

ECON411: Advanced Macro
Fall 2017
Section 01: MWF 9:00-9:50, Tyler 133

CONTACT INFORMATION

Professor: Nate Throckmorton

E-mail: nat@wm.edu

Office: Tyler Hall 268

Office Hours: Wed. 10:00-noon and Thurs. 8:00-9:00

or by appointment (please e-mail at least one day in advance)

BOOKS

- (Required) McCandless, George (2008): *The ABCs of RBCs: An Introduction to Dynamic Macroeconomic Models*. (Cambridge, MA: Harvard University Press)
- (Required) Walsh, Carl E. (2012): *Monetary Theory and Policy*, 3rd ed. (Cambridge, MA: The MIT Press)

COMPUTING

In addition to theoretical tools, modern macroeconomics often requires extensive computational expertise to solve and simulate models. At several points during the semester, we will integrate the use of MATLAB, which is the most commonly-used computing environment in macroeconomics. Throughout the semester, you may want a guide for learning MATLAB so here are a few options:

- Gilat, Amos (2010): *MATLAB: An Introduction with Applications*, 4th ed. (Hoboken, NJ: John Wiley & Sons)
- Miranda, Mario J. and Paul L. Fackler (2002): *Applied Computational Economics and Finance*. (Cambridge, MA: The MIT Press)
- Pratap, Rudra (2009): *Getting Started with MATLAB: A Quick Introduction for Scientists and Engineers*. (New York, NY: Oxford University Press)
- Judd, Ken (1998): *Numerical Methods in Economics*. (Cambridge, MA: The MIT Press)

There are also countless tutorials and publicly available MATLAB scripts (including my own). W&M has a campus-wide MATLAB license. Please visit <http://www.wm.edu/offices/it/services/software/licensedsoftware> for instructions.

PREREQUISITES AND COURSE DESCRIPTION

This course builds on the theory and tools developed in Intermediate Macro (ECON 304) and Calculus I (MATH 111). We will learn to analytically and numerically solve general equilibrium models, the workhorse models in modern macroeconomics. In the first half of the course, we will study economic fluctuations and develop intuition about what drives these fluctuations through real business cycle models. In the second half of the course, we will learn how to analyze monetary and fiscal policy. This section will begin with perfectly competitive models with flexible wages and prices and then move toward monopolistically competitive models with real and nominal rigidities.

READING ASSIGNMENTS

Reading assignments are listed on the course outline and will be announced in class. Please try to do all your readings as scheduled. I understand that this is not always possible for a variety of reasons but falling too far behind in the readings is not a very good practice. Lectures will make more sense if you do the assigned reading prior to the lecture. Moreover, each new section will build upon the concepts learned in the earlier sections, and you will not be able to understand the current lectures unless you understood the previous lectures. Remember, some material in the text will not be repeated in lecture; some concepts in lecture may not be found in the textbook.

EXAMS

We will have one in-class midterm exam and a comprehensive final exam:

| | | |
|---------------------------|--------------------------|--------------------------|
| Friday, Oct 20 | Midterm Exam | 15% of your course grade |
| Wednesday, Dec 13, 9-noon | Comprehensive Final Exam | 25% of your course grade |

If you miss the midterm exam and you have a documented excuse from the Dean's office, the exam's weight will shift to the final exam. Excuses should be documented as far in advance as possible. If you miss the midterm exam without a valid excuse, you will receive a zero and there will be no chance to earn those course points.

ASSIGNMENTS

- In total, there are 5 problem sets, making up 25% of your course grade.
- There are 3 writing assignments worth 35% of the course grade. There is a brainstorming session (5%), a literature review and research proposal (10%), and a final paper (20%). The main goal is to build up to the final paper gradually in a manageable way where rewriting is an important part of the process.

All assignments must be typeset in L^AT_EX, and some of the assignments will require MATLAB. All assignments must be turned in on time on the due date by 5pm. Late work will *not* be accepted. I encourage you to work together, and you may work in groups of 3 or less. I will not assign groups nor will I police them; you may change groups throughout the semester. Assignments are graded on accuracy as well as on effort. Answers that are vague, difficult to read, or incomplete will not receive full credit.

