

University of Notre Dame du Lac
Monetary Theory and Policy
ECON 40364-01
Spring 2022

Location:

DeBartolo Hall 129

Times:

Tuesdays and Thursday, 2-3:15 pm

Instructor:

Eric Sims

3024 Jenkins-Nanovic Hall

esims1@nd.edu

(574) 631-6309

Personal [website](#)

Course website on Canvas

Office hours: Mondays, 5:10 pm – 6:20 pm, JNH 3024 or JNH 3005 (classroom)

Fridays, 11 am – 12:00 pm, JNH 3024 or JNH 3005 (classroom)

Teaching Assistant:

Sarah Tarhan (starhan@nd.edu)

Office hours: Wednesdays, 6:30 pm – 8:00 pm, DeBartolo 117

Textbooks:

Mishkin: *The Economics of Money, Banking, and Financial Markets*. 11th edition

Garin, Lester, and Sims: *Intermediate Macroeconomics*. Available [online](#)

Course Overview:

What is money? What determines the prices of the goods and services we buy? Why have we experienced persistent inflation since the early 20th century? What is a central bank? What are the important features of central bank function and design? What do we mean by liquidity, and why is it important? What is an interest rate, and why are there so many interest rates? How do central banks affect interest rates, and how do interest rates affect the economy? What is a yield curve? What should central banks do during a recession? What happens during a financial crisis? How should central banks react to financial crises? What has been going on with monetary policy in response to the COVID-19 crisis? What are the implications of the massive increases in central bank balance sheets in the last 10-12 years? What is going on with inflation right now? Will it be transitory, or is it here to stay?

This course is focused on monetary theory and how monetary policy interacts with the aggregate economy. It aims to provide students with some tentative answers to the questions listed in the paragraph above, as well with a set of tools to continually evaluate these and similar questions in the future. The course builds off of the basic tools of micro and macroeconomics. It is assumed that students have taken both intermediate micro and macro and have a working grasp of calculus.

The course will be divided into roughly three parts. In the first part of the course, we will study the origins and role of money; the meaning of liquidity; the factors determining money demand and supply, the aggregate price level, and nominal interest rates; and an aggregate demand-supply model of the economy which one can use to study what we will refer to as “conventional” monetary policy. By “conventional” monetary policy we refer to the adjustment of short term nominal interest rates to hit targets for inflation and some measure of economic activity. Much of the first part of the course ought to be at least somewhat familiar. The first part of the course will conclude with brief discussions about central bank mandates and design, the time inconsistency problem, recent interest in so-called “modern monetary theory,” and a brief discussion of cryptocurrency and central bank digital currencies.

The second and third parts of the course build on the first. The second part of the course focuses on asset pricing, the risk and term structure of interest rates, the stock market, financial structure, and banking. For much of this part of the course we will not talk explicitly about money per se, but financial markets are of great interest to monetary policymakers. The third part of the course studies financial crises and monetary policy responses thereto. We will compare and contrast the Great Depression and the Great Recession. We will use tools learned in the first and second parts of the course to study and analyze “unconventional” monetary policy, including tools such as large-scale asset purchases, quantitative easing, exotic lending facilities, forward guidance, and negative interest rates. We will conclude with a discussion into the monetary policy responses to the COVID-19 crisis.

Textbook and Readings:

There are two required texts for this course. The first is by Frederic Mishkin, *The Economics of Money, Banking, and Financial Markets*, 11th edition. This book is often assigned in Money, Credit, and Banking courses but also works well for a course in monetary theory and policy. The author of the book was a Governor of the Federal Reserve Board in the lead-up to, and early stages of, the financial crisis of 2007-2009, so he brings a solid perspective. We will follow some parts of the book more closely than others, will not cover all chapters, and will not progress through the book in a linear fashion. Note that I have an older edition of the book (11th), and will make assignments based on that. You may purchase a newer edition, but note that chapter numbers and material may not be exactly the same.

Some of the material presented in class will be at a higher level than that contained in Mishkin’s book. To assist with this material, I am also assigning several chapters from my intermediate macro text, which you can freely access [online](#). The most recent edition of the text has an entire part devoted to money, banking, and finance. These are the chapters from which we will draw in this particular class. In the course outline, I abbreviate the title of the book as “GLS.”

