UNIVERSITY OF NOTRE DAME

# Economics 30020: Intermediate Macro Theory
# Fall 2019

**Professor:**
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**Teaching Assistants:**
Julia Reyes (jreyes3@nd.edu), Head TA
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**Lectures:**
ECON30020-03: Tue and Thu 9:30 AM - 10:45 AM, DeBartolo Hall 118
ECON30020-04: Tue and Thu 11:00 AM - 12:15 PM, DeBartolo Hall 118

**Contacting me:** The best way to communicate with me is via email. *Please include "Intermediate Macro" in the subject of the email.* Questions about the course and other logistical details should go to me. Questions about homeworks or course material can go to me or TAs. I typically answer all emails by the following morning. If your question is urgent, please indicate this in the subject line and I will try to respond sooner. You are also welcome to discuss during office hours.

**Office Hours:** Mon 2-3 PM, Wed 8:30-9:30 AM, and Thu 4-5 PM in 3029 Jenkins-Nanovic Hall, unless otherwise noted. *Office hours begin Wednesday September 4*–if you have questions before then, please email me or ask me after class.

**TA Collaboration Sessions:**
Julia: Mon, 6-7 PM Location TBA
Madeline: Tue, 5-6 PM Location TBA
Alexander: Wed, 7-8 PM Location TBA

The problem sets are difficult. *After* struggling with them first on your own, and then with your study group, TAs will be available in a classroom during the collaboration sessions to help you and your group work through homework questions. Your TAs have taken the course before and understand the material really well. They want to guide you through the hard parts, not give answers. It really will get easier–dare I even say fun–with practice.

The collaboration sessions can also be used to work through exam review problems, and during exam weeks, each TA will have an additional session. I will announce these additional sessions via email/Sakai in the week before each exam.

*TA collaboration sessions begin in the 2nd week.*

**Coffee Chats:** I want to get to know everyone, and I would like to invite small groups of students to join me for lunch or coffee throughout the semester. We can talk about the course, your interests and plans, economics generally, or whatever you like. Lunch (roughly 45 minutes) will be in North

Dining Hall (meal plan) and Coffee Chats (roughly 30 minutes) will be in the Hagerty Family Cafe at the north end of Duncan (my treat). Signups and schedule on Sakai, if interested.

**Course Textbook and Website:**
Garín, Lester, and Sims (GLS), *Intermediate Macroeconomics*, v3.0.0.

All course materials, including the textbook, are posted on Sakai (sakai.nd.edu). Problem sets are also submitted through Sakai.

**Panopto Classroom Recording Notification:** This course will be recorded using Panopto. This system allows us to automatically record and distribute lectures in a secure environment. You can watch these recordings anytime, anywhere, on any device. In Sakai, look for the "Panopto" tool on the left hand side of the course.

Because we will be recording in the classroom, your questions and comments may be recorded. Recordings typically only capture the front of the classroom, but if you have any concerns about your voice or image being recorded please speak to me to discuss your concerns. Except for faculty and staff who require access, no content will be shared with individuals outside of your course without your permission.

These recordings are jointly copyrighted by the University of Notre Dame and your instructor. Posting them to other websites (including YouTube, Facebook, SnapChat, etc.) or elsewhere without express, written permission may result in disciplinary action and possible civil prosecution.

**Support for Student Mental Health at Notre Dame:** Care and Wellness Consultants provide support and resources to students who are experiencing stressful or difficult situations that may be interfering with academic progress. Through Care and Wellness Consultants, students can be referred to The University Counseling Center (for cost-free and confidential psychological and psychiatric services from licensed professionals), University Health Services (which provides primary care, psychiatric services, case management, and a pharmacy), and The McDonald Center for Student Well Being (for problems with sleep, stress, and substance use). Visit care.nd.edu.

## Course Description

Macroeconomics is concerned with the behavior of the aggregate economy. This is a course in macroeconomic theory at the intermediate level. We will be examining macroeconomic data and studying models designed to help us understand those data. We will pay special attention to the role of policymakers in shaping macroeconomic outcomes.

