



Econ 420 - Intermediate Macroeconomics
Economics Department, UNC at Chapel Hill
Summer session II - 2024

Play hard, play smart, play together.

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| Instructor: | Pablo Ariel Picardo. |
| Email: | picardo@unc.edu. |
| Instructor office: | Gardner Hall 409. |
| Class time: | MTWRF, 11.30 am - 1 pm. |
| Classroom: | Kenan Labs B125. |
| Office Hours: | Thursdays 4 - 5 pm at Econ Aid Center. |
| Course Site: | Can be found at http://canvas.unc.edu . |
| Text: | Abel, Andrew B. Bernanke, Ben S., and Croushore, Dean. Macroeconomics, 10th. Edition. Pearson, 2020. |
| Prerequisites: | Econ 101 & Econ 410 with a grade of at least C. |
| Credit Hours: | 3 |

Course Description: An introduction to modern macroeconomic concepts, data, theory, and analysis. Topics include national accounting, economic growth, fluctuations, unemployment, and inflation, as well as monetary and fiscal policies designed to achieve specific economic goals. The course will employ mathematical models to explore and analyze these topics and will provide students with a solid foundation to discuss key macroeconomic concepts. Students may not receive credit for both Econ 320 and Econ 420.

Learning Objectives: This course aims to provide a comprehensive introduction to modern macroeconomics, with an emphasis on developing your ability to analyze macroeconomic phenomena through the lens of economic models. The course focuses on foundational concepts and will prepare you for advanced topics. By the end of the course, you should be able to:

1. Recognize patterns in macroeconomic data and interpret them.
2. Construct and solve a model that matches several stylized facts about the macroeconomy.
3. Analyze partial equilibrium outcomes of economic models and use them as a building block to understanding general equilibrium models.
4. Apply and analyze the economy through basic general equilibrium models, such as the IS-LM-FE, and evaluate how different shocks affect the economy.
5. Discuss and analyze data and media statements through the lens of the models discussed in the course.
6. Evaluate fiscal and monetary policy decisions using simple models and discuss the limitations of these models for real-world policymaking.
7. Understand the scope and limitations of macroeconomics as a field and be familiar with several subfields, including growth theory, monetary theory, and international macroeconomics.

Syllabus Changes

The instructor reserves the right to make changes to the syllabus, including problem-set due dates and test dates. These changes will be announced as early as possible. Please note that any syllabus modifications will be carefully considered and aim to have the least disruptive impact on students. I prioritize ensuring these changes are beneficial and improve the learning experience.

Contact Information

Emails with private or sensitive information concerning your grade or performance in the course should be sent to the instructor directly at picardo@unc.edu. Any questions relating to the material of the course or procedural questions are expected to be asked during the class, after the class, or during office hours. I will stay about 30 minutes after each class to answer any questions.

Grading policy

Grading scheme:

| | |
|------------------------------|-----|
| In-class polls (attendance): | 5% |
| Problem sets (7): | 20% |
| Midterm (2): | 40% |
| Final: | 35% |

You can be absent for up to 4 classes without being penalized, and I will drop your two lowest homework grades. Your aggregate grade will be determined according to the formula:

$$\begin{aligned}
 &0.05 * (\text{Attendance average score}) + \\
 &0.20 * (\text{Problem set average score}) + \\
 &0.20 * (\text{Midterm I score}) + 0.20 * (\text{Midterm II score}) + \\
 &0.35 * (\text{Final exam score}) = \text{Aggregate grade}
 \end{aligned}$$

Your letter grade will be determined by calculating your aggregate course grade and matching it to the following table:

Letter Grade Distribution:

| Aggregate grade | Letter grade |
|-----------------|--------------|
| ≥ 93 | A |
| 92.99 - 86 | A- |
| 85.99 - 80 | B+ |
| 79.99 - 74 | B |
| 73.99 - 69 | B- |
| 68.99 - 64 | C+ |
| 63.99 - 60 | C |
| 59.99 - 55 | C- |
| 54.99 - 52 | D+ |
| 51.99 - 50 | D |
| below 50 | F |

