



# **ECON\*3810.02**

## **Advanced Macroeconomics**

### **Winter 2025**

### **0.50 Credits**

#### General Course Information

**Instructor:** Laurent L. Cellarier, Ext. 52180

*Email:* lcellari@uoguelph.ca

*Office Location:* MCKN 712

*Zoom Office Hours:*

Friday 9:30AM - 11:30AM

or by appointment

**TA:** TBA

*Office Hours:* TBA

**Class Schedule:** T/Th 11:30PM-12:50AM, Guelph, MACS 121

Pre-requisites: [ECON\\*2410](#), ([ECON\\*2740](#) or [STAT\\*2040](#)), ([ECON\\*2770](#) or [MATH\\*1210](#))

#### Course Description

The goal of this course is to provide all the fundamental concepts and basic theoretical tools to analyze, understand and predict the behaviour of economies in the long run.

#### Course Learning Outcomes

Upon successfully completing this course, you will be able to extend the various models studied to answer your own questions about economic growth.

## Knowledge and Understanding:

- 1) **Mathematical Methodology:** Students are expected to **solve** systems of equations, optimization problems and to **analyze** systems of first-order difference equations.
- 2) **Statistical and Econometric Methodology:** Students have to be **familiar** with data analysis, and regression analysis.
- 3) **Microeconomic modelling:** Students are expected to **use** the theory of the firm and to **apply** the supply and demand framework to various markets.
- 4) **Macroeconomic Modeling:** As an advanced course, ECON\*3810 introduces students to macroeconomic dynamics. Students are expected to **understand** and to **recognize** various concepts and models.
- 5) **Historical and Global context:** Students will be required to **research** the values of current macroeconomic indicators and variables. Short essay questions will ask students to **construct** an argument about a macroeconomic issue from an historical perspective and **formulate** a solution for a current macroeconomic problem.
- 6) **Economic Policy and Regulation:** Students must **understand** and **explain** the macroeconomic consequences of the various forms of government intervention.

## Discipline/Professional and Transferable Skills:

- 7) **Written Communication:** Short answer essay questions will be graded with the usual essay writing criteria except for the requirement of a bibliography.
- 8) **Problem Solving:** Students will have to **calculate** various macroeconomic indicators, **solve** various general equilibrium models namely the Malthusian model, the Solow-Swan model with one or two sectors. Students will also have to make **quantitative predictions** and to use **graphical analysis** to **demonstrate** and **interpret** the various **economic models**. All these skills will be assessed in the homework assignments, the midterm examination and the final examination.
- 9) **Real World Applications:** Students will have to **apply** the course materials to historical and current **macroeconomic problems**.
- 10) **Computer skills:** Basic **data analysis** skills are expected.
- 11) **Professional and Ethical Awareness and Conduct:** There will be no time extension to complete homework assignments in order to master **time management** skills.

## Attitudes and Values

NA

**Overview** (First day of classes)

- Chapter 1 Introduction** (Week 1)  
(*Economic Growth*, David N. Weil, 4<sup>th</sup> edition, Chapters 1 and 2)  
(*Introduction to Economic Growth*, Charles I. Jones, 3<sup>rd</sup> U.S. edition, Chapter 1)  
(*Macroeconomics*, Charles I. Jones, 3<sup>rd</sup> U.S. edition, Chapter 3)  
(*Macroeconomics*, Olivier Blanchard, 7<sup>th</sup> U.S. edition, Chapter 10)
- Chapter 2 The Malthusian Model** (Week 2)  
(*Macroeconomics*, Williamson S, 5<sup>th</sup> U.S. edition, Chapter 7)  
(*Economic Growth*, David N. Weil, 4<sup>th</sup> edition, Chapter 4)  
(*The Economics of Growth*, Philippe Aghion, Peter Howitt, Chapter 10)
- Chapter 3 Population** (Week 3)  
(*Economic Growth*, David N. Weil, 4<sup>th</sup> edition, Chapter 5)
- Chapter 4 The Solow Growth Model** (Weeks 4-5)  
(*Economic Growth*, David N. Weil, 4<sup>th</sup> edition, Chapters 3, 4)  
(*Macroeconomics*, Charles I. Jones, 3<sup>rd</sup> U.S. edition, Chapter 5)  
(*Macroeconomics*, Olivier Blanchard, 7<sup>th</sup> U.S. edition, Chapter 11)  
(*The Economics of Growth*, Philippe Aghion, Peter Howitt, Chapter 1)  
(*Economic Growth*, Robert Barro, Xavier Sala-i-Martin, 2<sup>nd</sup> edition, Chapter 1)
- Chapter 5 Human Capital** (Weeks 6-7)  
(*Economic Growth*, David N. Weil, 4<sup>th</sup> edition, Chapter 6)  
(*Macroeconomics*, Charles I. Jones, 3<sup>rd</sup> U.S. edition, Chapter 6)
- Chapter 6 Productivity** (Week 8)  
(*Economic Growth*, David N. Weil, 4<sup>th</sup> edition, Chapter 7)  
(*Macroeconomics*, Charles I. Jones, 3<sup>rd</sup> U.S. edition, Chapter 4)
- Chapter 7 Technology** (Weeks 9-10)  
(*Economic Growth*, David N. Weil, 4<sup>th</sup> edition, Chapters 8 and 9)  
(*Macroeconomics*, Olivier Blanchard, 7<sup>th</sup> U.S. edition, Chapter 12)
- Chapter 8 Efficiency** (Weeks 11-12)  
(*Economic Growth*, David N. Weil, 4<sup>th</sup> edition, Chapter 10)

