Instructor:
Prof. Marco Cozzi, BEC 368, Department of Economics
E-mail: mcozzi \[at\] uvic.ca
Website: https://sites.google.com/site/marcozzi73/home/teaching

Time and Location:
Monday 8.30am-9.50am
Thursday 8.30am-9.50am
Location BEC 363.

Office Hours:
Mon 4:00pm-5:30pm or by appointment.

Teaching Assistant:
The TA for the course is Tanvir Khan, tanvirkhan [at] uvic.ca
Tutorial Times: Wednesday 11.30am-12.20pm
Location: BEC 363 (BEC Computer Lab, starting in March)
TA Office Hours: Wednesday, 12.30pm-2.00pm, BEC 325 (starting on Jan 22nd)

Readings:
There are two suggested textbooks for the course (both are on a one-day reserve at the library).


For various sections, the following books could be a useful reference:


At the beginning of the course it will be assumed that every student masters basic calculus, constrained optimization, undergraduate microeconomics (e.g., at the level of Varian’s *Intermediate Microeconomics*) undergraduate macroeconomics (e.g., at the level of Abel and Bernanke’s *Macroeconomics*), and basic econometrics. Prior knowledge of some econometric software (preferably E-Views or STATA) will help in some of the assignments.

Grading:
There will be at least three long assignments (which will count toward the final grade), and a final (almost certainly, take home) exam. The grading scheme will be as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Assignments</td>
<td>60%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>40%</td>
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The official policy for this course is that no make-up exams will be offered because of the nature of a take home examination.

Course Requirements:
Students are encouraged to work together on the assignments (usually groups of 2-3 people are quite efficient) but must submit their own answers, clearly indicating the group they worked in.

Late problem sets will not be accepted except with my prior consent (not the TA’s) or in very unusual circumstances.

If needed, the datasets for the assignments will be made available on the course website.
The main goal of the course is to provide the students with a set of tools useful to study dynamic economies. We will learn a mix of theoretical and applied (quantitative) methods that are going to be instrumental for the analysis of Macroeconomic issues with a modern approach.

The first part of this course discusses general equilibrium theory and introduces students to dynamic models of growth and business cycle fluctuations. The second part turns to the computation of aggregate variables, namely to applied Macroeconomics. To this end we are going to rely heavily on Dynare (http://www.dynare.org/), a software interface that allows for an easy specification, numerical solution and (often) estimation of dynamic models.

Although the computers in the departmental lab has recent Dynare versions installed, it is a free software, and students are encouraged to install it on their own computers. Dynare relies on other platforms (typically, Octave or Matlab) to actually perform the computations, so it cannot be used as a stand-alone software. Octave is a free software and it is powerful enough for our purposes. Matlab is a more complete option, but it is also quite expensive. The University offers free student licenses, which will expire once the students are going to complete their MA program.

LIST OF TOOLS COVERED IN THE COURSE

- Elements of Dynamic Economies in Discrete Time.
- Elements of Stochastic Processes and Time Series Analysis.
- Elements of DSGE Modeling.

A TENTATIVE LIST OF TOPICS AND RELATED READINGS:
The list is likely to change.
Please ask me in due time for the detailed list of sections in the books that you are supposed to read.

- Preliminaries: Maths and Econometrics
  Lecture notes.
  M Chapters 3 and 4; Mathematical Appendix in W or BS.

- Economic Dynamics: the Basics
  M Chapter 1; DD Chapters 1 and 2; W Chapter 2 (No 2.7); BS Chapter 1.

- Neoclassical Growth Theory
  M Chapter 1; W Chapters 3 and 4; BS Chapters 2 and 3 (No 2.7, 2.9, 3.4, 3.5, and 3.6).

- The OLG Growth Model
  M Chapter 2; W Chapter 4.4; BS Appendix to Chapter 3.

- Endogenous Growth Theory
  W Chapter 3.5: BS Chapter 4 (No 4.5).

- The Empirics of Economic Growth
  BS Chapters 10 and 12.
• **The Empirics of Economic Fluctuations**
  DD Chapter 6; Lecture notes.

• **Numerical Solution of DSGE Models**
  M Chapters 4, 5 and 6; DD Chapter 4; Lecture notes.

• **Calibration**
  DD Chapter 11.

• **Estimation: Classical Vs. Bayesian**
  DD Chapters 12 and 14.

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