Economics 60202: Macro Theory II
Spring 2024
University of Notre Dame

Times and Locations:
Tuesdays and Thursdays, 9:00-10:45 am
JNH B079

Instructor:
Eric Sims
3020 Jenkins Nanovic Hall
esims1@nd.edu
Personal website
Course website on Canvas
Office hours: by appointment

Teaching Assistant:
Thomas Poitevin
3009 Jenkins Nanovic Hall
tpoitevi@nd.edu
Tutorials: Tuesdays, 10:30-11:45 am, location TBD

Overview:
This is the second of the required core courses in macroeconomic theory for first-year students in the PhD program. Macroeconomics is a broad field interested in the "big" questions. Why do economies grow over time, and how can they grow faster? Why are some countries rich and others poor? Why do we have business cycles? What are the causes of business cycles? How should monetary and fiscal policy be conducted, and how should they be deployed to dampen to short-run fluctuations?

Though we will look at some data, for the most part we are going to be working through sets of models in this course. Macro is better termed "aggregate" economics because it is not fundamentally different from micro, other than its focus on what happens at the aggregate (i.e., country) level. Given its aggregate focus, macro is focused on general equilibrium. We will be considering a variety of models of general equilibrium with a focus on the short run. We will typically start with frictionless models where competitive equilibria are efficient. We will then go on to consider various market frictions and failures, which open the door to thinking about aggregate policies. Most of the models we will consider will be representative agent models. There is a burgeoning research area focused on the implications of micro-level heterogeneity for macro fluctuations and policy. We will touch briefly on some of this literature, but it is important to first fully understand models without rich heterogeneity.

Modern macroeconomics is a quantitative science. As such, students will be expected to perform quantitative exercises using a computer program, most preferably MATLAB (this is the programming language for which I will offer support). You will also be asked to download Dynare, which is a set of codes used to solve, simulate, and estimate DSGE models. Many of the problem sets will feature a heavy MATLAB component. I strongly believe in "learning by doing," and I think you learn well by coding things up yourself. This quantitative work will have the added advantage of leaving you well-equipped to begin doing your own research in macroeconomics in the coming years. The TA will be doing extensive coding work with you in the tutorial sections.

Note: the official class time is two hours, 8:45-10:45. It is common in these two-hour classes to have a break in the middle. I will dispense with the break. We will instead start a bit later, at 9:00 am each week. Class will therefore run 9-10:45 am and meet twice a week.

Evaluation and Grading

Evaluation for the course will be based on six problem sets, a midterm exam, and a final exam.

The six problem sets will require you to solve problems and, in many cases, to produce quantitative output from a computer. You may, and in fact should, work together on problem sets, but you must turn in your own problem set. You may either handwrite or type solutions to the problem sets. Either way, pdfs of problem set solutions (scanned if you handwrite) should be uploaded online via Canvas. Problem sets will be loosely graded, with three possible scores: A, B+, or B. An A is good work, a B+ constitutes acceptable work that nevertheless needs improvement, and a B is unacceptable. In aggregate, the six problem sets will account for 30 percent of your final course grade.

The midterm and final will be written exams that must be completed without references to notes. These will each be two hours and administered at the times laid out below. The midterm will count for 30 percent of your grade and the final for 40 percent.

Due dates for problem sets and dates for exams are below:

Problem Sets	Exams
January 26	February 29 (midterm)
February 9	May 9 (final, 10:30-12:30)
February 23	
March 22	
April 5	
May 1	

Textbook and Readings

There is no single assigned textbook for the course. Rather, class lectures will draw on a number of different sources, some of which are listed below. In addition, I will provide you with detailed, typed lecture notes that are meant to be more or less self-contained. Some papers will be assigned as well.

Gali, Jordi (2015). *Monetary Policy, Inflation, and the Business Cycle*. Princeton University Press. Link.

Ljungqvist, Lars and Thomas Sargent (2018). *Recursive Macroeconomic Theory*. MIT Press. Link.

McCandless, George (2008). *The ABCs of RBCs*. Harvard University Press. Link.

Romer, David (2019). *Advanced Macroeconomics*. McGraw Hill. Link.

Course Website
I will use Canvas to host course materials. Lecture notes and slides will also be available on the site, as will any academic papers.

Office Hours
Office hours are by appointment or by drop-in. You are free to stop in at any time, though I may not be able to meet with you then.

Teaching Assistant
The teaching assistant for the course is Thomas Poitevin. Tutorial sections will be held Tuesdays from 5-6:15 in JNH B032. He will be doing many interactive quantitative exercises in tutorials, so you should bring a laptop. He will hold regular office hours at a time and location of his choosing.

