

ECON 0200
Game Theoretic Principles
Summer 2016

Instructor: Felipe Augusto de Araujo
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Office: 4513 Posvar Hall
Class times: Monday and Wednesday 6:00-9:15pm (4900 WW Posvar Hall)
Office Hours: Room 4524 on Wednesdays 1:00 – 3:00 (or by appointment)

Prerequisites: This course uses algebra at the level of MATH 0031.

Course Objective: This course introduces the basic concepts of game theory. The emphasis is on the unifying perspective that game theory offers to questions in economics, in other disciplines, and to everyday life. It will enable students to view interactions as strategic games and to use game theoretic concepts to predict and to explain behavior in these interactions.

Textbook: Harrington, Joseph E., *Games Strategies, and Decision Making*, 2nd edition, Worth Publishers (2015). ISBN: 1-4292-3996-4. The textbook is available at the bookstore and from on-line booksellers. The textbook covers most of the same material as the lectures, using different explanations and different examples. Some homework problems will be assigned from the textbook. If you cannot afford to buy the textbook, please arrange with your classmates to share a copy.

Courseweb: This course will use the University's Courseweb system: <http://courseweb.pitt.edu>. Students who are registered for the course can access their grades on-line. Any communication regarding changes in the schedule or revisions to the syllabus will sent via Courseweb's email list to your University email account.

Assignments: The homework assignments allow you to synthesize the concepts you have studied so far and apply them to a variety of real and hypothetical situations. These assignments are more complex than the problems covered in lecture. The assignments will be posted each week on Courseweb and are to be submitted in class. Because I will post the answers to Courseweb, late assignments will not be accepted.

Exams: There will be a midterm and a final exam. Both the midterm and final exam will be during scheduled lecture time. I will not allow students to take either exam early. The final is cumulative to the extent that the material is cumulative.

Life Happens: A number of unexpected events may occur that prevent you from completing your work on time. For this reason, everyone gets one unexpected event per semester – I will count only 4 of your 5 assignments. Makeup exams, however, will only be given if you provide verification of illness from a healthcare provider.

In-class exercises: Occasionally, we will work on cooperative group assignments during the class period. These exercises will be handed in for bonus points which will be added to your homework grade. If you are not in class, you cannot earn points for in-class exercises.

Grading: Your learning will be assessed through assignments, tests, and the in class exercises, weighted as follows:

Assignments	30%
Midterm	30%
Final	40%

Academic Integrity: Students are expected to abide by the University's policy on academic integrity. Students may work collaboratively on assignments, however, you may not simply copy another student's work. Plagiarism or cheating of any kind will result in a failing grade for the course.

Accommodations for students with disabilities: If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact the Disability Resources and Services, 216 William Pitt Union, 412-648-7890 or 412-383-7355 (TTY).

Schedule

Date	Topic	Assignments	Reading
May 16	Lecture #1: What is a game? Lecture #2: Modeling games I		Chapter 1 Chapter 2 (2.1 - 2.3)
May 18	Lecture #3: Modeling games II Lecture #4: Solution concept: Dominance I		Chapter 2 (2.4 - 2.9) Chapter 3 (3.1 - 3.3)
May 23	Lecture #5: Solution concept: Dominance II Lecture #6: Solution concept: Nash Equilibrium I	PS #1 Due	Chapter 3 (3.4 - 3.5) Chapter 4 (4.1 - 4.3)
May 25	Lecture #7: Solution concept: Nash Equilibrium II Lecture #8: n-player games		Chapter 4 (4.4 - 4.6) Chapter 5
May 30	NO CLASS (Memorial Day)		
Jun 1	Lecture #9: Solution concept: Mixed N. E. I Lecture #10: Solution concept: Mixed N. E. II	PS #2 Due	Chapter 7
Jun 6	Lecture #11: Review MIDTERM EXAM	PS #3 Due	
Jun 8	Lecture #12: Solution concept: Backward induction Lecture #13: Solution concept: SPNE		Chapter 8
Jun 13	Lecture #14: Imperfect information I Lecture #15: Imperfect information II	PS #4 Due	Chapter 9
Jun 15	Lecture #16: Solution concept: Bayesian N.E. I Lecture #17: Solution concept: Bayesian N.E. II		Chapter 10
Jun 20	Lecture #18: Repeated Games I Lecture #19: Repeated Games II	PS #5 Due	Chapters 13
Jun 22	FINAL EXAM		