6119 Macroeconomics II

- PRELIMINARY -

João Brogueira de Sousa

Spring 2025

E-mail: joao.sousa@novasbe.pt

Office Hours: Wed. 1-2pm (by appointment)

Office: B112D

Web: www.jbsousa.com

Classes: Tue. 11am-1:45pm

Class Room: D009

Course Description

This course is part of the PhD sequence in Macroeconomics. The purpose of this course is to continue building your foundation knowledge in the field.

We will study in detail the properties and predictions of the standard models in Macro, with one single representative household, or many heterogeneous agents, and some applications. We will learn to solve and obtain testable predictions from these models.

Course Structure

Class Structure

Tuesdays: 11am-12:15pm + 15 min. break + 12:30pm-1:45pm. Class Room: D009.

Course Requirements

Midterm (45%), Final (55%).

Syllabus

1. The Neoclassical Growth Model (approximately 3 weeks)

    (a) Competitive Equilibrium: Definition, Properties.

    (b) Welfare Theorems, Pareto Optimal Allocations.

    (c) Alternative Implementations: Time-zero Trading, Sequential Markets.

    (d) Aggregation: Single Sector, Representative Consumer Model.

    (e) The Effects of Taxes in the Model.

2. Recursive Formulation of the Model (approximately 4 weeks)

    (a) Dynamic Programming Problems and The Principle of Optimality.

    (b) Bellman Equations and Solution Methods.

    (c) Solution Properties, Balanced Growth.

    (d) Applications of Dynamic Programming Problems.

3. Bewley Models (approximately 5 weeks)

    (a) Stochastic Dynamic Programming.

    (b) The Standard Incomplete Markets Model.

    (c) Extensions: Aiyagari Model, Life-cycle Models.

    (d) Quantitative Analysis and Calibration.

References

- JUNGQVIST, L. AND SARGENT T. J. (2018), "Recursive Macroeconomic Theory", fourth edition, The MIT Press.

- MAS-COLELL, A. D., WHINSTON, M., AND GREEN, J. R. (1995), "Microeconomic Theory", Oxford University Press.

- STOKEY, N. L., AND E. C. LUCAS, R. E. WITH PRESCOTT (1989), "Recursive Methods in Economic Dynamics", Harvard University Press.

Attendance Policy

For complete attendance and excused absence policies, please see *NOVA's PhD Student Handbook*. Attendance is expected in all sessions. Valid excuses for absence will be accepted before class. In extenuating circumstances, valid excuses with proof will be accepted after class. For every class missed the participation grade will be dropped 0.5 point.

Academic Integrity and Honesty

Students are required to comply with the university policy on academic integrity found in the Rule of Conduct.