

# ECO511 Macroeconomic Theory

Term: **Spring 2025**

Department: **School of Economics**

Credit: **3 Hours**

Meeting: **Mon & Wed 2:00pm-3:15pm in Lengyel 125**

Learning Modality: **In-Person; Traditional Lecture**

Professor: **Dr. Thomas F. P. Wiesen** ([thomas.wiesen@maine.edu](mailto:thomas.wiesen@maine.edu))

Office: **Winslow Hall 207C**

Office Hours: **Mon & Wed 3:45pm-4:45pm**



## Class Details

### Textbook and Materials

- Primary textbook: *Advanced Macroeconomics*, by David Romer (any edition)
- Secondary reference textbook: *Dynamic Macroeconomics*, by George Alogoskoufis

I will primarily draw materials from Romer's textbook. You do not have to buy either of the textbooks; all are optional purchases. However, if you do buy a textbook, then I strongly recommend you buy Romer's book. Any edition of Romer's book will suffice.

### Course Details according to the UMaine Course Catalog

An examination of the development of modern economic analysis with regard to employment, income distribution, and stabilization policies. Prerequisite: Graduate standing or 4+1 in the SOE.

### Course Description

This course is a graduate-level introduction to classic and modern theories of the aggregate economy. You will develop a fundamental understanding of formal models explaining economic growth—the performance of the economy in the long-run—and aggregate fluctuations—the performance of the economy in the short-run across business cycles. The focus of the course is on developing, using, and empirically assessing these models to predict the response of overall production, investment, employment, consumption, and prices to external shocks and government policy.

I assume students have mastered the tools of differential calculus, integral calculus, multivariate calculus, linear regression models, and are comfortable with linear algebra. If needed, I will provide brief reviews of these topics.

### Tentative Course Content and Outline

The outline below includes chapters and sections from David Romer's textbook. This is tentative and may change depending on time constraints and the pace of learning in the class.

#### **Lesson 1: The Solow Growth Model** (Ch1 in Romer)

- Background and theories of economic growth
- Assumptions and parameters
- Model dynamics
- Description of the balanced growth path
- The impact of a change in the investment (savings) rate
- Speed of convergence to balanced growth path

- The Solow model and central questions of growth theory
- Empirical applications (convergence of rich and poor countries, savings vs. investment)

**Lesson 2: The Ramsey-Cass-Koopmans/Infinite Horizons Model** (Ch2 part A in Romer):

- Assumptions and parameters
- Firm behavior
- Household behavior
- Implications of household budget constraint
- Household's optimization problem
- The dynamics of the economy using phase diagrams
- The "saddle path" equilibrium
- Welfare
- The effects of a change in the discount rate
- The effects of government purchases
- Empirical application (interest rates and temporary government purchases)

**Lesson 3: The Diamond Overlapping Generations Model** (Ch2 part B in Romer):

- Assumptions
- Household behavior
- Euler equation for consumption
- Dynamics of capital and the "equation of motion" for intensive capital
- Specific Case: Log utility and Cobb-Douglas production
- The effects of a fall in the discount rate
- General Case: general utility and production function
- The possibility of dynamic inefficiency
- Social planner's problem and social security
- Adding government to the Diamond OLG model

**Lesson 4: Real Business-Cycle Theory** (Ch5 in Romer)

- Adding shocks and endogenously determined labor to the model
- A baseline real-business-cycle model
- Household behavior
- Intertemporal substitution in labor supply
- Household optimization under uncertainty
- Euler equation for consumption
- Within period consumption vs. labor supply tradeoff
- Solving the model for a special case
- Solving the baseline RBC model using log-linearization
- Empirical Illustration: Impulse response function from a knowledge shock
- Empirical Illustration: Impulse response function from a government spending shock

**Lesson 5: Endogenous Growth Models** (Ch3 in Romer) *Time Permitting*

Research and Development Models

- Framework and assumptions
- The model without capital
- The general case
- The nature of knowledge and allocation of resources to R&D
- An example of endogenous savings in models of knowledge accumulation
- Models of knowledge accumulation and the central questions of growth theory
- Empirical application: population growth and technological change

Human Capital Models

- A model of human capital and growth
- Implications
- Empirical Applications: physical and human capital accumulation

**Grades**

Grades will be determined by two midterm exams, a cumulative final exam, and a scholarly journal article presentation with the following weights:

First Midterm Exam	22%
Second Midterm Exam	22%
Journal Article Presentation	20%
Cumulative Final Exam	36%

The two midterms and the final exam will assess your understanding of macroeconomic theory. The journal article presentation allows you to learn about macroeconomic topics outside of the textbook.

