Carl von Ossietzky
Universität
Oldenburg

Advanced Macroeconomics

Winter 2020/21

Prof. Dr. Jürgen Bitzer

Course Meeting Time and Place:

Monday, 14:00 – 16:00 in HS: Videoaufzeichnung/Online
Tuesday, 14:00 - 16:00 in HS: Videoaufzeichnung/Online

Starts: 19th October 2020 Ends: 1st February 2021

Content

"Why are some countries rich and others poor?" is the question at the heart of the research on economic growth and development. In the course, the students will be introduced to the basic economic growth models and the empirical research, which try to answer this question.

Structure of the course and prerequisites

The structure of the course is given in the Course Outline on the next page of this syllabus. The course deals with theoretical models, which requires a sound knowledge of mathematics. Those who lack this knowledge should first participate in the course "Intensive Course in Economics (Foundations of Economic Policy)". Furthermore, to be able to follow the empirical papers on economic growth basic econometric knowledge is required. Therefore, the modules "Ökonometrie" or "Multivariate Statistik" are useful prerequisites.

Grading

Grade will be based on a written exam.

Course Outline

1. **Introduction**

   ⇒ Some stylised facts on economic growth?

   ⇒ Which questions should be answered?

   Literature: Barro and Sala-i-Martin (2004), S. 1-22;
   Acemoglu (2009), Chapter 1.

   Videos: AM-VL-1-T1 to AM-VL-1-T3

2. **The Solow model**

   ⇒ A short reminder: The Solow model without technological progress
   Videos: AM-VL-2-T1 to AM-VL-2-T8

   ⇒ The Solow model with technological and its implications
   Videos: AM-VL-2-T9 to AM-VL-2-T12

   ⇒ The Solow model with technology diffusion
   Videos: AM-VL-3-T1 to AM-VL-3-T4

   Literature: Barro and Sala-i-Martin (2004), Chapter 1;
   Acemoglu (2009), Chapter 18.2.1.

3. **The Solow model and the data**

   ⇒ Convergence
   Video: AM-VL-3-T5

   ⇒ Growth Accounting
   Video: AM-VL-3-T6

   Literature: Barro and Sala-i-Martin (2004), Chapter 1 and 10;
   Acemoglu (2009), Chapter 3.

4. **An Introduction to dynamic optimisation**

   ⇒ A short remainder: Static optimisation
   Video: AM-VL-4-T1

   ⇒ Dynamic optimisation
   Videos: AM-VL-4-T2 to AM-VL-4-T8

   ⇒ Dynamic optimisation in economic growth models
   Video: AM-VL-4-T8

   Literature: Barro and Sala-i-Martin (2004), Chapter A.3.

5. **The Ramsey-Cass-Koopman model**

   ⇒ The Ramsey-Cass-Koopman model with endogenous saving rate
   Videos: AM-VL-5-T1 to AM-VL-5-T10

   Literature: Barro and Sala-i-Martin (2004), Chapter 2.

6. **The Romer Model**

   ⇒ The Romer model
   Videos: AM-VL-6-T1 to AM-VL-6-T12

   Literature: Romer (1990).

7. **The Aghion and Howitt Model**

   ⇒ The Aghion and Howitt model
   Videos: AM-VL-7-T1 to AM-VL-7-T8

   Literature: Aghion and Howitt (1998), chapter 2.

8. **Institutions and growth**

   Types of institutions

   The impact of institutions on growth
   Videos: AM-VL-8-T1 to AM-VL-8-T3

   Literature: Acemoglu (2009), chapter 22 and 23.

Literature

Acemoglu, Daron (2009): Introduction to Modern Economic Growth. Princeton University Press: Princeton.

Aghion, Philippe, and Peter W. Howitt (1998): Endogenous Growth Theory. MIT Press, Cambridge, Mass.

Barro, Robert J., Xavier Sala I. Martin (2004): Economic Growth: Second Edition. MIT Press, Cambridge, Mass.

Romer, Paul M. (1990): Endogenous Technical Change, Journal of Political Economy, Vol. 98, No. 5, p. S71-S102.

Literature on the mathematical background

Chiang, Alpha C. and Kevin Wainwright (2005): Fundamental Methods of Mathematical Economics, 4th edition, McGraw-Hill: New York.

Sydsaeter, Knut, Peter Hammond, Atle Seierstand, and Arne Strom (2008): Further Mathematics for Economic Analysis, 2nd edition, Prentice Hall: Harlow.

Sydsaeter, Knut and Peter Hammond (2008): Essential Mathematics for Economic Analysis, 3rd edition, Prentice Hall: Harlow. (Oder die deutsche Fassung "Mathematik für Wirtschaftswissenschaftler", 3. Auflage, erschienen 2008 bei Pearson Studium.)

Tietze, Jürgen (2009): Einführung in die angewandte Wirtschaftsmathematik, 15. Auflage, Vieweg: Wiesbaden.