Advanced Microeconomics III - Information Economics

UC3M - Master of Economic Analysis[*][†]

Autumn 2020

Course Content

The course gives an introduction to Information Economics at a graduate level. It covers both positive and normative aspects. We start with a positive, game-theoretic analysis of the economics of information and later move to the normative design approace. In each part we will address canonical models and recent topics in the literature.

Organization:

Lecture: Monday & Wednesday, 14:15 - 15.45

Exercises: Friday, tba.

Homework: There is a weekly homework. You may form groups *up to three people* at the beginning of the term who collaborate on solving the weekly problem sets. Each group has to hand in *one written solution.* 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 a weighted average. 40% is from continuous evaluation, 60% from the final exam. Continuous evaluation is based on midterms and weekly problem sets.

References

We do not follow any textbook directly. Our approach of covering the content, however, is related to the covarge in certain text books.

In the first part the main models are in Mas-Collel, Whinston and Green (1995, henceforth MWG). Most of the models from the second part are in Bolton and Dewatripont (2004, henceforth B/D). The main reference for the last part is Boergers (2013). Other references are given next to the topics and will be provided in class.

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: B/D, Chp 4-6, MWG Chp 14)

7. The First Order Approach to Optimal Contracts

8. Advanced Topics

   - Reputation, Renegotiation, Dynamics, Delegation (main reference: B/D, 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)