

University of Chicago
Booth School of Business

Business 33040
Macroeconomics

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COURSE OVERVIEW - Preliminary

This course is designed to provide students with a unified framework that can be used to analyze macroeconomic issues such as employment, income, output growth, inflation, budget deficits, recessions, productivity, interest rates, monetary policy, fiscal policy, foreign trade imbalances and exchange rates.

TEXTBOOK

Andrew Abel, Ben Bernanke and Dean Croushore, Macroeconomics, Pearson; Tenth Edition, 2017.

TA

The TA for the course is: Ivan Kirov. His e-mail addresses is ikirov@uchicago.edu. The TA is primarily responsible for grading. I prefer that questions about the lecture material be directed to me.

REVIEW SESSIONS FOR THE TAKE HOME EXAMS AND FINAL

I will conduct a review session for the first take-home exam on Thursday, January 28 from 6:00 pm to 8:00. The session is scheduled to be recorded and made available to all students as soon as possible.

I will conduct a review session for the second take-home exam on Thursday, February 18 from 6:00 pm to 8:00 pm. The session is scheduled to be recorded and made available to all students as soon as possible.

I will conduct a review session for the take-home final on Thursday, March 11 from 6:00 pm to 9:00 pm. The session is scheduled to be recorded and made available to all students as soon as possible.

WEEKLY ONLINE OFFICE HOURS

These are unusual times for the economies of the world and that makes it especially difficult to teach a basic course in macro. On the one hand, students understandably want to know about what is happening today. On the other hand, during the majority of a student's business career the economy will not behave as it is behaving now, so a course devoted to the operation of an economy during a pandemic will soon be of little value.

I have decided to deal with the pressures of making the course relevant today and at the same time have long-term value by (i) teaching essentially the same course I would teach otherwise; and (ii) conduct a weekly "online office hours" session to discuss current events.

The weekly online office hours sessions will take place Thursday evenings starting at 6:00 pm and will be recorded. I will be available to answer questions about the previous lectures, but also to discuss current events.

Students are encouraged to send me questions they wish to discuss in advance. This has at least two main benefits. First, the longer I have to think about a question, the better the answer I can give. Second, I can give priority to questions that are of interest to a larger fraction of the students.

USE OF MATH

Math is used in this class. Nothing beyond algebra is needed. I will refer to some results from calculus from time to time. I hope this is useful, but it is not required.

Math is a tool, a means to an end. Math is used to help develop your intuition. It provides rigor, logic, and power to the analysis we do. By power I mean that results will emerge from the use of math that would not emerge if we did the analysis without math.

Some students have intuition that is well enough developed that they do not need to use math to develop their intuition. Fewer students are in this category than think they are. Some students will get caught in the math and never make it to the final goal of improved economic intuition. The class will not be of much value to these students. Hopefully, you will be a student who uses the math as a crutch, like training wheels on a bike; math will be something to help you progress, but also something you are able to discard.

COMPONENTS OF COURSE

The course has three different components:

- a) **Developing Terminology:** Although this is boring, it is necessary. It is where we start. Terminology will be illustrated using real world data. After the first two classes this will be of diminished importance. In this regard, the first two classes are not indicative of the course.
- b) **Describing Institutions:** Institutions can play an important role in how an economy operates. Much institutional detail is country specific, however, so we won't spend too much time on this. We will do some generic descriptions of banks and central banks as part of our money market.
- c) **Model Building:** An economic model is a mathematical description of a simplistic, stylized economy. And the bulk of this course is devoted to building and working with economic models.

The primary benefit of studying economics through the use of economic models is the ability to harness the power of math described above. The purpose of a simple model is to ensure we can see what is going on so we can develop intuition. A model that is too complicated to understand is useless. A good model simplifies by isolating factors that are of key importance and suppressing factors that are of secondary importance.

If you want to succeed in this course your primary goal should be to master how the economic models developed in class work, and be able to extrapolate from these models to understand how the real world works.