I understand that textbooks are exorbitantly expensive and feel somewhat bad for assigning one for which you must pay. But Mishkin’s book is actually pretty good and provides some good background on much of the material we will cover in the course. I think you will benefit from reading the assigned chapters before class discussions and then going back through the assigned chapters after lectures. You will not be responsible for anything in either Mishkin’s or my texts which is not covered in class. If you want to try to get by without Mishkin’s book I will not try to stop you, though I think you will benefit from it. If you’re looking for a way to save some money, I would suggest you try sharing a book with another member of the class. You are also welcome to

purchase older (or newer) editions of the book, but I do not have access to these and cannot guarantee that the material in older (or newer) editions is the same as in the 11th edition.

There will be other outside readings assigned throughout the semester. These include academic journal articles, excerpts from books, blog posts, or shorter articles in popular periodicals. These readings are listed on the course outline with hyperlinks. pdf copies of these readings are also provided on the course webpage. As the outside readings are all related to the course lectures, for exams you will be responsible for the material contained in assigned outside readings, regardless of whether we explicitly discuss these readings in class. Note that this policy differs from that relating to the textbooks.

Course Website:

I will maintain an active course website online through Canvas. Note that this is my first semester using Canvas, so there may be some hiccups. On the website you can find the syllabus, lecture slides, problem sets and solutions, exam solutions, and outside assigned readings. I will also use the Canvas site as a gradebook so that you may follow your progress over the course of the semester.

Evaluation:

Evaluation for the course will be based on graded problem sets, quizzes, and exams. There will be five assigned problem sets due roughly every two to three weeks throughout the semester. Problem sets can be worked on in groups but must be turned in individually. Problem set questions may include questions that ask you to download data, produce graphs, or conduct computations in Microsoft Excel. I assume that by now you have some working familiarity with Excel. If not, the internet is a good resource. Hard copies of problem sets will be due at the beginning of the class day on which they are due.

The course will also feature online quizzes, occurring at a more or less weekly frequency. These quizzes will be short and will feature only multiple choice and/or true-false questions. You must complete quizzes by 5 pm on the due date. Quizzes will go live on Canvas on the Thursday before they are due at 5 pm. You will have a 24-hour window in which to complete each quiz (i.e. until Friday at 5 pm). The quizzes are open book, but you will only have ten minutes in which to complete the quiz once you begin. The quizzes will focus on topics covered in the lectures from that week, and will also focus on supplemental readings that may or may not have been explicitly discussed in class that week. There will be 11 quizzes over the course of the semester. You will be able to drop one quiz when calculating your course grade.

There will be one midterm exam and a comprehensive final exam. The midterm exam will be administered in class on Thursday, March 3. Note this is the Thursday prior to Spring Break. The midterm will cover all materials assigned prior to that point. The final exam will take place on the date and time assigned by the Registrar. This happens to be Wednesday, May 4, from 10:30-12:30 am. The exam will take place in our classroom. The final exam will be cumulative.

All assignments will be graded out of 100 points. Collectively, the problem sets will count for 25 percent of the course grade (five percent each). No problem set scores will be dropped in the calculation of the final course grade. Quizzes will account for 20 percent of the course grade (two percent per quiz, factoring in that you get to drop one). The midterm exam will count for 25 percent of the final course grade. The final exam will account for the remaining 30 percent of the course grade.

I will be using a conventional, high school level 0-100 grading scale. The mapping between points and letter grades can be found below, where g denotes numeric points:

A	$g \geq 94$
A-	$90 \leq g < 94$
B+	$87 \leq g < 90$
B	$83 \leq g < 87$
B-	$80 \leq g < 83$
C+	$77 \leq g < 80$
C	$73 \leq g < 77$
C-	$70 \leq g < 73$
D	$65 \leq g < 70$
F	$g < 65$

I do not particularly care for such a scale, but I think it is useful for students to know where they stand. I may curve scores on problem sets or exams. If I do so, I will give students the formula converting raw scores into curved scores (the curve may be linear or non-linear). I also may not curve scores, depending on my assessment of the absolute difficulty of the exam or assignment as well as the overall class performance. In the interest of being completely transparent, I anticipate that the average grade for the semester will be around a 3.4 (roughly a B+), though this is only a rough guide and I make no promises. I also sometimes take the liberty of bumping people up from one grade category to another at the end of the semester (e.g. from a B+ to an A-). Factors influencing bumps include being close to the cutoff line, improvement over the semester, or other extenuating circumstances. Bumps can only help you – your final letter grade will be no lower than the mapping described above.

