

Macroeconomics 3

Module 3, 2020-2021

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Course information

Instructor's Office Hours: TBA

TAs: TBA

Course description

This is the first graduate-level course in the macro sequence. It introduces some of the basic methods and concepts commonly used in modern macroeconomics. The primary examples for this exposition are the Neoclassical Growth Model and the Overlapping Generations Model. To get used to basic math tools, students will solve deterministic dynamic optimization problems in discrete and continuous time. To learn basic macro tools, students will use the social planner's problem to find the "first best" allocation, distinguish between different concepts of competitive equilibria, and solve the Ramsey problem to find the optimal policy. We may also discuss the importance of heterogeneity and supply chains in aggregation to the macro level and use the New Keynesian model as an example for an application of tools learned in this course.

Course requirements, grading, and attendance policies

Class attendance and participation are encouraged, but not required. The course grade will be based on homework assignments (10% of the grade), the midterm (30%), and the final exam (60%).

Course contents

1. The Neoclassical Growth Model and the social planner's problem. Dynamic optimization in continuous time.
2. Equilibrium concepts: Arrow-Debreu Competitive Equilibrium, Sequence of Markets Competitive Equilibrium, Recursive Competitive Equilibrium.
3. The Ramsey problem of optimal policy. Capital taxation.
4. The Overlapping Generations Model and dynamic inefficiency. Dynamic optimization in discrete time.
5. Aggregation: representative agents, misallocation, micro origins of macro shocks.
6. Optimal policy in the New Keynesian model.

Sample tasks for course evaluation

Consider a permanent and a transitory productivity shocks in a neoclassical growth model with a Cobb-Douglas production function. Describe the paths of consumption and capital accumulation after each shock. Explain the differences.

Course materials

There is no required textbook, but selected chapters from Acemoglu “Introduction to Modern Economic Growth” should prove useful. Additional materials will be posted on my.nes.ru.

Academic integrity policy

Cheating, plagiarism, and any other violations of academic ethics at NES are not tolerated.