
Games and Economic Behavior**ECON 459-100**

Summer I, 2019

MTWRF 10:00-11:35 am

ALLN 1002

Course Description

Introduction to game theory for advanced undergraduates. Topics include dominance, Nash equilibrium, mixed strategies, repeated and extensive form games.

Prerequisite: ECON 323, MATH 142 or equivalent

Learning Objectives: Upon the successful completion of this course, you will be able to apply game theoretic solution concepts, including Nash equilibrium, mixed equilibrium, and subgame perfect equilibrium, to economic situations and understand when these game theoretic solutions make accurate predictions and give effective advice.

Student Learning Outcomes: Texas A&M University has identified student learning outcomes that describe our institutional commitment to your education goals. These include the ability to demonstrate critical thinking, effective communication, and social, cultural, and global competence. Please see:

<https://provost.tamu.edu/Provost/media/Assets/pdfs-essentials/Access-Undergrad-Learning-Outcomes.pdf>

Textbook: Strategies and Games: Theory and Practice, by Prajit K Dutta, MIT 1999.

Instructor Information

Name: Adam Bestenbostel
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Office hours: MTWR 11:35 am - 12:30 pm
Office location: ALLN 3031

Grade Policies

10% Homework
30% Exam 1
30% Exam 2
30% Final Exam (cumulative)

**Note: After one week from when I notify you of a homework or exam grade, the grade may no longer be disputed.*

Grading Scale: A = 90-100, B = 80-89, C = 70-79, D = 60-69, F = 0-59

Homework: Assignments will be given throughout the semester, approximately one per week. Initially they will be graded based on completion of the assignment, but I reserve the right to grade based on performance if I feel effort is not reflective of this university's reputation. Homework is always due in class on the day it is assigned. NO CREDIT WILL BE GIVEN FOR LATE SUBMISSIONS, PERIOD.

Exams: Exam questions will closely follow class examples and homework problems. They represent a significant percent of your grade, so prepare accordingly. Graphing calculators are not allowed. You will need to bring a (green) half size scantron for each exam.

Absence Policy: It is your responsibility to submit homework on time and attend exams as scheduled. You will receive a grade of *zero* for late homework or missed exam unless you (1) receive my written approval in *advance* of your absence or (2) submit documentation (including doctor note for illnesses) by email of a university approved excuse in accordance with [Student Rule 7](#) within *48 hours* of the date of the assignment or exam. Only excuses listed under Student Rule 7 will be considered, and only if submitted by email in a timely manner.

Course Topics

**Note: schedule is subject to change. It is your responsibility to keep up with class announcements and changes*

Class	Day	Date	Topic	Homework due
1	Tu	28-May	Intro	
2	W	29-May	Dominant Strategies	
3	Th	30-May	Dominance Solvability	
4	F	31-May	Dominance Solvability	Assignment #1
5	M	3-Jun	Nash Equilibrium	
6	Tu	4-Jun	Cournot Duopoly	
7	W	5-Jun	Cournot Duopoly	
8	Th	6-Jun	Cournot & Cartels	Assignment #2
9	F	7-Jun	Exam 1	
10	M	10-Jun	Mixed Strategies	
11	Tu	11-Jun	Mixed Strategy Nash Eq.	
12	W	12-Jun	Mixed Strategy Nash Eq.	
13	Th	13-Jun	Zero-sum Games	
14	F	14-Jun	Extensive Form Games	Assignment #3
15	M	17-Jun	Backward Induction	
16	Tu	18-Jun	Backward Induction	
17	W	19-Jun	Subgame Perfect Nash Eq.	
18	Th	20-Jun	SPNE	Assignment #4
19	F	21-Jun	Exam 2	
20	M	24-Jun	Repeated Games	
21	Tu	25-Jun	Finitely Repeated Games	
22	W	26-Jun	Infinitely Repeated Games	
23	Th	27-Jun	Infinitely Repeated Games	
24	F	28-Jun	Review	Assignment #5
	M	1-Jul	Final Exam	

Americans with Disabilities Act (ADA)

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact Disability Services, currently located in the Disability Services building at the Student Services at White Creek complex on west campus or call 979-845-1637. For additional information, visit <http://disability.tamu.edu>.

Academic Integrity

“An Aggie does not lie, cheat, or steal, or tolerate those who do.”

Upon accepting admission to Texas A&M University, a student immediately assumes a commitment to uphold the Honor Code, to accept responsibility for learning, and to follow the philosophy and rules of the Honor System. Students will be required to state their commitment on examinations, research papers, and other academic work. Ignorance of the rules does not exclude any member of the TAMU community from the requirements or the processes of the Honor System. For additional information please visit: <https://aggiehonor.tamu.edu/>

Title IX and Statement on Limits to Confidentiality

Texas A&M University and the College of Liberal Arts are committed to fostering a learning environment that is safe and productive for all. University policies and federal and state laws provide guidance for achieving such an environment. Although class materials are generally considered confidential pursuant to student record policies and laws, University employees — including instructors — cannot maintain confidentiality when it conflicts with their responsibility to report certain issues that jeopardize the health and safety of our community. As the instructor, I must report the following information to other University offices if you share it with me, even if you do not want the disclosed information to be shared:

- Allegations of sexual assault, sexual discrimination, or sexual harassment when they involve TAMU students, faculty, or staff.

These reports may trigger contact from a campus official who will want to talk with you about the incident that you have shared. In many cases, it will be your decision whether or not you wish to speak with that individual. If you would like to talk about these events in a more confidential setting, you are encouraged to make an appointment with the Student Counseling Service (<https://scs.tamu.edu/>). Students and faculty can report concerning, non-emergency behavior at <http://tellsomebody.tamu.edu>.