

Macroeconomics I

EUI, FALL 2015

Instructor: Axelle Ferrière, E-mail: axelle.ferriere@eui.eu.

Time and Location: Wednesday-Friday 8.45-10.45

Course Overview: The first course in Macroeconomics focuses on stochastic models with infinitely lived agents. We will mostly build upon the main workhorse of modern macroeconomics: the (neoclassical) growth model.

The class will be organized as follows:

- We first learn dynamic programming techniques and apply them to study the stochastic growth model. We discuss Markov processes. We learn simple solution techniques which make the growth model tractable using the computer.
- Then, using the tools described above, we focus on the sources and implications of business cycles and economic growth. We also show how we can decentralize the efficient allocation (the solution of the social planner's problem) as a recursive competitive equilibrium.
- Finally we turn our attention to another source of uncertainty: idiosyncratic shocks. We first study how consumption responds to individual income shocks under different market structures and under different assumptions on the shock process. Finally, we enrich the environment of the neoclassical growth model by introducing ex post heterogeneous agents facing stochastic uninsurable and idiosyncratic (income) shocks. We study the implications of this model in terms of income, consumption and wealth dispersion.

Readings: I will provide detailed lecture notes. The main background material is in the following textbooks:

- N. Stokey, R. Lucas and E. Prescott: Recursive Methods in Economic Dynamics, Harvard University Press, 1989.
- L. Ljungqvist and T. J. Sargent: Recursive Macroeconomic Theory, The MIT Press, 3rd edition, 2012.

Grading: There will be 5 assignments throughout the term and a final exam. They will count toward the final grade as follows.

Assignments	10%
Final	90%

The assignments will consist of some modelling, analytical and numerical tasks. Some very basic knowledge of programming will be assumed. Simple Matlab codes will be provided and discussed during class and/or recitations.