Econ 311: Intermediate Macroeconomics

George Mason University

Summer 2025

Instructor: Prad Sharma	**Location:** Online
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Introduction: Welcome to Intermediate Macroeconomics. This is an upper-level course where we study and apply the canonical models of macroeconomics. Unlike Microeconomics, where the unit of observation is the individual or household, Macroeconomics is concerned with understanding the economy in its aggregate. Generally, this refers to a country, but it can also be a state or region.

The foundational questions of Macroeconomics involve a generalized approach to explaining cross-country differences in economic outcomes. The two primary questions we are concerned with are: (1) Why did some countries grow rapidly while others did not? and (2) What causes fluctuations in the economy, and what role does policy play in both mitigating and causing these fluctuations?

My goal in this course is to teach you how to formally reason about these questions—specifically, to think analytically about economic growth and economic fluctuations using models that are generalizable and grounded in economic theory. To do that, we begin by establishing the language of macroeconomics. The first three weeks of the course focus on macroeconomic data, unemployment, and national income accounting. These foundational topics provide the empirical and conceptual vocabulary we will use throughout the remainder of the course.

We will then study models of economic growth, the role of money, and the dynamics of business cycles—drawing on frameworks such as the Solow growth model, Romer growth theory, the IS-LM model, and extensions to understand business cycles. In our study of business cycles, we will also examine the Austrian Business Cycle Theory and discuss it in the context of broader intellectual debates about the causes and nature of economic fluctuations.

This course teaches you to analyze aggregate data and to use macroeconomic models as professional economists do. To that end, this is a relatively technical course. It will make use of calculus, logarithms, and exponents. However, you will not be tested on calculus in exams. A math handout reviewing these tools will be available on Canvas for reference throughout the course.

Office Hours

– Wednesdays 12:00 PM–1:15 PM via Zoom: https://gmu.zoom.us/j/6793342485
– By appointment: Wednesdays 1:15 PM–2:00 PM and Thursdays 12:00 PM–2:00 PM

(Please email me at least 48 hours in advance to schedule these psharm6@gmu.edu). I am more than happy to answer any course-related questions or discuss topics in economics beyond the scope of the course during office hours.

Prerequisites: ECON 103 and 104 or permission of instructor. You will frequently see exponential and logarithmic functions, and some calculus. An overview is provided in a document on canvas. Khan Academy or similar platforms may help as refreshers.

Note: You will not be tested on using calculus

Textbook: *Macroeconomics*, N. Gregory Mankiw (Worth, 2022; 11th ed., ISBN 9781319388058). Additional papers and handouts on Canvas.

Course Pages: Canvas: https://canvas.gmu.edu/
Important Dates:

First Day of Class	May 19th, 2025
Midterm #1 (Due Date)	June 10th, 2025
Midterm #2 (Due Date)	July 3rd, 2025
Final Exam (Due Date)	July 26th, 2025

For complete details on official dates for the university see https://registrar.gmu.edu/calendars/summer_2025/

Class Policy: This class is online and asynchronous. Video lectures and notes will be made available on canvas. You can watch the lecture videos at your convenience. Note however that homework deadlines are binding.

Grading Policy: Homework Assignments (35%), Exam 1 (20%), Exam 2 (20%), Final Exam (25%).

Final Grades:

A+	97%-100%
A	90%-96%
B+	87%-89%
B	80%-86%
C+	77%-79%
C	70%-76%
D	60%-69%
F	$\leq$ 59%

decimal points .5 and above will be rounded up and decimal points .49 and below will be rounded down.

Exams: You will have 3 exams in this class: two midterms and one final exam. Each mid term exam is worth 20% of your final grade. The final exam is worth 25% of your final

grade. A significant portion of the exam questions will be similar (but not necessarily identical) to the questions in your homework assignments. Thus doing your homework on time will help prepare you for the exam. You are required to take the exams on the scheduled date with few exceptions.

Challenging Exam Grading: If I committed an arithmetical error in calculating your exam grade, please notify me as soon as you discover the error. I will correct the mistake immediately. Otherwise, any objections you have to your grade must be expressed to me in writing. Submit to me a typed paragraph or two explaining why you believe that your answer deserves more credit than I gave it. In such situations, I will have another faculty member in the department grade your exam. If you do this, however, the entire exam will be regraded. It is possible that the re-grade will lower your score.

Early and Late exams: With few exceptions, you must take the exam at the required date and time. To take it late without being assessed a penalty, you must have an excused absence. Your excuse must be supported by documented evidence (e.g., a doctor's note). If you miss an exam for any other reason, I'll allow you to take it late, but you will be assessed a 30-point late penalty. Regardless of whether you have an excuse to take the exam late, you must notify me—by email, no later than 24 hours after the scheduled time of the exam—that you missed the exam.

Homework Assignments: Homework assignments compose 35% of your final grade. You will have 7 homework assignments (effectively worth 5% each of your final grade). This is a significant proportion of your grade. I have structured it this way to encourage active engagement with the course. Additionally, this is a great way to earn easy points in this class.

For your homework assignments, most questions will be structured like the Quick Quiz questions in the textbook. These questions make up 80% of the assignment, and the remaining 20% will be based on review or applied questions—usually from the textbook.