Along the way I will report on empirical tests of the models that are designed to determine where a model is useful for understanding the world and where it is not.

This course develops a multi-market economic model known as the Classical model, in which markets are always in equilibrium. This model is most useful for understanding the long-run effects of economic policy and macroeconomic “shocks”.

Given that Booth has decided to eliminate a week of instruction (the permanent situation is now 9 weeks of instruction instead of 10 weeks of instruction there will not be time to develop a Keynesian model, in which certain markets can be

in disequilibrium. This model is most useful for understanding the short-run effects of economic policy and macroeconomic “shocks”.

Notes will be provided that cover a Keynesian model so students who wish to learn this material on their own can do so. Zoom recordings of lectures covering this material will also be made available.

Notes will also be provided on the third branch of macroeconomics, known as Growth Theory.

The complete Classical model will have either three or four markets. There will always be a Labor, Goods, and Money market. When the economy is open to international trade there also is an International Bond market.

Prior to the first take-home exam we will cover the Classical version of the Labor market. Between the first and second take-home exams we will add the Classical version of a closed-economy Goods market and begin analysis of the open-economy Goods Market. After the second take-home exam we will complete the Classical version of an open-economy Goods market, add the International Bond market and complete the Money market.

WARNING: Your intuition is probably Keynesian, not Classical, so you will have to fight hard to develop new intuition in this course.

CLASS WEBSITE

With the exception of the textbook, everything students need for this class is available online. The course web page is in the Canvas system.

You can access the class website through the Booth portal by clicking on My Classes. If you have trouble, go to <http://courses.uchicago.edu>, and log in with your CNet ID and password. You will see the class website in your Canvas dashboard. If you have any problems locating the class site, please email canvas@chicagobooth.edu.

You will need a CNET ID and password. If you have not claimed your CNET ID go to <http://cnet.uchicago.edu>, click on create your CNET ID, and follow the directions.

The Class Website is scheduled to go live on Monday, January 4.

The material on the class website is organized into things that can be found through the Homepage and things that can be found through multiple Modules.

On the main Homepage for the class you will find:

Links to this course overview (*Course Overview*), the first class assignment (*First Class Assignment*), and the course syllabus (*Syllabus*).

A page with links to files that describe which topics were covered in past lectures and which topics are expected to be covered in the current and next lecture. (*Lecture Topics*).

A page with links to files that record the announcements in each class meeting (*In-Class Announcements*).

A page with links to Zoom meetings for regularly scheduled classes and review sessions. (*Links to Zoom Meetings*)

A page with links to the recordings of Zoom meetings for regularly scheduled classes and review sessions (*Links to Zoom Recordings*).

The Module Answers to Problems in Textbook contains:

A page with links to files that contain the answers to all the questions in the textbook (*Abel, Bernanke and Croushore 10th edition*).

The Module Lecture Material contains:

A separate page for each of the eight sections on the course syllabus (*Section I, Section II, ... Section VIII*). Each page has links to (i) the class notes; (ii) a file containing the old exam questions (with answers); (iii) copies of articles referred to in the class notes (these articles are optional readings, which means material from these articles will not appear on a quiz, the midterm or the final); and (iv) a file containing my comments on the articles. The pages for the various Sections will be added as the course progresses.

The Module Slides contains:

A separate page for each week's lecture, with links to the Lecture Slides displayed in each of the weekly Zoom meetings. The best way to think of the relationship between the Class Notes and Lecture Slides is that the Lecture Slides hit the highlights, provide an introduction to the material and a high-level coverage of the material, while the Class Notes provide much more detail than can be covered in lecture.

A separate structure is needed for the module containing the Lecture Slides and the module containing the Class Notes because lectures frequently contain material from more than one section on the course syllabus.

