



Cornell University

ECON 6130 – MACROECONOMICS I (FIRST HALF)

MATHIEU TASCHEREAU-DUMOUCHEL
FALL 2024

<https://canvas.cornell.edu/courses/65178>

mt763@cornell.edu

This syllabus is for the first half of the semester. The second half is taught by Ryan Chahrour.

Course description: We will cover the following topics: static general equilibrium; intertemporal general equilibrium: infinitely-lived agents models and overlapping generations models; welfare theorems; equivalence between sequential markets and Arrow-Debreu Markets; Ricardian equivalence; Modigliani-Miller theorem; asset pricing; recursive competitive equilibrium; the Neoclassical Growth Model; calibration; and dynamic programming.

Website: The website for the class is <https://canvas.cornell.edu/courses/65178>. Announcements, problem sets, etc. will all be posted there so make sure that you take a look at it frequently.

Organization: The lectures are on Monday and Wednesday mornings from 10:10am to 11:25am in Rockefeller Hall 112, and the discussions are on Friday mornings from 8:40am to 9:55am in Uris Hall 262 (section 201) and Goldwin Smith Hall 236 (section 202).

Office hours: My office hours are on Monday from 3pm to 5pm in Uris Hall 480. If you would like to attend, please send me an email. If you cannot meet at that time, please contact me and we will find another time to talk.

TA: The teaching assistants for the course are Zheyang Zhu (zz792@cornell.edu) and Ekaterina Zubova (ez268@cornell.edu). Ekaterina's office hours are on Tuesdays from 5pm to 7pm in Uris 451. Zheyang's office hours are on Thursdays from 5pm to 7pm in Uris TBA.

Prerequisites: At least three years of undergraduate mathematics, including at least two semesters of formal mathematics such as analysis, and at least four semesters of economics beyond intermediate microeconomic and macroeconomic theory, or permission of the instructor. A basic knowledge of a mathematical programming language is recommended.

Grading: Students are expected to attend class and participate actively. Grades will be based on homework assignments (40%) and one midterm exam (60%). Actively working on the assignments is essential for your understanding of the course material. You may work in groups, but you must turn in your own answers. The best copy will be anonymized and posted online as solution. The midterm is closed book.

Textbook: Most of the material we will cover can be found in

- **LS:** Lars Ljungqvist and Thomas J. Sargent. *Recursive Macroeconomic Theory*, 3rd edition, MIT Press, 2012.

- **SLP:** Nancy Stokey and Robert Lucas, with Edward Prescott, *Recursive Methods in Economic Dynamics*, Harvard University Press, 1989.

Useful discussions are provided in

- David **Romer**, *Advanced Macroeconomics*, 3rd edition, McGraw Hill, 2006.
- **BF:** Olivier Blanchard and Stanley Fisher, *Lectures on Macroeconomics*, MIT, 1989.

A treatment of numerical and mathematical methods can be found in

- Kenneth Judd, *Numerical Methods in Economics*, MIT Press, 1998.
- Angel de la Fuente, *Mathematical Methods and Models for Economists*, Cambridge, 2000

Calendar

August 26: First day of class

August 28

September 2 (Labor Day, no class)

September 4

September 9

September 11

September 16

September 18

September 23

September 25

September 30

October 2

October 7

October 9

October 14 (Columbus Day, no class)

October 16: Midterm exam

Topics

This list is preliminary and subject to change.

1. General Introduction to Macroeconomics and Stylized Facts
 - Romer, Sections 1.1 and 4.1.
 - BF, Chapter 1.
 - LS, Section 1.3
2. Endowment Economy with Complete Markets
 - LS, Chapter 8.
 - SLP, Chapter 15.
3. Math, Dynamic Programming and Numerical Methods
 - LS, Chapters 2-5.
 - SLP, Chapter 3-5.
4. Production and Investment
 - Romer, Chapter 8
5. Neoclassical Growth model
 - LS, Chapter 11.1-11.3, 11.9. 15.1-15.3, 15.5.

Copyright: All the class material (recordings, lecture slides, problem sets, exams, etc.) is copyrighted and cannot be shared with anyone without the written permission of the instructor.