Department of Economics
The University of Mannheim
Spring 2018

Quantitative Methods for Monetary Economics

Time and place: Wednesdays 12:00 – 13:30 & 13:45 – 15:15
at L9, 1-2 room no. 003

Instructor: Takeki Sunakawa (takeki.sunakawa@gmail.com)

Objectives:

This course will provide a basic toolbox to analyze macroeconomic models. Specifically we will learn how to solve neoclassical growth models, real business cycle models, and New Keynesian monetary models by numerical methods. They are also called "Dynamic Stochastic General Equilibrium (DSGE)" models. DSGE models often have only numerical solutions; therefore, it is important to learn how to solve models as well as its implication for understanding macroeconomic phenomena. In class, hands-on sessions using MATLAB and Dynare are also provided.

Homework assignments may require writing computer codes. The programming environment of the course is MATLAB and Dynare. Programming may be done in groups, but the homework must be submitted individually.

Grading: Problem sets (50%) + Final assignment (50%).

Textbooks:

McCandless, G. "The ABCs of RBCs: An Introduction to Dynamic Macroeconomic Models," Harvard University Press (2008)

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

All the material discussed in class (slides, computer codes, etc.) is uploaded to https://github.com/tkksnk/qmme

Schedule (tantative):

14 Feb. #1 Introduction

21 Feb. #2 Solow model

28 Feb. #3 Ramsey-Cass-Koopmans (RCK, a.k.a. neoclassical growth) model (1) HW1 due

07 Mar. #4 RCK model (2): Hayashi and Prescott (2002)

14 Mar. #5 Review on time series, Real Business Cycle (RBC) model (1) HW2 due

21 Mar. #6 RBC model (2): Hansen (1985)

[Easter break]

11 Apr. #7 New Keynesian model (1): Cooper and Hansen (1990), Gali ch. 2 HW3 due

18 Apr. #8 New Keynesian model (2): Gali ch. 3

25 Apr. #9 New Keynesian model (3): Gali ch. 4

02 May #10 New Keynesian model (4): Gali ch. 5

09 May #11 TBA

16 May #12 TBA

23 May #13 TBA

30 May #14 TBA