The Module Online Quizzes contains:

An information page for the online quizzes. The information page has links to (i) a file that contains information about online quizzes that cannot be found in this course overview (*Additional Information*); (ii) a file that describes exactly what material is covered for each quiz (*Quiz Material*); and (iii) a file that lists the schedule for when the for-credit quizzes become available and are due (*For-Credit Quiz Schedule*).

A separate page for each of the 9 quizzes. (*Quiz 1, Quiz 2, ... Quiz 9*). Each page has links to the for-credit, the not-for-credit and the two practices versions of the quiz.

The Module Exams contains:

A page for the two take-home exams (*Take Home Exams*). The page contains links to files that (i) describe what material from the class notes and textbook are covered by the midterm; (ii) contain my summary review of this material; and (iii) contain a copy of each take-home exam (with answers).

A page for the take-home final (*Final*). The page contains links to files that (i) describe what material from the class notes and textbook are covered by the final; (ii) contain my summary review of this material; and (iii) contain a copy of the final (with answers).

The Module Office Hours Follow-Up contains:

A page with follow-up material for topics discussed in office hours, including links for further readings.

The Module Videos contains:

A page with links to a television series entitled “Greed”, hosted by John Stossel (*Greed – John Stossel*). This is great viewing for anyone who wants to learn about economics.

A page with a link to a lecture given by Booth’s Professor Kevin Murphy on Income Inequality (*Human Capital Investment, Inequality and Growth – Kevin Murphy*). Unfortunately, given time constraints, we will not cover this important topic in our class. However, this recording will give you a good foundation on which you can build.

The Module Distribution of Scores contains:

A page with a link to the distribution of scores on all graded assignments (*Distribution of Scores*).

ROLES OF CLASS NOTES AND THE TEXT

a) Class Notes: This is the most important part of the course. If you master these you can do well in the class.

b) Text: The text does two things. First, it provides alternative explanations of what is in notes, though often for a simpler version of the model. For some students it seems helpful to start with the text and then move to the more advanced model contained in the class notes. If you feel the lectures go too fast, I encourage you to read the relevant portions of the book before class as a way of getting some of the material under your belt in advance.

Second, the text covers topics I don’t have time to cover in class. This material will constitute at most a minor part of the quizzes and will not appear on the take-home exams or final. That said, you will get a more complete understanding of the course material by reading the book.

Caveat: There will be occasions when the model in the book is inconsistent with, instead of being a simpler version of, the model in class notes. I will make clear in class when this occurs, and explain why my notes contradict the book. You are free to choose whichever model you want. You are graded on your ability to think logically and correctly within the context of a model, not on using my model. Also, the book is good, and the authors smart. I would love to have either one of them on our faculty. However, the only way to totally agree with the book is to write my own. I have no plans to do so.

HOMework AND OLD EXAM PROBLEMS

The reading list identifies homework problems from the book that may be useful as a tool for making sure you understand what we are doing in class. The answers to all the homework problems in the book can be downloaded from the class website. Click on the module *Answers to Problems in Textbook*.

For some sections I have written my own homework problems. These appear, along with answers, at the end of certain Class Notes documents.

Homework will not be collected or graded.

Questions from old midterm and final exams, along with answers, are available on the class website. The questions come from all sections of Macroeconomics I have taught: Executive Program, Full-time Program, Evening Program, and Weekend Program.

The questions are organized by section of the reading list, i.e. from Section I to Section VIII. To download from the class website, (i) click on the module for *Lecture Material*; (ii) click on the page for the relevant section (e.g. Section I); (iii) select Old Exam Questions and Answers. Within each section the questions are ordered from those on oldest exams to those on most recent exams. Since the class has changed over time, it is best to start with the highest numbered question and work toward the lowest numbered question.

Working old exam problems is an **essential** part of successfully studying for the take home exams and final. The best way to do these problems as a study aide IS NOT to read the question and then read the answer. The best way is to simulate your actual exam experience: read the question, write your answer, and then compare your answer to mine.