Total Points	Letter Grade	Transcript GPA points
100-93.3%	A	4.00
93.2-90.0%	A-	3.67
89.9-86.7%	B+	3.33
86.6-83.3%	B	3.00
83.2-80.0%	B-	2.67
79.9-76.7%	C+	2.33
76.6-73.3%	C	2.00
73.2-70.0%	C-	1.67
69.9-66.7%	D+	1.33
66.6-63.3%	D	1.00
63.2-60.0%	D-	0.67
59.9-0%	F	0.00

The above table gives the grade distributions. These are minimum scores and if need be, I will introduce a “curve.” The curve will consist of lowering the minimum percentages required for a particular grade. For instance, a curve may change the minimum score for an “A” from 93.3% to 92%. However, you should not depend on the curve as the curve is NOT guaranteed, and if I do implement it, it may be very small.

I will not drop any grades of any assessments. There will be no extra credit in this class.

**Homework?**

There is no graded homework in this class. However, to help you study for the exams, I will post ungraded practice problems to Brightspace. You should treat these practice problems as ungraded homework. Students are encouraged to work together. However, students should think for themselves; do not simply copy what your peers are doing.

**Two Midterm Exams and Final Exam**

There will be two midterm exams and one cumulative final exam, the dates for which are in the course calendar below. These are in-person assessments, and students must attend class during these exam days. If an illness or personal emergency occurs, please let me know as soon as possible (no later than three days afterwards), and we will make arrangements for you to make up the exam.

The exams will be proctored in-class, and the final exam will be proctored during the designated final exam period unless otherwise agreed upon by the entire class (see syllabus course calendar below). I will NOT provide an online option for the exams. All exams are required for everyone (i.e., no exams will be dropped).

### **Journal Article Presentation**

A component of your grade will be based on a scholarly journal article presentation. Students will pick one scholarly journal article to read and present to the class. The journal article must be about a macroeconomic topic (this includes the subdiscipline of monetary economics—see the [JEL code “E”](#)). Students can select from macroeconomics field journals:

- [American Economic Journal: Macroeconomics](#)
- [Journal of Economic Growth](#)
- [Journal of Monetary Economics](#)
- [Review of Economic Dynamics](#)
- [Journal of Money, Credit, and Banking](#)
- [Journal of Economic Dynamics and Control](#)
- [The B.E. Journal of Macroeconomics](#)
- [Macroeconomic Dynamics](#)
- [Journal of Macroeconomics](#)

Or, students can select from top general interest journals (again, the topic of the article must be about macroeconomics):

- [Quarterly Journal of Economics](#)
- [American Economic Review](#)
- [Journal of Political Economy](#)
- [Econometrica](#)
- [Review of Economic Studies](#)
- [Review of Economics and Statistics](#)
- [Journal of Economic Perspectives](#)
- [Journal of Economic Literature](#)

Selecting an article from a journal not listed above is allowed, but I will have to approve the article. Importantly, the article should be from a [highly ranked and respected journal](#).

Part of this assignment is to select a scholarly article that (1) covers a macroeconomic topic that you are interested in and (2) is an article that you could feasibly present the main ideas to the class. I acknowledge that most of the papers in the above listed journals are advanced and highly technical. Having you select from top journals is deliberate—a part of graduate school is expanding your intellectual horizons and getting you out of your comfort zone. That said, the article should still be approachable enough for you to understand the main model and key insights. You are not expected to understand every technical aspect and mathematical detail.

To find and select an article, I recommend reading the titles and abstracts of papers from the above journals (see links above). [Google Scholar](#) can also be very helpful to find articles related to your macroeconomic interests. Because the article should be approachable, I might recommend avoiding articles that are purely theoretical (although, this is only a suggestion, not a strict restriction). Note that the [Journal of Economic Perspectives](#) provides high-quality publications that are generally less technical.

To access these articles, you may have to sign into the UMaine library and use the “[OneSearch](#)” tool. Do NOT pay for access to any article; access to these articles is provided through the UMaine library. If you cannot access a specific article via the UMaine library, feel free to reach out to me or your librarian ([John Hutchinson](#)). When accessing these articles, I recommend you download the PDF. For some older papers, publishers have converted the PDFs into web text, which has sometimes introduced errors into the equations.

Once you select a macroeconomic article, email me your selection for approval by the date listed on the syllabus course calendar. In the very unlikely event that multiple students pick the same article, whoever emailed me first will get to present that paper.

