



## Macroeconomics II - ECON 504

Spring 2022

**Instructor:** İnci Gümüş  
Office: FASS 1032 / Phone: (216) 483 93 28  
Email: [inci.gumus@sabanciuniv.edu](mailto:inci.gumus@sabanciuniv.edu)

**Office Hours:** Online by appointment

**Lectures:** Tuesday 11:40 - 14:30, FASS G048

**Zoom link for lectures:** <https://sabanciuniv.zoom.us/j/98479380598>

**Recitation:** Tuesday 15:40 - 16:30, online

**Zoom link for recitations:** <https://sabanciuniv.zoom.us/j/3484452533>

**Teaching assistant:** Mehmet Akın Şimşek (Email: [mehmetakin@sabanciuniv.edu](mailto:mehmetakin@sabanciuniv.edu))  
Office hours: Online by appointment

### Course Description:

This course is the second part of the macroeconomic theory sequence that aims at introducing you to the methods of, and some of the issues in modern macroeconomics. We will start the semester by studying the deterministic and stochastic versions of the neoclassical growth model, using dynamic programming and through computation of linear approximations. We will then continue by introducing taxation to the same framework and study implications of lump-sum and distortionary taxation.

The main source of readings for the course is the *lecture notes*. Supplementary readings for each topic are listed below. The reading material can be obtained at the Reserve Collection of the Information Center. Additional readings may be assigned throughout the semester.

### Main References:

- Lars Ljungqvist and Thomas Sargent, 2004, *Recursive Macroeconomic Theory*, Second Edition, The MIT Press.
- Nancy L. Stokey and Robert E. Lucas, Jr. with Edward C. Prescott, 1999, *Recursive Methods in Economic Dynamics*, Harvard University Press.

**Grading:** Midterm: 50%  
Final: 50%

## Course Requirements and Rules of Conduct

- The course will be taught through in-class lectures, which will be simultaneously delivered through Zoom.
- All lectures will be recorded and shared on SuCourse+.
- Class attendance is expected. Students are responsible for all of the material covered during the lectures.
- Problem sets will be graded in three grading categories: check, check plus and check minus. *Your grades in the problem sets will be a decision factor in determining your letter grade.*
- Recitation sessions will not be held every week. In the weeks that will have a recitation, it will be announced by email.
- All exams will be held in-person, on campus.
- Make-up exams are granted only in case of a valid and documented reason. In case of an illness, this has to be verified and reported by the University Health Center.
- The definition for scholastic dishonesty is given in the rules and regulations of the Sabancı University. Cheating during written work will result in a course grade of F. All incidents of scholastic dishonesty will be reported to the Dean's Office.
- The syllabus is subject to change depending on changing circumstances and the regulations of the Higher Council of Education (YÖK). Students will be notified prior to any changes.

## Course Outline

- Review of the Neoclassical Growth Model and Dynamic Programming Under Certainty  
*Reading:* - Ljungqvist and Sargent, Chapter 4.
- Recursive Competitive Equilibrium
- The Neoclassical Growth Model with Exogenous Technical Progress and Calibrating the Growth Model  
*Readings:* - King, R. G., Plosser, C. I., Rebelo, S. 2002. "Production, Growth and Business Cycles: Technical Appendix." *Computational Economics*, 20, 87-116.  
- Thomas F. Cooley and Edward C. Prescott, "Economic Growth and Business Cycles," in *Frontiers of Business Cycle Research*, T.F Cooley, editor. Princeton University Press, 1995.

- Stochastic Growth and Real Business Cycle Models

*Readings:* - Ljungqvist and Sargent, Chapter 2.

- Stokey and Lucas, pages 16-22, 319-334.

- King, Robert G. & Rebelo, Sergio T., 1999. "Resuscitating Real Business Cycles," *Handbook of Macroeconomics*, in: J. B. Taylor & M. Woodford (ed.), *Handbook of Macroeconomics*, edition 1, volume 1, chapter 14, pages 927-1007.

- Log-linearization and Solving Linearized Rational Expectations Models

*Readings:* - Azariadis, Costas. 1993. *Intertemporal Macroeconomics*, Chapter 4.

- Uhlig, Harald. 1995. "A Toolkit for Analyzing Nonlinear Dynamic Stochastic Models Easily," Discussion Paper 97, Tilburg University, Center for Economic Research.

- Blanchard, O. J., Kahn, C. M., 1980. "The Solution of Linear Difference Models under Rational Expectations," *Econometrica* 48(5), pp. 1305-1311.

- Christiano, L. J., 2002. "Solving Dynamic Equilibrium Models by a Method of Undetermined Coefficients," *Computational Economics*, 20(1), pp. 21-55.

- Introducing Taxes into the Neoclassical Growth Model

➤ Lump-sum Taxes, Government Spending and Ricardian Equivalence

*Reading:* Ljungqvist and Sargent, Chapter 10.

➤ Distortionary Taxes and Optimal Taxation with Commitment

*Reading:* Ljungqvist and Sargent, Chapter 15.