ECON 60202
Graduate Macro Theory II
Spring 2025

Basic Course Information

Instructor: Jasmine Xiao
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3033 Nanovic Hall
Lectures: **Mon/Wed 1:15pm-3:15pm**
Flanner Hall 114
Office hours: By appointment
3033 Nanovic Hall or Zoom: https://notredame.zoom.us/j/2986893992
TA: Nan Jiang (njiang@nd.edu)
Course Website: https://canvas.nd.edu/courses/106238

Course Description

This course is an introduction to dynamic macroeconomic theory for the first year PhD students. It is based on general equilibrium theory and recursive methods and language. We will cover three modules: **real business cycle** models, **new Keynesian** models, and models with **incomplete markets**. Our agenda centers on learning how to formulate and solve optimal policy problems. You will also be expected to perform quantitative exercises using MATLAB, as we will work with some of these models in conjunction with data, discussing how to calibrate, estimate, and evaluate these models. By the end of this course, you should be able to speak the recursive language, write code in MATLAB, and be able to apply these techniques to interesting questions in Macro, Labor, Growth and Development or other areas.

Grade Components and Assignment Details

Component	**Weight**	**Due date(s)**
Problem sets (x5)	25% (5% each)	Jan 31st, Feb 14th, Mar 7th, Mar 31st, Apr 25th **Before noon**
Midterm exams (x2)	50% (25% each)	**February 26st** **April 2nd**
Final exam	25%	**April 30th** (during class)

Each problem set will be graded on a 5-point scale, whereas each exam will be graded on a 100-point scale, and points converted into grades according to the following cutoffs.

Cutoff	90	85	80	75	70
Grade	A	A-	B+	B	B-

Problem Sets

A total of 5 problem sets will be posted on the Sakai course page throughout the semester. A problem set approximately covers two weeks of materials. Each problem set is 5%.

You are encouraged to work through the problems in a study group, but every student must hand in his/her own uniquely written assignment. You may submit either a hard-copy or a digital version of your assignments. You must submit your assignments **before noon** on the submission date. **Late problem sets will not be accepted for credit.**

Exams

There will be two midterms and one final exam. **Each exam is 2 hours. All exams will be closed-book, and you cannot communicate with your classmates during the exam.** While the final exam is cumulative, the final part of the course will receive proportionally more weight.

The exams are designed to test whether you really understand the concepts and can apply them in solving problems. Hence you are expected to study for the exams. Your study materials should be:

- Lecture notes & videos
- Problem sets
- Progress checklists
- Practice exam

Textbooks and Other References

There is no single assigned textbook for the course. Lectures will draw on a number of different sources. The main source of reference for each section of the course is:

1. RBC Models
   - Prof. Eric Sims' notes: https://sites.nd.edu/esims/courses/ph-d-macro-theory-ii/

2. New Keynesian Models
   - *Monetary Policy, Inflation, and the Business Cycle*, by Jordi Gali. Princeton University Press.

3. Models with Incomplete Markets
   - *Recursive Macroeconomic Theory*, by Lars Ljungqvist and Thomas J. Sargent. The MIT Press.

The other widely used graduate level textbooks include:

- *Recursive Methods in Economic Dynamics*, by Nancy L. Stokey, Robert E. Lucas Jr., and Edward C. Prescott. Harvard University Press.
- *Advanced Macroeconomics*, by David Romer. McGraw-Hill Economics.
- *Numerical Methods in Economics*, by Kenneth L. Judd. The MIT Press.

Other useful textbook-like references include:

- *Macroeconomic Theory*, by Dirk Krueger, 2012.
- *Quantitative Macroeconomics: An Introduction*, by Dirk Krueger, 2007.
- *Real Macroeconomic Theory*, by Per Krusell, 2014.

- *Macroeconomics with Financial Frictions: A Survey*, by Marcus K. Brunnermeier, Thomas M. Eisenbach and Yuliy Sannikov, 2012.
- *Financial Frictions in Macroeconomic Fluctuations*, by Vincenzo Quadrini, 2011.

