

## **Introduction to Advanced Macroeconomic Analysis (IAMA)**

**Prof. Michael C. Burda, Ph.D.**

**Dr. Alexander Meyer-Gohde**

<b>Lectures:</b>	Prof. Burda	Tuesdays 10.15-11.45	Room 202
<b>Section:</b>	Dr. Meyer-Gohde	Thursdays 10.15-11.45	Room 202
	Dr. Meyer-Gohde	Fridays 08.15-09.45	Room 125
<b>Office hours:</b>	Prof. Burda	Mondays 10.00-12.00	Room 109
	Dr. Meyer-Gohde	Fridays 10.00-11.00	Room 110

This course is a mandatory course for the Master's and MEMS module "Advanced Macroeconomic Analysis" and related modules for other Master courses of study. It is designed to give a broad overview of the main currents of macroeconomic theory, as well as to introduce students to the most important ideas, models and research methods. Students without prior exposure to macroeconomics will need to follow a disciplined program of outside reading in the early weeks to acquire background knowledge at the undergraduate level.

The course is based on ideas, models and techniques. This knowledge will be evaluated on the basis of mandatory problem sets and a final exam. Regular attendance at lectures as well as sections is important if not essential for achieving a passing grade on the final exam, which counts for 70% of the final grade. The remaining 30% consists of grades on three problem sets, which will be assigned throughout the semester.

**The problem sets are an integral part of the course.** Group work is recommended as a useful way of learning about the material by interacting with fellow students. However, each participant is required to turn in legible, handwritten solutions (no TeX or other typewritten forms are accepted). Problem sets are to be turned in by the end of the day on the due date in Prof. Burda's mailbox in the ground floor. ***No grade or credit is given for problem sets turned in late.***

The literature for this course is comprised of *required readings*, that are more or less essential for a successful completion of the course, as well as optional *additional readings*, which can be useful for obtaining more details on the material covered or for more advanced treatment of the subjects. Most of the required readings can be found in:

**Jean-Pascal Bénassy (2010): *Macroeconomic Theory*, Oxford University Press.**

This book is a comprehensive treatment of theoretical macroeconomic and can also be used for the courses in growth theory, macroeconomic policy, or as a general reference text. Each lecture is generally accompanied by an additional reading from an academic journal. Readings will be available on demand via MOODLE. More details will be made available in the repetition section.

## COURSE OUTLINE

### *I. Models of Long-Run Macroeconomic Behavior*

#### 1. The Solow model of economic growth (1)

<b>Lecture Dates</b>	19 Oct.
<b>Exercise Sections</b>	21/22 Oct.
<b>Concepts/techniques:</b>	The Solow model of economic growth, introduction to difference and differential equations
<b>Required readings:</b> <b>Additional readings:</b>	Benassy (2010), Ch. 1. Burda, Michael and Charles Wyplosz (2009): <i>Macroeconomics: A European Text</i> , Oxford University Press. Fifth Edition. Ch.3, esp. Web Appendix 3. Romer (2006): <i>Advanced Macroeconomics</i> . McGraw-Hill. Third edition. Ch.1. Phelps, Edmund (1961): "The Golden Rule of Accumulation: A Fable for Growthmen," <i>The American Economic Review</i> , 51(4), pp. 638-643.

#### 2. The overlapping generations (OLG) model (2)

<b>Lecture Dates</b>	26 Oct., 2 Nov.
<b>Exercise Sections</b>	28/29 Oct, 4/5 Nov.
<b>Concepts/techniques:</b>	The overlapping generations (OLG) model, optimization under constraints in two periods
<b>Required readings:</b> <b>Additional readings:</b>	Benassy (2010), Ch.8 Blanchard, Olivier J. and Fischer, Stanley (2000): <i>Lectures on Macroeconomics</i> , MIT Press. Ch. 3.1. Romer (2006) Ch.2, pp.75-90. Diamond, Peter A. (1965): "National Debt in a Neoclassical Growth Model," <i>The American Economic Review</i> , 55(5), pp. 1126-1150.

