Thema & Essec
Fall 2018

Stefania MARCASSA
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# DYNAMIC STOCHASTIC GENERAL EQUILIBRIUM

*SYLLABUS*

## COURSE OVERVIEW

This course will focus on issues in "short run" macro, in a closed economy setting. We will do so using equilibrium models that take agent optimization, dynamics, and expectations formation seriously. Dynamic stochastic general equilibrium (DSGE) models have become the standard workhorse models for the analysis of aggregate fluctuations. The primary focus of the course will be on the analysis, solution, calibration, estimation of DSGE models. We will work with these models in conjunction with data, discussing how to calibrate, estimate, and evaluate these models. If time permits, we will then use the models to think about economy policy.

Students will be expected to perform quantitative exercises using a computer program, most preferably MATLAB or Python.

## COURSE OUTLINE AND READING LIST

### 1. Introduction and Business Cycle Stylized Facts

Lecture 1 Slides.

Stock, James, and Mark Watson (1998), "Business Cycle Fluctuations in U.S. Macroeconomic Time Series", NBER Working Paper 6528 [also published in J. Taylor and M. Woodford eds., Handbook of Macroeconomics, vol 1A, 1999]

King, Robert and Sergio Rebelo (2000), "Resuscitating Real Business Cycles", NBER Working Paper 7534 [also published in J. Taylor and M. Woodford eds., Handbook of Macroeconomics, vol. 1B, 2000]

### 2. Review of the Neoclassical Growth Model and Dynamic Programming

Lecture 2 Slides.

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Acemoglu, Daron, Introduction to Modern Economic Growth, Chapter 5

Cooley, Thomas F., and Edward C. Prescott (1995), "Economic Growth and Business Cycles," in T.F. Cooley, ed, Frontiers of Business Cycle Research, Princeton University Press. Chapter 1.

Prescott, Edward C. (1986), "Theory Ahead of Business Cycle Measurement", Quarterly Review, Federal Reserve Bank of Minneapolis.

Stokey, Nancy, Robert E. Lucas Jr., and Edward C. Prescott (1989), Recursive Methods in Economic Dynamics. Chapter 1.

**3. The Real Business Cycle Model: Equilibrium Analysis of the Decentralized Model and Log-Linearization**

Lecture 3 Slides.

Kydland, Finn and Ed Prescott. "Time to Build and Economic Fluctuations." Econometrica, 1982. http://www.jstor.org/sici?sici=0012- 9682(198211)50:6%3C1345:TTBAAF%3E2.0.CO;2-E&origin=repec

**4. The Quantitative Performance of the RBC Model: Calibration**

Lecture 4 Slides.

Cooley, Thomas F., and Edward C. Prescott (1995), "Economic Growth and Business Cycles," in T.F. Cooley, ed, Frontiers of Business Cycle Research, Princeton University Press. Chapter 1.

Prescott, Edward C. (1986), "Theory Ahead of Business Cycle Measurement", Quarterly Review, Federal Reserve Bank of Minneapolis.

Stokey, Nancy, Robert E. Lucas Jr., and Edward C. Prescott (1989), Recursive Methods in Economic Dynamics.

**LECTURES**

This class meets on Mondays 9 a.m. - 12 p.m.

You can contact me at stefania.marcassa@u-cergy.fr

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All lecture notes, problem sets, and materials will be posted on my website http://stefaniamarcassa.webstarts.com.

**COURSE GRADING POLICY**

Your final grade in this course will be determined as follows:

50% Problem Sets

50% Final Exam