

**Econ 9453**  
**Advanced Macroeconomic Theory I**  
FALL 2017

**Instructor:** Prof. Aaron Hedlund (hedlunda@missouri.edu – include “9453” in subject)

**Time and Location:** T, R 3:30pm – 4:45pm, Naka Hall 355

**Office Hours:** By Appointment, 226 Professional Building

**Canvas:** <https://missouri.instructure.com>

**Dropbox Link:** <https://www.dropbox.com/sh/6zakdi09frznr3b/AADAPZFdVMw77rHTffIBjgKYa?dl=0>

**Final Exam:** Tuesday, December 12, 7:30am – 9:30am

## Course Description

This course is an introduction to PhD-level modern macroeconomics. The main emphasis of the course will be on providing a solid foundation in macroeconomic theory, but the development of analytical and computational tools will also play an important role.

## Resources

The main reference books are *Recursive Methods in Economic Dynamics* (Stokey and Lucas) and *Recursive Macroeconomic Theory* (Ljungqvist and Sargent). For those of you who are interested in pursuing macroeconomics as one of your research specialties, I suggest gradually adding the following books to your library as well:

- *Dynamic General Equilibrium Modeling* (Heer and Maussner)
- *Dynamic Economics* (Adda and Cooper)
- *Frontiers of Business Cycle Research* (Cooley)
- *The ABCs of RBCs* (McCandless)
- *Methods for Applied Macroeconomic Research* (Canova)
- *Structural Macroeconometrics* (Dejong and Dave)
- *Numerical Methods in Economics* (Judd)
- *Applied Computational Economics and Finance* (Miranda and Fackler)
- *Computational Methods for the Study of Dynamic Economies* (Marimon and Scott)

## Assessment

Your grade for my section of this course will be based 35% on assignments and 65% on the final exam. The assignments will involve a combination of analytical problems and computational work. For the computation, I suggest familiarizing yourself with Matlab.

## Course Outline

### 1. Dynamic Programming

- (a) Deterministic Dynamic Programming
- (b) Stochastic Dynamic Programming
- (c) Asset Pricing

### 2. Heterogeneous Agent Models with Incomplete Markets

- (a) Partial Equilibrium Models: Infinite Horizon and Life Cycle
- (b) General Equilibrium Models: Steady State
- (c) General Equilibrium Models: Transition Dynamics
- (d) General Equilibrium Models: Aggregate Risk
- (e) Models with Financial Frictions and Equilibrium Default

## MU Policies

### Academic Integrity

Academic integrity is fundamental to the activities and principles of a university. All members of the academic community must be confident that each person's work has been responsibly and honorably acquired, developed, and presented. Any effort to gain an advantage not given to all students is dishonest whether or not the effort is successful. The academic community regards breaches of the academic integrity rules as extremely serious matters. Sanctions for such a breach may include academic sanctions from the instructor, including failing the course for any violation, to disciplinary sanctions ranging from probation to expulsion. When in doubt about plagiarism, paraphrasing, quoting, collaboration, or any other form of cheating, consult the course instructor.

**Accommodation of Disabilities**

If you anticipate barriers related to the format or requirements of this course, if you have emergency medical information to share with me, or if you need to make arrangements in case the building must be evacuated, please let me know as soon as possible. If disability related accommodations are necessary (for example, a note taker, extended time on exams, captioning), please register with the Office of Disability Services (<http://disabilityservices.missouri.edu>), S5 Memorial Union, 882-4696, and then notify me of your eligibility for reasonable accommodations. For other MU resources for students with disabilities, click on "Disability Resources" on the MU homepage.

**Intellectual Pluralism**

The University community welcomes intellectual diversity and respects student rights. Students who have questions or concerns regarding the atmosphere in this class (including respect for diverse opinions) may contact the Departmental Chair or Divisional Director; the Director of the Office of Students Rights and Responsibilities (<http://osrr.missouri.edu/>); or the MU Equity Office (<http://equity.missouri.edu/>), or by email at [equity@missouri.edu](mailto:equity@missouri.edu). All students will have the opportunity to submit an anonymous evaluation of the instructor(s) at the end of the course.