1. **Attendance/in-class polls:** We will spend time in class learning by doing. This will include in-class activities and answering some poll questions. All polls will account for participation (full points just for answering). Your attendance average will be the average of all the poll scores. You must be present in class to answer polls, and doing so out of class is an honor code violation. Polls will not necessarily be given in every class. As a reminder, I will drop your **four** lowest polls.
 - We will use Poll Everywhere for polling in class. You can either log in at pollev-erywhere.com or the Poll Everywhere mobile app. No matter which method you use, you must use your official UNC-CH email address, select the single sign-on link, and then enter your ONYEN and Password.
 - **IMPORTANT:** The email address you listed under your profile in Poll Everywhere must match the email address you listed in the UNC Directory. If this is not the case, you will not receive credit for the polls you do, as they will not properly sync with Canvas.
2. **Problem sets:** There will be seven homework assignments. These assignments will be typically due each Tuesday and Thursday at midnight via Gradescope. Homework will have one multiple-choice section and one long-form section. Submission instructions will be on each homework's cover page; ensure you upload the pages correctly on Gradescope and write legibly (there will be a penalty for not doing so). You are strongly encouraged to work in groups with other students, but copying answers violates the honor code. You are also expected to attempt each question before seeking help; this will help you learn and be better prepared for the tests. In addition, I will drop your 2 lowest problem set scores in computing your final score. In grading, I focus on your understanding and application of the course material. I assure you of a very gentle approach in grading problem sets, recognizing that learning is a process and making mistakes is okay. My office hours will be on Thursdays, and I will stay about 30 minutes after each class to discuss any content in the classroom.
3. **Midterms:** It will consist of a similar assignment as the problem sets: a multiple-choice and a long-form section. No makeup midterm exam will be offered. In the event of a university-excused absence, the weight of the missed midterm will be on the final exam. Any other reasons for missing an exam that does not have a University Excused Absence will result in a zero for the missed test.
4. **Final exam:** The final exam is a cumulative final exam consisting of multiple-choice and long-form questions. The post-midterm topics will have a higher weight, but all course topics can be tested. You can only take the final exam at an alternate time if you give me an official exam excuse. Outside of this, no alternate times will be granted.

The date for the final is Monday, July 29th from 11:30 am until 2:30 pm.
5. **Note sheet for tests:** Each student is permitted to bring one sheet of paper (A4/letter size, both sides ok) with notes, formulas, or any other information they deem helpful for the tests. This is intended to alleviate the stress associated with memorization and to encourage a deeper understanding of course concepts.

6. **Calculator:** Only a non-programmable and non-graphical calculator is permitted on exams. If your calculator is not a basic four-function calculator (think the cheap 10-dollar calculators from the grocery store), I must approve it before an exam.
7. **Regrade requests:** All grades will be posted on Gradescope, and any regrade requests must be made within 72 hours of the grade being posted. In addition, all regrade requests require a clear, courteous, and formal written justification for why you believe the assignment or question is incorrectly graded.
8. **Late and Makeup Policy:** All due dates are non-negotiable, and no extensions or makeups will be given. I recognize that people are ill, have family or other emergencies, or something glitches, and you can't turn in something. For all these reasons, I drop each student's lowest grades in problem sets and polls/attendance. That means these drops cover all life events, including whether a conflict or absence is University excused. A general rule to avoid being late is to turn it in on time, and if Gradescope still accepts it we will also accept it. Exceptions can be made during ongoing or severe illnesses or events lasting more than one week. In this event, you must provide a University Excused Absence and then communicate with me before or during the week you return to class so we can make a plan to help get you back on track.
9. **Extra Credits:** I do not offer extra credit for the course.

Classroom Policies/Help Resources

- **Diversity Statement:** As an international Ph.D. student on the path to becoming a Professor, I am deeply committed to creating a classroom environment that values and celebrates diversity in all its forms. This commitment extends to embracing diversity in political and religious beliefs, ethnicity, gender identity, sexual orientation, physical and learning abilities, and the various goals and motivations each student brings to this course. I recognize that everyone may come to this class with different objectives, whether it be to fulfill a requirement, explore a new interest, or pursue a passion. It is my goal to acknowledge and respect these differing objectives through my teaching methods.

In this class, respect for our differences is not just expected—it is fundamental. I uphold a zero-tolerance policy for any form of disrespect or discrimination. Disparaging remarks, exclusionary behaviors, or any other form of disrespect will not be tolerated. Such actions may lead to removal from the course and corresponding disciplinary measures. I take this matter very seriously and trust that it will not be tested.

To ensure our learning environment continues to grow more inclusive, I eagerly welcome and value your feedback and suggestions.

- **Workload Expectation:** This is a required economics major course worth 3 credit hours. For many of you, this will be the primary course that teaches you the basics of macroeconomics, so you should expect to spend at least 15-20 hours per week apart from class time. I strongly advise maintaining a steady pace throughout the course rather than waiting until the end to catch up. Consistent effort and engagement will greatly help your learning experience.

If there are ways I can make your learning experience smoother without compromising standards, or if you have suggestions for improvement, please share them with me.

