

Syllabus (v1)
Economics 212 – Game Theory
August 30, 2012
Professor Steven A. Matthews, University of Pennsylvania

Description. The object of game theory is to understand situations in which the behavior of a person affects the optimal behavior of others. It can be viewed as the extension of the single-person rational-actor model to groups. We study the theory and some of its applications to economics, political science, and law.

Lectures. Tuesday/Thursday, 1:30-3 pm, McNeil 395.

Professor. Steven Matthews, stevenma@econ.upenn.edu.

Teaching Assistant. Ekim Muyan, muyan@sas.upenn.edu. He writes solutions and grades.

Office Hours. Matthews: Friday, 10–11:30 am in 466 McNeil.
Muyan: Thursday, 3-5 pm in 479 McNeil (starting 9/13).

Prerequisites. Econ 101 and Math 114/115, in a previous semester.

Textbook. *Strategy: An Introduction to Game Theory*, 2nd edition, by Joel Watson.

Course Materials. Posted on Blackboard: <https://courseweb.library.upenn.edu>.

Homework. Almost weekly problem sets, graded on a coarse scale (1-3). No late homework. You are encouraged to work in groups, but must write up your solutions individually. Do not copy solutions you may find elsewhere. Solutions to assigned problems will be posted after their due dates. *Your two worst homework scores will not be counted.*

Exams. Two non-cumulative midterms, one cumulative final. All exams are closed book, notes, calculators, iPads, etc.

Grading. 10% homework, 30% for each of the three exams. If you are unable to take one of the midterms for an excused reason, the other one will count 45% and the final exam 45%.

Additional Policies. Please read the following departmental policies document:

<http://www.econ.upenn.edu/undergraduate/policies>

Dates.

Class Canceled: Tuesday, Sept 18 (Rosh Hashanah)
Midterm 1: Thursday, Oct 11, at normal class time
Midterm 2: Thursday, Nov 8, at normal class time
Final Exam: Thursday, Dec 13, 12pm – 2pm

Topics Outline

Topic	Chapter
Representing Games	
Extensive form, strategies	1 – 3
Normal form, beliefs/mixed strategies	4, 5
Static Games	
Best response, rationalizability, applications	6 – 8
Equilibrium, applications	9, 10
Mixed strategy equilibrium	11
Contract and law	13
Dynamic Games	
Extensive forms and subgame perfection	14, 15
IO applications	16
Bargaining	18, 19
Negotiation and hold up	20, 21
Repeated games and applications	22, 23
Imperfect Information Games	
Random events and incomplete information	24
Bayesian-Nash equilibrium, applications	26, 27
PBE, applications	28, 29