

ECON-S-510 Graduate Microeconomics I (24 hrs lectures plus 24 hrs exercises)

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Course description

In this course students learn the fundamental building blocks of microeconomic theory and game theory. Topics are the theories of consumption and production; decision under risk and uncertainty; partial equilibrium; general equilibrium (existence, uniqueness and stability) and the two welfare theorems; core and cooperative game theory; normal form games with complete and incomplete information; extensive form games.

The lectures are accompanied by exercise classes.

Mathematical prerequisites are convexity and optimization.

Grading procedure

The final grade will depend on the participation in the exercise class and on the grade in the final exam. If a student is present in at least 75% of all exercise classes, his/her grade for the exercise class, denoted by ε , will be 1. Otherwise, $\varepsilon=0$. Denote by ζ the grade of the final exam. The overall grade, denoted by g , is: $g = \varepsilon\zeta$

Reading list

Mas-Colell, A., M. D. Whinston and J. R. Green (1995), *Microeconomic Theory*, Oxford University Press. (M)

Fudenberg, D. and J. Tirole (1992), *Game Theory*, MIT Press. (F)

Carlsson, H. and E. van Damme (1993), *Global Games and Equilibrium Selection*, *Econometrica*, 989-1018. (CD)

Structure of the course

1. Consumer Theory (M1,2,3)
2. Consumer Theory (M3,4)
3. Production Theory (M5)
- 4+5. Choice under Risk and Uncertainty (M6)
6. General Equilibrium: Definition and Welfare Properties (M16)
7. General Equilibrium: Existence, Uniqueness, Stability (M17)
8. Topics in General Equilibrium Theory: Partial Equilibrium (M10), Core and Cooperative Game Theory (M18)
9. Normal Form Games with Complete Information (F1,2)
10. Extensive Form Games (F3,4)
11. Normal Form Games with Incomplete Information (F6)
12. Global Games (CD)

The numbers in parentheses denote the chapters of the textbooks on which the respective lecture is based.