

**Syllabus for
Macroeconomics: Business Cycle
(Master of Science in Economics)**

Lecture & Exercise - 5 ECTS

Lecture: Wednesday, 9.45-11.15 h, starting date: 16 October 2025 (LG 3.152/3)

Exercise: Pencil and Paper: Tuesday, 15.00-16.30 h
PC exercise: will be announced in due time

Important note: In-class teaching. No online offers will be available.

Language: English

Office hours: Christian Merkl: by appointment
Timo Sauerbier: by appointment

Macroeconomics in the Master of Science in Economics:

This course covers business cycles, search and matching models and monetary policy issues. It enables students to start reading the modern scientific literature in macroeconomics and to follow presentations by macroeconomists in the department's research seminar and the macro-labor research seminar.

Structure:

1. Introduction: Growth and Cycles

- Distinction between growth and cycles
- What are the stylized facts of the business cycle?

Literature:

Hodrick, Robert J. and Edward Prescott (1997): "Postwar U.S. Business Cycles: An Empirical Investigation." *Journal of Money, Credit, and Banking*, 29 (1), 1-16.

2. Refresher and a Tour from Old Style to Modern Macroeconomics

- A short refresher of the basic elements of old style macroeconomics: IS-LM & AD-AS.
- A historical tour from old style to modern macroeconomics

Literature:

Goodfriend, Marvin and Bob King (1997): "The New Neoclassical Synthesis and the Role of Monetary Policy." *NBER Macroeconomics Annual*, 12, 231-283.

3. A Basic Real Business Cycle Model

- Derivation of a basic RBC model
- Comparison of stylized facts and the model

Literature:

Hansen, Gary (1985): "Indivisible Labor and the Business Cycle." *Journal of Monetary Economics*, 16, 309-327.

4. Real Business Cycles with Real Unemployment

- Derivation of a basic search and matching model
- The “Shimer puzzle”

Literature:

Hornstein, Andreas, Krusell, Per and Violante, Giovanni (2005): “Unemployment and Vacancy Fluctuations in the Matching Model: Inspecting the Mechanism.” *Federal Reserve of Richmond Economic Quarterly*, 91 (3), 19-51.

Shimer, Robert (2005): “The Cyclical Behavior of Equilibrium Unemployment and Vacancies.” *American Economic Review*, 95 (1), 25-49.

5. [Pandemics: Covid-19 → this part will only be taught if students are interested!]

- Combination of a basic epidemiology model with a RBC model
- Externality problem and optimal policy

Literature:

Eichenbaum, Martin, Sergio Rebelo, Mathias Trabandt (2021): “The Macroeconomics of Epidemics.” *Review of Financial Studies*, 34 (11), 5149-5187.

6. Monetary Theory: The Basic New Keynesian Model

- Basic elements of the New Keynesian model (NKM): monopolistic competition & sticky prices (wages)
- Effects of monetary policy in a NKM

Literature:

Galí, Jordi (2003): “New Perspectives on Monetary Policy, Inflation, and the Business Cycle.” In: *Advances in Economics and Econometrics*.

7. The NKM: Critique and Potential Solutions

- How does the NKM fit the data?

Literature:

Rudd, Jeremy and Karl Whelan (2007): “Modeling Inflation Dynamics: A Critical Review of Recent Research.” *Journal of Money, Credit, and Banking*, 39, 155-170.

Mankiw, Gregory (2001): “The Inexorable and Mysterious Tradeoff between Inflation and Unemployment.” *Economic Journal*, 111, 45-61.

8. Optional Research Related Topics

- To be selected toward the end of the semester