

ECON 642 – Syllabus
Topics of Applied Macroeconomics
Master of Science in Applied Economics Program
Fall 2022
University of Maryland-College Park

Instructor: Colin Caines

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Office hour: Mondays, 7:30-8:30 via Zoom

Class schedule: Wednesdays 6:30pm – 9:15pm, with a 15 minute break at some point

Classroom: Tydings 2111

Teaching Assistant: Andrea Vilchez

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Office hour: Tuesdays 5:00pm – 6:00pm

Course Description

This is the core macroeconomics course in the Applied Economics M.S. program. Macroeconomics is focused on understanding the behavior of the aggregate economy in the long and short run. The course will study data properties of the main macroeconomics – gross domestic product (GDP), inflation, and unemployment – and the fundamental macroeconomics models of growth and business cycles dynamics, including the effects of monetary and fiscal policy. The material assumes a knowledge of macro- and microeconomics and principal level, as well as algebra and differential calculus.

Covid-19 Information: <https://umd.edu/4Maryland>

Up-to date information about UMD Covid-19 policies and guidance are posted at <https://umd.edu/4Maryland>. Given the evolving nature of the pandemic, the guidance and policies are subject to change. The plans are always coordinated with state and county health officials, with additional guidance provided by the University System of Maryland. The focus will always be on the health and well-being of our entire campus community.

We strongly urge all students, staff and faculty to read announcements they receive about Covid-related guidance and policy, and to stay familiar with the information posted at <https://umd.edu/4Maryland>. We thank you all for your individual efforts to help protect the collective health of our entire community.

Course Objective

The Applied Economics program has 7 general learning outcomes for students:

- 1. Ability to understand, evaluate and analyze economics data**
- 2. Ability to understand and interpret statistical evidence from economic data**
- 3. Ability to apply empirical evidence to assessing economic arguments**
- 4. Ability to apply macroeconomics theories to policy discussions**

5. Ability to apply microeconomic theories to policy discussions
6. **Ability to communicate economic ideas to a broader audience**
7. Ability to evaluate the effectiveness of policy programs using sound economic techniques

The learning outcomes pertaining to this course are 1, 3, 4, 6

COURSE TEXTBOOKS AND OTHER LEARNING MATERIALS

Required text

- *Intermediate Macroeconomics*, 2018 (mimeo), Julio Garin, Robert Lester, and Eric Sims. Version 3.0.0. Henceforth referred to as GLS
 - o Text is freely available at https://www3.nd.edu/~esims1/gls_int_macro.pdf
- Supplementary reading material will be posted on ELMS

Additional resources

- *Macroeconomics*, Charles I. Jones, Fifth Edition, Published by W.W. Norton & Co.

The required text for the course will be Garin, Lester and Sims' *Intermediate Macroeconomics* text, which conveniently is available freely online. I will also post supplementary readings (mostly articles and largely non-technical papers) on ELMS. Supplementary readings will be posted at least one week before the relevant lecture.

I have also cited an optional resource above. Charles Jones' *Macroeconomics* text covers much of the same material as GLS, but is somewhat less model-focused. Students may find the expositional differences useful for helping understand the course material. The course outline below notes the chapters in the Jones text that cover the relevant material, but these readings are not required.

COURSE REQUIREMENTS

The final grade for this course will be based on the following assignments and weights

- **MIDTERM EXAM: 25%**
- **FINAL EXAM: 40%**
- **PROBLEM SETS: 15%**
- **SHORT PAPER PRESENTATION: 10%**
- **SHORT PAPER 10%:**

At the end of the course each student will receive a numerical grade, on the scale from 0 to 100 (percent), which will be the weighted average of their percentage score on each of the above components (using the above weights). I will decide upon the numerical cutoffs between various letter grades based on my professional judgement. I will consider students' performance relative to the class. I will also consider absolute standards of professional competence. Highly competent students will get A's. Barely competent students will get B's, and students below that standard will receive B-'s or worse. The cutoffs that I use will respect the ordinal ranking of

numerical course grades. No student with a given numerical course grade will receive a lower letter grade than someone else with a lower numerical course grade.

Midterm and Final Exam

Both are closed book exams. The midterm will be in class on **Wednesday, October 12**. The final exam is schedule for **Wednesday, December 14** and is **cumulative** (note, this includes the short paper presentations, see below). Each exam will begin at 6:30pm on the day of the exam and last for two hours and thirty minutes. Further instructions on how the exams will be administered will be posted on the ELMS in due course.

Problem Sets

There will be five problem sets. I will assign a problem set every other Wednesday, except for the week before the midterm exam (week 6). The problem sets will be due at the start of class two weeks later, late submissions will not be accepted. Students are permitted (and indeed are encouraged) to discuss the problem sets with one another, however each student must turn in their work individually. Assignments that are straight copies of one another will receive a grade of zero. Submitted work must be legible, clearly written, and neatly presented. I reserve the right to not accept illegible work.

