Macroeconomics I: Introduction to dynamic general equilibrium models[1].

Course description

This course/module introduces dynamic general economic models and basic computational techniques needed to solve them. We start with the Solow growth model and show how to introduce competitive labour and capital markets into it. We then discuss the so-called neoclassical growth model à la Ramsey, Cass and Koopmans. We also consider a stochastic version of the model and use it to introduce recursive computational methods. Finally, we study stochastic lifecycle models of labour supply and savings.

Students are required to solve both analytical and computational problems. Model solutions to the computational problems will be given in Matlab. Other recommended options for programming language are Octave (which is largely compatible with Matlab) and Julia.

Grading is based on problem sets (25 %) and a final exam (75 %).

[1] In some documents this course is titled "Advanced optimization methods for macroeconmic models".