Macroeconomics II

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1 Contact Information

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2 Course Description

This is the second of the required core courses in macroeconomic theory for students in the Masters degree. The focus of the course is on short-run fluctuations in closed economies. The analysis will be based on the workhorse models of business cycle fluctuations, DSGE models. In the course, students will be introduced to the analysis, solution, and calibration of this type of models by using MATLAB and Dynare.

3 Topics and Organization

Part I — Preliminaries, Stylized Facts and Measurement of Business Cycles

- Expectations, Stochastic Processes, and Impulse Response Functions.
- Definition and measurement. Separating trend and cycles.
- Time series of actual economies. Stylized facts.

Part II — The Real Business Cycle Model

- Dynamic optimization. Control and state variables, transition and return functions.
- The basic Real Business Cycle Model (RBC).
- Linearization.
- Dynare.
- Calibration.

Part III — Extensions of the RBC Model

- Indivisible labor.
- Investment adjustment costs.
- Variable factor utilization.

4 Schedule

The first part of the course will last from January 10th until February 9th. We will have a tentative schedule by weeks. There will be a midterm exam on February 9th.

Week 1 Preliminaries. Microfoundations.

Week 2 Basic RBC and equilibrium concepts. Solving the model.

Week 3 Linearization. Blanchard-Khan conditions. Calibration.

Week 4 Dynare. Dynamics of basic RBC.

Week 5 RBC extensions.

Week 6 Review and Exam.

5 Important Dates

- Deadline Problem Set I: January 18th.
- Deadline Problem Set II: January 25th.
- Deadline Problem Set III: February 1st.
- Midterm Exam: February 8th.
- Final Exam: March 19th.

6 Bibliography

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- Judd, K. (1998). *Numerical Methods in Economics*. Cambridge, Mass: MIT Press
- King, R. G. & Rebelo, S. T. (1999). Chapter 14 Resuscitating Real Business Cycles. In *Handbook of Macroeconomics*, volume 1 (pp. 927–1007). Elsevier. URL https://www.sciencedirect.com/science/article/pii/S1574004899100223

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