

# ECON 7010 - MACROECONOMICS I

Fall 2015

Tuesday 2:40-5:40pm

BAS S337

**Instructor:** Jason DeBacker

**Office:** BAS N306

**Office Hours:** Tuesday 11:15am-1:45pm, Thursday 12:30pm-3:00pm; or by appointment

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## Useful texts:

1. *Dynamic Economics*, by Jerome Adda and Russell Cooper, MIT Press, 2002.
2. *The ABCs of RBCs: An Introduction to Dynamic Macroeconomic Models*, by George McCandless, Harvard University Press, 2008.
3. *Recursive Macroeconomic Theory*, by Lars Ljungqvist and Thomas J. Sargent, MIT Press, 2004.

**Webpage:** Announcements, problem sets, and additional readings will be posted to the class website which can be found at: <http://mtweb.mtsu.edu/jdebacker/Macro1.html>.

**Course Description:** This is the first course in the PhD macroeconomics sequence. The focus of the course is dynamic economics, both the solutions to dynamic optimization problems and the characterization of the equilibria of dynamic economies. The tools and concepts of this course are applied in all branches of modern economics. The presentations will stress both general results on these topics as well as applications in macroeconomics.

There will be some overlap with the material presented in Microeconomics I, particularly in the first few months. The overlap is intentional and will provide ample opportunity to learn about the basics of individual choice problems and equilibrium outcomes in dynamic stochastic settings.

**Semester Plan:** The semester plan, as well as the exam dates, are attached to this document. As the semester proceeds, there may be changes in the dates certain material will be presented. I will announce any changes to the schedule and then post them on the course webpage. The exam dates will not change.

**Class Preparation:** Students are expected to have read the relevant materials prior to their presentation in class and to review material covered in the previous classes. I expect every student to be able to participate in classroom discussions.

**Homework:** I will assign 6 problem sets over the course of the semester. I encourage you to work in groups and/or consult with other students. However, I will not accept carbon copies of other students' work. These problem sets are intended as preparation for the exams and should be viewed as such. Homework will be collected at the beginning of the class on the due date. Submissions after the due date will not be accepted.

**Exams:** There are three exams in the course; two midterm exams and a final exam. These exams will consist of analytical problems and short answer questions that test your ability to apply the economic concepts that you will learn through the lectures, problem sets, and readings. Missed exams generally will be treated as zeroes. The exception is if you have a family emergency or serious personal illness. Documentation of the emergency or illness will be required, and you must make arrangements promptly to take the exam at another time.

If you miss an exam with a valid excuse, then the other exams will be re-weighted. There are **no make-up exams**. The first midterm exam will be given on **September 22**, the second midterm exam will be given on **November 10**, and the final exam will be given on **Tuesday, December 8** from 3:30-5:30pm, according to the schedule given by the Registrar's Office (<http://www.mtsu.edu/registration/fall-exams.php>).

**Grade Determination:** Your grade will be based on the following components: each midterm exam (25%), final exam (40%), and homework (10%).

The following grading scale will be employed:

A = 93.0 and up  
A- = 90.0-92.9  
B+ = 87.5-89.9  
B = 82.5-87.4  
B- = 80.0-82.4  
C+ = 77.5-79.9  
C = 72.5-77.4  
C- = 70.0-72.4  
D+ = 67.5-69.9  
D = 62.5-67.4  
D- = 60.0-62.4 F = 59.9 and below

Grades will be calculated exactly as above. Note that there are no opportunities for "extra credit." Please do not ask for special favors or consideration of individual circumstances in the determination of your grade.

**Attendance:** Attendance will not be monitored and does not directly affect your grade. However, it is very likely that missing class will adversely affect your grade in an indirect way.

**Reasonable Accommodations for Students with Disabilities:** Middle Tennessee State University is committed to campus access in accordance with Title II of the Americans with Disabilities Act and Section 504 of the Vocational Rehabilitation Act of 1973. Any student interested in reasonable accommodations can consult the Disability & Access Center (DAC) website [www.mtsu.edu/dac](http://www.mtsu.edu/dac) and/or contact the DAC for assistance at 615-898-2783 or [dacemail@mtsu.edu](mailto:dacemail@mtsu.edu). ADA accommodation requests (temporary or permanent) are determined only by the DAC. Students are responsible for contacting the DAC to obtain ADA accommodations and for providing the instructor with the Accommodation Letter from the DAC.

**Academic Conduct:** Middle Tennessee State University takes a strong stance against academic misconduct. Academic misconduct includes, but is not limited to, plagiarism, cheating, and fabrication.

1. Plagiarism. The adoption or reproduction of ideas, words, statements, images, or works of another person as one's own without proper attribution. This includes self-plagiarism, which occurs when an author submits material or research from a previous academic exercise to satisfy the requirements of another exercise and uses it without proper citation of its reuse.
2. Cheating. Using or attempting to use unauthorized materials, information, or aids in any academic exercise or test/examination.
3. Fabrication. Unauthorized falsification or invention of any information or citation in an academic exercise.

