EC 504

MACROECONOMICS II

SPRING 2026

SYLLABUS

Instructor: Orhan Torul

Time and Location:

- Tuesday 09:00–10:50, NBB10
- Thursday 09:00–10:50, NBB10

Telephone: 212-359-6677

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Office Hours: Thursday 14:00–14:50 or by appointment

Course Website: Moodle

Teaching Assistant: Erhun Çetiner

Course Description

EC 504 Macroeconomics II is the second course of the graduate-level macroeconomics sequence of the M.A. program in Economics at Boğaziçi University. The course is taught by Orhan Torul, who will concentrate mainly on dynamic optimization and agent-level heterogeneity.

Course Objectives

This is the second graduate-level course of the macroeconomics sequence in the M.A. program. This course intends to accomplish two primary goals. The first objective is to familiarize students with advanced economic tools (e.g., dynamic programming under uncertainty), which we will cover throughout our discussion of the theoretical and empirical foundations of consumption. The second objective is to study a number of contemporary economic questions that cannot be addressed using the representative-agent paradigm. For this purpose, we will study heterogeneous-agent models to discuss several issues, such as the determination of prices under the presence of incomplete markets and politico-economic equilibrium over government policies, such as taxes. We will also cover various modern macroeconomics topics from *PhDMacroBook*.

Requirements

This is a graduate-level course, and graduate standing is a prerequisite. Exceptions may be granted in extraordinary circumstances.

Textbook

Recursive Macroeconomic Theory, 4th Edition by Lars Ljungqvist and Thomas J. Sargent, MIT Press, 2018. (L+S hereafter)

Macroeconomics, December 2025 Edition by Marina Azzimonti, Per Krusell, Alisdair McKay, and Toshihiko Mukoyama, Online. (PhDMacroBook hereafter)

Online Supplementary Materials to *PhDMacroBook*, January 2026 Edition

Grading Policy

Grades will be determined as follows:

- **Problem Sets**: 10%
- **Pop Quizzes + Class Participation**: 20%
- **Midterm Exam**: 30%
- **Final Exam**: 30%
- **Paper Presentation and Referee Report**: 10%

The standard grading scale at Boğaziçi University is as follows:

Letter Grade	Interpretation	Weight	Grade Percentage
AA	Excellent	4.0	90% and above
BA	Very Good	3.5	85–89%
BB	Good	3.0	80–84%
CB	Fair-Good	2.5	75–79%
CC	Fair	2.0	70–74%
DC	Fair-Poor	1.5	65–69%
DD	Poor	1.0	60–64%
F	Fail	0.0	Below 60%

I reserve the right to adjust grade cutoffs based on the class distribution. The withdrawal deadline is April 17, 2026 (Friday). Refer to the Academic Calendar.

Other Policies

- **Attendance:** Regular attendance is required. Students who miss classes may lose quiz credits and risk lower participation grades.
- **Problem Sets:** Approximately 5 (±1) problem sets will be assigned and graded equally. Deadlines will be posted on the course website.
- **Exams:**
  - **Midterm Exam (Tentative: Late April 2026):** Covers material up to the exam date.
  - **Final Exam (Tentative: May/June 2026):** Comprehensive exam covering all topics.

- **Paper Presentation and Referee Report:** You will be assigned a recent paper, which you will present at the end of the semester. You will also submit a referee report for the same paper. Both the presentation slides/document and the referee report must be typed in LaTeX.
- **Make-up Exams:** Allowed only for valid, documented reasons in compliance with university policy. Requests must be made within seven calendar days of the missed exam.
- **Re-grade Requests:** Submit written requests within seven calendar days of receiving graded exams. Note that the entire exam will be re-evaluated.
- **Problem Sessions:** There will be weekly/biweekly problem sessions held by the teaching assistant (dates and locations to be announced). Attendance is very strongly recommended.
- **Quizzes:** Unannounced pop quizzes will cover both course content and assigned readings from PhDMacroBook.

Communication

E-mail will be the primary method of communication. Ensure your registered e-mail address is current to avoid missing updates.

Academic Integrity

Academic dishonesty will be addressed per Boğaziçi University and Turkish Higher Education Council (YÖK) regulations. For details, refer to:

- Student Discipline Regulations (YÖK)
- Boğaziçi University Ethics Code

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Tentative Course Outline

Note: While we cover the topics below, I will assign various chapters from PhDMacroBook, and you will take pop quizzes on them.