- **AI Tools Usage:** You're welcome to use AI tools like ChatGPT but remember they're aids, not substitutes for learning. Your understanding and problem-solving skills will be tested, so use AI tools wisely.
- **Office Hours:** I am happy to talk with you during office hours; I am fully available on Thursdays from 4 pm - 5 pm and about 30 minutes after each class. I encourage you to work on your own or with classmates and then come with doubts. I will hold my office hours in the Econ Aid center. If, for whatever reason, none of the times work for you or there is a compelling reason you need to meet with me outside these hours, I can make an appointment on a limited basis. Additionally, I may occasionally schedule extra office hours based on my availability. One positive practice I've observed is students using office hours as a coordination device to gather as a group and help each other in the Econ Aid center. While I will be there to assist with specific tools, your classmates and collaborative efforts will often provide the best resource for everyone.
- **Course Announcements and Additional Materials:** All course announcements will be conducted through the Canvas Page. Problem sets and any additional material will also be posted to Canvas. Canvas will ultimately be my main way of communicating with the class. Please ensure that you are receiving updates from Canvas via email or, at the very least, checking it regularly. If you cannot access the course on Canvas, please notify me immediately.
- **Etiquette:** You can call me by my first name; my pronouns are he/him. Please don't call me Professor since I am a Ph.D. student and Instructor, not a Professor. I also prefer not to be called Mr. or Sir.
- **Critical Incident Response in the event of an active shooter:** In light of the events that occurred in 2023 and to ensure a coordinated response in the unlikely event of a similar incident, please check the following sites:
 - <https://police.unc.edu/services/active-shooter-critical-incident>
 - <https://www.fbi.gov/how-we-can-help-you/active-shooter-safety-resources>

University Policies and Resources

Attendance Policy

University Policy: As stated in the University's Class Attendance Policy, no right or privilege exists that permits a student to be absent from any class meetings, except for these University Approved Absences:

- Authorized University activities: The University Approved Absence Office (UAAO) website provides information and FAQs for students and FAQs for faculty related to University Approved Absences.
- Disability/religious observance/pregnancy, as required by law and approved by Accessibility Resources and Service and/or the Equal Opportunity and Compliance Office (EOC).
- Significant health condition and/or personal/family emergency as approved by the Office of the Dean of Students, Gender Violence Service Coordinators, and/or the Equal Opportunity and Compliance Office (EOC).
- Instructors may work with students to meet attendance needs that do not fall within University approved absences. For situations when an absence is not University approved (e.g., a job interview, illness/ flu or club activity), instructors are encouraged to work directly with students to determine the best approach to missed classes and make-up assessments and assignments.

Honor Code

All students are expected to follow the guidelines of the UNC Honor Code. In particular, students are expected to refrain from "lying, cheating, or stealing" in the academic context. If unsure which actions violate the Honor Code, please see me or consult student-conduct.unc.edu.

Acceptable Use Policy

By attending the University of North Carolina at Chapel Hill, you agree to abide by the University of North Carolina at Chapel Hill policies related to the acceptable use of IT systems and services. The Acceptable Use Policy (AUP) sets the expectation that you will use the University's technology resources responsibly, consistent with the University's mission. In the context of a class, it's quite likely you will participate in online activities that could include personal information about you or your peers, and the AUP addresses your obligations to protect the privacy of class participants. In addition, the AUP addresses matters of others' intellectual property, including copyright. These are only a couple of typical examples, so you should consult the full Information Technology Acceptable Use Policy, which covers topics related to using digital resources, such as privacy, confidentiality, and intellectual property. Additionally, consult the Safe Computing at UNC website for information about data security policies, updates, and tips on keeping your identity, information, and devices safe.

Accessibility Resources and Service

Accessibility Resources and Service (ARS – ars@unc.edu) receives requests for accommodations and, through the Student and Applicant Accommodations Policy, determines eligibility and identifies reasonable accommodations for students with disabilities and/or chronic medical conditions to mitigate or remove the barriers experienced in accessing University courses, programs and activities. ARS also offers its Testing Center resources to students and instructors to facilitate the implementation of testing accommodations. Faculty and instructors with any concerns or questions about accommodations and/or their implementation are invited to reach out to ARS to discuss.

Counseling and Psychological Services

UNC-Chapel Hill is strongly committed to addressing the mental health needs of a diverse student body. The Heels Care Network website is a place to access the many mental health resources at Carolina. CAPS is the primary mental health provider for students, offering timely access to consultation and connection to clinically appropriate services. Go to their website <https://caps.unc.edu/> or visit their facilities on the third floor of the Campus Health building for an initial evaluation to learn more. Students can also call CAPS 24/7 at 919-966-3658 for immediate assistance.