Short Paper and Short Paper Presentation

Students, working in groups of two, will be required to prepare a short paper and presentation on a recent paper or article in the macro literature that is relevant to the course content. Groups should choose from a list of papers that I have approved, and which will be posted in the first couple weeks of class. Topics will be allocated on a first come, first serve basis. Groups are free to propose a paper themselves if it is more in line with their interests, but must get my approval before proceeding in this case.

The goal of this project is to present a paper to your classmates, who will have some intuition about they concepts through their classwork but who won't be familiar with all the technical details. This is a common task in policy-making jobs – explaining technical work to a non-specialist audience. That is the lens through which you should think about your presentation and paper: will the viewer/reader come away from this with a good sense of the question being addressed, the nature of the contribution, an intuitive understanding of how the question is addresses, as well as the major drawbacks.

A successful project will include the following elements:

- i. An appropriate discussion of the paper's methodology and findings. I will try to ensure that approved papers are not pitched at too high a technical level. However, the research process involves independent learning, and one goal of this project is to get students to collaboratively work through challenging concepts. Groups are encouraged to come talk to me and the TA for help working through the papers.
- ii. An analysis of the paper using theoretical and/or empirical tools. Students should think critically of their paper's findings and be creative. Questions to consider: *How can this paper be improved? Are there alternative strategies for addressing the questions raised? Does this research raise interesting questions for future study?*

Groups should submit an outline of their project on **October 26**, which I will comment on in advance of the presentations. The outline is intended to help you incorporate suggestions and new ideas. It will not be explicitly graded, although failure to submit an outline that shows some degree of thought will result in a points deduction from the overall projection.

Groups will give a 20-minute PowerPoint presentation of their work during class time. Each group member must present some material and be able to answer questions during the presentation. Presentations will be seminar-style, so questions from and discussion with the audience is encouraged. Presentations will take place after the midterm, tentatively scheduled for weeks 11-14 (although a final schedule will be determined once groups and topics are determined). After the presentation the group will have **one week** to incorporate comments and suggestions and turn in the final version of the paper. Papers should be around 15 single-sided pages (double spaced, 12-point Times New Roman, 1-inch margins). I will not enforce a strict page limit, but clarity of exposition will be one of the criteria for grading and papers substantially longer than this are unlikely to have this feature. Percentage grades for the presentation and the short paper will be given to the group as a whole. However, I reserve the right to give individual grades if there is evidence of a substantial discrepancy in effort between group members.

Course Outline (tentative)

Week 1, 8/31: Introduction / preliminaries

- Overview of macroeconomic data
 - o GDP accounting, prices and inflation
- Framing macroeconomic analysis
 - o Short run v long run, economic models
- Math review
- *Reading:* GLS chapters 1-3, mathematical appendices A and B; Jones chapters 1-2.

Week 2, 9/7: Economic Growth I

- Long-run growth facts
 - o Kaldor facts, cross-country growth facts
- Baseline Swan-Solow Model
- *Reading:* GLS chapters 4-5; Jones chapters 3-5,

Week 3, 9/14: Economic Growth II

- Augmenting the Solow model (population growth, productivity)
- Cross-country differences in growth
- *Reading:* GLS chapter 6-7

Week 4, 9/21: Economic Growth III

- Augmenting the Solow model (*continued if needed*)
- Endogenous growth: the Romer model

- *Reading:* Jones chapter 6
- **HW #1 due** (assigned week 2)

Week 5, 9/28: Microfoundations of Macroeconomics I

- Two-period consumption-savings problems
- *Reading:* GLS chapter 9; Jones chapter 16

Week 6, 10/5: Microfoundations of Macroeconomics II

- Two-period consumption-savings problems (cont'd)
- **HW #2 due** (assigned week 4)

Week 7, 10/12: Midterm Exam

- Exam will cover materials for weeks 1-6

Week 8, 10/19: Business Cycles I

- The consumption function
- *Reading:* GLS chapter 10.1-10.2, 11, 13.1-13.2

Week 9, 10/26: Business Cycles II

- Building the RBC model
 - o Special case: solving the RBC model with log utility form
- Effect of shocks in the RBC model (*time permitting*)
- *Reading:* GLS chapters 17-18
- **Outline for paper/presentation due**

Week 10, 11/2: Business Cycles III

- Shocks in the RBC model (*cont'd*) and data predictions
- Money, inflation and interest rates in the data
- Introducing money in the neoclassical model
- *Reading:* GLS chapters 14, 19-20
- **HW #3 due** (assigned week 8)

Week 11, 11/9: New Keynesian Economics I

- Demand side of the NK economy
- Graphical analysis of NK model
 - o Deriving the IS, LM, and AD curves
- *Reading:* GLS chapter 23

