Syllabus and Reading List

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Course Objectives: This course aims to thoroughly treat the field of Game Theory, and provide you with useful tools for understanding current research and performing your own research in the field. The course follows the organization of the text by Osborne and Rubinstein, supplemented by a few “classic” articles.

Course Requirements: There will be a one-day take-home final exam, which counts for 60% of the grade. In addition, there will be 3 or 4 homework assignments, which count for the remaining 40%. Study groups are allowed on the homework assignments, in which you can discuss the questions and talk about how to solve them. However, you need to write up the answers individually and without help, and indicate on your writeup the names of the people in your study group. There is to be no communication on the take-home final.


Other sources (not required):


I. Games in Strategic (Normal) Form

1. Nash Equilibrium, Strictly Competitive Games, Bayesian Games.
   O-R, chapter 2.

   O-R, chapter 3.

3. Rationalizability and Iterative Elimination of Strictly Dominated Actions.


O-R, chapter 4.


O-R, chapter 5.


II. Extensive Form Games with Perfect Information.

1. Extensive form games with perfect information, subgame perfect equilibrium, the one-deviation property, Kuhn’s theorem and backwards induction, exogenous uncertainty, simultaneous moves.


2. Repeated Games and Folk Theorems.

O-R, chapter 8.


III. Extensive Form Games with Imperfect Information.

1. Extensive form games, mixed and behavioral strategies.

O-R, chapter 11.

2. Sequential Equilibrium.

O-R, chapter 12.

3. Perfect Bayesian Equilibrium for games with observable actions, signaling games.

O-R, chapter 12.

4. “Almost” observable actions.

   O-R, chapter 12.

**IV. Topics in Game Theory.**

1. Timing Games.


2. Bargaining with Incomplete Information.


3. Sender-Receiver Games.