There is no class participation grade or formal attendance policy. You are adults and are responsible for managing your own time. While there is no explicit attendance policy, I am loosely aware of attendance patterns. Keep in mind that as instructor I will be more willing to work with a student and/or show leniency when I sense that the student is putting forth solid effort. You are welcome to alert me if you have to miss class for any reason, though this is not necessary. Some of you are seniors looking for jobs, some of you may be athletes, and others may be involved in university clubs or activities. Many of you may well have commitments that force you to miss class from time to time, and this is understood. But it should also be understood that you are responsible for any material presented in class when you are absent for any reason. Although I am happy to work with you outside of class, it is not my responsibility to repeat lectures you had (or chose) to miss.

If you have to miss an exam for any reason, you must notify me at least one week in advance. If the conflict is legitimate (e.g. a university-sponsored event), we can jointly set alternative arrangements. Failure to alter me of any potential conflict at least a week in advance may result in no alternative arrangements being available. If you have a conflict and are unable to take the midterm at an alternative time within a one- or two-day window of the rest of the class, you may be offered the choice to have the weight of the midterm shifted to the final exam.

Recording Lectures

In accord with current university policies, the class will not be offered in dual mode. I will, however, experiment with recording class lectures and posting these to the Canvas site. I am doing so because

students may have legitimate reasons to miss class (e.g. quarantine!). It is also the case that I am in favor of providing you with as many learning resources as possible. At the same time, I have some concerns about recording lectures. Recordings should not be viewed as a substitute for in-class attendance. Recordings are my property, and are only available to you for reviewing class lectures or watching a missed class. You may not use the recordings for any other purpose.

Office Hours and Out of Class Meeting Times:

My office hours will be listed at the times given on the first page. I have reserved JNH 3005 (the small classroom on the third floor of JNH across from the restrooms) for office hour times. If more than one or two people show up for office hours, I will move down to the classroom. Otherwise I will be in my office, JNH 3024. There may be weeks where I need to reschedule office hours.

The course will have one undergraduate teaching assistant: Sarah Tarhan. Sarah has taken this class and excelled. She will hold weekly offices hours from 6:30 – 8:00 pm (location TBA). These will be in person, and there will be no recording available. She will hold additional office hours around the time of exams.

The best way to contact me is via email. I will do my best to respond promptly but keep in mind that I sleep more or less normal hours, unlike many of you. Middle of the night emails will not be responded to until the next day. To ensure a prompt response, please put “Monetary Theory” or something similar in the subject line of any email.

Prayer before Class:

I will open each class with a free-form prayer asking God to guide us as we seek to better understand the world around us. My Catholic faith is important to me, and at a Catholic university I think it is crucial that we ask for God’s assistance as we engage in important endeavors. You are welcome to participate in the prayer however you best see fit. If you are not the praying kind, that is fine and I want you to feel welcome, but please be respectful.

If you would like to add a prayer intention, please email me your intention before class and I will include it in my opening prayer. Please limit yourself to non-frivolous intentions. While former head football coach Gerry Faust famously used to ask his players to recite a Hail Mary before important plays, and while I (and I am sure some of you) are guilty of this practice as well, I will not entertain intentions for athletic victories in the opening class prayer.

Rough Course Outline with Readings (tentative and subject to revision):

1) Traditional Monetary Theory and Conventional Monetary Policy

- a) What is money (Friedman Ch. 1, first part of Ch. 2 up until “The Supply of Money”)
- b) Money supply (Friedman Ch. 2, section on “The Supply of Money”; Mishkin Ch. 3; Ch. 14; Ch. 15 pg. 341-348; GLS Ch. 32; Rendahl and Freund [“Banks do not Create Money out of Thin Air”](#))
- c) Money demand (Friedman Ch. 2, part on “The Demand for Money”; Mishkin Ch. 19; the rest of Friedman Ch. 2)
- d) Conventional monetary policy and the macroeconomy (Mishkin Ch. 20, Ch. 21, Ch. 23 pg. 553-569)
- e) The Federal Reserve (Mishkin Ch. 13); central bank design, mandates, transparency, and accountability (Crowe and Meade [“The Evolution of Central Bank Governance Around the](#)

