CLAREMONT McKENNA COLLEGE

ECON196: Advanced Macroeconomics
Robert Day School of Economics and Finance
Prof. Julio Garín
Spring 2020

Email: jgarin@cmc.edu.
Website: juliogarin.com/teaching and Sakai Portal.
When: MW 11:00AM–12:15PM.
Where: Room 25, Bauer Center.
Office Hours: M 9:00–10:00AM and T 2:00–3:00PM in my office (B103).
Tutor: Vera Kratz.
Tutors hours: SU 6:00–8:00PM in Bauer Center 1.

Basics

Course Description and Objectives: This course is a continuation of what you learned in intermediate macroeconomics. The focus will be on tools and frameworks that will prepare you to read academic research as done by economists studying the aggregate consequences of individuals' and firms' behavior.

Pre-requisites: You should have an intermediate-level understanding of both macroeconomics and microeconomics (ECON101 and ECON102). Because our models will require mathematical tools, you should also feel comfortable using high school algebra and differential calculus. We will also use Microsoft Excel and MATLAB in some of our assignments. If you are not familiar with Excel or Matlab, the tutorials on YouTube are extremely helpful.

Communication: The best way to communicate with me is via email. Please include "ECON196" in the subject of the email (that way, it will be forwarded to the right folder). I am not in my email all the time so plan accordingly (i.e. do not necessarily expect an immediate response.) Keep in mind I receive a lot of emails, so make sure your answer can be addressed in at most three lines; if it takes more than that, it would be better to talk in person.
While most announcements will be made in class, you should check your CMC email regularly throughout the semester and I will assume you do so.

Office Hours: The time allocated for office hours may change during the semester. I will do my best to hold extra office hours before the scheduled exams. The logistics of these will be communicated a week in advance of the test.

Tutors: Vera Kratz will be the tutor for the class.[1] If I were you –and given the difficulty of the material,– I would take full advantage of the tutoring sections.

[1] Vera's email: vkratz21@students.claremontmckenna.edu.

Course Materials

The main content for the course is covered in my lectures and in the second draft of the book Rob Lester (Colby College), Eric Sims (Notre Dame), and I wrote. A free of charge copy of the manuscript can be obtained here: juliogarin.com/textbook/. The book is still a work in progress hence I recommend you print the chapters as we cover them. I will notify you as updates are made.

As the textbook is still work in progress, there are likely typos. We (Eric, Rob, and myself) would greatly appreciate any feedback. Throughout the textbook, there are blue hyperlinks which direct you to outside readings. These are not required but are meant to supplement the material. Some of these are simply Wikipedia pages on a particular topic, other are links to formal academic papers. These links will work simply by clicking on the link in the .pdf document. This is an advantage of reading the book on a electronic device.

In addition to the textbook, I will make available an electronic version of the slides that I use during class. The slides are just a tiny fraction of all the material I go over during lectures (essentially, they are just a guide) but in the past students have found them pretty helpful. However, you should be aware that neither the slides nor the textbook are substitutes for attending class (I'm assuming you pay attention to the lectures!).

I *strongly* encourage you to read the relevant chapters before and after each lecture, print out the slides, and fill them out during class.

Textbook:

Intermediate Macroeconomics, Garín, Lester, and Sims (GLS).

Reference Books:

- *Introduction to Modern Economic Growth*, Daron Acemoglu, Princeton University Press, 2008. (**Acemoglu**)
- *Recursive Macroeconomic Theory*, Lars Ljungqvist & Thomas Sargent, Fourth Edition. MIT Press, 2018. (**LS**)
- *Notes on Macroeconomic Theory*, Steve Williamson, Unpublished Notes. University of Iowa, 1999. (**Williamson**)

Class Policies

Attendance: Unless you have a legitimate excuse (e.g. family or health related emergency, NCAA athletic competition away, or job interview), *you need to attend class, arrive on time, and not leave early.* Projects or assignments for other classes are not acceptable excuses for missing class. If for some reason you are not able to come to class or you have to come late or leave early you need to contact me before class and let me know. When you must miss a class it is your responsibility to get the assignments from me or a classmate. Poor attendance will surely contribute to a low grade. I will be more than happy to help you with course material on a 1-to-1 basis as long as you attend class and put forth the proper effort.

Electronic Devices: Except when mentioned, *you are expected not to use electronic devices in the class.* That means that you should not be using any device that either starts with an 'i', has a LCD screen, or both. If you usually take your notes on a laptop, talk to me.

Academic Honesty: *You are expected not to engage in academic dishonesty.* While collaboration in small groups while doing homework is permitted in this course, copying is not. Problem sets and examinations are conducted under Claremont McKenna's Statement of Academic Integrity.

Makeup Exam Policy: *There will be no makeup exams.* If you have a valid excuse (family or health related emergency, NCAA athletic competition away, and final exam conflict) you or a friend of yours need to let me know *before* the missed exam. In case of a health related emergency, I will need a doctor's letter of excuse; in the other situations, you will need to get a letter of excuse from the relevant office. If you follow these instructions, I will transfer the weight of your missed test(s) to the remained exam(s), otherwise, you will receive a zero score on the missed test(s).

Re-grades: If you feel that your exam was incorrectly or unfairly graded, you have *one week* after the class in which it is returned to submit it for a re-grade. However, when an exam is turned in for a re-grade, the entire exam will be re-graded and the scores for individual questions can be either increased or decreased.