**Outline (tentative):**
Topic 1–Introduction

a. Math review (GLS Appendix A)
b. Basic economic concepts (GLS Ch. 1)
c. What is a model (GLS Ch. 2)
d. Brief history of economic thought (GLS Ch. 3)

Topic 2–Economic growth

a. Stylized facts (GLS Ch. 4)
b. Solow growth model (GLS Ch. 5-6)
c. Cross-country differences in standards of living (GLS Ch. 7)

Topic 3–Dynamics and equilibrium

a. Two period consumption-saving problem (GLS Ch. 9)
b. Endowment economy equilibrium (GLS Ch. 11)

c. Production and labor supply (GLS Ch. 12)

Topic 4–Neoclassical business cycle model

a. Neoclassical business cycle model (GLS Ch. 17-18)
b. Fiscal policy and Ricardian equivalence (GLS Ch. 13.1-13.2)
c. Money (GLS Ch. 14)
d. Money, inflation, and interest rates (GLS Ch. 20)
e. Taking the model to the data (GLS Ch. 19), Critiques (GLS Ch. 21)

Topic 5–New Keynesian model

a. IS-LM-AD model (GLS Ch. 23), IS-LM-AD-AS model (GLS Ch. 24-25)
b. Dynamics and the Phillips Curve (GLS Ch. 26)
c. Monetary Policy (GLS Ch. 27)
d. Zero Lower Bound (GLS Ch. 28)

**Prerequisites:** The course presumes knowledge of both micro and macro at the principles level, as well as elementary differential calculus and high school level algebra. Intermediate micro is helpful, though not necessary. GLS Appendix A contains a math refresher, and Appendix B reviews some probability and statistics concepts we will use. You should also be comfortable with a spreadsheet program like Microsoft Excel.

## Homework, Exams, and Grading

**Course Grade:** I will curve exam grades (up but not down) so the numeric scores better correspond to the traditional ranges for letter grades. For example, if *after* applying the curve your score is an 85, this is B. Using the curved numeric grades I compute your course grade according to:

$$\text{Course score} = 26\% \text{ exam } 1 + 26\% \text{ exam } 2 + 26\% \text{ exam } 3 + 18\% \text{ homework} + 4\% \text{ participation.}$$

I will provide the formula I use to convert raw scores curved scores when I return the first exam so that you can keep track of your course performance. Expect the average course grade over both sections to be around B+.

**Homework:** There will be 10 problem sets assigned throughout the semester, due according to the schedule at the bottom of the syllabus. Only the best 9 of 10 assignments will count towards your grade, and thus each accounts for 2% of your overall course grade.

After first working on them individually, I encourage you to work on finishing homeworks in small study groups. The finished homework may be turned in as a group assignment. *Groups may have up to 4 students and only one group member should submit the assignment.* Please make sure that the names of all group members are listed (legibly) on the first page. All group members will receive the same grade. The problem sets are the best preparation for the exam so it is in your interest to actively participate in solving each problem.

Assignments are submitted (by only one group member) electronically via Sakai. Scan in any hand-written component and attach it with an accompanying Excel file when applicable. Scanning on campus is free. See https://nd.service-now.com/kb_view.do?sysparm_article=KB0010725. You can also use an app on your phone to scan and convert to a pdf. Please do not just submit individual pictures from your phone: these will not be graded. *Also, make sure then entire problem set pdf is legible before submitting (Illegible problem set responses receive 0 credit), and make sure you click "submit" after uploading the file and see a submission confirmation.*

Problem sets are graded on a check plus, check, check minus scale, which correspond to 100%, 85%, and 50%, respectively. Homework turned in after the deadline but before the solutions are posted will be bumped down one step, e.g. from check plus to check or from check minus to 0. This

deduction applies to everyone in the group. Homework submitted after the solutions are posted or not submitted at all receives 0 credit.

Some of the homework problems are from the textbook (GLS). At the end of each chapter in GLS, there are both "Questions for Review" and "Exercises." I will refer to the former as "Questions" and the latter as "Exercises." The Questions typically only require a shorter written response and are meant to review the material presented in the textbook. The Exercises are longer, often featuring multiple parts, and require you to do some math and draw graphs. Some of the Exercises include an Excel component.