## Course Assessment

			<b>Associated Learning Outcomes</b>	<b>Due Date/ location</b>
<b>Assessment 1:</b>				<b><i>Hw1</i></b> (Posted on Week 2 & Due on Week 4) <b><i>Hw2</i></b> (Posted on Week 4 & Due on Week 6) <b><i>Hw3</i></b> (Posted on Week 9 & Due on Week 11)
	30%	3 Homework Assignments	LO 1 - 11	
<b>Assessment 2:</b>	30%	Midterm Examination	LO 1 - 9	March 1 <sup>st</sup> , (Week 7, Time & Location: TBA)
<b>Assessment 3:</b>	40%	Final Examination	LO 1 - 9	Exam Weeks, (Time & Location: TBA)
<b>Total</b>	<b>100%</b>			

## Teaching and Learning Practices

**Lectures:** Lectures will be also livestreamed on Zoom. Every Zoom attendee is expected to turn his/her Webcam on. Class notes (PDF format), tutorial videos (MP4 format), and interactive documents (CDF format) will be posted in advance on CourseLink. You will be responsible for the graphs in addition to the data presented in the textbook. I expect that you remember the approximate levels and trends for some of the key macroeconomic statistics (i.e. GDP, GDP growth rate, returns to education, etc.).

**Recommended Textbook Problems:** A list of recommended textbook problems will be provided for each chapter. These problems are the primary way in which you will learn how to apply the macroeconomic models discussed in class. These problems will not be graded or turned in. However, you should attempt as many of them and view them as a necessary and required component of the course. The answer key to most of these recommended textbook problems will appear later in the terms either in the class notes or in the exam review notes.

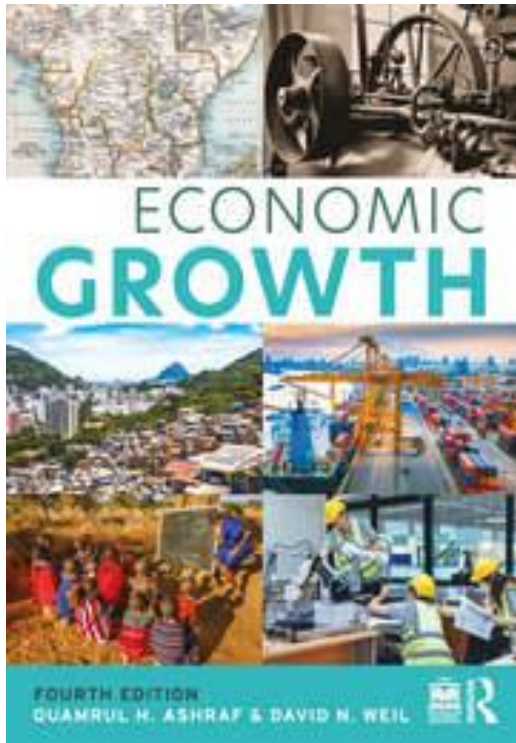
**Homework Assignments:** There will be three Homework Assignments posted on CourseLink. Each Homework Assignment includes (2-3) quantitative problems. These problems are similar in format to those found in the textbook.

**Midterm Examination:** A Midterm Examination is scheduled to take place face to face on March 1<sup>st</sup> (Week 7). If the Midterm Examination cannot be held on campus due to the COVID situation, its questions will be posted on CourseLink at 8AM on February 27<sup>th</sup> (Week 7) and due before 2PM on March 1<sup>st</sup>. The format is: (2-4) quantitative problems (50%) and (2-4) short answer questions (50%). The quantitative problems and the short answer questions will be similar in format to those found in the textbook and in the Homework Assignments.

**Final Examination:** A Final Examination is scheduled take place face to face. If the Final Examination cannot be held on campus due to the COVID situation, its questions will be posted on CourseLink at 8AM on April 9<sup>th</sup> (First Exam Week) and due before 2PM on April 12<sup>th</sup>. The format is: (2-4) quantitative exercises (50%) and (2-4) short answer questions (50%). The quantitative exercises and the short answer questions will be similar in format to those found in the textbook, the Midterm Examination and the Homework Assignments.

