### ECON 13210 - Introduction to Macroeconomic Models

#### Oscar Galvez-Soriano

#### Summer Session

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Class Room: SHFE 146 Class Hours: MTWThE 9:00am-3:00pm

Office Hours: MTWTh 11:00am-12:00pm

Office: Outside SHFE 146 Office Hours: TuTh 3:00-4:00pm

## **Course Description**

This course offers a comprehensive exploration of neoclassical macroeconomic models. The course is divided into five key modules: (i) economic growth and production, (ii) consumption and savings, (iii) business cycles and unemployment, (iv) fiscal policy, and (v) monetary policy and forecasting. Throughout each module, we extensively utilize relevant data to enhance the understanding of theoretical concepts. By the end of the course, students will be able to interpret macroeconomic news and articles and analyze policies through a model-based framework.

# Required Materials

I have set up a Canas course website that contains the lecture notes, problem sets, and other learning resources.

The following textbooks are not required, but serve as the main references for this course:

- Jones, Charles (2020). Macroeconomics (Fifth Edition). W W Norton & Company
- Miller, Merton H. and Upton, Charles (1986). Macroeconomics: A Neoclassical Introduction. The University of Chicago Press
- Romer, David (2019). Advanced Macroeconomics (Fifth Edition). McGraw Hill
- Williamson, Stephen D. (2016). Macroeconomics (Sixth Edition). Pearson

### **Prerequisites**

In order to register for this course all students should have a good command of high school Algebra, graphical analysis and, preferably, basic knowledge of Calculus. If you do not meet these prerequisites and you choose to take this course, then it is your responsibility to work on your math skills in order to be able to follow the materials taught in this course.

## Requirements and Grading

Each student's cumulative score for this course will be based on performance on problem sets and exams with the weights given in the grading scheme below. This cumulative score will then be mapped into a letter grade at the end of the course.

- 1. Problem sets: four problem sets, with the lowest score dropped (20%)
- 2. Economic reports: two reports (10%)
- 3. Midterm exam. Friday, July 18 (15%)
- 4. Final project. Friday, July 25 (25%)
- 5. Final exam. Friday, July 25 (**20**%)
- 6. Attendance (**10**%)

VIVE SYLLARS All grades are final except for correcting obvious grading mistakes. For example, points are added up incorrectly, or obviously correct answers are mistakenly marked wrong. Please bring these to the teaching assistant's attention as soon as possible. For other cases, please discuss questions with the teaching assistant or me.

The following are guaran letter grade cutoffs. At the instructor's discretion, cutoffs may be lowered but will never

Letter C	ride	A or A-	B+ or B	B- or C+	C or C-	D+ or D	F
Cum. 50	core	90	80	70	60	50	<50

Any student scoring higher than the cutoff given above will earn at least that grade in the course.

**Problem Sets:** Problem sets will be assigned on Canvas and should be submitted the following week (also on Canvas) by the time of the discussion section. Solutions to problem sets will be available right after the submission date and will be explained during the discussion section. Graded problem sets will be returned one week after submission. You should examine the solutions to review any areas of confusion or questions marked as incorrect. Note I cannot give deadline extensions for the problem sets; however, I do drop the lowest problem set grade, which gives you some flexibility in handling unexpected events.

**Exams:** Exams will draw on material from lectures, problem sets, and the textbook. You will have 80 minutes to complete the midterm and 100 minutes to complete the final exam. Both exams will take place in person. No book, notes, phone or internet access of any kind is allowed during the exam. Examinations are to be attempted individually. No communication with others about any aspect of the course is permitted during the exam. No part of the examinations may be copied, shared, posted on a website or otherwise distributed at any time. Any student who violates these examination policies will fail the course and be referred to the Dean of Students.

**Final Project:** Students will collaborate in groups of four (maximum) to work on a project guided by a prompt I will provide later on in the course. Students will put into practice one of the five main topics covered in this course. The topics will be randomly assigned, but the students have the freedom to use data from the country they prefer and also have the option to swap topics from a set of optional questions I will prepare. Each group will give a ten-minute, five-slide presentation of their results. This final project is worth 20% or your grade, and the grade will be based solely on the paper you will submit, but not the presentation.

While grading your paper, I will consider the following: I will take 5-10 points off for incorrect statements/explanations, poor-quality graphs, and tables. The paper must contain a short introduction and continue with a "data" section, including only relevant descriptive statistics in the form of tables and/or graphs (maximum 500 words for both sections). Then, I expect to see a "model" or "empirical strategy" section, which must include your main equation(s), and a description of your equation(s) (maximum 200 words). Finally, you will explain the "results and conclusions", including tables and/or graphs (maximum 600 words). The minimum grade you will get assuming you submit you paper on time, complete all sections, and answer all questions is 90 out of 100. Hence, even 8 you make multiple mistakes, I will value the effort of approaching each prompt with economic intuition. Notice, however, that I may assign a lower score for missing sections, unanticed questions, or missing submissions.

Monthly Reports: Students will write two individual reports during the summer, which must be uploaded on Canvas. These reports are expected to contain one or two relevant graphs of the economic indicator to be reported and the answers to the checkpoint questions. These reports will be a maximum of one page long and will be graded based on a 0-100 scale, with only four potential grades: 0, 80 (check-minus), 90 (check), and 100 (check-plus). Students will receive a zero for not submitting the report or for submitting it after the deadline. We will award a check-minus if the report has more than one mistake, either in the formatting of the graph(s) or its interpretation. We will award a check if the report has only one mistake and check-plus for reports with zero mistakes. Formatting issues will be considered as mistakes.

