

# E433 Advanced Macroeconomics I

Dr. Christian Manger  
Winter Semester

Lecture (3 SWS) + Practice Course (2 SWS)

For rooms and dates please check [alma](#)!

Visit <http://vwl-tuebingen.de> for a summary of the modules offered in economics!

9 ECTS

## Method of Assessment:

Written Exam (90 Minutes), **Mandatory** Assignments (Presentations)

## Grading:

You must **pass** the assignment/presentation (10% of final grade, see below). The final exam counts for 90% of the final grade. There is no midterm exam.

## Important (Assignment/Presentation):

The module comes with about 9 to 10 tutorials (usually on Wednesdays). One week before a tutorial takes place, I upload the problem set. I will then unlock a survey on ILIAS where you can indicate which problems you are willing to present. I will randomly allocate the problems among the volunteers. This means once you have been selected, you have 1 week to prepare your presentation. 2 days before your presentation (that is, usually Monday evening), you must send me at least a preliminary version of your solution/presentation. This allows me to give you feedback before your presentation in case that is necessary.

Giving one (exactly one) presentation in one of the tutorials is a necessary condition for passing Advanced Macro 1. It is normal that at the beginning of the module, there are more volunteers than available questions/presentations for a particular problem set. I am ready to do whatever it takes to provide sufficient material so that everybody can present an exercise question over the course of the semester. And believe me, it will be enough (where is this quote from?). More details regarding the assignments/presentations will follow in the first lecture.

## Preliminary Content (focus on the first 5 chapters of the Romer textbook):

1. Economic Growth – Some Stylised Facts
2. Solow Model (Romer, Chapter 1 / Barro and Sala-i-Martin, Chapter 1)
  - Solow Model without Technological Progress
  - Solow Model with Technological Progress
  - Golden Rule of Capital Accumulation
  - Growth Accounting
  - Quantitative Properties (Speed of Convergence, Elasticities...)
  - Poverty Traps
  - Solow Model of an Open Economy (Sørensen and Whitta-Jacobsen, 2005, Chapter 4)

3. Ramsey-Cass-Koopmans Model (Romer, Chapter 2A / Barro and Sala-i-Matin, Chapter 2 and 3 (selection))
  - Euler Equation
  - Budget Constraints
  - Transversality Condition
  - Phase Diagram
  - Saddle Path
  - Taxation and Government Spending
  - Efficiency and Planner's Problem
  - Linearized Model
4. Diamond OLG Model (Romer, Chapter 2B / Barro and Sala-i-Matin, Chapter 3.8)
  - Optimal Savings Rate and Intertemporal Elasticity of Substitution
  - Dynamic Inefficiency
  - Multiple Equilibria
5. Endogenous Growth – AK-Type Models (Barro and Sala-i-Matin, 1.32 and 4 (selection))
  - Solow Model
  - Ramsey-Cass-Koopmans Model
  - Learning by Doing
  - Productive Government Spending
6. Inequality and Economic Growth – The Alesina-Rodrik Model (Alesina and Rodrik, 1994)
  - Economic Equilibrium
  - Median Voter Theorem
  - Political Equilibrium
  - Implications
7. Climate change and economic growth (paper yet to be determined)
8. Monetary Policy, Inflation, and the Business Cycle: An Introduction to the New Keynesian (Gali, Chapters 1 to 3)

**Literature (more details in the lecture):**

- Alberto Alesina and Dani Rodrik: “Distributive Politics and Economic Growth”, 1994, Quarterly Journal of Economics, 465 – 490.
- Jordi Gali: “Monetary Policy, Inflation, and the Business Cycle: An Introduction to the New Keynesian Framework”, 2<sup>nd</sup> Edition (1<sup>st</sup> edition is also fine), 2015, Princeton University Press, 2nd edition.
- Robert J. Barro and Xavier Sala-i-Matin: “Economic Growth“, 2<sup>nd</sup> Edition, 2003, MIT Press.
- David Romer: “Advanced Macroeconomics“, (any edition), McGraw-Hill.
- Peter Sørensen and Hans Whitta-Jacobsen: “Introducing Advanced Macroeconomics: Growth and Business Cycles“, 3rd Edition, 2023, Oxford University Press.
- Xavier Sala-i-Matin: “The Classical Approach to Convergence Analysis”, 1996, The Economic Journal, 1019 - 1036.