**Exams:** *There is no final exam during exam week.* In its place, there are three in-class "midterm" exams that assess the material since the last exam and carry equal weight. However, since the material naturally builds on itself, performing well on later exams requires understanding earlier material. Since these exams will have assessed the material for the entire course, there is no need for a cumulative final exam.

The in-class exam schedule is at the end of the syllabus. *Please mark your calendar.* All the exams are closed-book individual exams. You may bring one double-sided 8.5 x 11 inch (letter) size hand-written "cheat sheet". This can be re-used across exams, although I recommend preparing a new one each time. Calculators are unnecessary but allowed; they may not be shared.

**Reschedule:** Should any of the exam times conflict with a University-approved absence, consult with me a least a week ahead of the exam date to make alternative arrangements in accord with University guidelines. Formal documentation is required. See Section 3.1.3 of the Undergraduate Academic Code (https://facultyhandbook.nd.edu/assets/288727/undergraduate_academic_code_corrected_9.5.2018.docx.pdf). Failure to resolve exam conflicts with a scheduled excused absence at least a week in advance may mean no alternative arrangements will be available.

**Regrade:** I will post detailed solutions when I return the exams, and I encourage you to review these closely with your exam in hand. Any clerical errors or obvious grading mistakes will be corrected without any hassle, but *you must let me know by email within a week of returning the exam.* Attach a picture or scan of the affected page with your explanation. (Here, a *or* picture from your phone is fine so long as it is legible.)

For other cases, if you believe your answer is still correct but was marked incorrectly, you may request a regrade in writing (email is fine) also within one week of the exam's return that includes a description of which question you believe was graded incorrectly *and an explanation of why.* You must attach a picture or scan of the affected page(s) and return your original exam to me within the same week to be re-graded. I will re-check the entire exam to ensure it was graded correctly.

A word of caution: If your answer is partially correct, I am unlikely to change points awarded. When grading the exams, we use a scoring rubric to ensure partial credit is awarded consistently across exams, and unless there was a mistake with the point deduction, in the interest of fairness I cannot change the points awarded on your exam without also adjusting the points awarded to all other students whose exams were graded the same way.

Final answers on exams should be written in pen and circled if they are not clear. *Answers written in pencil or erasable pen cannot be regraded.*

**Attendance and Participation:** Relevant questions, insights, and discussion are encouraged throughout the course. It is a lecture course, but it will be boring if I am the only one talking. Asking relevant questions during the lecture, especially when things are confusing, will help everyone. I will also often pause to ask questions to individuals and the class overall. While not explicitly graded, participation in these dimensions will count positively at the margin.

Because of limited space in the classrooms, I ask that you attend the lecture of the section to which you are assigned. For special circumstances (e.g. an interview), you can attend an alternate section without permission as long as space permits.

**Homework and Exam Schedule:** all homework submissions are due before each Thursday's lecture through Sakai. **The deadline is 9 am on Thursdays, and the deadline is *binding.*** Plan to submit well ahead of the deadline, in case of connection issues. Except in rare cases, I will not accept hard copy or email submissions.

8/29 Thursday: No problem set due: first week
9/05 Thursday: Problem set 1 due
9/12 Thursday: Problem set 2 due
9/19 Thursday: Problem set 3 due
9/24 Tuesday: **Exam 1**, in class
9/26 Thursday: No problem set due: exam week
10/03 Thursday: Problem set 4 due
10/10 Thursday: Problem set 5 due
10/17 Thursday: Problem set 6 due
10/24 Thursday: FALL BREAK!
10/31 Thursday: Problem set 7 due
11/05 Tuesday: **Exam 2**, in class
11/07 Thursday: No problem set due: exam week
11/14 Thursday: Problem set 8 due
11/21 Thursday: Problem set 9 due
11/28 Thursday: HAPPY THANKSGIVING!
12/05 Thursday: Problem set 10 due
12/10 Tuesday: Last day of lectures
12/12 Thursday: **Exam 3**, in class

**Honor code:** The Honor Code can be found here: https://honorcode.nd.edu.

> As a member of the Notre Dame community, I acknowledge that it is my responsibility to learn and abide by principles of intellectual honesty and academic integrity, and therefore I will not participate in or tolerate academic dishonesty.