**Syllabus**

**Macroeconomic Theory II**

* **Instructor:** Michael Reiter (mreiter@ihs.ac.at)
* **Credits:** 5.0
* **Term:** Spring
* **Course level:** PhD
* **Prerequisites:** Macroeconomic Theory I
* **Course description**

The aim of the course is to give students a thorough understanding of the methods and models of modern business cycle theory. Starting from basic real business cycle models, we discuss models of labor market dynamics, as well as the New Keynesian models that are the core of the Dynamic Stochastic General Equilibrium (DSGE) models used in applied policy analysis. Students will learn to solve DSGE models on the computer, using the software toolkit Dynare. The second half of the course will deal with financial frictions and heterogeneous agent models.

**Learning outcomes**

By the end of the course, students will

* understand the concepts and models of modern business cycle theory
* be able to solve business cycle models on the computer, using standard software tools.
* be able to analyze and interpret the numerical solution of business cycle models
* understand the policy implications of these models, and apply their knowledge to current questions of macroeconomic policy

**Learning activities and teaching methods**.

This course relies on a combination of lectures, in-class discussions and problem sets. The lectures will introduce the basic concepts and theories. Students are expected to come to class prepared, that means, having read the required articles, so that the content, methods and difficulties of the article can be discussed in class. The problem sets will contain theoretical exercises, as well as computational problems, because programming a model provides a deeper understanding of the model structure than just a theoretical discussion.

**Reading list**

See articles below

**Assessment**

The grade will be based on a sequence of problem sets (30%), a midterm exam (30%) and a final exam (40%).

**Course schedule and materials for each session**

Weeks 1: The basic real business cycle model

Cooley and Prescott (1995, Chapter 1)

Greenwood, Hercowitz, and Hu man (1988)

Week 2: Solving business cycle models on the computer

Sims (2001)

Blanchard and Kahn (1980)

Weeks 3-4: Labor markets and the business cycle

Pissarides (1990, Chapter 1)

Merz (1995)

Shimer (2005)

Costain and Reiter (2008)

Hall and Milgrom (2008)

Coles and Kelishomi (2018)

Week 5: Foundations of New Keynesian models

Gali (2015, Chapter 3)

Week 6: The conduct of monetary policy

Clarida, Gali and Gertler (1999)

Gali (2015, Chapters 4,5)

Week 7: Unconventional monetary policy

Joyce, Miles, Scott, and Vayanos (2012)

Gertler and Karadi (2011)

Week 8: Fiscal policy

Blanchard and Perotti (1999)

Christiano, Eichenbaum, and Rebelo (2011)

Auerbach and Gorodnichenko (2012)

Gali , Lopez-Salido, and Valles (2007)

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Week 10: Financial frictions

Carlstrom and Fuerst (1997)

Gertler and Kiyotaki (2010)

Week 11: Financial crises

Brunnermeier (2008)

Jorda, Schularick, and Taylor (2016)

Week 11: Medium-scale macroeconomic models

Smets and Wouters (2003)

Christiano, Motto, and Rostagno (2014)

Week 12: Heterogeneous agent models

Krusell and Smith (1998)

Kaplan, Moll, and Violante (2018)

References

Auerbach, A. J. and Y. Gorodnichenko (2012). Measuring the output responses to fiscal policy. American Economic Journal: Economic Policy 4 (2), 1{27.

Blanchard, O. and R. Perotti (1999). An Empirical Characterization of the Dynamic Effects of Changes in Government Spending and Taxes on Output. NBER Working Papers 7269, National Bureau of Economic Research, Inc.

Blanchard, O. J. and C. M. Kahn (1980). The Solution of Linear Difference Models under Rational Expectations. Econometrica 48 (5), 1305{1311.

Brunnermeier, M. K. (2008, December). Deciphering the liquidity and credit crunch 2007-08. NBER Working Papers 14612, National Bureau of Economic Research, Inc.

Carlstrom, C. T. and T. S. Fuerst (1997, December). Agency Costs, Net Worth, and Business Fluctuations: A Computable General Equilibrium Analysis. American Economic Review 87 (5), 893{910.

Christiano, L., M. Eichenbaum, and S. Rebelo (2011). When Is the Government Spending Multiplier Large? Journal of Political Economy 119 (1), 78{121.

Christiano, L. J., R. Motto, and M. Rostagno (2014). Risk shocks. American Economic Review 104 (1), 27{65.

Clarida, R., J. Gali , and M. Gertler (1999). The science of monetary policy: A New Key-nesian perspective. Journal of Economic Literature 37 (4), 1661{1707.

Coles, M. G. and A. M. Kelishomi (2018, July). Do Job Destruction Shocks Matter in the Theory of Unemployment? American Economic Journal: Macroeconomics 10 (3), 118{136.

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Cooley, T. F. and E. C. Prescott (1995). Economic growth and business cycles. In T. F. Cooley (Ed.), Frontiers of Business Cycle Research. Princeton: Princeton University Press.

Costain, J. and M. Reiter (2008). Business cycles, unemployment insurance, and the calibration of matching models. Journal of Economic Dynamics and Control 32 (4), 1120{55.

Gali, J. (2015). Monetary Policy, Inflation, and the Business Cycle: An Introduction to the New Keynesian Framework and Its Applications, Second Edition. Princeton University Press.

Gali, J., J. D. Lopez-Salido, and J. Valles (2007). Understanding the E ects of Government Spending on Consumption. Journal of the European Economic Association 5 (1), 227{ 270.

Gertler, M. and P. Karadi (2011, January). A model of unconventional monetary policy.

Journal of Monetary Economics 58 (1), 17{34.

Gertler, M. and N. Kiyotaki (2010). Financial intermediation and credit policy in business cycle analysis. In B. M. Friedman and M. Woodford (Eds.), Handbook of Monetary Economics, Volume 3 of Handbook of Monetary Economics, Chapter 11, pp. 547{599. Elsevier.

Greenwood, J., Z. Hercowitz, and G. W. Hu man (1988, June). Investment, capacity uti-lization, and the real business cycle. American Economic Review 78 (3), 402{17.

Hall, R. E. and P. R. Milgrom (2008). The limited influence of unemployment on the wage bargain. American Economic Review 98 (4), 1653{74.

Jorda, O., M. Schularick, and A. M. Taylor (2016, May). Macro-financial History and the New Business Cycle Facts, pp. 213{263. University of Chicago Press.

Joyce, M., D. Miles, A. Scott, and D. Vayanos (2012). Quantitative easing and unconventional monetary policy: an introduction. Economic Journal 122 (564), F271{F288.

Kaplan, G., B. Moll, and G. L. Violante (2018, March). Monetary policy according to hank. American Economic Review 108 (3), 697{743.

Krusell, P. and A. A. Smith (1998). Income and wealth heterogeneity in the macroeconomy. Journal of Political Economy 106 (5), 867{96.

Merz, M. (1995). Search in the labor market and the real business cycle. Journal of Mon-etary Economics 36, 266{300.

Pissarides, C. A. (1990). Equilibrium Unemployment Theory. Oxford: Basil Blackwell.

Shimer, R. (2005). The cyclical behavior of equilibrium unemployment and vacancies.

American Economic Review 95, 25{49.

Sims, C. A. (2001). Solving linear rational expectations models. Computational Eco-nomics 20 (1-2), 1{20.

Smets, F. and R. Wouters (2003, 09). An Estimated Dynamic Stochastic General Equi-librium Model of the Euro Area. Journal of the European Economic Association 1 (5), 1123