Syllabus
Economics 212-001 – Game Theory
Fall 2014
Professor Steven Matthews
University of Pennsylvania

Description. The object of game theory is to understand situations in which a person's behavior affects the optimal behavior of others. It builds on the single-person rational-actor model. We study the theory and some of its applications to economics, political science, and law.

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

Class Times. Tuesday/Thursday, 1:30-3 pm, McNeil 285.

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

Teaching Assistant. Devin Reilly, reillyde@sas.upenn.edu.

Office Hours.

Matthews: Monday, 3–4:45 pm in 466 McNeil. By appt on Fridays.
Reilly: Friday, 3:30–5 pm in 442 McNeil (starting 9/5).

Textbook. *Strategy: An Introduction to Game Theory,* 3rd ed, by Joel Watson. Lecture slides, supplementary readings.

Course Materials. Posted on Canvas: http://canvas.upenn.edu.

Homework. Almost weekly problem sets, graded on a 1-3 scale. Solutions to problems will be posted on Canvas. Diligently attempting to solve the homework problems is very very important.

Exams. Two non-cumulative midterms, one cumulative final exam. All exams are closed book, notes, and electronics.

Grading. 5% class participation, 25% for each midterm, 45% for the final exam. Homework performance determines borderline cases. If you are unable to take one of the midterms for an excused reason, the other one will count 35% and the final exam 60%.

Additional Policies. Use the Course Absence Reporting (CAR) system to tell the instructor if you cannot take one of the midterms, and why. Please read the following document about other department policies:

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

Dates.

Class Canceled: Thursday, Sept 25 (Rosh Hashanah)
Midterm 1: Tuesday, Sept 30, in class
Midterm 2: Tuesday, Nov 4, in class
Final Exam: Wednesday, Dec 17, 12–2 pm

Tentative Course 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
Strictly competitive games	12
Contract and law	13
Dynamic Games	
Extensive forms and subgame perfection	$14, 15$
Applications: IO and parlor games	$16, 17$
Bargaining games	19
Repeated games and applications	$22, 23$
Incomplete Information Games	
Random events and incomplete information	24, App A
Bayesian-Nash equilibrium, applications	$26, 27$
PBE, signaling, reputation	$28, 29$

Main Chapters Skipped: 18, 20, 21, 25