

Microeconomics III: Economics of Information

European University Institute

Term III — January 2021

Instructor Information

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Assessment

Weekly Problem sets: 20%
Midterm Exam (Date TBA): 40%
Final Exam (Date TBA): 40%

Course Description

This course is intended to introduce you to Economics of Information, Mechanism Design and Social choice Theory. The course has a principal text book and a recommended textbook. Each topic has Extra readings that are either articles that are particularly closely related to some of the material from class, or are books that are particularly useful for the topic. There will be a midterm exam (Date TBA) and a final exam (Date TBA), each worth 40% of your grade. Exercises will be assigned from time to time during class. It is in your interest to complete all the exercises as they are randomly marked by the class TA and contributes to 20% of your final grade. Solutions will be covered in the TA sessions . The extra readings are optional in the sense that you will not be tested on material that is not covered in class. In addition, the readings are quite difficult; so do not get discouraged if you find them so.

Textbooks

Principal Textbook:

- *Jehle and Reny (2011): Advanced Microeconomic Theory. 3rd Edition, London: Pearson*

Recommended Textbook:

- *Mas-Colell, Whinston and Green (1995): Microeconomic Theory. Oxford, Oxford University Press*
- *Bolton and Dewatripont (2005) : Contract Theory. Cambridge, Massachusetts, The MIT Press*

Topics:

Information & Bayesian Games:

- Introduction to Bayesian games and Bayesian Equilibrium
 - JR 7.3
 - MWG 13-A
- Adverse Selection, Signaling and Screening
 - JR 8.1
 - MWG 13-BCD
- Moral Hazard
 - JR 8.2
 - MWG 14-ABC
- Information Cascades
 - Banerjee. Abhijit V. "A Simple Model of Herd Behavior", The Quarterly Journal of Economics, 107(3), (1992): 797-817

Extra Readings:

1. Cho, In-Koo, and David M. Kreps. "Signaling Games and Stable Equilibria." The Quarterly Journal of Economics, 102(2), (1987): 179–221.
2. Grossman, Sanford J., and Oliver D. Hart. "An Analysis of the Principal-Agent Problem." Econometrica 51(1), (1983): 7-45.
3. Harsanyi, J. "Games with Incomplete Information Played by Bayesian Players," Parts I-III, Management Science, 14,(1967-68): 159-182, 320-334, 486-502.
4. Hölmstrom, Bengt. "Moral Hazard and Observability." The Bell Journal of Economics 10(1), 1979: 74-91.

Social Choice:

- Introduction to Social Choice
 - JR 6.1-6.2
 - MWG 21-AB
- Arrow's Impossibility Theorem
 - JR 6.5
 - MWG 21-CDE
 - * Dasgupta, P. and E. Maskin, "On the Robustness of Majority Rule," Journal of the European Economic Association, 6(5) (2008): 949--973.

Extra Readings:

1. Arrow, K. (1963): *Social Choice and Individual Values*. New Haven: Yale University Press
2. Gibbard, A. "Manipulation of Voting Schemes," *Econometrica* 41, (1973): 587-601
3. Reny, P. J. "Arrow's Theorem and the Gibbard-Satterthwaite Theorem: A Unified Approach," *Economics Letters*, 70(1), (2001): 99-105.

Mechanism Design:

- Introduction to Mechanism Design
 - JR 9.4
 - MWG 23-AB
- D.S Implementation
 - JR 9.4-9.5
 - MWG 23-C
- Revenue Equivalence
 - JR 9.2-9.3
 - MWG 23-DEF
 - * Milgrom, P. and I. Segal, "Designing the US Incentive Auction", (2017) In M. Bichler and J. Goeree (Eds.). *Handbook of Spectrum Auction Design* (pp. 803-812). Cambridge: Cambridge University Press.

Extra Readings:

1. Krishna, V. and M. Perry: "Efficient Mechanism Design," mimeo, 2000 Penn State University, <https://drive.google.com/file/d/0B9qyCPfbmExnbmE1OTk5OGJmQzA/view>.
2. Milgrom, P. and I. Segal, "Clock Auctions and Radio Spectrum Reallocation", *Journal of Political Economy*, 128(1), (2020): 1-31.
3. Milgrom, Paul and R. Weber: "A Theory of Auctions and Competitive Bidding," *Econometrica*, 50, (1982): 1089-1122.
4. Myerson, R.: "Optimal Auction Design," *Mathematics of Operation Research*, 6, (1981): 58-73
5. Perry, Motty and Philip J. Reny, "A General Solution to King Solomon's Dilemma," *Games and Economic Behavior*, 26(2), (1999): 279-285

* If time permits.