

# Syllabus for Economics 721: Graduate Macroeconomics

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Spring 2017 (Jan 11 - Apr 26)  
[Updated Jan 2017]

- Lectures: Monday & Wednesdays, 10:30am-11:45am, Carolina Hall 104
- Recitation: Fridays (unless otherwise notified), 1pm-2:15pm, Smith 107
- Office hours:
  - Professor Phan: Mon noon-1pm, and by appointment, Gardner 301
  - TA Andrew Hanson: Tues and Thurs 10-11am, Gardner 416
- Class website: Sakai page

## Description

This course continues to study the theoretical foundations of modern macroeconomics. In particular, we study the theories of *real business cycles* in closed and open economies and *monetary economics*. We will also cover some selected topics at the end of the semester if time permits. Even though this course focuses on theory, I will motivate each module with empirical facts and historical background. Throughout the course, I encourage the practice of three important values in scientific research: curiosity (asking why), creativity (finding your own answers), and critical thinking (being skeptical of existing theories, including your own: e.g., do the assumptions make sense? do the models match the data?).

## Reading material

Please check Sakai for reading materials for each class. Many reading materials will be posted online.

- Textbooks (see Sakai/Resources/Books)
  - Dirk Krueger, *Quantitative Macroeconomics: An Introduction*, 2007 ([http://www.fgv.br/professor/ferreira/QuantMacro%20\(2\).pdf](http://www.fgv.br/professor/ferreira/QuantMacro%20(2).pdf)).
  - Uribe and Schmitt-Grohe, *Open Economy Macroeconomics*, 2015 (<http://www.columbia.edu/~mu2166/book/>)
  - Gali, *Monetary Policy, Inflation and the Business Cycle*, 2008 (see Sakai)

- Optional texts:
  - \* Romer, *Advanced Macroeconomics*, 2012
  - \* Ljungqvist, L. and T. Sargent. *Recursive Macroeconomic Theory*, 2000
- Various published research papers and working papers will be posted on Sakai

## Grades

- Homework assignments: 10%
- Midterm exam 1: 30%
- Midterm exam 2: 30%
- Final exam: 30%

## Administrative rules

- *Academic integrity*: I highly value academic integrity. I expect each of you to follow the UNC Honor System.
- *Homework*: I highly encourage working in groups on homework. Each group only needs to turn in one homework write-up.
- *Not handing in work on time*: If you miss a deadline, then your score will be halved for each late day. (So your late score = actual score \* 0.5<sup>numbers of late days</sup>). In other words, please do not miss a deadline.
- *Missing a midterm*: If you miss a midterm, the distribution of grades will be shifted towards the final (for example, if you miss midterm 1, then your final exam will worth 60% of your grades. You cannot miss the final exam.
- *Appeals* regarding the grading of a test must be submitted to me or to an Economics Department secretary in writing within one week of your receipt of the graded work. The original test must accompany the appeal. The TA or I will re-grade the entire test. Note that this may lead to a lower overall grade. Your complaint has to be in writing and in detail.
- *Email policy*: I will do my best to respond to e-mail within 24 hours on a weekday, 48 hours on a weekend, according to the following policy:
  1. I only respond to e-mails posing questions that can be answered in a sentence or two. For detailed questions, please see me after class or in office hours.
  2. I do not reply to e-mails that request information that can be found on the web or the syllabus, so you should check those places first.
  3. I do not reply to e-mails regarding the results of graded material – for that, please see me after class or in office hours.

## Tentative exam dates

- Midterm 1: Mon Feb 20
- Midterm 2: Wed Mar 22
- Final exam: Fri May 6 at 4pm (in classroom)

University holidays (no classes)

- MLK day: Mon Jan 16
- Spring break: Mar 11 - 19
- Good Friday: Fri Apr 14

## Tentative outline of topics

Note: the outline below is only tentative and is subject to change. Please see Sakai and [toanphan.org/721](http://toanphan.org/721) regularly for the latest updates.

### Real business cycles in closed economy

1. Motivation and data.
2. Basic RBC model.
3. Social planner problem.
4. Steady state analysis.
5. Dynamic analysis.
6. Calibration.
7. Full RBC model with stochastic technology shocks.
8. Evaluating the model.

### Real business cycles in open economy

1. Endowment model.
2. Model with capital.
3. SOE (small-open-economy) RBC model.

### Monetary economics

1. New Keynesian model in two period.
2. Analysis of monetary policies in the two-period setting
3. Infinite-horizon New Keynesian model
4. Optimal monetary policies

5. SOE model with nominal rigidities
6. Nominal exchange rate policies
7. New Keynesian model with debt deleveraging and zero lower bound: theory and evidence

**Financial frictions** (subject to change and availability of time)

1. Kiyotaki and Moore model