Advanced Microeconomics III - Information Economics

UC3M - Master of Economic Analysis*

Autumn 2018

Course Content

The course gives an introduction to Information Economics at a graduate level. It covers both positive and normative aspects. We cover positive, game-theoretic analysis of the economics of information and a normative, design approaches. In each part we will cover a set of canonical models before briefly discussing related topics.

Organization:

Lecture: Monday & Wednesday, 16:15 - 17.45, 15.1.39

Exercises: Friday, 15:00-16:30, 15.1.39

Homework: You may form groups *up to three people* at the beginning of the term that can then collaborate when solving the weekly problem sets. Each group has to hand in *one written solution* only. However, during the exercise sessions *each group member* should be able to present the group's solution in front of the class.

Grading: The final grade is then a weighted average. 40% is from continuous evaluation, 60% from the final exam. Continuous evaluation is based on midterms and weekly problem sets.

Prerequisites

Advanced Microeconomics I and II. Mathematics.

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Content (roughly by week)

Part I: Games of Incomplete Information

1. Adverse Selection (main reference: *static:* MWG chapter, Chapter 13; *dynamic:* Fuchs et al (2016, TE))
2. Signalling (main reference: MWG chapter, Chapter 13; Lecture notes P. Cramton Chp 5)
3. Competitive Screening (main reference: MWG chapter, Chapter 13; Hoerner: Signalling and Screening in *New Palgrave Dictionary of Economics*)
4. Strategic Information Transmission (main reference: Tadelis, chapter 18, Crawford and Sobel (1982, ECMA), Che et al (2008, ECMA))
5. Advanced Topics
    - Purification, Further Refinements, Dynamic Information Transmission (main reference: Myerson (1997, chp 6), Morris: Purification in *New Palgrave Dictionary of Economics*)

Part II: Incentive Contracts

6. The Principal Agent Framework and Moral Hazard (main reference: Bolton/Dewatripont, Chp 4-6, MWG Chp 14)
7. The First Order Approach to Optimal Contracts
8. Advanced Topics
    - Reputation, Renegotiation, Dynamics, Delegation (main reference: Bolton/Dewatripont, Chp 10)

Part III: Mechanism Design

9. Bayesian Implementation and the Revelation Principle (main reference: Boergers, Chp 3 - 6)
10. Mechanism Design and Applications I: Auctions and Public Good Provision (main reference: Boergers, Chp 3-6)
11. Mechanism Design and Applications II: Trade Mechanisms (main reference: Boergers, Chp 3, MWG chp 23, Cramton lecture notes chapter 3)
12. Mechanism Design and Applications III: Coordination Mechanisms (main reference: Myerson (1997), Bergemann (2017, TE))
13. Mechanism Design and Applications IV: Bayesian Persuasion (main reference: Kamenica/Gentzkow (2008, AER))
14. Advanced Topics
    - Informed Principal Problems, Dominant Strategy Implementation, Simple Mechanisms (main reference: Boergers 6-9)