



Department of Economics

Spring 2023

ECO 407: Macroeconomic Theory
(LEC, 3 credits)

Class Time: Tue Thu 3:30PM—4:50PM EST

Class Location: Nsc 215

Instructor

Dr. Monica Tran-Xuan

Email

monicaxu@buffalo.edu

Office Location & Hours

Fronczak 425

Tue and Thu 2:00PM—3:00PM EST or by appointments

(The best way to reach me is via email. Email subject: ECO 407 – your name)

Teaching Assistants:

Graduate TA: Qiong Liu. Email: qliu35@buffalo.edu

Office Hour: Friday 1:00PM—2:00PM. Location: Fronczak 411

Undergraduate TA: Kevin Jiang. Email: jiankeji@buffalo.edu

Homework Help Session: Friday 2:00PM—5:00PM. Location: Talbert 103

Course Description

This course is an intermediate-level examination of the sometimes-competing models of the macroeconomy. It uses economic theory to explain the causes of inflation, business fluctuations, unemployment, and economic growth. The course builds on the instruments of individual decision making of consumers and firms to study the macroeconomic effects of technological improvement, taxes, government spending, and financial frictions. The course also covers the most important facts of economic growth. Students will learn how to test important theoretical results on real-world data and examples.

Learning Outcomes

Upon successful completion of this course, students are expected to

Learning outcomes	Assessment methods
1. Develop an understanding of the foundations of modern macroeconomic models	Problem set, Exam
2. Subject these various models to data and determine their empirical relevance	Problem set
3. Analyze modern/past economic issues with these models	Problem set, Exam

Prerequisites

MTH 121 or MTH 131 or MTH 141

Students are expected to have a basic knowledge on calculus (derivatives, etc.), or equivalents. Knowledge of macroeconomic concepts at the introductory level will be helpful. Basic data management skill will be needed in some of the assignments.

Textbook

The required textbook for this course is

- *Macroeconomics* by Stephen Williamson (6th edition)

This textbook should be available on the UB bookstore. Optional readings include

- *Macroeconomics: A Modern Approach*, by Robert Barro (1st edition), Thomas Southwestern
- *Macroeconomics*, by N. Gregory Mankiw (7th edition), Worth
- *Introduction to Economic Growth*, by Charles Jones (3rd edition), W. W. Norton

Course Requirements

Students will be graded on participation, 5 problem sets, two midterms, and one final exam. Students are responsible for materials covered in lectures.

Participation: Students should attend every class and participate in each class actively. Students are expected to ask questions and answer or comment on other students' questions. There will be random participation check throughout the semester.

Problem sets are submitted via UB Learns. Late assignments will receive half credits except for special circumstances with official documents (doctor's notes, etc.). Some problem sets might involve the use of Excel, or other software useful for data analysis of your choosing. Students are highly encouraged to work together on problem sets, but each student must submit individual solutions and acknowledge whom the students work with on the first page. The solutions can be electronic (using LaTeX and its applications such as Overleaf, Lyx, etc.) or handwritten and scanned.

Exams: All exams are conducted in person, closed books and notes, and with a time limit. Midterms will cover the first and second part of the class, while the final is cumulative. Students are required to submit handwritten answers to exams. There are no make-up exams for the midterms. I will drop the lowest midterm grade. Make-up final exams will only be scheduled under documented special circumstances. Students with final exam conflicts must follow the university guidelines at <https://registrar.buffalo.edu/schedules/finalexams.php>. Exam schedule:

Exam	Date	Time	Location
Midterm 1	March 7	3:30PM—4:50PM	Nsc 215
Midterm 2	April 20	3:30PM—4:50PM	Nsc 215
Final	May 18	3:30PM—6:30PM	Nsc 210*

***Note: room change for the Final exam.**

Grading Policy

The final total score for the course will be determined as follows:

Participation	10%
Problem sets	30%
Midterms	25%
Final	35%

I will follow this grading rubric in determining your final letter grade:

Letter grade	Final total score
A	93-100
A-	87-92
B+	80-86
B	75-79
B-	70-74
C+	65-69
C	60-64
C-	55-59
D+	50-54
D	45-49
F	00-44

Students have a responsibility to participate in the course evaluation process. For the “Incomplete” grade, please refer to the [university’s grading procedure](#).

Academic Content

This is the list of topics and relevant reading materials that may be covered in this course. The instructor reserves the right to modify/adjust course materials during the semester.

