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Syllabus for the Master's course  
**Advanced Macroeconomics 1**  
Winter semester 2023/24

- Summary:

The course studies macroeconomic models at an advanced level using state-of the art dynamic general equilibrium theory. The main focus is on monetary models of the business cycle and the role of fiscal and monetary policy in this framework. Specifically, we will study how monetary policy interacts with fiscal policy and how they jointly determine equilibrium prices and allocations in real and financial markets. We will also explore the tools available to monetary policy to control inflation and the role of fiscal policy and its potential to stimulate the economy. Finally, we will study the existence and form of optimal monetary and fiscal policy aiming to maximize consumer welfare under alternative informational and political constraints.

The course employs the two major workhorses of modern macroeconomics in this field: First, the New Classical framework which abstracts from market frictions assuming price-taking behavior of all market participants combined with price flexibility on all markets. Second, the New Keynesian models which incorporate various frictions such as monopolistic competition and/or staggered price adjustments. In recent years, the New Keynesian approach has become the dominant framework used at central banks to guide monetary policy.

- Credit points: 6 ECTS

- Target audience:

Students enrolled in the M.Sc. programs Economics and VWL.

- Teaching format:

- All classes take place in-person requiring your presence in Freiburg.
- Students unable to be in Freiburg can download the course material but there will be no lecture videos nor live-streaming of lectures and tutorials.

- Contents (tentative):

#### Part I: New Classical Monetary Theory

1. The Basic New Classical Model
2. Monetary Dynamics and the Interaction of Fiscal and Monetary Policy
3. Monetary Policy in a Currency Union
4. Optimal Fiscal and Monetary Policy
5. The Stochastic New Classical Model

#### Part II: New Keynesian Monetary Theory

1. The Basic New Keynesian Model
2. Optimal Fiscal and Monetary Policy
3. Fiscal Policy at the Zero-Lower Bound\*
4. Monetary Policy Trade-Offs: Discretion vs. Commitment\*

\* = 'time permitting'

- Course literature:

- COCHRANE, J. H. (2023): The Fiscal Theory of the Price Level. Princeton University Press, MA.
- GALI, J. (2008): Monetary Policy, Inflation, and the Business Cycle. Princeton University Press, Princeton a.o.
- LJUNGQVIST, L. & T. SARGENT (2012): Recursive Macroeconomic Theory, Third Edition. MIT Press, Cambridge, Massachusetts.
- MIAO, J. (2014): Economic Dynamics in Discrete Time. MIT Press, Cambridge, Massachusetts.

Additional references will be given in class.

- Prerequisites:

Course participants are expected to have a sound understanding of intermediate macroeconomics and microeconomics paired with a solid background in basic mathematics (linear algebra, calculus, constrained optimization, etc.) and statistics (probability theory, random variables, etc.). Since the course will have a strongly quantitative focus, we also expect a genuine interest in economic theory and mathematical model building.

- Course meeting times:

- One-and a half lecture classes ( $3 \times 45$  min.) per week
- Lecture classes take place on Thursdays, 4-7 pm in lecture hall HS 3219 (KG III)
- The first lecture class is on Thursday, October 19, 2023 at 4:15 pm
- Lecture classes are complemented by tutorial classes (offered in English and Chinese):
  - regular tutorial classes discussing course material relevant for the exam
  - supplementary tutorials discussing additional material not relevant for the exam.

We will alternate between regular and supplementary tutorials every week.

- Tutorials are taught by Marius Jäger, M.Sc. (in English) and Tong Wu (in Chinese).
- Meeting times and venues will be announced in the first lecture class.

- Organization:
  - The entire course material (slides, problem sets, etc.) will be provided electronically on the ILIAS platform ([ilias.uni-freiburg.de](https://ilias.uni-freiburg.de)).
  - Students can directly sign up for the course and no password is required.
  - The course material will be released gradually every week prior to the lecture classes.
  - Participants enrolled in the course will be notified about all updates.
  - The same procedure applies for the tutorial classes.
  - We will also set up the ILIAS course to include a discussion forum permitting all participants to engage in discussions and ask questions.
- Examination:
  - Two-hour (90 minutes) written final exam at the end of the semester.
  - A retake will be offered at the end of the following semester.