#### 3. The Ramsey-Cass-Koopmans model of economic growth (3)

<b>Lecture Dates</b>	9 Nov., 16 Nov., 23 Nov
<b>Exercise Sections</b>	11/12 Nov., 18/19 Nov., 25/26 Nov.
<b>Problem Set 1 Given/Due</b>	26 Nov. / 3 Dec.
<b>Concepts/techniques:</b>	The maximum principle and maximization over infinite horizons under certainty in continuous time
<b>Required readings:</b> <b>Additional readings:</b>	Benassy (2010) Ch.7. Blanchard/Fischer (2000) Ch.3.3. Intriligator, Michael, D. (1971): <i>Mathematical Optimization and Economic Theory</i> , Prentice Hall. Ch.14 and 16. Romer (2006) Ch.2, pp. 47-74. Cass, David (1965): "Optimum Growth in an Aggregative Model of Capital Accumulation," <i>The Review of Economic Studies</i> , 32(3), pp. 233-240.

**4. Money and Inflation in the Long Run (1)**

<b>Lecture Dates</b>	30 Nov.
<b>Exercise Sections</b>	2/3 Dec.
<b>Concepts/techniques:</b>	Cagan model, expectations
<b>Required readings:</b> <b>Additional readings:</b>	Benassy (2010) Ch.3. Romer (2006) Ch.10.1. and 10.8. Sargent, Thomas J. and Neil Wallace (1973): "Rational Expectations and the Dynamics of Hyperinflation," <i>International Economic Review</i> , 14(2), pp. 328-350.

**II. Models of Short-Run Fluctuations****5. The Dynamic AS-AD Model (2)**

<b>Lecture Dates</b>	7 Dec., 14 Dec.
<b>Exercise Sections</b>	9/10 Dec., 16/17 Dec. (computer session 'Intro. to Matlab')
<b>Problem Set 2 Given/Due</b>	17 Dec. / 7 Jan.
<b>Concepts/techniques:</b>	Impulse-response mechanisms, stochastic difference equations, stability and dynamics
<b>Required readings:</b> <b>Additional readings:</b>	Burda/Wyplosz (2005, 4 <sup>th</sup> ed.); Web Appendix 14. Farmer, Roger E. A. (1993): <i>The Macroeconomics of Self-Fulfilling Prophecies</i> , MIT Press. Ch.2. Sargent, Thomas J. (1976): "A Classical Macroeconometric Model for the United States," <i>The Journal of Political Economy</i> , 84(2), pp. 207-238.

**6. Rational Expectations and the Lucas Island Model of Aggregate Supply (2)**

<b>Lecture Dates</b>	4. Jan, 11 Jan.
<b>Exercise Sections</b>	6/7 Jan., 13/14 Jan.
<b>Concepts/techniques:</b>	Rational expectations, law of iterated expectations
<b>Required readings:</b> <b>Additional readings:</b>	Benassy (2010) Ch.3. Romer (2006) Ch.6, pp. 265-280. Lucas, R.E., Jr. (1973): "Some International Evidence on Output-Inflation Trade-offs," <i>American Economic Review</i> , 63, 326-334.

**7. The stochastic growth (RBC) model (2)**

<b>Lecture Dates</b>	18 Jan., 25 Jan.
<b>Exercise Sections</b>	20/21 Jan., 27/28 Jan. (computer session 'Solution Methods')
<b>Problem Set 3 Given/Due</b>	28 Jan., 4 Feb.
<b>Concepts/techniques:</b>	Intertemporal optimization under uncertainty, dynamic programming and the method of log-linearization (3)
<b>Required readings:</b> <b>Additional readings:</b>	Benassy (2010) Ch.10. Romer (2006) Ch.4. Campbell, John (1994): "Inspecting the Mechanism," <i>Journal of Monetary Economics</i> , 33, 463-506. King, Robert G. and Sergio Rebelo (1999): "Can the Real Business Cycle Model be Resuscitated?" <i>Handbook of Macroeconomics</i> , Elsevier.

**8. New Keynesian Models (2)**

<b>Lecture Dates</b>	1 Feb., 8 Feb.
<b>Exercise Sections</b>	3/4 Feb., 10/11 Feb.
<b>Concepts/techniques:</b>	Calvo Model, solution methods
<b>Required readings:</b> <b>Additional readings:</b>	Benassy (2010) Ch.13. Clarida, Richard, Jordi Galí and Mark Gertler (1999): "The Science of Monetary Policy: A New Keynesian Perspective. <i>Journal of Economic Literature</i> , 37(4), pp. 1661-1701. Christiano, Lawrence, Martin Eichenbaum and Charles Evans (2005), "Nominal Rigidities and the Dynamic Effects of a Shock to Monetary Policy", <i>Journal of Political Economy</i> 113(1), pp. 1-45.