You can turn in late work; however, your original grade will be multiplied by 0.7 for any homework that is submitted late. Homework must be submitted using the link available on Blackboard under the "Assignments" tab. Homework assignment questions will be available on Blackboard.

Note: Any homework submitted after **5:00PM on Wednesday July 23rd 2025** will receive a score of 0. **Note: Homework Assignments are due at 11:59 PM on the due date**

A Note on using LLMs: I encourage you to use large language models like ChatGPT to aid your learning in this course. These tools can help clarify concepts or present topics in ways that enhance your understanding. However, all work submitted for homework assignments and exams must be your own.

While I cannot monitor this constantly, I want to offer a challenge as you think about how to use these tools. Consider your reasons for taking this course and pursuing a college degree. A college degree is an investment in human capital, and it is associated with a wage premium. If the work you submit is entirely generated by an AI model, you

are effectively making the case that you cannot contribute to the production process as an economist beyond what generative artificial intelligence can do. That may not hurt your course grade, but it is likely to be detrimental to your long-term earning potential.

My goal is for you to learn how to use all available tools as complements—not substitutes—for your own thinking and effort.

Tentative Course Outline:

Lecture Videos: Each lecture is about 45 minutes to an hour broken into 15-20 minute sections.

Week 1 (May 19–25): Course Overview; Macroeconomic Data

Lecture 1: Introduction and the Science of Macroeconomics (Mankiw Ch 1)

Lecture 2: Data in Macroeconomics (Mankiw Ch 2)

HW 1 due May 25

Week 2 (May 26–June 1): Measuring Unemployment; National Income Accounting (Mankiw Ch 3)

Lecture 3: Unemployment (Mankiw Ch 7)

Lecture 4: Introduction to National Income Accounting (Mankiw Ch 3)

HW 2 due June 1

Week 3 (June 2–8): National Income Accounting cont.; Production Functions

Lecture 5: National Income Accounting cont. (Mankiw Ch 3)

Lecture 6: Production Functions (Mankiw Ch 3; Production Functions Handout Canvas)

Week 4 (June 9–15): Exam 1 (covers Weeks 1–3; due June 10th 11:59PM)

Lecture 7: Introduction to Economic Growth (Mankiw Ch 8)

Lecture 8: Introduction to the Solow Model (Mankiw Ch 8,9)

HW 3 due June 15th

Week 5 (June 16–22): The Solow Model & Endogenous Growth

Lecture 9: The Solow Growth Model with Technological Growth (Mankiw Ch. 9, 10)

Lecture 10: Endogenous Growth (Romer Handout)

HW 4 due June 22

Week 6 (June 23–29): Money & Inflation

Lecture 11: Money Part I: Money, Interest Rates, and the Monetary Base (Mankiw Ch. 4)

Lecture 12: Money Part II: Quantity Theory & Neutrality (Mankiw Ch 5)

Lecture 13: Money Part III: Fisher Equation, Costs of Inflation (Mankiw Ch 5) *HW 5 due June 29*

Week 7 (June 30–July 6): Exam 2 (covers Weeks 4–6; due July 3 11:59PM)

Lecture 14: The Open Economy – basic open-economy (Mankiw Ch 6)

Lecture 15: The Open Economy cont.(Mankiw Ch 6, Ch.14)

Week 8 (July 7–13): Introduction to Business Cycles

Lecture 16: The AD–AS Framework – demand & supply shocks (Mankiw Ch. 11)

Lecture 17: The IS–LM Model – goods & money markets (Mankiw Ch 12)

HW 6 due July 7

Week 9 (July 14–20): Applications of Business Cycle Models (Mankiw Ch 13)

Lecture 18: Applying the IS–LM Model (Mankiw Ch 13)

Lecture 19: Macroeconomic Policy – ABCT vs. Keynesian responses (Mankiw Ch. 13, ABCT Handout)

HW 7 due July 14

Week 10 (July 21–23): Review and Final Exam

Lecture 18: Review for the Exam

Final Exam Available July 24; Due July 26 (11:59PM)

Academic Honesty: I expect you to adhere to the Mason honor code and meet academic integrity standards: Please ensure that the work you submit is your own. Details on all common course policies listed above that apply to courses at George Mason University can be found here:
https://stearnscenter.gmu.edu/home/gmu-common-course-policies

ADA accommodations: Students with disabilities who seek accommodations in a course must be registered with George Mason University Disability Services. Approved accommodations will begin at the time the written letter from Disability Services is received by the instructor (see https://ds.gmu.edu).

Title IX: As a faculty member, I am designated as a "Non-Confidential Employee," and must report all disclosures of sexual assault, sexual harassment, interpersonal violence, and stalking to Mason's Title IX Coordinator per University Policy 1202. If you wish to

speak with someone confidentially, please contact one of Mason's confidential resources, such as the Student Support and Advocacy Center (SSAC) (New Window) at 703-380-1434 or Counseling and Psychological Services (CAPS) at 703-993-2380. You may also seek assistance or support measures from Mason's Title IX Coordinator by calling 703-993-8730, or emailing titleix@gmu.edu.