COMMUNICATION

I am available to meet with students privately out of class via phone or Zoom. If you wish to meet, please e-mail me to make an appointment. My e-mail address is John.Huizinga@ChicagoBooth.edu . It will speed up the process if you begin the subject line of your message with BUS 33040.

If you prefer e-mail, you can e-mail me with class related questions at any time. I will try to hit a 24-hour turnaround on e-mail, though that may not always be the case, depending on the flow of incoming questions.

At times I will initiate e-mail communication with students. You are responsible for the content of all the e-mails I send you. Furthermore, you are responsible for ensuring that your Booth e-mail account and your University e-mail account (which is distinct from your Booth e-mail account) is forwarding content to an account that you read regularly. This forwarding of your University e-mail account is necessary because the e-mail system in Canvas, which I may use at times, uses your University e-mail account.

GRADES

Your course grade will be determined by two take-home exams and a take-home final exam. These exams will test your ability to apply the economic models we develop to problems you have not seen before. This will require you to master using the models and make informed judgments in new situations. Memorization will not be sufficient.

The course also contains nine OPTIONAL online quizzes, each of which contains 10 True/False questions and has a 20 minute time limit. These quizzes are designed to (i) provide feedback on whether a student has a basic understanding of the models and their components; and (ii) give students a chance to improve their grade. These quizzes are not designed to push students or to determine if they can apply an economic model to new situations. In this sense, doing well on quizzes is likely to be necessary, but not sufficient, for doing well on the take-home exams and final.

a) Take-home exam #1: 36 points

This will be available on Friday, January 29 at 9:00 a.m. and will be due Monday, February 1 at 11:59 p.m. The exam is open-book and open notes and is designed to be completed in one-hour, though there is no time limit enforced. The focus of the exam will be the application of the Classical model of the Labor Market.

It will be a violation of the Honor Code to discuss the take-home exam with anyone except the professor or the TA during the time students are completing the exam.

b) Take-home exam #2: 54 points

This will be available on Friday, February 19 at 9:00 a.m. and will be due Monday, February 22 at 11:59 pm. The exam is open-book and open notes and is designed to be completed in one-hour and thirty minutes, though there is no time limit enforced. The focus of the exam will be the application of the integrated Classical model of the Labor Market and closed-economy Goods Market.

It will be a violation of the Honor Code to discuss the take-home exam with anyone except the professor or the TA during the time students are completing the exam.

c) Take-home Final: 180 points

This will be available on Friday, March 12 at 9:00 a.m. and will be due Friday, March 19 at 11:59 pm. The exam is open-book and open notes and is designed to be completed in three hours, though there is no time limit enforced. The focus of the exam will be the application of the complete Classical model.

It will be a violation of the Honor Code to discuss the final with anyone except the professor or the TA during the time students are completing the exam.

d) Quizzes:

Quizzes can be taken in two ways: as a for-credit quiz or as a not-for-credit quiz. The questions are identical on the for-credit and not-for-credit quizzes. The quizzes differ because a for-credit quiz can only be taken during a specified window of time (see schedule below) during which the answers to the quiz are not available – not even to students who have completed the quiz. A not-for-credit quiz can only be taken after the deadline for taking a for-credit quiz has passed, at which point the answers to the quiz are available to everyone.

Students who take a for-credit quiz will receive a for-credit quiz score. For-credit quiz scores can never lower a student's course grade. However, if (at the end of the quarter) the cumulative performance on for-credit quizzes is good enough then students can raise their course grade one level (e.g. from a B to a B+ or from a B+ to A-).

Students who want to take a quiz for-credit may submit that quiz only once. *Submitting a for-credit quiz more than once, for ANY reason, invalidates any score for that quiz. No exceptions.* Students can take a not-for-credit quiz as many times as they want.

There will be 9 online quizzes. Quiz 1 covers material from Week 1 of class, Quiz 2 covers material from Week 2 of class, and so on.

The module *Online Quizzes* has an Information page that has a link to a file that describes exactly which parts of the Class Notes and textbook readings are covered in each online quiz.

