# Microeconomics, Block I

Syllabus

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| Web Site: | <http://www.eui.eu/Personal/Gottardi/teaching.html> |
| Professor: | Piero Gottardi (email: piero.gottardi@EUI.eu)<br>office hours: Thursdays 10:00 - 12:00 or by appointment |
| TA | Mathijs Janssen (email: mathijs.janssen@EUI.eu) |

**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. 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. In the final part of the course we will extend 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 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
   (b) Producer Theory

- Production sets
- Producer choice

2. Aggregation

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

3. 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

4. General Equilibrium Under Uncertainty

   - Contingent commodities
   - Sequential trades and securities' markets
   - Complete and incomplete markets
   - Asset pricing

**Teaching method.** There will be ten two-hour lectures and five classes.

Please check regularly the course website for updated versions of the slides and of the problem sets.

**Examination policy.** The grading will be based primarily on the final written exam. There will be 5 homework assignments. The grade on the homeworks will be taken into account in the determination of the final grade, especially in marginal cases. Cooperation on the assignments is encouraged, but they should be written up individually.

## Reading material

The main textbook for the class is:

A. Mas-Colell, M.D. Whinston and J.R. Green (1995), *Microeconomic Theory*, Oxford University Press. [Chapters 1–5, 15-16, 18]: this is a very useful reference throughout your student's career

Other references:

H. Varian (1984), *Microeconomic Analysis*, Norton, 2nd edition

G.A. Jehle and P.J. Reny (2011), *Advanced Microeconomic Theory*, 3rd edition, Prentice Hall 2011.

A. Rubinstein (2012), *Lecture Notes in Microeconomic Theory*, Princeton University Press, 2nd edition (available at http://press.princeton.edu/rubinstein/)