Title IX and Related Resources

Any student who is impacted by discrimination, harassment, interpersonal (relationship) violence, sexual violence, sexual exploitation, or stalking is encouraged to seek resources on campus or in the community. Reports can be made online to the EOC at <https://eoc.unc.edu/report-an-incident/> or by contacting the University's Title IX Coordinator (Elizabeth Hall, titleixcoordinator@unc.edu) or the Report and Response Coordinators in the Equal Opportunity and Compliance Office (reportandresponse@unc.edu). Confidential resources include Counseling and Psychological Services and the Gender Violence Services Coordinators (gvsc@unc.edu). Additional resources are available at safe.unc.edu.

Policy on Non-Discrimination

The University is committed to providing an inclusive and welcoming environment for all members of our community and to ensuring that educational and employment decisions are based on individuals' abilities and qualifications. Consistent with this principle and applicable laws, the University's Policy Statement on Non-Discrimination offers access to its educational programs and activities as well as employment terms and conditions without respect to race, color, gender, national origin, age, religion, genetic information, disability, veteran's status, sexual orientation, gender identity or gender expression. Such a policy ensures that only relevant factors are considered, and that equitable and consistent standards of conduct and performance are applied. If you are experiencing harassment or discrimination, you can seek assistance and file a report through the Report and Response Coordinators (email reportandresponse@unc.edu or see additional contact info at safe.unc.edu) or the Equal Opportunity and Compliance Office at <https://eoc.unc.edu/report-an-incident/>.

Learning Center

Want to get the most out of this course or others this semester? Visit UNC's Learning Center at <http://learningcenter.unc.edu> to make an appointment or register for an event. Their free, popular programs will help you optimize your academic performance. Try academic coaching, peer tutoring, STEM support, ADHD/LD services, workshops and study camps, or review tips and tools on the website.

Writing Center

Check out UNC's Writing Center for free feedback on any course writing projects. Writing Center coaches can assist with any writing project, including multimedia projects and application essays, at any stage of the writing process. You don't even need a draft to come visit. To schedule a 45-minute appointment, review quick tips, or request written feedback online, visit <http://writingcenter.unc.edu>.

Tentative Course Schedule:

| Date | Topic | Text | PSET Due |
|--------------------|---|------------------------|------------------------------------|
| Mon, Jun 24 | Introduction and review | Ch. 1 | |
| Tue, Jun 25 | National Accounting GDP and Price Indices | Ch. 2 | |
| Wed, Jun 26 | National Accounting Unemployment and the Business Cycle | Chs. 2/ 8 | |
| Thu, Jun 27 | Static Models: Labor Leisure Decisions | Ch. 3 | Problem Set 1 Due |
| Fri, Jun 28 | Static Models: Labor Supply | Ch. 3 | |
| Mon, Jul 1 | Static Models: General Equilibrium | Ch. 3 | |
| Tue, Jul 2 | Unemployment | Chs. 3/ 6 | Problem Set 2 Due at 6pm |
| Wed, Jul 3 | Midterm I | | |
| Thu, Jul 4 | Fourth of July, no class | | |
| Fri, Jul 5 | Economic Growth – The Solow Model | Ch. 6 | |
| Mon, Jul 8 | Economic Growth – The Solow Model | Ch. 6 | |
| Tue, Jul 9 | Dynamic Models: Consumption Savings | Ch 4 | Problem Set 3 Due |
| Wed, Jul 10 | Dynamic Models: Consumption Savings/Permanent Income Hypothesis | Ch. 4 (incl. appendix) | |
| Thu, Jul 11 | Consumption Savings: Substitution Effects and Savings Schedule | Ch. 4 | |
| Fri, Jul 12 | Investment Demand and the Savings Market | Ch 4 | Problem Set 4 Due (extra day) |
| Mon, Jul 15 | Money and Asset Markets | Ch. 7 | |
| Tue, Jul 16 | Asset Markets and Money Demand | Ch.7 | |
| Wed, Jul 17 | Midterm II | | |
| Thu, Jul 18 | IS-LM Framework | Ch. 9 | Problem Set 5 Due |
| Fri, Jul 19 | IS-LM Framework | Ch. 9 | |
| Mon, Jul 22 | IS-LM Sticky Prices/ AD-AS Model | Ch. 9 | |
| Tue, Jul 23 | Inflation and Unemployment | Ch. 12 | Problem Set 6 Due |
| Wed, Jul 24 | Monetary Policy in Limited Reserves / Ample Reserves | Ch. 14 | |
| Thu, Jul 25 | IS-LM Framework in Open Economy | Ch. 13 | |
| Fri, Jul 26 | Reading Day - NO CLASS | | Problem Set 7 Due |
| Mon, Jul 29 | FINAL: 11.30 am. same classroom. | | |

Other important dates to have in mind with the schedule: <https://copaamerica.com/>