Each online quiz has two practice versions, with questions that differ from each other and differ from the questions on the corresponding for-credit quiz.

A student who plans to take a quiz for credit should prepare by taking the accompanying practice quizzes. The practice versions allow a student to master the technical aspects of taking the quiz and to get a sample of the type of questions that will be asked. Answers to practice quizzes are always available immediately. Students can take practice quizzes as often as they like. Taking a practice quiz never affects a student's grade.

Practice quizzes for Quiz 1 through Quiz 5 will be available on the first day of class in Week 1. Practice quizzes for Quiz 6 through Quiz 10 will be available on the first day of class in Week 5.

All quizzes can be found in the module *Online Quizzes* on the class website.

Here is the schedule for when the for-credit quizzes will be available and are due.

FOR-CREDIT QUIZ SCHEDULE

Quiz 1 available	Thursday, Jan 14	6:00 a.m.
Quiz 1 deadline	Tuesday, Jan 19	6:00 p.m.
Quiz 2 available	Thursday, Jan 21	6:00 a.m.
Quiz 2 deadline	Tuesday, Jan 26	6:00 p.m.
Quiz 3 available	Thursday, Jan 28	6:00 a.m.
Quiz 3 deadline	Tuesday, Feb 2	6:00 p.m.

Quiz 4 available	Thursday, Feb 4	6:00 a.m.
Quiz 4 deadline	Tuesday, Feb 9	6:00 p.m.
Quiz 5 available	Thursday, Feb 11	6:00 a.m.
Quiz 5 deadline	Tuesday, Feb 16	6:00 p.m.
Quiz 6 available	Thursday, Feb 18	6:00 a.m.
Quiz 6 deadline	Tuesday, Feb 23	6:00 p.m.
Quiz 7 available	Thursday, Feb 25	6:00 a.m.
Quiz 7 deadline	Tuesday, Mar 2	6:00 p.m.
Quiz 8 available	Thursday, Mar 4	6:00 a.m.
Quiz 8 deadline	Tuesday, Mar 9	6:00 p.m.
Quiz 9 available	Thursday, Mar 11	6:00 a.m.
Quiz 9 deadline	Tuesday, Mar 16	6:00 p.m.

Postings of for-credit quiz answers and release of not-for-credit quizzes occur 30 minutes after the for-credit quiz deadline.

You are on your honor that quizzes taken for-credit are to be done without any assistance of any kind from anyone else. Assistance and discussion on practice quizzes and not-for-credit quizzes is both allowed and encouraged.

When taking a quiz for-credit you will be allowed 20 minutes to complete the quiz. The 20 minute time limit starts as soon as you begin the quiz and cannot be stopped for any reason. The time constraint means that even though the quizzes are open book and open notes, you will not have much time to search through materials to find an answer. Quizzes that are not submitted within the 20 minute time limit do not receive a score. **YOU ARE RESPONSIBLE FOR KEEPING TRACK OF YOUR TIME ON THE QUIZ.**

NOTE 1: For those who take a for-credit quiz, your for-credit score is calculated as the maximum (0, raw score -5). This rewards you if you exceed the expected raw score for guessing and ensures that you can never be penalized for taking a quiz. Keep in mind, Canvas will show your raw score, not your for-credit score.

The sum of your for-credit scores for Quiz 1 through Quiz 5 will be entered into the Canvas gradebook shortly after Quiz 5 is due. The sum of your for-credit scores for Quiz 6 through Quiz 9 will be entered into Chalk shortly after Quiz 9 is due.

NOTE 2: Please read the additional info file regarding online quizzes that is posted to the class website. To access the file (i) click on the module for *Online Quizzes*; (ii) click on the page *Information*; and (iii) select the link for Additional Info Regarding Online Quizzes.

