

# Macroeconomics 3

Module 3, 2019-2020

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## Course information

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Course Website: [my.nes.ru](http://my.nes.ru)

Instructor's Office Hours: Mondays 17:00-19:00

TAs: TBA

## Course description

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This is the first graduate-level course in the macro sequence. It introduces 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. The students will learn to solve deterministic dynamic optimization problems in discrete and continuous time, with sequence and recursive approaches. We 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 determine the optimal policy.

## Course requirements, grading, and attendance policies

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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

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1. The Neoclassical Growth Model. Social planner's problem. Continuous and discrete time, sequence and recursive formulation.
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. Ricardian equivalence.

## **Sample tasks for course evaluation**

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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**

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There is no required textbook, but selected chapters from Acemoglu “Introduction to Modern Economic Growth” and Galor “Discrete Dynamical Systems” will come in handy.

## **Academic integrity policy**

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