ECO-5201: Macroeconomics I

Anshumaan Tuteja
Ashoka University

anshumaan.tuteja@ashoka.edu.in

May 8, 2024

1 Course overview

Welcome to the core course of graduate macroeconomics! We will conduct an in-depth study of the key theoretical and empirical macroeconomic models used by researchers worldwide. The course begins with a brief history of macroeconomic thought, followed by detailed discussions on Dynamic Stochastic General Equilibrium (DSGE) models — including Real Business Cycle, New Keynesian models, and an introduction to Overlapping Generations models. We will also explore long-run growth models, such as those developed by Solow and Romer, and delve into empirical time series models, focusing on Vector Autoregression (VAR) techniques.

Note:

- A few minor tweaks may take place over the summer.
- This course will not cover forecasting.

2 Learning outcomes

1. Learn about the evolution of macroeconomic theories and time-series methods.
2. Gain an in-depth understanding of DSGE models that form the base of macro models utilized in major policy institutions.
3. Analyse the effectiveness of macroeconomic tools (fiscal policy and monetary policy) in VARs.
4. Proficiency in writing MATLAB code for DSGE models and VARs.

3 Evaluation

The grade will be split into three parts: Home Assignments and in-class quizzes (30%), mid-term exam (30%) and a final exam (40%). The home assignments will be designed to give you a signal about your understanding of class material by asking you to write down solutions of models that are discussed in the lecture or write code related to these models in MATLAB. The mid-term exam will be solely from DSGE and long-run growth models. The final exam will cover the entire course, with a higher weight (likely to be 70%) on empirical models.

Grading will be relative but with lower bounds as follows:

- A: Top 10-15% students will receive the highest grade (only if scores are higher than 85% of the max score)
- A- : Next 10-15% of the students will receive this grade (scores should not be lower than 75% of the max score),
- B+, B, B-, C,C-,D, D- will be subsequently decided by the respective percentiles.
- Students receiving below 40% of the total will receive F.

4 Course rules

1. Attendance is not compulsory, no need to inform me about your absence.
2. You are free to communicate with the outside world, but I encourage you to keep this to a minimum. If you need to speak urgently on the phone, feel free to move out and return, just ensure minimal distraction for others.
3. No photography allowed from any device, please don't ask for permission in class. All lecture notes will be available, mostly prior to the class for you to either print them out in advance or open on your device. Some edits might happen based on our interaction during the lecture.
4. Coffee/tea and cold foods are allowed in the classroom.
5. Please maintain decorum in the classroom (me and/or your peers) while you participate in the lecture. I encourage participation, please raise your hand if you have any doubts. No doubt is small, so fire away if you are unclear about something.

5 Office hours

Fridays 16:00-18:00 hours. Email me and we will set up a time.

6 Reading list

We will use multiple texts for the course. The main reference for long-run growth models will be Romer (2012). DSGE models will be covered extensively from Galí (2015) and McCandless (2009). For VARs, the main reference will be detailed lecture notes/ slides, but you may want to refer to material from Kilian and Lütkepohl (2017). For a more basic understanding of VARs, you may like to refer to Enders (2015).

References

W. Enders. Applied econometric time series fourth edition. *New York (US): University of Alabama*, page 30, 2015.

J. Galí. *Monetary policy, inflation, and the business cycle: an introduction to the new Keynesian framework and its applications*. Princeton University Press, 2015.

L. Kilian and H. Lütkepohl. *Structural vector autoregressive analysis*. Cambridge University Press, 2017.

G. McCandless. *The ABCs of RBCs: An introduction to dynamic macroeconomic models*. Harvard University Press, 2009.

D. Romer. *Advanced Macroeconomics*. McGraw-Hill/Irwin, New York, NY, 4 edition, 2012.