References

The Life Cycle/Permanent Income Hypothesis and Variants: Theory

- Ljungqvist, Lars and Thomas J. Sargent. *Recursive Macroeconomic Theory*, 4th Edition. MIT Press, 2018. (L+S hereafter) Chapters 1–5, 8, 17–18 (specific sections as noted previously).
- Deaton, Angus (1991). "Saving and Liquidity Constraints." *Econometrica*, 59(5), 1221–1248.

Weeks	Topics
1–2	Life Cycle/Permanent Income Hypothesis under Certainty
3–4	Decision Making Under Uncertainty and LCPIH Under Uncertainty
5–6	Review of Complete Markets Economy
	Midterm Exam
7–8	Certainty Equivalence and Precautionary Savings
9–10	Macroeconomic Models with Incomplete Markets
11–12	Political Economy in Macroeconomics

- Zeldes, Stephen (1989). "Optimal Consumption with Stochastic Income: Deviations from Certainty Equivalence." *Quarterly Journal of Economics,* 104(2), 275–298.

Consumption: Empirical Evidence

- Agarwal, Sumit, Chunlin Liu, and Nicholas S. Souleles (2007). "The Reaction of Consumer Spending and Debt to Tax Rebates — Evidence from Consumer Credit Data." *Journal of Political Economy*, 115(6), 986–1019.
- Aguiar, Mark and Erik Hurst (2005). "Consumption Versus Expenditure." *Journal of Political Economy*, 113(5), 919–948.
- Aguiar, Mark and Erik Hurst (2007). "Life-Cycle Prices and Production." *American Economic Review,* 97(5), 1533–1559.
- Card, David, Raj Chetty, and Andrea Weber (2007). "Cash-on-Hand and Competing Models of Intertemporal Behavior: New Evidence from the Labor Market." *Quarterly Journal of Economics,* 122(4), 1511–1560.
- Cochrane, John H. (1991). "A Simple Test of Consumption Insurance." *Journal of Political Economy*, 99(5), 957–975.
- Hall, Robert E. (1978). "Stochastic Implications of the Life Cycle-Permanent Income Hypothesis: Theory and Evidence." *Journal of Political Economy*, 86(6), 971–987.
- Hsieh, Chang-Tai (2003). "Do Consumers React to Anticipated Income Changes? Evidence from the Alaska Permanent Fund." *American Economic Review,* 93(1), 397–405.
- Scholz, John Karl, Ananth Seshadri, and Surachai Khitatrakun (2006). "Are Americans Saving 'Optimally' for Retirement?" *Journal of Political Economy*, 114(4), 607–643.
- Shea, John (1995). "Union Contracts and the Life Cycle-Permanent Income Hypothesis." *American Economic Review*, 85(1), 186–200.
- Stephens, Melvin (2003). "'3rd of tha Month': Do Social Security Recipients Smooth Consumption Between Checks?" *American Economic Review,* 93(1), 406–422.
- Wilcox, David W. (1989). "Social Security Benefits, Consumption Expenditure, and the Life-Cycle Hypothesis." *Journal of Political Economy,* 97(2), 288–303.
- Zeldes, Stephen P. (1989). "Consumption and Liquidity Constraints: An Empirical Investigation." *Journal of Political Economy,* 97(2), 305–346.

Asset Pricing: A Basic Introduction

- Barro, Robert J. (2006). "Rare Disasters and Asset Markets in the Twentieth Century." *Quarterly Journal of Economics*, 121(3), 823–866.
- Brunnermeier, Markus K. and Stefan Nagel (2008). "Do Wealth Fluctuations Generate Time-Varying Risk Aversion? Micro-Evidence on Individuals' Asset Allocation." *American Economic Review*, 98(3), 713–736.
- Kocherlakota, Narayana R. (1996). "The Equity Premium: It's Still a Puzzle." *Journal of Economic Literature*, 34(1), 42–71.

Macroeconomic Models with Incomplete Markets

- Aiyagari, S. Rao (1994). "Uninsured Idiosyncratic Risk and Aggregate Saving." *Quarterly Journal of Economics*, 109(3), 659–684.
- Heathcote, Jonathan, Kjetil Storesletten, and Giovanni L. Violante (2009). "Quantitative Macroeconomics with Heterogeneous Households." *Annual Review of Economics*, 1, 319–354.
- Huggett, Mark (1993). "The Risk-Free Rate in Heterogeneous-Agent Incomplete-Insurance Economies." *Journal of Economic Dynamics and Control*, 17(5–6), 953–969.
- Krusell, Per and Anthony A. Smith, Jr. (1998). "Income and Wealth Heterogeneity in the Macroeconomy." *Journal of Political Economy*, 106(5), 867–896.
- Ríos-Rull, José-Víctor (1995). "Models with Heterogeneous Agents." In *Frontiers of Business Cycle Research*, edited by Thomas F. Cooley, Princeton University Press, 98–125.

