive, supportive and safe learning and working environment for all its members.

Waitlist Policies
- Instructors have no discretion to admit waitlisted students or raise the cap on the course.
- Students on the waitlist should discuss with the instructor how to ensure they are not behind with coursework in the event they are admitted.
- Registered students who do not participate as specified in this outline during the first 7 calendar days may be dropped from the course.
- Registered students who decide not to take the course are responsible for dropping the course, and are urged to do so promptly out of courtesy toward waitlisted students.
- Waitlist offers cease after the last date for adding courses irrespective of published waitlists.

Classroom Etiquette
Behave politely and professionally. Do not create negative externalities. Do not disturb or distract your fellow students or the instructor.

Academic Integrity
Academic integrity requires commitment to the values of honesty, trust, fairness, respect, and responsibility. Students are expected to observe the same standards of scholarly integrity as their academic and professional counterparts. A student who is found to have engaged in unethical academic behaviour, including the practices described in the Policy on Academic Integrity in the University Calendar, is subject to penalty by the University.

Review What is Plagiarism for the definition of plagiarism. No form of plagiarism will be tolerated in this course. The University reserves the right to use a plagiarism software to detect violations of academic integrity (including unauthorized use of ChatGPT and other Artificial Intelligence).

Student Code of Conduct
The Humanities, Science, and Social Sciences Faculties have adopted this Student code of conduct.

Educational Technology involving storage outside Canada
To the best of my knowledge, Zoom might store some personal information outside of Canada. If you are not comfortable with your personal information being stored outside of Canada, please speak to me within the first week of class about using an alternative (such as using an alias or nickname). Otherwise, by continuing in this course, you agree to the use of the educational technology in the course and the storage of personal information outside of Canada.
Repeating Courses
According to the University of Victoria Calendar http://web.uvic.ca/calendar

“A student may not attempt a course a third time without the prior approval of the Dean of the Faculty and the Chair of the Department in which the course is offered unless the calendar course entry states that the course may be repeated for additional credit. A student who has not received this approval may be deregistered from the course at any point and may be asked to withdraw from his or her declared or intended program.”

In order to request permission to attempt this course for the third time, you must follow the instructions provided under the link Repeating Courses at:

http://www.uvic.ca/socialsciences/economics/undergraduate/home/course%20policies/index.php

Failure to obtain permission will result in deregistration from the course.

Accessibility & Health Resources

Centre for Accessible Learning
Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations, you are free to approach me. However, you must register with the Centre for Accessible Learning (CAL) for formal arrangements to be made. The CAL staff are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations. The sooner you let us know your needs the quicker we can assist you in achieving your learning goals in this course.

Health Services - University Health Services (UHS) provides a full service primary health clinic for students, and coordinates healthy student and campus initiatives.

Support Connect - a 24/7 mental health support service for students
Toll-free (calls from North America): 1-844-773-1427
International collect calls: 1-250-999-7621

Counselling Services - Counselling Services can help you make the most of your university experience. They offer free professional, confidential, inclusive support to currently registered UVic students.

Elders’ Voices - The Office of Indigenous Academic and Community Engagement (IACE) has the privilege of assembling a group of Elders from local communities to guide students, staff, faculty and administration in Indigenous ways of knowing and being.

Sexualized Violence Prevention & Response
UVic takes sexualized violence seriously, and has raised the bar for what is considered acceptable behaviour. Students are encouraged to learn more about how the university defines sexualized violence and its overall approach by visiting www.uvic.ca/svp . If you or someone you know has been impacted by sexualized violence and needs information, advice, and/or support please contact the sexualized violence resource office in Equity and Human Rights (EQHR). Contact svpcoordinator@uvic.ca.