Week 12, 11/16: New Keynesian Economics II

- Nominal rigidities on the supply side
 - o Deriving in the AS curve
- Equilibrium in the NK model
 - o Responses to shocks
- Transition from short- to medium run (*time permitting*)
- *Reading:* GLS chapters 24-25, 26 (*time permitting*)
- **HW #4 due** (assigned week 10)

11/23: Day before Thanksgiving - No Class

Week 13, 11/30: Monetary Policy and Dynamics in NK model

- Monetary policy in the NK model
- Topics in monetary policy
 - o Discretion v. commitment
 - o Zero lower bound
 - o Liquidity trap
- *Reading:* GLS chapter 27-28

Week 14, 12/7: Special Topics (as time permits)

- Incorporating financial factors into the NK model (*time permitting*)
- Asset pricing, expectation distortions, asset price bubbles (*time permitting*)
- *Reading:* GLS chapter 33-35 (*time permitting*)
- **HW #5 due** (assigned week 12)

Week 15, 12/14: Final exam

- Closed book, cumulative

Policies related to all graduate courses at the University of Maryland are posted on this page of the Graduate School's website:

<https://gradschool.umd.edu/faculty-and-staff/course-related-policies>

Please familiarize yourself with these policies related academic integrity, non-discrimination policy, accessibility, absences and accommodations, grading, academic standing, grievance procedures, and other important policies.

Additional notes that should appear in all MS in Applied Economics program syllabi:

Work Load: Mastering the material covered in this course requires a significant amount of work outside of class. Students should expect to spend more time outside of class than in class – typically at least twice as much time.

Academic Progress: The graduate school requires that students maintain a GPA of at least 3.0. Students whose cumulative GPA falls below 3.0 will be placed on academic probation by the graduate school. Students on academic probation must ask the program's director to petition the graduate school if they want to remain in the program. The petition must include a plan for getting the student's GPA up to at least 3.0. Students who do not live up to their plan can be forced to leave the program without having earned the degree. Note: a grade of "B" corresponds to a GPA of 3.0. A grade of "B-" corresponds to a GPA of 2.7.

Excused Absences: If you miss any class meetings for any reason, you are still responsible for all material covered during the meeting you missed. It is your responsibility to work with study partners, the teaching assistant, and the instructor to make sure you catch up on the missed

material. Instructors routinely facilitate things by posting lecture notes, etc.

If you need to miss an exam or other graded course requirement because of illness, injury, or some other emergency: Follow doctor's orders and get documentation. Get in touch with the instructor as soon as you're able – preferably prior to missing the exam or deadline.

Communicate with the instructor to make up the course requirement as soon as possible. You are entitled to recover before you make up the course requirement, but you are not entitled to extra days to study beyond the time the doctor's note says you've been incapacitated. If you are incapacitated for more than a week or so beyond the end of the term, your grade in the course will be an "Incomplete." In such cases you must negotiate a plan with your instructor for completing the course requirements. Once you make up the course requirement the instructor will change your "I" to the appropriate letter grade.

School Closings and Delays: Information regarding official University closing and delays can be found on the campus website and the snow phone line: (301) 405-SNOW (405-7669) The program director will also announce cancellation information to the program as an announcement on the program's ELMS/Canvas site. This will generally be done by 1:00 p.m. on days when weather or other factors are an issue. When classes need to be canceled during the semester, we make every effort to schedule makeup classes.

UMD Counseling Center: Sometimes students experience academic, personal and/or emotional distress. The UMD Counseling Center in Shoemaker Hall provides comprehensive and confidential support services that promote personal, social, and academic success. The cost of these services is covered by the fees you already paid when you registered for classes, and there is no additional charge if you use the services. Proactively explore the range of services available, including the Counseling Service, Accessibility and Disability Service, and the Testing Office, all described at <http://www.counseling.umd.edu/>

Graduate Academic Counselor: The UMD Graduate School also has an academic counselor available to support students who are having difficulty navigating mental health resources on campus, are considering a leave of absence and/or need assistance finding mental health care off campus. The Graduate Academic Counselor also facilitates bi-weekly Graduate Student Circle Sessions which provide an opportunity to learn about resources and connect with other graduate students. Students can learn more about the Graduate Academic Counselor by going to: <https://gradschool.umd.edu/gradcounselor>

Course Evaluations: Near the end of the term, you will receive an email inviting you to submit a voluntary and anonymous course evaluation. Your feedback on courses will be very helpful in improving the quality of instruction in our program.

Access to Morrill Hall and Morrill 1102: Morrill Hall is locked every day from 7:00 p.m. - 7:00 a.m. Your university ID gives you swipe access to the back door of the building. There is keypad access to the door of Morrill 1102. The code will be shared with students by the program coordinator.