I have uploaded the pdf files of these texts on Sakai. In addition, you are also encouraged to read (at least some of) the seminal papers for the topics we are going to study:

- Kydland, Finn and Ed Prescott. Time to Build and Economic Fluctuations. *Econometrica*, 1982.
- King, Robert and Sergio Rebelo. Resuscitating Real Business Cycles. *Handbook of Macroeconomics*, 2000.
- Hayashi, Fumio. Tobin's Marginal *q* and Average *q*: A Neoclassical Interpretation. *Econometrica*, 1982.
- Chari, VV, Patrick Kehoe, and Ellen McGrattan. Business Cycle Accounting. *Econometrica*, 2007.
- Hansen, Gary. Indivisible Labor and the Business Cycle. *Journal of Monetary Economics*, 1985.
- Clarida, Richard, Jordi Gali, and Mark Gertler. The Science of Monetary Policy: A New Keynesian Perspective. *Journal of Economic Literature*, 1999.
- Gali, Jordi and Olivier Blanchard. Real Wage Rigidities and the New Keynesian Model. *Journal of Money, Credit, and Banking*, 2007.
- Aiyagari, Rao. Uninsured Idiosyncratic Risk and Aggregate Saving. *Quarterly Journal of Economics*, 1994.
- Kiyotaki, Nobuhiro and John Moore. *Credit Cycles*. *Journal of Political Economy*, 1997.
- Bernanke, Ben, Mark Gertler and Simon Gilchrist. The Financial Accelerator in a Quantitative Business Cycle Framework. *Handbook of Macroeconomics*, 1999.
- Carlstrom, Charles, and Tim Fuerst. Agency Costs, Net Worth, and Business Fluctuations: A Computable General Equilibrium Analysis. *American Economic Review*, 1997.

Progress Checklists

I will be giving out a progress checklist for each lecture, containing a list of ``*Key concepts*'', the equations ``*You should be able to derive*'', and the results ``*You should be able to explain*''. I will also list the relevant readings for the lecture here.

Software

This course requires access to a computer with a Matlab installation. You can it to your personal computer with your ND account at: https://oit.nd.edu/services/software/software-downloads/matlab/. You also need to download Dynare from https://www.dynare.org/.

Tentative Weekly Schedule

	Week	Topic	Monday class	Wednesday class	Problem set due
RBC	Jan 13th	1. Neoclassical Growth Model	*N/A*	1. NGM	**PS #1** Jan 31st (Fri)
	Jan 20th	2. Basic RBC	*Martin Luther King Jr. Day: No class*	2. Basic RBC	
	Jan 27th	3. Labor in RBC	Special: Dynare demo	3. Labor	
	Feb 3rd	4. RBC with money	4. Money	5. Preferences	**PS #2** Feb 14th (Fri)
	Feb 10th	5. RBC with non-CRRA preferences 6. RBC with fiscal policy	6. Fiscal policy	7. Adjustment cost	
	Feb 17th	7. RBC with adjustment costs 8. Imperfect competition	8. Imperfect competition	9. Basic NK (I)	**PS #3** Mar 7th (Fri)
	Feb 24st	**Midterm 1**	*Review before Midterm*	*Midterm 1* **February 26th**	
New Keynesian	Mar 3rd	9. The Basic NK model	9. Basic NK (I)	9. Basic NK (II)	
	Mar 10th	**Spring Break**			**PS #4** Mar 31st (Mon)
	Mar 17th	9. The Basic NK model	9. Basic NK (II)	*Buffer*	
	Mar 24st	10. Monetary policy design in NK models 11. Monetary policy tradeoffs	10. MP design	11. MP tradeoff	
	Mar 31th	**Midterm 2**	*Review before Midterm*	*Midterm 2* **Apr 2nd**	
Incomplete markets	Apr 7th	12. Consumption insurance	*Midterm 2 + NK Review*	12. Consumption insurance	**PS #5** Apr 25th (Fri)
	Apr 14th	13. The Aiyagari model 14. Collateral constraint	13. Aiyagari	14. Collateral (I)	
	April 21th		*Easter Monday: No class*	14. Collateral (II)	
	April 28th	**Final**	*Review before Final*	*Final Exam* **April 30th**	

Updated on April 4, 2025