

## **INFORMATION AND EXPECTATIONS IN MACROECONOMICS (24 Hours)**

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DEPARTMENT: Economics & Decision Sciences

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### SYNOPSIS

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Information is a key ingredient for the efficiency of economic choices. However, information is typically incomplete, asymmetric across agents and costly to acquire. Many economic phenomena like booms and busts in economic growth, market crashes, bank runs may be thought as the result of sudden shifts in agents' expectations: but how should we model these phenomena? And how may data inform us on the way people form expectations? Answering these questions requires understanding the implications of different models of information frictions, ranging from rational extrapolation to pure animal spirits, and their implication for policy efficiency. This course provides some answers by presenting the basic techniques to signal extraction in Gaussian environments and reviewing the essential of the literature on information frictions in Macroeconomics and Finance.

### COURSE OVERVIEW

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The course provides an introduction to the literature of information frictions in Macroeconomics and Finance. It pays particular attention to the microfoundations of agents' learning and the general equilibrium feedback between market outcomes and expectations. On the one hand, the role of markets is precisely to aggregate available information into prices to inform individual economic choices. On the other hand, market failures or frictions may twist the information content of prices making them coordination devices for inefficient fluctuations. Notably, monetary and fiscal policies cannot neglect the signaling role of prices and the importance of policy communication in modern economies.

### KEY TOPICS AND LEARNING OUTCOMES

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The first part of the course provides the basics for the comprehension of any signal extraction problem in Economics:

- we will introduce the concept of Rational Expectations Equilibrium, highlighting the differences between macro and micro notions of equilibrium
- we will learn the basic techniques for the analysis of Gaussian signal extraction problems, in static and dynamic environments

- we will discuss how the presence of pay-off complementarities may create externalities in the use or aggregation of information
- we will discuss how we could measure the degree of information rigidities in surveys of expectations by consumers and professional forecasters.

The second part reviews seminal models and recent ideas in the literature on information frictions in Macroeconomics and Finance:

- we will study asset pricing models as testbed to illustrate the typical mechanisms of information aggregation in markets and their failures
- we will investigate the role of expectations in monetary models of the business cycle: from the prototypical Lucas' Island model to the celebrated New-Keynesian model
- we will discuss recent advance of the literature on Rational Inattention and its applications to Macroeconomics
- we will finally review classical models of bank runs and currency attacks in the Global Games literature.

#### ASSESSMENT

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Students will be required to work through light homework, which helps keeping track of the lectures. The final exam consists in the discussion of a key paper in the field, using the concepts and the tools developed in class.

#### AUDITING

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Accepted