Topics and Outline
The following is a tentative list of topics, readings, and an outline for the course:

- Week 1 (January 16 and January 18)
    - Topics: Consumption-saving models: an introduction to general equilibrium
    - Readings:
        - My lecture notes
    - TA session: no meeting
- Week 2 (January 23 and January 25)
    - Topics: Neoclassical growth model
    - Readings:
        - My lecture notes
        - McCandless chapters 4-5; Romer chapter 2; Ljungvist and Sargent chapters 3-4
    - Problem Set 1: due January 26
    - TA session: review of value function iteration
- Week 3 (January 30 and February 1)
    - Topics: Log-linearization and solving linearized models
    - Readings:
        - My lecture notes
        - McCandless chapter 6
    - TA session: introduction to Dynare
- Week 4 (February 6 and February 8)
    - Topics: real business cycle models

    - Readings:
        - My lecture notes
        - McCandless chapter 6, Romer chapter 5
        - King and Rebelo (2000). "Resuscitating Real Business Cycles." *Handbook of Macroeconomics*. Link.
        - Campbell (1994). "Inspecting the Mechanism: An Analytical Approach to the Stochastic Growth Model." *Journal of Monetary Economics*. Link.
    - Problem Set 2: due February 9
    - TA Session: TBD
- Week 5 (February 13 and February 15)
    - Topics: real business cycle models, fiscal policy
    - Readings:
        - My lecture notes
        - Baxter and King (1993). "Fiscal Policy in General Equilibrium." *American Economic Review*. Link.
        - Aiyagari, Christiano, and Eichenbaum (1992). "The Output, Employment, and Interest Rate Effects of Government Consumption." *Journal of Monetary Economics*. Link.
        - McGrattan (1994). "The Macroeconomic Effects of Distortionary Taxation." *Journal of Monetary Economics*. Link.
    - TA Session: TBD
- Week 6 (February 20 and February 22)
    - Topics: real business cycle model extensions
    - Readings:
        - My lecture notes
        - McCandless chapters 8-9
        - Burnside, Eichenbaum, and Rebelo (1993). "Labor Hoarding and the Business Cycle." *Journal of Political Economy*. Link.
        - Burnside and Eichenbaum (1996). "Factor-Hoarding and the Propagation of Business-Cycle Shocks." *American Economic Review*. Link.
        - Hansen (1985). "Indivisible Labor and the Business Cycle." *Journal of Monetary Economics*. Link.
    - Problem Set 3: due February 23
    - TA Session: TBD
- Week 7 (February 27)
    - Topics: wedges and business cycle accounting
        - My lecture notes
        - Chari, Kehoe, and McGrattan (2007). "Business Cycle Accounting." *Econometrica*. Link.
    - Midterm: February 29 (in class)
    - TA Session: Midterm review session
- Week 8 (March 5 and March 7)
    - Topics: financial constraints

    - Readings:
        - My lecture notes
        - Carlstrom and Fuerst (1997). "Agency Costs, Net Worth, and Business Fluctuations: A Computable General Equilibrium Analysis." *American Economic Review*. Link.
        - Jermann and Quadrini (2012). "Macroeconomic Effects of Financial Shocks." *American Economic Review*. Link.
    - TA Session: TBD
- Week 9 (March 19 and March 21)
    - Topics: New Keynesian models
    - Readings:
        - My lecture notes
        - Romer chapter 6, McCandless chapter 10
        - Gali (2018). "The State of New Keynesian Economics: A Partial Assessment." *Journal of Economic Perspectives*. Link.
    - Problem Set 4: due March 22
    - TA Session: TBD
- Week 10 (March 26 and March 28)
    - Topics: interest rate rules and optimal monetary policy
    - Readings:
        - My lecture notes
        - Clarida, Gali, and Gertler (1999). "The Science of Monetary Policy: A New Keynesian Perspective." *Journal of Economic Literature*. Link.
    - TA Session: TBD
- Week 11 (April 2 and April 4)
    - Topics: zero lower bound
    - Readings:
        - My lecture notes
        - Guerrieri and Iacoviello (2015). "OccBin: A Toolkit for Solving Dynamic Models with Occasionally Binding Constraints Easily." Journal of Monetary Economics. Link.
        - Christiano, Eichenbaum, and Rebelo (2011). "When is the Government Spending Multiplier Large?" *Journal of Political Economy*. Link.
    - Problem Set 5: due April 5
    - TA Session: TBD
- Week 12 (April 9 and April 11)
    - Topics: New Keynesian model with price and wage stickiness
    - Readings:
        - My lecture notes
        - McCandless chapter 11
        - Erceg, Henderson, and Levin (2000). "Optimal Monetary Policy with Staggered Wage and Price Contracts." *Journal of Monetary Economics*. Link.
    - TA Session: TBD

- Week 13 (April 16 and April 18)
  - Topics: medium-scale DSGE models
  - Readings:
    - My lecture notes
    - Romer chapter 7
    - Christiano, Eichenbaum, and Evans (2005). "Nominal Rigidities and the Dynamic Effects of a Shock to Monetary Policy." *Journal of Political Economy*. Link.
    - Smets and Wouters (2007). "Shocks and Frictions in US Business Cycles: A Bayesian DSGE Approach." *American Economic Review*. Link.
  - TA Session: TBD
- Week 14-15 (April 23, April 25, April 30)
  - Topics: two-agent New Keynesian models (TANK), introduction to HANK
  - Readings:
    - My lecture notes
    - Debortoli and Gali (2018). "Monetary Policy with Heterogeneous Agents: Insights from TANK Models." Working paper. Link.
  - Problem Set 5: due May 1
  - TA Session: TBD