Econ 4310 prospectus

Macroeconometrics

Course Description and Level: This course will teach you modern econometric techniques that are used to conduct empirical research in macroeconomics and forecast macroeconomic (and, to some extent, financial) time series. Autoregressive models will play an important role in this course. We will also consider state-space models and dynamic stochastic general equilibrium (DSGE) models. Examples of applications include nowcasting and forecasting of inflation and GDP growth, and the analysis of the effects of unanticipated changes in monetary and fiscal policy using structural vector autoregressions and linear projections.

The prerequisite for this course is Econ 2310 (formerly Econ 104 "Introduction to Econometrics") or by permission from the instructor. To do well in this course you will need to be comfortable with econometric methods typically covered in Econ 2310, though no specific knowledge of time series econometrics is required.

Class Structure for Spring 2023

- In-Person Sessions Planned
  - There will be lectures on Tuesday and Thursday 1:45 – 3:15 pm ET. The lectures will include coding/computational exercises.
  - Instructor office hours will be announced after the start of the course.
- Online Activities
  - Piazza, accessible via Canvas, will be used to make course announcements and answer questions about course material. This will be moderated actively, both to answer questions and approve (or correct) answers written by fellow-students.
- Schedule reflecting the workload for a typical week
  - FRIDAY - MONDAY: Read and take notes from assigned texts, and revise material from lectures. Work on homework assignments which involve coding in R. Group work is encouraged, but you will have to submit your own answers.
  - As the semester progresses, you should also start thinking about and working on your group project.

Outline of Assignments & Assessments

- Homework assignments, best 4 out of 5, roughly one every 2 weeks for the first ten weeks: 20%
- Mid Term I, on February 14: 25%
- Mid Term II, on March 28: 25%

- Group project (at most 3 people per group) involving replicating an existing study or applying time series techniques to a new data set: 30%
  Due: April 25 (Last Day of Classes)
  Start thinking of the project early! You should inform me of the topic for your project in the week after the spring break.
- Bonus, for participation in Piazza: up to 2%. Bonus points are discretionary

Readings

- I will post detailed lecture slides which are supplemented by handbook chapters and research articles.
- You should also have your Econ 2310 / Econ 104 textbook handy as a reference.

Required software

- R with RStudio as front-end. This is open-source and freely downloadable from the internet. Make sure you update to the latest version regularly.
- Lectures, homework assignments and the term project will involve substantial amounts of programming and /or data analysis on R.