

MICROECONOMICS 2

Syllabus

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Outline :

The fundamental welfare theorems establish the perfectly competitive case as a benchmark for thinking about outcomes in market economies. In particular, any inefficiencies that arise in a market economy, and hence any role for Pareto-improving market intervention, must be traceable to a violation of at least one of the building assumptions of the perfectly competitive case. The analysis of these market failures is the topic of this course.

The course consists in three main parts. The first part covers classical market failures without informational concerns: public goods, externalities and market power. It introduces basic results and serves as an introduction to any further course in public economics and in industrial organization.

The second part focuses on uncertainty and the formalization of information in a standard microeconomic context: decision under uncertainty, information structures, competitive equilibrium under uncertainty, incomplete markets. This part is a necessary step in order to address issues of asymmetric information and it serves as an introduction to any further course in finance and insurance theory.

The third and most important part is devoted to the study of informational imperfection and asymmetries as a source of inefficiencies. Starting from the failure of the competitive equilibrium paradigm in a context of informational asymmetries, it first presents central models of transaction under asymmetric information, the so-called Principal - Agent models. Moving to interactive situations with multiple agents, the course then provides an introduction to mechanism design, with applications to auctions and public good provision, and a discussion of implementation.

Organization :

This is 36h course consisting in 18 sessions of 2h each. Students are split into three groups for the tutorials that take place once a week.

Slides will be available on the APE online resources website before each session. Courses will be more easily followed and will therefore be more helpful if students read the corresponding slides before each session, focusing on the main ideas. Slides should be read again, this time in more detail, after the corresponding session.

A short list of references is given at the end of each session: they are meant to be read ! These are papers that every serious candidate for a master degree in economics should have read and studied.

During the tutorials, students will be asked to work on problems related to the lectures. These problems will be handed out to the students one week in advance. Students are expected to prepare these problems before the tutorial.

In addition, students will be handed out two major homework assignments. One will focus on the first two parts of the course on non-information based market failures and choice and equilibrium under uncertainty, the other one on the last part of the course on principal-agent models and mechanisms.

Evaluation :

The final grade for the course will consist in the weighted average of :

- two grades for the two homework assignments : the first one to be handed by Friday, March 3rd, the second one to be handed by Friday, April 7th (20% each)
- a grade for participation in the tutorials (10%)
- a grade for the final 3h exam (50%)

Preliminary schedule : changes and adaptations are possible.

Monday	01/23	BC	General introduction + Market power 1
Thursday	01/26	BC	Market power 2
Monday	01/30	BC	Externalities
Thursday	02/02	BC	Public goods

Monday	02/06	FB	Decision under uncertainty
Thursday	02/09	FB	Information structures
Monday	02/20	FB	Arrow-Debreu equilibrium
Monday	02/27	FB	Asset markets and incomplete markets
Thursday	03/02	BC	Asymmetric information in competitive equilibrium
Monday	03/06	BC	Principal Agent under screening 1
Thursday	03/09	BC	Principal Agent under screening 2
Monday	03/13	BC	Principal Agent under moral hazard 1
Thursday	03/16	BC	Principal Agent under moral hazard 2
Monday	03/20	FB	Auctions : positive models
Thursday	03/23	FB	Auctions : optimal auction design
Monday	03/27	FB	VCG mechanisms
Thursday	03/30	FB	Mechanism design and implementation 1
Monday	04/03	FB	Mechanism design and implementation 2