

Econ 459 - 100 Games & Economic Behavior

Summer 2020

MTWRF 12:00 PM - 1:35 PM

Course Description

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

Prerequisite ECON 323, MATH 142, or equivalent or approval of instructor

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 http://provost.tamu.edu/essentials/pdfs/copy_of_UndergraduateLearningOutcomesFinal.pdf/view

Instructor Information

Name	Meradee Tangvatcharapong
Phone	979-422-4758
Email	meradee_tang@tamu.edu
Office Hours	MTWRF 11:00 AM – 12:00 PM
Office Hours Location	Zoom Meeting https://tamu.zoom.us/j/93215251854?pwd=MEFHMzVXN2cxam42NXBvN3NVNzluZz09 Meeting ID: 932 1525 1854 Password: 767227

Textbook and/or Resource Material

Textbook	Strategies and Games: Theory And Practice, by Prajit K Dutta, MIT 1999.
Slides	Slides will be posted to eCampus.
Helpful Resources	Games of Strategy, by Dixit, Skeath, Reiley, Norton 2014 (good for examples) Game Theory: A Nontechnical Introduction to the Analysis of strategy, Roger A McCain, World Scientific 2014 (good for examples) Game Theory: An Introduction, by Steven Tadelis, Princeton University Press 2013 (more advanced, especially if you are considering graduate school)

Grading Policy

20% Homework (due every Friday)
25% Exam 1 (Mon, Jun 8th)
25% Exam 2 (Mon, Jun 22nd)
30% Final (Mon, Jun 29th)

Grading Scale

A = 90-100, B = 80-89, C = 70-79, D = 60-69, F = <60

Homework

- There will be 5 homework assignments. Each assignment is worth 4% of your grade.
- Homework assignment will be posted on eCampus.
- Assignments is due every Friday at 11:59 pm CST.
- Late homework will not be accepted for any reasons that do not comply with university regulations. (See Student Rule 7: <https://student-rules.tamu.edu/rule07/>)
- If you have any question regarding the grading of your assignment, please contact me **within one week** of getting your assignment returned. There will be NO grade change after one week.

Exam

- No make-up exams will be given without a university-approved and documented excuse. Student Rule 7 (<https://student-rules.tamu.edu/rule07/>) governs attendance policy and excused absences. Per Student Rule 7, you must notify me or the Department of Economics main office *prior* to the exam if such notification is feasible. In cases where advance notification is not feasible (e.g. accident, or emergency) notification must be provided by the end of the second working day after the absence. This notification should include an explanation of why notice could not be sent prior to the class. Non-excused absences will result in a zero for that portion of your grade.
- No grade will be communicated by phone or email. Likewise, grade issues cannot be discussed by phone or email. If you have question regarding the grading of your exam, please contact me to schedule a zoom meeting no later than one week after the exam is returned. There will be NO grade change after one week.

Course Topics, Calendar of Activities, Major Assignment Dates

Class	Day	Date	Topic	Homework Due
1	Tue	26-May	Syllabus, Intro	
2	Wed	27-May	Dominance Strategy	
3	Thu	28-May	Dominance Solvability	
4	Fri	29-May	IEDS	HW1
5	Mon	01-Jun	Nash Equilibrium	
6	Tue	02-Jun	Cournot Duopoly	
7	Wed	03-Jun	Cournot Duopoly	
8	Thu	04-Jun	Cournot Duopoly & Cartels	
9	Fri	05-Jun	Mixed Strategy	HW2
10	Mon	08-Jun	Exam 1	
11	Tue	09-Jun	Mixed Strategy	
12	Wed	10-Jun	Mixed Strategy NE	
13	Thu	11-Jun	Extensive Form	
14	Fri	12-Jun	Backward Induction	HW3
15	Mon	15-Jun	SPNE	
16	Tue	16-Jun	SPNE	
17	Wed	17-Jun	Repeated Games	
18	Thu	18-Jun	Finitely repeated Games	
19	Fri	19-Jun	Infinitely Repeated Games	HW4
20	Mon	22-Jun	Exam 2	
21	Tue	23-Jun	Infinitely Repeated Games	
22	Wed	24-Jun	Moral Hazard	
23	Thu	25-Jun	Mechanism Design	
24	Fri	26-Jun	Review	HW5
	Mon	29-Jun	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, located in the Disabilities Building at the Student Services at White Creek complex on Campus or call 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>.