## Course Resources

### Required Textbook:



**Authors:** Quamrul H. Ashraf, David N. Weil

**Title:** Economic Growth

**Hardcover:** 698 pages

**Publisher:** Routledge Taylor & Francis Group; 4<sup>th</sup> Edition\* (October 30, 2024)

**Language:** English

**ISBN:** 9781138504349

**Price:** ≤ 339 CAD (**Indigo:** ≤ 310.95 CAD; **Amazon:** ≤ 301.90 CAD)

### Online Resources:

The textbook companion website is available at:

<http://www.routledgetextbooks.com/textbooks/9780321795731/>

A **physical textbook** option can be ordered through our **University Bookstore:**

<https://bookstore.uoguelph.ca/>

The **Wolfram Player** (Versions 12 but not higher) required to open **CDF documents** can be downloaded for free from:

<https://www.wolfram.com/player/>

---

\* Earlier & cheaper editions of the textbook such as 3<sup>rd</sup> or 2<sup>nd</sup> are also acceptable.

## Online Course Materials:

Additional resources will be available at:

<https://courselink.uoguelph.ca/shared/login/login.html>

## Course Policies

### Grading Policies

Students who find themselves unable to meet course requirements by the deadlines or the criteria expected because of medical or personal reasons, should review the regulations on academic consideration in the Academic Calendar and discuss their situation with the instructor, program counselor or other academic counselor as appropriate:

<http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-grds.shtml>

A grade of zero will be assigned if you fail to submit an assignment, unless you are ill or have other compassionate reasons. Please read your Undergraduate Calendar for the regulations regarding illness and compassionate grounds. Please note, vacation travel, moving house, or outside work commitments will not be accepted as valid reasons for missing deadlines.

There is no make-up Midterm Exam. If a student misses the Midterm Exam (with appropriate documentation) its weight will be shifted to the final.

If you have religious observances which conflict with the course schedule or if you are registered with Student Accessibility Services, please contact the course instructor in order to make arrangements for your assessment if appropriate.

## University Policies

### Disclaimer

Please note that the ongoing COVID-19 pandemic may necessitate a revision of the format of course offerings, changes in classroom protocols, and academic schedules. Any such changes will be announced via CourseLink and/or class email.

This includes on-campus scheduling during the semester, midterm examination and final examination schedules. All University-wide decisions will be posted on the COVID-19 website (<https://news.uoguelph.ca/2019-novel-coronavirus-information/>) and circulated by email.

## **Illness**

Medical notes will not normally be required for singular instances of academic consideration, although students may be required to provide supporting documentation for multiple missed assessments or when involving a large part of a course (e.g. final exam or major assignment).

For information on current safety protocols, follow these links:

<https://news.uoguelph.ca/return-to-campuses/how-u-of-g-is-preparing-for-your-safe-return/>

<https://news.uoguelph.ca/return-to-campuses/spaces/#ClassroomSpaces>

***Please note, these guidelines may be updated as required in response to evolving University, Public Health or government directives.***

## **Academic Consideration**

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons, please advise the course instructor in writing, with your name, id#, and e-mail contact. See the academic calendar for information on regulations and procedures for Academic Consideration:

<http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml>

## **Academic Misconduct**

The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community, faculty, staff, and students to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring.

University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff and students have the responsibility of supporting an environment that discourages misconduct. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection. Please note: whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

The Academic Misconduct Policy is detailed in the Undergraduate Calendar:

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml>

## **Accessibility**

The University of Guelph is committed to creating a barrier-free environment. Providing services for students is a shared responsibility among students, faculty and administrators. This relationship is based on respect of individual rights, the dignity of the individual and the University community's shared commitment to an open and supportive learning environment. Students requiring service or accommodation, whether due to an identified, ongoing disability or a short-term disability should contact Student Accessibility Services as soon as possible.

For more information, contact SAS at 519-824-4120 ext. 56208 or email [sas@uoguelph.ca](mailto:sas@uoguelph.ca) or see the website:

<https://wellness.uoguelph.ca/accessibility/>

## **Course Evaluation Information**

Please refer to the [Blue by Explorance system](#).

### **Recording of Materials**

Presentations which are made in relation to course work—including lectures—cannot be recorded or copied without the permission of the presenter, whether the instructor, a classmate or guest lecturer. Material recorded with permission is restricted to use for that course unless further permission is granted.

### **Drop date**

The last date to drop one-semester courses, without academic penalty, is **Friday, April 4, 2025**. For regulations and procedures for Dropping Courses, see the Academic Calendar:

<https://calendar.uoguelph.ca/graduate-calendar/general-regulations/>