These presentations should last **approximately 16-18 minutes** and should be accompanied by presentation slides (emailed to the professor at least a half hour beforehand). Students will be graded on the accuracy and clarity of the article content as well as the delivery of the presentation. A good way to tell if you understand something is if you are able to explain it to someone else in your own words. A student's presentation should include the paper's motivation, the key details of the economic model utilized, and the major insights—however, given the length of your presentation, you are NOT expected to cover every technical/mathematical detail. These presentations will occur according to the syllabus course calendar. All students are expected to attend class during the presentations.

### **What to Expect in Class**

I primarily convey course content through writing on the board or using the document camera. I very strongly recommend that students take notes in class and write down anything I write on the board. Except for showing tables/figures, I do not typically use presentation slides.

## **Syllabus Course Calendar**

<b>Date</b>	<b>Description</b>
Wed, January 22	First day of this class. Course introduction and syllabus review.
Mon, January 27	Lecture.
Wed, January 29	Lecture.
Mon, February 3	Lecture.
Wed, February 5	Lecture.
Mon, February 10	Lecture.
Wed, February 12	Lecture.
Mon, February 17	<b>No class. Presidents' Day</b>
Wed, February 19	Lecture.
Mon, February 24	Lecture.
Wed, February 26	Lecture.
Mon, March 3	<b>First Midterm Exam</b>
Wed, March 5	Lecture. Let me know your journal article selection by this day or earlier.
Mon, March 10	Lecture
Wed, March 12	Lecture.
Mon, March 17	<b>No class. Spring break.</b>
Wed, March 19	<b>No class. Spring break.</b>
Mon, March 24	Journal Article Presentations (3 students).
Wed, March 26	Journal Article Presentations (3 students).
Mon, March 31	Journal Article Presentations (3 students).
Wed, April 2	Lecture.
Mon, April 7	Lecture.
Wed, April 9	Lecture.
Mon, April 14	Lecture.
Wed, April 16	<b>Second Midterm Exam</b>
Mon, April 21	Lecture.
Wed, April 23	Lecture.
Mon, April 28	Lecture.
Wed, April 30	Lecture.
<b><u>Friday, May 9</u></b>	<b>In-Person Cumulative Final Exam 8:00am-10:00am in Lengyel Hall 125 .</b>

Why are the journal article presentations scheduled for the middle of the semester? In an ideal world, the journal article presentations would be at the end of the semester after you've learned more macroeconomics. However, other graduate classes often have projects, presentations, and final exams at the end of the semester. Thus, scheduling the journal article presentations in the middle of the semester helps make the end of the semester less stressful.

## **Class Policies**

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### **Attendance**

You are expected to attend class according to the syllabus course calendar. Although you are generally expected to attend class, you should stay home if you are sick. One of the societal changes due to the COVID-19 pandemic is to alter expectations of working or attending school when ill. If you have a bad cough, have a fever, are nauseous, or are generally feeling under the weather, please stay home. For obvious public health reasons, we do not want sick students in our face-to-face classes. Your classmates don't want to catch whatever is making you ill. If you do miss a class, be sure to get the missed notes from a classmate.

If you miss an exam or presentation due to an illness or personal/family emergency, please let me know as soon as possible (and no later than 3 days after the missed due date). If I deem the reason for the absence as excusable, then you will be allowed to make up the exam or presentation.

### **Statement about Artificial Intelligence (AI)**

Studying the class notes, reading the textbook, and working through the practice problems are the best ways to learn the material and study for the exams. Using AI to do the practice problems for you is not recommended. While AI may be helpful if you are stuck on a problem, using it exclusively to arrive at a (potentially incorrect) solution robs you of the learning that occurs from working through the exercises.

For comparison, working through the practice problems is a superior learning experience compared to simply looking at a solution manual. In this way, AI is like a solution manual (albeit one that is wrong 25% of the time). While AI can be a helpful tool, relying on it exclusively can yield incorrect answers and poorer learning.

### **Late Policy**

Late assignments will not be accepted unless you have an illness or legitimate personal emergency that prevented you from submitting the assignment on time. If an illness or personal emergency causes you to miss an exam or assignment, please let me know as soon as possible and no later than 3 days after the missed due date. If more than 3 days pass after the missed due date, a zero grade will be given for the missed assignment.

### **Classroom conduct**

You are expected to act professionally. This expectation includes, but is not limited to: being quiet when others are speaking, silencing your cell phone, respecting other students, respecting the instructor, and asking questions by raising one's hand. If you are acting disorderly and impeding other students' ability to learn, I reserve the right to ask you to leave the classroom.