- **Introduction and Measurement**
 - Introduction, Chapter 1
 - National Accounts, Chapter 2
 - Business Cycle, Chapter 3
- **Long-run Macroeconomics and Growth**
 - Solow Growth Model, Chapter 7
 - Growth Convergence, Chapter 8
- **One-period Economy**
 - Individual Optimization, Chapter 4
 - Static Equilibrium, Chapter 5
- **Two-period Economy**
 - Consumption/Savings Problem, Chapter 9
- **General Equilibrium**
 - Model with Production/Investment, Chapter 11
- **Additional topics (if time permits)**
 - Financial Frictions, Chapter 10
 - Unemployment, Chapter 6
 - International Trade, Chapter 16

Course Website

All relevant course materials, links, and assignments will be posted on UB Learns (<https://ublearns.buffalo.edu/>). Please check the website regularly.

Please do not share course documents, links to lectures, office hours, or other course meetings to others who do not officially register with the course without the instructor's approval. If you receive such requests, please forward it to the instructor.

Class Policies

Students are encouraged to actively participate in class discussions and respect the instructor, the TAs, and other students. There should be no eating or drinking during class times. Masks must be worn in the classroom. Any student found disturbing the academic environment in the class would be asked to leave. Reentry into the class will be permitted at the discretion of the instructor.

Academic Integrity

Academic integrity is critical to the learning process. It is your responsibility as a student to complete your work in an honest fashion, upholding the expectations your individual instructors

have for you in this regard. The goal is to ensure that you learn the content in your courses in accordance with UB's academic integrity principles, regardless of whether instruction is in-person or remote. Please refer to <https://catalog.buffalo.edu/policies/integrity.html> for more details.

Students are expected to have appropriate citation of sources used, acknowledgment of collaboration and help in your work, and no communication with others during exams. Failure to abide by such policies will result in a failing grade of the course.

Thank you for upholding your own personal integrity and ensuring UB's tradition of academic excellence.

Accessibility Resources

If you have any disability which requires reasonable accommodations to enable you to participate in this course, please contact the Office of Accessibility Resources in 60 Capen Hall, 716-645-2608 and also the instructor of this course during the first week of class. The office will provide you with information and review appropriate arrangements for reasonable accommodations, which can be found at <http://www.buffalo.edu/studentlife/who-we-are/departments/accessibility.html>.

Critical Campus Resources

Sexual Violence

UB is committed to providing a safe learning environment free of all forms of discrimination and sexual harassment, including sexual assault, domestic and dating violence and stalking. If you have experienced gender-based violence (intimate partner violence, attempted or completed sexual assault, harassment, coercion, stalking, etc.), UB has resources to help. This includes academic accommodations, health and counseling services, housing accommodations, helping with legal protective orders, and assistance with reporting the incident to police or other UB officials if you so choose. Please contact UB's Title IX Coordinator at 716-645-2266 for more information. For confidential assistance, you may also contact a Crisis Services Campus Advocate at 716-796-4399.

Mental Health

As a student you may experience a range of issues that can cause barriers to learning or reduce your ability to participate in daily activities. These might include strained relationships, anxiety, high levels of stress, alcohol/drug problems, feeling down, health concerns, or unwanted sexual experiences. Counseling, Health Services, and Health Promotion are here to help with these or other issues you may experience. You can learn more about these programs and services by contacting:

Counseling Services:

120 Richmond Quad (North Campus), 716-645-2720

202 Michael Hall (South Campus), 716-829-5800

Health Services:

Michael Hall (South Campus), 716-829-3316

Health Promotion:

114 Student Union (North Campus), 716-645-2837

Tentative Course Schedule

Week	Topic	Chapter	Assignment	Date
1	Intro, Measurement	1,2		
2	Business Cycles, Math Review	3		
3	Math Review, Solow Growth	7,8	Problem set 1	
4	Solow Growth	7,8		
5	Growth Convergence, Midterm 1 Review	7,8	Problem set 2	
6	Midterm 1 Growth Accounting	1-3, 7, 8		Mar 7
7	Firm Optimization, Consumer Optimization	4		
8	Spring Break			
9	Consumer Optimization	4	Problem set 3	
10	Static Equilibrium	5		
11	Static Equilibrium	5	Problem set 4	
12	Midterm 2 Review Midterm 2	4, 5		Apr 20
13	Consumption/Savings	9		
14	Consumption/Savings	9	Problem set 5	
15	Production/Investment, Final Review	11		
Final	Final Exam	1-5, 7-9		May 18