LECON2112 Advanced Microeconomics II

– COURSE OUTLINE –

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Academic Year: 2023/2024
Spring term

Course Description

Building upon the tools of decision and game theory acquired in Advanced Microeconomics I, the course is divided in two main sections. In the first section, General Competittive Analysis is developed both in its positive and normative dimensions. In the second section, the problem of designing efficient allocation mechanisms is studied in a general perspective. Incomplete information and incentives issues are introduced. The design of auctions and public good mechanisms is included.

Learning outcomes. The objective of the course is to provide the basic microeconomic tools to be used in the analysis of problems of resource allocation by economists working in research, in businees or in various organisations. The course adopts both a positive and a normative approach. It includes recent advances of the theory and aims at developing the capacity to apply economic concepts to real-world problems.

Contents. The first part of the course will be devoted to an introduction to game theory (e.g., basic concepts of dominant, undominated, rationalizable strategies, Nash equilibrium, Bayesian Nash equilibrium, and subgame perfect Nash equilibrium) with some applications. The second part will be devoted to topics in social choice theory (e.g., the Arrow theorem), bargaining theory and information economics. A more detailed overview can be found on the next page.

Reference Book

The course will be based on *Mas-Colell, Whinston, & Green, 1995. "Microeconomic Theory," Oxford University Press*. Both lectures and TA sessions will follow the book closely (even though most assignments will feature a greater set of exercises than Mas-Colell et al. (1995)).

Exams and Assignments

There will be a final exam at the end of the term. Moreover, QEM students will have the possibility to take a mid-term exam organized before the spring break.

Participating students will have to submit weakly assignments that will be posted on Moodle. Dedicated TA sessions to discuss the assignment will organized accordingly.

TOPICS[1]

Part 1 – Game Theory.

7 BASIC ELEMENTS OF NONCOOPERATIVE GAMES

8 SIMULTANEOUS-MOVE GAMES [Dominant/Dominated strategies, iterated deletion, rationalizable strategies, Nash equilibrium (pure and mixed), existence, Bayesian Nash equilibrium, correlated equilibrium]

9 DYNAMIC GAMES [Backward induction and subgame perfection: subgame perfect Nash equilibrium, weak perfect Bayesian equilibrium]

Part 2 – Market Equilibrium and Market Failure.

11 EXTERNALITIES AND PUBLIC GOODS [Bilateral externality, public good]

13 ADVERSE SELECTION, SIGNALING AND SCREENING [Market unraveling, constrained Pareto efficiency, signaling with pooling and separating equilibria]

Part 3 – Some Foundations for Competitive Equilibria.

18 SOME FOUNDATIONS FOR COMPETITIVE EQUILIBRIA [Cooperative game theory, the core, the equivalence between the core and the set of competitive allocations]

[1] As organized as in Mas-Colell et al. (1005).