

MACROECONOMICS I (9 CFU)

Teacher: Marco Dardi

List of the main topics, 2017-2018 (2nd semester, February-May 2018)

The course aims to present the main features of the Dynamic Stochastic General Equilibrium model (DSGE) still prevalent in macroeconomic theory . We start with an introduction to methods of mathematical dynamic optimization and show how these methods are applied to the analysis of intertemporal equilibrium consumption-accumulation paths in a deterministic (or “certainty-equivalent”) environment. The DGE path is characterized both in terms of a “command” economy and as equilibrium of a decentralized perfectly competitive economy. There follows a brief comparison between DGE and equilibrium paths generated by a simple Overlapping Generations model. Finally, the role of price stickiness in generating “Keynesian” features of DGE is examined by means of a simple model of dynamic price adjustment.

In the second part of the course uncertainty is introduced into the model by assuming that random events generated by simple stochastic processes affect the dynamics of the relevant economic variables. We discuss the assumption of Bayesian expectations, and use a sketchy model of an economy driven by an autoregressive process to show how different ways of modeling expectation formation affect the dynamics of the system. We focus on the difference between rational and adaptive expectations. These notions are applied to the analysis of the representative household’s choice among risky assets. We discuss the concepts of risk involved in the utility-based and consumption-based Capital Asset Pricing Model. A comparison with the contingent claims approach is used in order to introduce the notions of completeness of financial markets, efficiency in risk allocation and non-diversifiable risks.

Texts: Wickens, Macroeconomic Theory, Princeton 2008 (2nd edition, 2012); Teacher’s lecture notes, 2018 edition (available in Moodle <https://e-l.unifi.it>)

Pre-requisites: Students are supposed to have attended classes of Mathematics for Economics, and to be familiar with the basics of Macroeconomics at the elementary level (National Accounts; Fiscal and monetary policy; IS-LM and AD-AS models of an open economy).