Econ 328
Game Theory
Whitman College
Spring 2013

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Office hours are the following, or by appointment:

Monday	2:45-4:00 pm
Wednesday	10:30-11:00 am
Thursday	2:00-3:00 pm
Friday	10:30-11:30

Game theory is the study of strategic interaction. The goal is to explain and predict how people make decisions when they know their actions affect the behavior of others. Game theory also offers suggestions for how people should behave when they interact with others. This course introduces the study of games and explores applications. The textbook is Strategy: An Introduction to Game Theory Second Edition by Joel Watson.

There will be three mid-term exams worth 100 points each (Thursday, February 7, Thursday, March 7, and Thursday, April 18) and a 200-point comprehensive final exam (the afternoon of Friday, May 10). Please arrange your schedule now so that you do not have conflicts with the mid-term or final exam schedule. I will not offer alternative exam times. If you have a registered disability that requires special accommodation for exams, see me a week before each exam so that we can make arrangements.

There will be ten problems sets, worth 10 points each. You may work together on the problem sets, but must write up your answers separately and legibly. I will assign problem sets on Thursdays at the end of class. Each problem set is due the following Monday by 4:30 pm. Turn it in to me in my office. If I'm not there, please slip it under my office door. You are also welcome to give it to me in class on Monday morning. To get credit for a problem set, you must turn it in by 4:30 Monday, write neatly enough that I can read it, and show all of your work. I will return late or illegible problem sets unread. Please arrange your schedule now to prevent conflicts with the problem set schedule. Because conflicts do arise, I will drop your two lowest problem set scores.

Working in a group with one or two other students, you will give a four-minute class presentation. In your presentation, your group will describe a real-world situation of strategic interaction that you find interesting. You'll use the tools of game theory to help explain the interaction between the players. The presentation, including your attendance at other people's presentations, is worth 20 points.

As a courtesy to others, do not leave class except in emergencies. All cell phones and laptops must be turned off and packed away during class. If you need your computer for taking notes in class, come see me. I will ask you to consult the staff at the Academic Resource Center about optimal note-taking.

The grading scale for the course appears on the next page. Note that there is no disadvantage to studying with others, as your grade does not depend on anyone else's performance. To help you with your studying, the old exams from this course are available from my website. The link to the exams is http://people.whitman.edu/~hazlett/328.html.

Total Points	(% of 600)	Grade	Total Points	(% of 600)	Grade
588	0.98	A+	462	0.77	C+
558	0.93	A	438	0.73	C
540	0.90	A-	420	0.70	C-
522	0.87	B+	402	0.67	D+
498	0.83	B	378	0.63	D
480	0.80	B-	360	0.60	D-

Read pages 367-371 of our textbook for a review of the single-variable calculus that you need as a prerequisite for this course. Below are the topics we will cover in class, and the associated textbook chapters.

Part I: Representing Games

Introduction chp 1 and calc review in appendix
Introduction to the extensive form of a game chp 2
Strategies and the normal form of a game chp 3 and set review in appendix
Beliefs, mixed strategies and expected payoffs chp 4 and prob review in appendix
General assumptions and methodology chp 5 and pages 365-367

Part II: Static Games

Dominance and best response, Pareto efficiency chp 6
Rationalizability, iterated dominance, and strategic coordination chp 7
Application: a location game pp. 77-80, 86
Nash equilibrium chp 9 (skim pp. 91-92 on congruous sets)
Applications chp 10
Mixed strategy Nash equilibrium chp 11
Strictly competitive games (such as zero-sum games) with two players p. 134 and Figure 12.1
Contract, law and enforcement chp 13

Part III: Dynamic Games

Details of the extensive form chp 14
Backward induction and subgame perfection chp 15
Applications chp 16 (if time permits)
Parlor games chp17
Bargaining chp 18
Analysis of bargaining games chp 19
Repeated games and reputation chp 22
Applications pp. 275-8

Before class Tuesday, January 15, listen to (or read the transcript of) the January 10, 2013 Diane Rehm National Public Radio interview with Susan Crawford, author of Captive Audience: The Telecom Industry and Monopoly Power in the New Gilded Age. Links to the audio and the transcript are at http://thedianerehmshow.org/shows/2013-01-10/susan-crawford-captive-audience. Come to class January 15 with a list of the players in the strategic situations Dr. Crawford describes.