GRADING PROCEDURES

The classes will be a mixture of lecture, discussion, MATLAB demonstrations, and review. The grading scheme follows:

| Activity | Points | Percent |
|-------------------------|--------|---------|
| Problem Sets (5@50) | 250 | 25% |
| Writing Assignments | 350 | 35% |
| Midterm Exam | 150 | 15% |
| Final Exam (cumulative) | 250 | 25% |

There are 1000 total points available in this class. Please note that it is possible to miss the next highest grade by only a few points. This may happen, so be aware of this possibility. If you want to appeal any grading, you must contact me no later than one week from the date I post your score. The following table indicates the minimum number of points needed to guarantee a certain grade.

| Grade | Minimum Points | Percent |
|-------|----------------|---------|
| A | 920 | 92 |
| A- | 880 | 88 |
| B+ | 850 | 85 |
| B | 800 | 80 |
| B- | 770 | 77 |
| C+ | 740 | 74 |
| C | 700 | 70 |
| C- | 670 | 67 |
| D+ | 640 | 64 |
| D | 580 | 58 |
| D- | 550 | 55 |
| F | <550 | <55 |

If the *median* grade at the end of the course falls below 72%, then each student's final grade will be adjusted upward by the same number of points to achieve a class median of 72%. For example, if the median grade is 700/1000 points, 20 points will be added to every student's grade. Note that this does not mean final grades are based on a predetermined bell curve.

HONOR CODE

I expect everyone to follow the Honor Code. Please see your student handbook for details. "As a member of the William and Mary community, I pledge on my honor not to lie, cheat, or steal, either in my academic or personal life. I understand that such acts violate the Honor Code and undermine the community of trust, of which we are all stewards." Financial and economic crises are precipitated by breeches of trust, so you must understand this is not only very important to me but also to our entire society. I will not hesitate to punish violators of the Honor Code.

STUDENT ACCESSIBILITY SERVICES

It is the policy of The College of William & Mary to accommodate students with disabilities and qualifying diagnosed conditions in accordance with federal and state laws. Any student who feels s/he may need an accommodation based on the impact of a learning, psychiatric, physical or chronic health diagnosis should be referred to Student Accessibility Services (SAS) staff at 757-221-2509 or at sas@wm.edu. SAS staff will work with you to determine if accommodations are warranted, and if so, to help you obtain an official letter of accommodation. For more information please see www.wm.edu/sas.

TENTATIVE COURSE OUTLINE

This is a tentative outline. I encourage you to independently work through these resources. Each topic will take several class meetings. I will announce any modifications to this schedule in class.

1. **Basic Dynamic General Equilibrium Model**

Readings: McCandless (2008, Chapter 3), Wickens (2012, Chapter 2, on blackboard)

2. **Recursive Methods and Dynamic Programming Introduction**

Readings: McCandless (2008, Chapters 4-5), Sargent (1987a, Chapter 1, on blackboard)

3. **Linear Rational Expectations Models and the Lucas Critique**

Readings: McCandless (2008, Chapter 6), Dejong & Dave (2011, Chapters 2, 4, on blackboard)

4. **Real Business Cycle Models**

Readings: Cooley (1995, Chapter 1, on blackboard), Romer (2011, Chapter 5, on blackboard)

5. **Monetary Theory**

Readings: McCandless (2008, Chapter 8-9), Walsh (2012, Chapters 1-3)

6. **New Keynesian Models**

Readings: McCandless (2008, Chapter 10-11), Walsh (2012, Chapter 8)

Tentative (except exams) due dates for graded items:

1. Brainstorming Session, Friday, Sept 8
2. Problem set #1, Friday, Sept 15
3. Problem set #2, Friday, Sept 29
4. Problem set #3, Friday, Oct 13
5. Midterm Exam, Friday, Oct 20
6. Literature Review, Friday, Oct 27
7. Problem set #4, Friday, Nov 10
8. Problem set #5, Friday, Dec 1
9. Final Paper, Friday, Dec 8
10. Final Exam, Wednesday, Dec 13, 9-noon

Other important dates:

1. Add/drop ends, Sept 8
2. Fall break, no class Oct 16
3. Last Day to Withdraw, Oct 27
4. Thanksgiving, no class Nov 22 and 24