

University of Minnesota
Economics 4109H: Game Theory and Applications
Fall Semester 2006

Lecture: 4:00pm-5:15pm Tu,Th, Blegen Hall 120

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Office Hours...Monday 4:00 - 6:00 PM and by appointment

Textbooks:

R. Gibbons, Game Theory For Applied Economics, Princeton University Press, 1992 (required)
P. J. Dutta, Strategies and Games, MIT Press, 1999 (optional)

Prerequisites:

The prerequisites for this course are Econ 3101-3102 and Math 1271-1272, which you must have successfully completed **before** taking this course. If you think you are underprepared for this class, please talk to me as soon as possible (in the first week of class).

Grading Scale:

%:	100-92	91-90	89-88	87-82	81-80	79-78	77-72	71-70	69-68	67-60	59-0
grade:	A	A-	B+	B	B-	C+	C	C-	D+	D	F

This is the grading system used by the Department of Economics. At the discretion of the instructor this scale may be curved.

Course Requirements and Grading System:

There will be a cumulative final, non-cumulative midterm and 6 homework assignments.

Final: 2 hours, 4:00pm – 6:00pm Th, December 14, 120 Blegen Hall, top grade of 100%, problem oriented.

Midterm: 1 hour 15 minutes, top grade of 100%, problem oriented (rather than Multiple Choice)

No make-up Midterms are scheduled. In case of **emergency** documented absence, consult instructor.

HWs: Top grade of 100% each. Distributed in class and are posted on the website the same day.

Hws are problem oriented and are written by the instructor.

Late HWs are NOT ACCEPTED (in case of emergency contact instructor).

Must be typed except for graphs and calculations. Typing penalty is grade multiplied by .75

A paper copy must be submitted. Electronic copies are NOT ACCEPTED.

Consult the attached Schedule of Events for dates of the above requirements.

Should the class fall behind schedule, the dates for Midterm and HWs will **NOT** change.

There will be **NO** individual extra credit.

$$\text{Class Grade} = 0.4 * \text{Final Grade} + 0.3 * \text{Midterm Grade} + 0.3 * (\text{average Hw \%})$$

Course Description and Objectives:

Game Theory deals with a class of problems that is at the core of social sciences: those where the actions of a group of agents (countries, consumers, firms, etc), which are taken with a selfish concern, jointly affect the outcome of a process, and therefore the “utility level” of all agents. It is then a branch of mathematics that allows us to tackle situations where an agent cannot consider “the world” as given, but as a result of a potentially complex interaction between many intelligent and rational forces, each one trying to best further its own interests. The objective of this course is to study which outcomes we can expect in this class of situations. A strong emphasis will be put on applications, mainly economic, but also from political science and history.

Academic Dishonesty

All work submitted must be that of the student.

Excepting only the students’ ingenuity, lecture and recitation notes, and the text listed above on the syllabus, all other sources of information used to solve an assignment must be **cited**. This includes, but is not limited to, help received during **office hours**. Also included as academic dishonesty by the student code of conduct is submission of false records of academic achievement; cheating on assignments or examinations; plagiarizing; altering, forging, or misusing a University academic record; taking, acquiring, or using test materials without faculty permission; and acting alone or in cooperation with another to enhance a grade.

A **minimum** penalty for academic dishonesty is a grade of 0 for the assignment. If the offense occurs on a final or midterm, a grade of F or N will be issued. Other penalties may include a complaint to the Office of Academic Integrity and Student Judicial Affairs.

Cooperation among students on Homework is allowed, though each student must hand in their own assignment with citations given for help received. Identical or **essentially similar** homeworks will receive a grade of zero.

Course Announcements:

Important information on the class will be sent to the students’ University email account.

Note that I have the predisposition towards sending lots of e-mails.

You may have this account forwarded to another address if you wish.

Be sure to check your University email once a week for announcements.

Email can be activated at <http://www.umn.edu/validate>.

Other, less urgent announcements will be made on www.econ.umn.edu/~aevk

Schedule of Events

In the event the class lags behind this schedule, Midterm date will **NOT** change.
Rather the exams themselves will be altered to reflect what has been covered in class.

Week	Dates	Comments	Hand Out	Due	Returned
1	9/5,7	Normal form games (Ch 1)			
2	9/12,14	Normal form games (Ch 1)	HW 1		
3	9/19,21	Dynamic games (Ch 2)		HW 1	
4	9/26,28	Dynamic games (Ch 2)	HW 2		HW 1
5	10/3,5	Dynamic games (Ch 2)		HW 2	
6	10/10,12	Dynamic games (Ch 2)	HW 3		HW2
7	10/17,19	Applications (Ch 1-2)		HW 3	
8	10/24,26	Review (Tu) / Midterm 1 (Th)		MD 1	HW 3
9	10/11, 11/2	Static games of incomplete information (Ch 3)	HW 4		MD 1
10	11/7,9	Static games of incomplete information (Ch 3)		HW 4	
11	11/14,16	Static games of incomplete information (Ch 3)	HW 5		HW 4
12	11/21	Dynamic games of incomplete information (Ch 4)		HW 5	
13	11/28,30	Dynamic games of incomplete information (Ch 4)	HW 6		HW 5
14	12/5,7	Dynamic games of incomplete information (Ch 4)		HW 6	
15	12/12	Review (Tu)			HW 6
	12/14	4:00pm – 6:00pm, Final, Blegen Hall 120			