Political Economy of Economic Growth

- Meltzer, Allan H. and Scott F. Richard (1981). "A Rational Theory of the Size of Government." *Journal of Political Economy*, 89(5), 914–927.
- Persson, Torsten and Guido Tabellini (1994). "Is Inequality Harmful for Growth?" *American Economic Review*, 84(3), 600–621.

Modern Heterogeneous Agent Macroeconomics & Related Topics

- Adams, Jonathan J. and Eugenio Rojas (2024), "Household consumption and dispersed information," *Journal of Monetary Economics*, 147, 103592.
- Adams, Jonathan J.; Cuciniello, Vincenzo; and Nicola Limodio (2026), "The rise of AI pricing: Trends, driving forces, and implications for firm performance," *Journal of Monetary Economics*, 157.
- Auclert, Adrien; Rognlie, Matthew; and Ludwig Straub (2025), "Fiscal and monetary policy with heterogeneous agents," *Annual Review of Economics*, 17, 539–562.
- Balleer, Almut et al. (2026), "The effects of biased labor market expectations on consumption, wealth inequality, and welfare," *American Economic Journal: Macroeconomics*, 18(1), 297–335.
- Boehm, Johannes; Fize, Etienne; and Xavier Jaravel (2025), "Five facts about MPCs: Evidence from a randomized experiment," *American Economic Review*, 115(1), 1–42.

- Debortoli, Davide and Jordi Galí (2024), "Idiosyncratic income risk and aggregate fluctuations," *American Economic Journal: Macroeconomics*, 16(4), 279–310.
- Graham, James and Robert A. McDowall (2026), "Mental accounts and consumption sensitivity across the distribution of liquid assets," *American Economic Journal: Macroeconomics*, 18(1), 1–33.
- Maxted, Peter (2025), "Present bias unconstrained: Consumption, welfare, and the present-bias dilemma," *Quarterly Journal of Economics*, 140(4), 2963–3013.

Various Macroeconomics Topics

- Various chapters from Azzimonti, Marina, Per Krusell, Alisdair McKay, and Toshihiko Mukoyama. *Macroeconomics*. Online edition (latest available as of December 2025). https://phdmacrobook.org.

Miscellaneous: Cross-Sectional Facts on Inequality and Transatlantic Differences

- Alesina, Alberto and Edward L. Glaeser (2004). *Fighting Poverty in the U.S. and Europe: A World of Difference*. Oxford University Press.
- Alesina, Alberto, Edward L. Glaeser, and Bruce Sacerdote (2005). "Work and Leisure in the United States and Europe: Why So Different?" *NBER Macroeconomics Annual*, 20, 1–64.
- Alesina, Alberto and George-Marios Angeletos (2005). "Fairness and Redistribution." *American Economic Review*, 95(4), 960–980.
- Bénabou, Roland and Jean Tirole (2006). "Belief in a Just World and Redistributive Politics." *Quarterly Journal of Economics*, 121(2), 699–746.
- Blundell, Richard and Ben Etheridge (2010). "Consumption, Income and Earnings Inequality in Britain." *Review of Economic Dynamics*, 13(1), 76–102.
- Domeij, David and Martin Flodén (2010). "Inequality Trends in Sweden 1978–2004." *Review of Economic Dynamics*, 13(1), 179–208.
- Fuchs-Schündeln, Nicola, Dirk Krueger, and Mathias Sommer (2010). "Inequality Trends for Germany in the Last Two Decades: A Tale of Two Countries." *Review of Economic Dynamics*, 13(1), 103–132.
- Heathcote, Jonathan, Fabrizio Perri, and Giovanni L. Violante (2010). "Unequal We Stand: An Empirical Analysis of Economic Inequality in the United States: 1967–2006." *Review of Economic Dynamics*, 13(1), 15–51.
- Jappelli, Tullio and Luigi Pistaferri (2010). "Does Consumption Inequality Track Income Inequality in Italy?" *Review of Economic Dynamics*, 13(1), 133–153.
- Pijoan-Mas, Josep and Virginia Sánchez-Marcos (2010). "Spain Is Different: Falling Trends of Inequality." *Review of Economic Dynamics*, 13(1), 154–178.
- Piketty, Thomas and Gabriel Zucman (2014). "Capital Is Back: Wealth-Income Ratios in Rich Countries 1700–2010." *Quarterly Journal of Economics*, 129(3), 1255–1310. (Originally circulated as CEPR Discussion Paper 9588, 2013.)