Laptop computers are allowed in class for legitimate class-related tasks, such as taking notes, accessing course materials, or completing assignments. If I find you using your laptop computer in class for tasks not related to the course, then I will ask you to put your laptop away.

## **Office Hours**

My office is located on the second floor of Winslow Hall room 207C. My official office hours are listed on the first page of this syllabus. If those times do not work for you, just send me an email and we can set up an appointment. Feel free to use these office hours to come see me and ask questions.

## **Class Communication**

I will use Brightspace to communicate announcements and distribute course materials. I strongly recommend you set up your Brightspace settings to automatically email you when a new announcement is posted. It's a good habit to periodically check Brightspace and your UMaine email. I'll occasionally give reminders for upcoming due dates.

## **Syllabus**

This syllabus should be considered a contract between me (the professor) and you (the student). However, there may come a time when a change to the syllabus becomes necessary. In such an event, the change will be announced during class and posted online.

# **University Policies**

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## **Academic Honesty Statement**

Academic honesty is very important. It is dishonest to cheat on exams, to copy term papers, to submit papers written by another person, or generated by software or systems without the explicit approval of the instructor, to fake experimental results, or to copy or reword parts of books or articles into your own papers without appropriately citing the source. Students committing or aiding in any of these violations may be given failing grades for an assignment or for an entire course, at the discretion of the instructor. In addition to any academic action taken by an instructor, these violations are also subject to action under the University of Maine Student Conduct Code. The maximum possible sanction under the student conduct code is dismissal from the University. Please see the University of Maine System's Academic Integrity Policy listed in the Board Policy Manual as Policy 314: <https://www.maine.edu/board-of-trustees/policy-manual/section-314/>

## **Students Accessibility Services Statement**

If you have a disability for which you may be requesting an accommodation, please contact Student Accessibility Services, located at the Center for Accessibility and Volunteer Engagement at the UCU, 139 Rangeley Rd, um.sas@maine.edu, 207.581.2319, as early as possible in the term. Students may begin the accommodation process by submitting an accommodation request form online and uploading documentation at [https://umaine-accommodate.symplicity.com/public\\_accommodation/](https://umaine-accommodate.symplicity.com/public_accommodation/). Once students meet with SAS and eligibility has been determined, students submit an online request with SAS each semester to activate their approved accommodations. SAS creates an accessibility letter each semester which informs faculty of potential course access and approved reasonable accommodations; the letter is sent directly to the course instructor. Students who have already been approved for accommodations by SAS and have a current accommodation letter should meet with me (Thomas Wiesen) privately as soon as possible.

## **Course Schedule Disclaimer (Disruption Clause)**

In the event of an extended disruption of normal classroom activities (due to COVID-19 or other long-term disruptions), the format for this course may be modified to enable its completion within its programmed time frame. In that event, you will be provided an addendum to the syllabus that will supersede this version.

**Observance of Religious Holidays/Events**

The University of Maine recognizes that when students are observing significant religious holidays, some may be unable to attend classes or labs, study, take tests, or work on other assignments. If they provide adequate notice (at least one week and longer if at all possible), these students are allowed to make up course requirements as long as this effort does not create an unreasonable burden upon the instructor, department or University. At the discretion of the instructor, such coursework could be due before or after the examination or assignment. No adverse or prejudicial effects shall result to a student's grade for the examination, study, or course requirement on the day of religious observance. The student shall not be marked absent from the class due to observing a significant religious holiday. In the case of an internship or clinical, students should refer to the applicable policy in place by the employer or site.

**Sexual Discrimination Reporting**

The University of Maine is committed to making campus a safe place for students. Because of this commitment, if you tell a faculty or staff member who is deemed a "responsible employee" about an experience of sexual assault, sexual harassment, stalking, relationship abuse (dating violence and domestic violence), sexual misconduct or any form of gender discrimination involving members of the campus, they are required to report this information to Title IX Student Services or the Office of Equal Opportunity. If you want to talk in confidence to someone about an experience of sexual discrimination, please contact these resources:

- For confidential resources on campus: Counseling Center: 207-581-1392 or Cutler Health Center: at 207-581-4000.
- For confidential resources off campus: Rape Response Services: 800-871-7741 or Partners for Peace: 800-863-9909.
- Other resources: The resources listed below can offer support but may have to report the incident to others who can help: For support services on campus: Title IX Student Services: 207-581-1406, Office of Community Standards: 207-581-1406, University of Maine Police: 207-581-4040 or 911. Visit the Title IX Student Services website at [umaine.edu/titleix/](http://umaine.edu/titleix/) for more information.