[World](#)"; Haedtler, Levin, and Wilson [“Making the Federal Reserve Fully Public: Why and How”](#)); modern monetary theory (Mankiw [“A Skeptic’s Guide to Modern Monetary Theory”](#)); cryptocurrency and central bank digital currencies (Cechetti and Schoenholtz [“Finance and the Blockchain: A Primer”](#); Cechetti and Schoenholtz [“Bitcoin and Fundamentals”](#); Royal and Voigt [“What is Cryptocurrency?”](#); Black [“Who Needs Cryptocurrency FedCoin When We Already Have a National Digital Currency?”](#); Brainard [“Private Money and Central Bank Money as Payments Go Digital: An Update on CBDCs”](#); Waller [“CBDC: A Solution in Search of a Problem?”](#); Cechetti and Schoenholtz [“Central Bank Digital Currency: The Battle for the Soul of the Financial System”](#))

2) Topics in Finance, Financial Markets, and Banking

- a) Bond pricing and the term and risk structure of interest rates (Mishkin Ch. 4; Ch. 5 pg. 85-100; Ch. 6; GLS Ch. 34; Poole [“Understanding the Term Structure”](#))
- b) Stock market (Mishkin Ch. 7; GLS Ch. 35)
- c) Adverse selection, moral hazard, and financial structure (Mishkin Ch. 8; *Economist* [“Secrets and Agents”](#))
- d) Banking (Mishkin Ch. 9; GLS Ch. 31; GLS Ch. 33; Diamond [“Banks and Liquidity Creation”](#))

3) Crises and Unconventional Monetary Policy

- a) Financial crises (Mishkin Ch. 12 pg. 267-282); Great Depression and Great Recession (Bernanke [“On Milton Friedman’s 90th Birthday”](#); Wheelock [“Lessons Learned”](#); Gorton [“Questions and Answers”](#); Mishkin [“Over the Cliff”](#); Cechetti [“Crisis and Responses”](#))
- b) Unconventional monetary policy and mapping crises and policy responses into the AD-AS model (Mishkin Ch. 15; pg. 355-361; Mishkin Ch. 23; pg. 569-578; Bernanke [“Targeting Long Rates”](#); Wu [“Did Quantitative Easing Work?”](#))
- c) Financial and banking regulation (Mishkin Ch. 10; Mishkin Ch. 12 pg. 283-289; Gorton and Metrick [“The Federal Reserve and Panic Prevention”](#); Hanson, Kashyap, and Stein [“A Macroprudential Approach”](#))
- d) The Fed and the COVID-19 Crisis (Cechetti and Schoenholtz [“Contagion: Bank Runs and COVID-19”](#); Cechetti and Schoenholtz [“COVID-19: What Can Monetary Policy Do?”](#); Cechetti and Schoenholtz [“The Fed Goes to War: Part 1”](#); Cechetti and Schoenholtz [“The Fed Goes to War: Part 2”](#); Cechetti and Schoenholtz [“The Fed Goes to War: Part 3”](#); Cechetti and Schoenholtz [“Fed’s Big Stick Lets it Speak Powerfully”](#); Cheng, Skidmore, and Wessel [“What’s the Fed Doing in Response to the COVID-19 Crisis?”](#); Cechetti and Schoenholtz [“Inflation Policy”](#); Cechetti and Schoenholtz [“From Inflation Targeting to Employment Targeting?”](#))

Assignments, Due Dates, and Other Important Dates:

- Online Quizzes: available Thursday 5 pm to Friday 5 pm on Canvas. Dates below are Fridays:
 - Quiz #1: January 14
 - Quiz #2: January 21
 - Quiz #3: January 28
 - Quiz #4: February 4

- Quiz #5: February 11
- Quiz #6: February 18
- Quiz #7: February 25
- Quiz #8: March 18
- Quiz #9: March 25
- Quiz #10: April 1
- Quiz #11: April 22

- Problem sets: hardcopy due at the beginning of class on assigned dates
 - Problem Set #1: January 25
 - Problem Set #2: February 10
 - Problem Set #3: March 1
 - Problem Set #4: March 29
 - Problem Set #5: April 21

- Midterm exam: March 3, in class

- April 7: no class meeting

- Final exam: May 4, 10:30-12:30, in classroom