

Game Theory (undergraduate/master level)

Textbook:

1. Robert Gibbons, Game Theory for Applied Economists, Princeton (1992)
2. Martin Osborne and Ariel Rubinstein, A Course in Game Theory, MIT Press (1994)

Tentative Class Structure:

1. An introduction to games and their theory (Osborne Chapter 1)

Static Game with Complete Information:

- 2-4. Normal Form Game and Nash Equilibrium (Gibbons Chapter 1.1-1.2, Osborne Chapter 2)
5. Applications
- 6-7. Mixed Strategy (Gibbons Chapter 1.3, Osborne Chapter 3)
8. Applications

9. Midterm 1

Dynamic Game with Complete Information

- 10-12. Extensive form Game, Backward Induction (Gibbons Chapter 2.1-2.2, Osborne Chapter 6)
13. Applications
- 14-15. Repeated Game (Gibbons Chapter 2.3, Osborne Chapter 8)
16. Applications

17. Midterm 2

Static Game with Incomplete Information

- 18-20. Bayesian Nash Equilibrium (Gibbons Chapter 3.1)
21. Applications
- 22-25. Auction (Gibbons Chapter 3.2)

- 26 Midterm 3

Dynamic Game with Incomplete Information

- 27-30. Signaling (Gibbons Chapter 4.1-4.2)
- 31-32. Applications

- 33-35. Review

36. Final Exam