

Econ 9453
Advanced Macroeconomic Theory I
FALL 2019

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

Time and Location: T, R 2:00pm – 3:15pm, Economics Department Conference Room (Professional Building)

Office Hours: By Appointment, 226 Professional Building

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

Dropbox Link: <https://www.dropbox.com/sh/o6vnioj2cf7fd84/AAC-gooGVUphyMN4uW0F212pa?dl=0>

Final Exam: Take-Home

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

Students with 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.

All students will have the opportunity to submit an anonymous evaluation of the instructor(s) at the end of the course.

Academic Inquiry, Course Discussion, and Privacy

University of Missouri System Executive Order No. 38 lays out principles regarding the sanctity of classroom discussions at the university. The policy is described fully in Section 200.015 of the Collected Rules and Regulations. In this class, students may make audio or video recordings of course activity unless specifically prohibited by the faculty member. However, the redistribution of audio or video recordings of statements or comments from the course to individuals who are not students in the course is prohibited without the express permission of the faculty member and of any students who are recorded. Students found to have violated this policy are subject to discipline in accordance with provisions of section 200.020 (https://www.umsystem.edu/ums/rules/collected_rules/programs/

[ch200/200.020_rules_of_procedures_in_student_conduct_matters](#)) of the Collected Rules and Regulations of the University of Missouri pertaining to student conduct matters.

Title IX

University of Missouri policies prohibit discrimination on the basis of race, color, national origin, ancestry, religion, sex, gender, gender identity, gender expression, sexual orientation, pregnancy, age, genetic information, disability and protected veteran status. Discrimination includes any form of unequal treatment such as denial of opportunities, harassment, and violence. Sex-based violence includes rape, sexual assault, unwanted touching, stalking, dating/interpersonal violence, and sexual exploitation.

If you experience discrimination, you are encouraged (but not required) to report the incident to the MU Office for Civil Rights & Title IX. Learn more about your rights and options at civilrights.missouri.edu or call 573-882-3880. You also may make an anonymous report online.

Students may also contact the Relationship & Sexual Violence Prevention (RSVP) Center, a confidential resource, for advocacy and other support related to rape or power-based personal violence at rsvp@missouri.edu or 573-882-6638, or go to rsvp.missouri.edu.

Both the Office for Civil Rights & Title IX (<http://civilrights.missouri.edu/>) and the RSVP Center (<http://rsvp.missouri.edu/>) can provide assistance to students who need help with academics, housing, or other issues.