

Professor: Laurent Mathevet (email:)

Office Hours:

TA:

Office Hours: see scheduled meetings.

**Purpose of course.** The course will examine individual choices and economies where all markets are competitive. More specifically, in the first part of the course we will analyze the choice problem of consumers and firms and determine the properties of individual and aggregate demand functions. We will conclude the first part with an analysis of individual choices under uncertainty. In the second part of the course we will investigate first which economic outcomes, or allocations, are feasible in these economies, and which outcomes are efficient. Next, we will analyze the properties of the allocations attained as equilibria when consumers and firms can trade in competitive markets. If time will allow we will conclude extending the analysis to dynamic economies under uncertainty, where agents can also trade in competitive markets for financial securities.

**Prerequisites.** You are expected to be familiar with the material covered in a standard intermediate microeconomics course (as in Varian, *Intermediate Microeconomics* (1999)).

In terms of mathematical background, you should be familiar with the material covered in the course *Mathematics at EUI*, and or the *Mathematical Appendix of Mas-Colell, Whinston and Green (1995)* (see also Simon, C.P. and L. Blume (1994), *Mathematics for Economists*, Norton.).

## Outline.

### 1. Single Agent Choice Theory:

#### (a) Consumer theory

- Consumption set and budget set
- Consumer preferences and utility
- Consumer choice
- Properties of individual demand function
- Duality
- Welfare analysis of price changes

#### (b) Producer Theory

- Production sets
- Producer choice

### 2. Aggregation

- Properties of aggregate vs. individual demand (when does a representative consumer exist?)

### 3. Choice under uncertainty

- Preferences over lotteries
- Expected utility theorem
- Risk attitude
- Comparing different risks

### 4. Competitive Equilibrium

- Feasible allocations. Pareto efficient allocations
- Simple Examples and general properties.
- Competitive equilibria: definition
- Welfare properties of competitive equilibria
- The First and the Second Welfare Theorems
- Gains from trade and other applications
- Existence of competitive equilibria
- Uniqueness of competitive equilibria
- Comparative statics analysis
- Strategic foundations of competitive equilibria

### 5. General Equilibrium Under Uncertainty

- Contingent commodities
- Sequential trades and securities markets
- Complete and incomplete markets

**Teaching method.** There will be fourteen one and a half hour lectures and seven exercise classes.

**Assignments.**

**Examination policy.**

**Reading material.**