University of Hohenheim
Institute of Economics
Chair of Monetary and International Macroeconomics
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Summer Term 2026

UNIVERSITY OF HOHENHEIM

Advanced Topics in Macroeconomics - PhD Course

Contact

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Dates and Venues

Lectures: Every Wednesday 3-6pm, lecture hall HS B4.

Exercises: Exercises will be integrated into the lectures.

Course Website

You will find a course website on ILIAS. It provides you with the slides, problem sets and further material.

General Information

This course is offered as part of the Ph.D. program in Economics but it is also open for Master students in Economics and also in Management. The objective of this course is to make students familiar with modern macroeconomic theory (and some empirical work). The course thus aims at giving the students a good basic understanding of the methodological approaches of modern macroeconomics which is conducted on the basis of formal mathematical (structural) models. As a consequence, the lecture will sometimes contain very formal elements. Nevertheless, the focus here really is not on formalities as a self-serving purpose but on the intuition and insights why modern macroeconomics is built upon them, their virtues and their shortcomings.

Required background knowledge

Microeconomics, Macroeconomics, as well as Mathematics and Econometrics as covered in standard courses of master programs.

Content of the Course

The first part of the course is devoted to get a first overview over the objective and the research approach of modern macroeconomics as a subdiscipline of social sciences. We will in particular focus on the first principles of modern macroeconomics: the description of individual behavior and consistency requirements of individual behavior in the aggregate. Equipped with a logically self-consistent normative framework we can then dive into the study of macroeconomic growth and business cycles. We will be looking at the correspondence of objects in the model economy to observable counterparts in real data and touch upon monetary and fiscal policy and optimal policy. Depending on the interests of attending students, we may alternate the content and consider also/instead more advanced topics like model estimation, the role of information processing and uncertainty, heterogeneity, commitment problems, time-consistency, reputation, recursive contracts or other topics.

A Rough and Tentative Outline

- Introduction
- A Simple Dynamic Economy
- The Neoclassical Growth Model in Discrete Time
- Some Mathematical Preliminaries and Dynamic Programming
- The Overlapping Generations Model
- Models with Risk
- Real Business Cycles
- Linear Rational Expectations Model
- A New Keynesian Model
- Fiscal and Monetary Policy
- Optimal Policy
- Optional Topics (Information and Uncertainty, Heterogeneity in Macroeconomics, etc.)

Literature

The lecture slides will be self-contained, integrating and extending material from multiple sources. As such, there is not one single textbook covering all the material to be presented and discussed in this course. A tentative list of references for the course is:
Primary reading:

- Krüger, Dirk (2021): "Macroeconomic Theory", Mimeo, University of Pennsylvania.
- Niepelt, Dirk (2019): "Macroeconomic Analysis", MIT Press, Cambridge.

Secondary reading:

- Galí, Jordí (2015): "Monetary Policy, Inflation, and the Business Cycle: An Introduction to the New Keynesian Framework and Its Applications", 2nd Edition, Princeton University Press.
- Ljungqvist, L. and T. Sargent (2018): "Recursive Macroeconomic Theory", 4th Edition, MIT Press, Cambridge.
- Miao, Jianjun (2014): "Economic Dynamics in Discrete Time", MIT Press, Cambridge.
- Stokey, N.L. and Lucas, R.E. with E.C. Prescott (1989): "Recursive Methods in Economic Dynamics", Harvard University Press, Cambridge.

Problem Sets

Problem sets are set up to get the students familiar with the methods and main insights. Also, to get a better understanding of the quantitative nature of modern macroeconomics, we will be using numerical examples and exercises using Matlab/Julia and apply various numerical methods. Students are very welcome to work in study groups of two or three. It is actually strongly encouraged to study in small groups and work together through the lectures as well as doing the exercises and the programming in the numerical implementation of the problem sets.

Grading

It is planned that the grading will be based on problem sets to be solved and handed in by the students. Details will be discussed during the course.