Students guilty of academic misconduct, either directly or indirectly, through participation or assistance, are immediately responsible to the instructor of the class. In these instances, the faculty member has the authority to assign an appropriate grade for the exercise or examination, or to assign an F in the course, as is proportional to the nature and extent of academic misconduct.

**NOTE:** The course syllabus is a general plan for the course; deviations announced to the class by the instructor may be necessary.

### Semester Schedule:

Date	Topic
August 25	Overview of Macro, Intro to Computing Software
September 1	Dynamic Optimization, Finite Time Models
September 8	Dynamic Optimization, Infinite Horizon Models
September 15	Stochastic Dynamic Optimization
September 22	<b>Midterm 1</b> , Dynamic Programming Applications
September 29	Dynamic Programming Applications
October 6	Dynamic Programming Applications
	<i>Fall Break, October 13</i>
October 20	Dynamic Programming Applications
October 27	Overlapping Generations Models
November 3	Overlapping Generations Models
November 10	<b>Midterm 2</b> , Econ Fluctuations
November 17	Econ Fluctuations - Models with Money, Imperfect Info
November 24	Econ Fluctuations - Models with Money, Sticky Prices
December 1	Econ Fluctuations - Expectations
<b>December 8</b>	<b>Final Exam, 3:30-5:30pm</b>

## Readings:

1. Overview of Macro
  - (a) Lucas, Robert, 1977. "Understanding Business Cycles," *Carnegie-Rochester Conference on Public Policy*, 5(1), pp. 7-29.
2. Dynamic Optimization Theory
  - (a) Adda-Cooper, Chapters 2 & 3
  - (b) Ljungqvist-Sargent, Chapters 2, 3, & 4
  - (c) Sargent, Thomas, 1987. *Dynamic Macroeconomic Theory*, Cambridge, Mass.: Harvard University Press, Chapter 1 & Appendix
3. Dynamic Programming Applications
  - (a) Household Decisions: Consumption and Labor Supply
    - i. Adda-Cooper, Chapter 6
    - ii. Hall, Robert, 1978. "Stochastic Implications of the Life Cycle Permanent Income Hypothesis: Theory and Evidence," *Journal of Political Economy*, 86, pp. 971-987.
    - iii. Sargent, Thomas, 1987. *Dynamic Macroeconomic Theory*, Cambridge, Mass.: Harvard University Press, Chapter 3
  - (b) Firm Decisions: Capital Accumulation
    - i. Adda-Cooper, Chapter 8
    - ii. Lucas, Robert and Edward Prescott, 1971. "Investment Under Uncertainty," *Econometrica*, 39, pp. 659-681.
  - (c) Non-Stochastic Growth
    - i. Adda-Cooper, Chapter 5
4. Overlapping Generations Models
  - (a) Cooper, Russel, 2006. "Notes on Overlapping Generations Models"
  - (b) Diamond, Peter, 1965. "National Debt in a Neoclassical Growth Model," *American Economic Review*, 55, pp. 1126-1150.
  - (c) Gale, Douglas, 1973. "Pure Exchange Equilibrium of Dynamic Economic Models," *Journal of Economic Theory*
  - (d) Shell, Karl, 1971. "Notes on the Economics of Infinity," *Journal of Political Economy*, 79, pp. 1002-1011.
5. Aggregate Fluctuations
  - (a) Money and Aggregate Fluctuations
    - i. Imperfect Information
      - A. Azariadis, Costas, 1981. "A Re-examination of Natural Rate Theory," *American Economic Review*, 71, pp. 946-960.
      - B. Cooper, Russell, 2006. "Notes on Money and Business Cycles"
      - C. Lucas, Robert, 1972. "Expectations and the Neutrality of Money," *Journal of Economic Theory*, 4, pp. 103-124.
    - ii. Sticky Prices
      - A. Chari, V.V., Patrick Kehoe, and Ellen McGrattan, 2000. "Sticky Price Models of the Business Cycle: Can the Contract Multiplier Solve the Persistence Problem?," *Econometrica*, 68, pp. 1151-1179.

- B. Dotsey, Michael, Robert G. King, and Alexander L. Wolman, 1999. "State Dependent Pricing and the General Equilibrium Dynamics of Money and Output," *Quarterly Journal of Economics*, 14, pp. 655-690.
  - C. Fischer, Stanley, 1977. "Long Term Contracts, Rational Expectations, and the Optimal Money Supply Rule," *Journal of Political Economy*, 85, pp. 191-205.
  - D. Taylor, John, 1980. "Aggregate Dynamics and Staggered Contracts," *Journal of Political Economy*, 88, pp. 1-23.
- (b) Expectations and Aggregate Fluctuations
- i. Azariadis, Costas, 1981. "Self-Fulfilling Prophecies," *Journal of Economic Theory*, 25, pp. 380-396.
  - ii. Cooper, Russell and Andrew John, 1988. "Coordinating Coordination Failures in Keynesian Models," *Quarterly Journal of Economics*, 103, pp. 441-463.