Economics 109: Game Theory
UCSD Spring 2014

<u>Times and Places</u>

Lectures:	MWF	1-1:50p	Warren Lecture Hall 2005
Discussion Sections:	W	6-6:50p	Cognitive Science Building 001
		7-7:50p	Cognitive Science Building 001

<u>Brief Course Description</u>

This intermediate microeconomics course examines strategic situations, in which each agent's behavior affects the well-being of the other agents. Game theory is a technical framework for rigorously analyzing decision-making in such settings. Almost every type of interaction between living things is strategic. As social scientists, we focus on human interaction, and we shall assume that people behave in a rational, deliberate manner. In addition to exploring theory in the abstract, we will consider a variety of applications from economics, political science, and everyday life.

<u>Required Textbook</u>

Watson, Joel. *Strategy: An Introduction to Game Theory 3rd edition* (W.W. Norton)

<u>Course Website</u>

I will post announcements, brief notes, problem set solutions, practice exams, and grades on our course website at Ted. http://ted.ucsd.edu

<u>Office Hours/Contact Information</u>

Instructor: Yuan Emily Tang, Ph.D.	yetang@ucsd.edu	W 9-11a	Econ Annex
TAs: Johnson Chen	zuchen@ucsd.edu		
Sarojini Hirshleifer	shirshleifer@ucsd.edu		Sequoyah 226
Zheng Huang	zhh006@ucsd.edu	Th 2-4p	Econ 127
Vincent Leah-Martin	vleahmar@ucsd.edu	Tu and W 4-5p	Econ 124

<u>Evaluation</u>

Your grade will be determined based on completion of problem sets assigned approximately weekly (10%), performance on one midterm exam (40%), and performance on the final exam (50%).

<u>Important Dates:</u>

Midterm Exam:	Wednesday 4/30	in class
Final Exam:	Thursday 6/12	11:30a-2:30p

<u>Policies</u>

Exam dates are not negotiable. You MUST take the exams scheduled for the section of class you are enrolled in. If you miss the midterm because of documented illness, sports or legal reasons, the final exam will count for 90% of your grade. If you miss the midterm for any other reason, you will receive a score of zero on that midterm. There are no acceptable reasons for missing the final-- if you miss the final, you will receive a failing grade for the course. If you believe that an exam has not been properly graded, you must discuss this with the TA whom graded the relevant part of the exam within two weeks of when exams were first returned to class. Any student found guilty of academic misconduct will earn a failing grade for the course. In addition to this academic sanction, the Council of Deans of Student Affairs will impose a disciplinary penalty. The final weighted points earned will be curved in the assignment of letter grades; the following apply as the *minimum* of the letter grade you can expect to earn based on the total weighted % of points you earn in the course: 98-100%= A+, 93-97=A, 90-92=A-, 88-89=B+, 83-87=B, 80-82=B-, 78-79=C+, 73-77=C, 70-72=C-, 50-69=D, <50% = F

<u>Course Content</u>

We will follow the textbook closely. Practice problems will be assigned from the textbook.

Preliminary Course Outline (Subject to Change)

Topic	*Chapter in Textbook*
A. Representing Games	
Intro, extensive form representation	1-2
Strategies and the normal form representation	3
Beliefs, mixed strategies, and expected payoffs	4
B. Analysis of Static Settings	
General assumptions and methodology	5
Best response, rationalizability, applications	6-8
Nash equilibrium, applications	9-10
Mixed strategy equilibrium	11
C. Analysis of Dynamic Settings	
Extensive form, backward induction	14
Sequential rationality and subgame perfection, applications	15-16
Bargaining	18-19
Repeated games, applications	22-23
D. Information	
Random events and incomplete information	24
Bayesian equilibrium, applications	26-27
Perfect Bayesian equilibrium, applications	28-29