**Attendance:** Attendance is mandatory and counts towards your final grade. Students are expected to attend every lecture and participate in lecture activities. Note that the lectures contain the material you are expected to know, and the textbooks are not a perfect substitutes for the lectures.

#### **General Policies**

#### **Our Class Meetings**

We will meet Monday through Friday, from July 7th to July 25th. Lectures will take place from 9:00 a.m. to 11:30 a.m., followed by a 1.5-hour break for lunch and an opportunity to attend my office hours. From 1:00 p.m. to 3:00 p.m., you will attend the discussion section, where you'll have the chance to work on assignments and explore additional material that will not be covered during the lectures.

#### **Academic Honesty**

To cultivate an environment of academic integrity, the University of Chicago expects students to abide by the University's Academic Honesty and Plagiarism Policy, found in the University of Chicago Student Manual.

#### **Student Code of Conduct**

Students are expected to abide by the University of Chicago's Student Code of Conduct.

#### **Sexual Misconduct Policy**

In accordance with the University of Chicago's Policy on Harassment, Discrimination, and Sexual Misconduct, your instructor is a "responsible employee" for reporting purposes under Title IX regulations and state law and must report incidents of sexual misconduct (sexual harassment, non-consensual sexual contact, sexual assault, sexual exploitation, sexual intimidation, intimate partner violence, or stalking) about which they become aware to the Title IX office. Please know there are places on campus where you can make a report in confidence. More information can be found on the Title IX website.

### Special Accommodations and Accessibility

The University of Chicago is committed to ensuring quitable access to our academic programs and services. Students with disabilities who have been approved for the use of academic accommodations by Student Disability Services (SDS) and need a reasonable accommodations to participate fully in this course should follow the procedures established by SDS for using accommodations. Timely notifications are required in order to ensure that your accommodations can be implemented. Reservices with me to discuss your access needs in this class after you have completed the SDS procedures for requesting accommodations.

Phone: (773) 702-6000 Email: disabilities@uch.cago.edu

For exam accommodations, it is recommended that students send their Instructor Notification Letters at the beginning of the quarter, or as soon as possible. Instructor Notification Letters must be sent no later than 7 days prior to the first quiz/exam date for the class for each class for which a student is seeking to use accommodations.

We will request that SDS proctor the ECON 13210 exams. Students must submit an exam request/schedule through the SDS Portal at least 7 days prior to an exam date. These steps should be followed for each exam. One option that students may utilize is submitting the exam requests for all known exam dates early in the quarter and may be done in one sitting if the dates are available in the syllabus. Currently, SDS may be unable to make arrangements for exam requests submitted less than 7 days in advance of an exam date. Remote exams are not available.

To submit an exam request, students should complete the following steps after they have sent their Instructor Notification Letter:

- 1. Log in to the AIM Student Portal (https://rainier.accessiblelearning.com/UChicago)
- 2. Select "Alternative Testing" on the left-hand side of the page.
- 3. Select the course for which you are scheduling with SDS from the drop-down menu at the top of the page.

- 4. Click "Schedule an Exam".
- 5. Complete the required fields on the exam detail form.
- 6. Click "Add Exam Request".
- 7. Students will receive a confirmation e-mail to verify that their exam request was received and may check the status of their request in their AIM Student Portal. SDS may proctor in-person exams at locations across campus and the locations will be listed in the status update in AIM. Locations are determined by SDS and may include Ida Noyes Hall, David Rubenstein Forum, and other campus locations.

#### **Diversity and Inclusion**

The University of Chicago believes that a culture of rigorous inquiry demands an environment where diverse perspectives, experiences, individuals, and ideas inform intellectual exchange and engagement. I concur with that commitment and expect to maintain a productive learning environment based upon open communication, mutual respect, and nondiscrimination. The University does not discriminate on the basis of race, color, religion, sex, sexual orientation, gender identity, national or ethnic origin, age, status as an individual with a disability protected veteran status, genetic information, or other protected classes as required by law.

#### Use of AI Tools

In this course, we will be developing skills and knowledge that are important to discover and practice on your own. Because use of AI tools inhibits development of these skills and knowledge, students are not allowed to use any AI tools, such as ChatGPT or Dall E 2, in this course. Students are expected to present work that is their own without assistance from others, including automated tools. If you are unclair if something is an AI tool, please check with your instructor. Using AI tools for any purposes in this course will violate the University's academic integrity policy.

#### Syllabus Changes

Notice that I may need to adjust the syllabus, depending on our progress in the course. In such case, I will notify you about these changes during the lectures and through our Canvas website.

## Course Outline and Schedul

The following schedule is tentative and subject to minor changes.

Week	Date	Lecture	topics	PS/Project due
1	07/07	1	Review on Statistics / Malthus and Solow Models	
	07/08	2/	Economic Growth I: Steady State and Golden Rule	
	07/09		Economic Growth II: Calibration and Convergence	
	07/10	4	A Two Period Model of the Economy / PIH	PS1
	07/11	5	PIH / Optimization and the Euler Equation	
2	07/14	6	The Slutsky Equation / Ricardian Equivalence	PS2
	07/15	7	Unemployment and the Business Cycle	
	07/16	8	Intertemporal Model with Investment	PS3
	07/17	9	Government and Fiscal Policy in Practice	
	07/18	10	Review / Midterm Exam	
3	07/21	11	Money, Interest Rate, and Inflation	
	07/22	12	The Phillips Curve, the Lucas Critique and the Taylor Rule	PS4
	07/23	13	Monetary Policy and Forecasting / Workshop	
	07/24	14	Presentations	
	07/25	15	Review / Final Exam	Project