

Syllabus

The purpose of this course is to teach the basic concepts and discuss some important economic applications of game theory, at a graduate level. As we will cover a broad set of topics, we will not have time to delve into them very deeply. Hence, the course is intended to provide you foundations to be able to do your own research in abstract or applied game theory, but in order to be able to start doing research, you will either need to take a more specialized course covering the topic of your interest, or read into the related literature yourself.

We will not strictly follow any textbooks, but as a background reading I recommend you the following two books, which cover a lot of the material we will study:

-Fudenberg, D. and J. Tirole (1991): Game theory, MIT Press

-Osborne, M. and A. Rubinstein (1994): A course in game theory, MIT Press

In addition, I plan to distribute hand-outs after classes, summarizing the covered material.

Grading will be based on problem sets (20% of the grade), an in-class midterm exam (30%), and a final exam (50%). I also give extra points for active class participation.

Class times and location: 11.45am-1.00pm Monday Wednesday, Social Science 113

Office Hours: 1.30-3pm Mondays, 313 Economics Department

The currently planned list of topics:

Week 1: Review of basic concepts

Week 2: Type spaces, rationalizability, correlated equilibrium

Week 3: Extensive form games: basic concepts

Week 4: Agreeing to disagree, No trade theorems

Week 5: Signaling games, forward induction, repeated games I.

Week 6: Repeated games II: Imperfect monitoring

Week 7: Midterm exam

Week 8: Application: Dynamic bargaining

Week 9: Application: Strategic communication

Week 10: Reputation, part I.

Week 11: Reputation, part II.

Week 12: Continuous-time games

Week 13: Global games