REGRADE POLICY

It is important for everyone to understand my re-grade policy. You will receive written answers to the take-home and final exams. These are the same written answers provided to the grader. If, AFTER you have read the answers, you feel you were unfairly graded, then you may submit your request for a re-grade IN WRITING, TO ME. Re-grade requests SHOULD NOT be discussed at any time with the TA.

Requests for a re-grade must include a written description of WHY you feel you are entitled to more points. Your entire exam will be re-graded, your score can go up or go down, and you will receive a written reply from me explaining why changes were made or not made.

Finally, I am tough on re-grades, since otherwise the system will reward the complainers and penalize those that spend their time in more productive ways.

PROVISIONAL GRADES

Booth students no longer require provisional grades.

Non-Booth students can receive a provisional grade. To receive a provisional grade a student must have performed at an acceptable level on the take-home exams.

To receive a final grade at or above his/her provisional grade a student must show acceptable effort and understanding on the final.

HONOR CODE

Students in this class are required to adhere to the standards of conduct in the Booth Honor Code and the Booth Standards of Scholarship. You should make yourself familiar with both.

As part of the Booth Honor Code students will be asked to sign the following pledge on every quiz and exam: I pledge my honor that I have not violated the honor code during this examination.

Since students will not be taking the for-credit quizzes, take home exams, and take-home final at the same time it is imperative that students do not discuss the for-credit quizzes, take-home exams, or take-home final unless all students in the discussion have completed the work. To engage in such a discussion is a violation of the honor code. If someone begins to discuss a for-credit quiz, a take-home exam, or the take-home final exam with you and you have not completed the work, you are required to immediately inform them of the situation and terminate the conversation.

The transition to a distance learning environment will create a variety of new situations where students will be confronted with decisions that interact with the honor code. Students are expected to be conscious of their responsibility to act appropriately in all these situations.

To assist students in this regard, here is a list of honor code issues that are relevant in this course. The list is illustrative not exhaustive:

1. It is an honor code violation for students to create their own recordings of class sessions.
2. It is an honor code violation for students to download official recordings of class sessions.
3. It is an honor code violation to share links to Zoom sessions or links to recordings of Zoom sessions with anyone who is not a student in the class, unless faculty members have given explicit permission in advance. Students are expected to treat virtual meetings the same way they would treat in-person meetings – they are reserved for students enrolled in the course unless permission has been granted in advance for a visitor by a faculty member.

ATTENDANCE & IN-CLASS ANNOUNCEMENTS

I do not take attendance, but in my opinion attending lectures improves student performance on the exams and therefore leads to a better grade.

Each class will begin with announcements. These in-class announcements will be posted to the class website after the class and students are responsible for knowing what has been conveyed in the announcements regardless of whether they attend class. To access the file (i) go to the Homepage for the course; (ii) click on the link for the In-Class Announcements page.

SWITCHING SECTIONS

You may attend the lecture for either of the sections of the class, or both if you like, with no advanced notice required.

You should be aware, however, that the two sections do always finish at exactly the same place each week.

POSITIVE vs. NORMATIVE ECONOMICS

Chapter 1 of the textbook describes the difference between positive and normative economics. This distinction is among the most important things to be learned in this class.

The distinction between positive and normative is important for a couple reasons:

- a) You shouldn't be taking normative advice from an economist; good economists are likely better than you only at positive economics.
- b) The distinction helps explain why economists often disagree in public. When economists make normative economics statements they are inserting their own values, and those are likely to differ.

Other reasons economists disagree: (i) We lack the ability to conduct experiments to gather data; (ii) Changing legal and institutional environments mean the world we are studying is ever changing, this is unlike the world being studied in the physical sciences like chemistry and physics.

I will try to focus on positive, as opposed to normative economics in class. I will leave it to you to do your own normative economics, using the positive economics you learn in class.

MACROECONOMIC ANALYSIS IN THE POPULAR PRESS

By a long shot, the best is *The Economist*.
The Financial Times is next best
The Wall Street Journal is ok.