Academic Accommodation: I am available to discuss academic accommodations that any student with a documented learning difference may require. Please note that you will need to provide a letter from the Dean of Students Office documenting your approved accommodations. Please meet with me to make a request for accommodations at the beginning of the semester – and at a minimum two weeks before any key dates – so that we can work together with the College to make the appropriate arrangements for you.

Assignments, Grading, and Important Dates: Lectures are important, but in economics, so is practice. With this in mind, we will have approximately *eight* homework assignments plus some additional assignments that will consist mainly of readings that will be handled in class and will provide you with extra training for tests and for life. The problem sets are graded out of twenty points. You may (and should) work in groups of up to three students on the homework assignments. If you work in a group, you can turn in one assignment, but you have to make sure that the names of all group members legibly appear on the first page of the assignment. The groups may be comprised of students from either of the two sections I am teaching. In addition, there will be *one* midterm and a final exam.

Grading: In this class, there is not a grading scale based on fixed intervals. Your letter grade, and the sign attached to it, will be based both on your performance and on the distribution of grades at the end of the semester, however the following should serve you as a guide. Grades in the A range reflect outstanding work. Students earning an A will have a thorough and comprehensive understanding of the material and be able to answer virtually any question about the material. Just as important, students will be able to apply the models and methods to questions beyond those addressed in lecture. Grades in the B range reflect a solid understanding of the material. Students earning a B will understand all the in-class material and have some success in applying concepts more broadly. Some sort of grade in the C range indicates that the student has a basic understanding of the material from class, but has difficulties applying it to new questions. Grades in the D range reflect a poor understanding of the material presented in class and mean the student has a very difficult time applying the concepts in different contexts. A grade of F represents no understanding of the material presented in class.

The weight of each one of the course component in the final grade and the important dates are as follows:

Grading Weight

Problem Sets & Reading Assignments	20%
Midterm	20%
Book/Papers Review & Discussion	20%
Research Proposal	15%
Final	25%

Important Dates

Date	Time	Location	Event
Wednesday, Jan 22	Regular	Classroom	First Class
Monday, March 9			No class
Tuesday, March 10	7:00PM–9:00PM	TBD	**Midterm**
Wednesday, May 6	Regular	Classroom	Last Class
Thursday, May 14	2:00PM–5:00PM	TBD	Final Exam

Course Outline

(Tentative and Subject to Revision)

First Part: Building Blocks

1. Preliminaries
   (a) Lagrangian Methods (GLS Appendix A)
   (b) Random variables, stochastic processes, and expected value (GLS Appendix B)
   (c) Markov processes
2. Dynamic Programming
   – LS, Chapters 3 & 4.
   – Acemoglu, Chapter 6.
   – Boileau, Marin, "A Child's Guide to Dynamic Programming," Unpublished Notes, University of Colorado.
   – Collard, Fabrice, "Numerical Methods," Lecture Notes 7: Dynamic Programming, Unpublished Notes, University of Bern.
3. Expected Utility and Complete Asset Markets
   (a) Uncertainty and Expected Utility Theory
      – Williamson, Chapter 5
   (b) Complete Asset Markets
      – LS, Chapter 8
      – Acemoglu, Chapter 17

Second Part: Heterogeneity

4. Consumption and Savings
   - Angus Deaton. "Understanding Consumption," Chapters 1 & 6

   (a) Self-Insurance, Incomplete Markets, and Permanent Income Hypothesis
   - Acemoglu, Chapter 17.
   - LS, Chapters 17 and 18
   - Hall, Robert E., 1978. "Stochastic Implications of the Life Cycle-Permanent Income Hypothesis: Theory and Evidence," Journal of Political Economy, University of Chicago Press, Vol. 86(6), Pages 971–87, December.

   (b) Bewley Models
   - Aiyagari, S Rao, 1994. "Uninsured Idiosyncratic Risk and Aggregate Saving," The Quarterly Journal of Economics, MIT Press, vol. 109(3), Pages 659–84, August.

5. Overlapping Generations (GLS Chapter 8)

6. Labor Markets (GLS Chapter 16)
   - LS, Chapters 6 & 29
   - Pissarides, Christopher A., 2000, *Equilibrium Unemployment Theory*, Second Edition. MIT Press. Chapters 1 & 2.
   - Richard Rogerson & Robert Shimer & Randall Wright, 2005. "Search-Theoretic Models of the Labor Market: A Survey," Journal of Economic Literature, American Economic Association, Vol. 43(4), Pages 959–988, December.

Third Part:[2] Money, Credit, Banking, and Finance

7. Money, Inflation, and Interest Rates (GLS Chapter 20)

8. Open Economy Version of the Neoclassical model (GLS Chapter 22)

9. The Basics of Banking (GLS Chapter 30)

10. The Money Creation Process (GLS Chapter 31)

11. A Model of Liquidity Transformation and Bank Runs (GLS Chapter 32)

12. Bond Pricing and the Term Structure of Interest Rates (GLS Chapter 33)

13. The Stock Market and "Bubbles" (GLS Chapter 34)

14. Financial Factors in a Macro Model (GLS Chapter 35)

15. Financial Crises and the Great Recession (GLS Chapter 36)

Always keep in mind that this syllabus is a general plan for the course and deviations announced to the class may be necessary.

[2] Time-permitting.