



## Econ 459-501 Games & Economic Behavior

Fall 2018

TR 8:20 AM - 9:35 AM

ALLN 1002

### Course Description

Introduction to game theory for advanced undergraduates. Topics include dominance, Nash equilibrium, mixed strategies, repeated and extensive form games, 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](http://provost.tamu.edu/essentials/pdfs/copy_of_UndergraduateLearningOutcomesFinal.pdf/view)

### Instructor Information

<b>Name</b>	Meradee Tangvatcharapong
<b>Telephone Number</b>	979-422-4758
<b>Email Address</b>	meradee_tang@tamu.edu
<b>Office Hours</b>	TF 10:00 AM - 12:00 PM or by appointment (see below)
<b>Office Location</b>	ALLN 3091

**Appointment** No need to email me. Make an appointment by going to <https://meradee.weebly.com/teaching.html>, then click "Schedule an Appointment" to see my availability and schedule an appointment.

### Textbook and/or Resource Material

<b>Textbook</b>	Strategies and Games: Theory And Practice, by Prajit K Dutta, MIT 1999.
<b>Slides</b>	In each lecture, I will teach using slides. All slides will be posted on eCampus.
<b>Helpful Resources</b>	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)

## Grading Policies

20% Homework  
 20% Exam 1 (Oct 2<sup>nd</sup> in class)  
 30% Exam 2 (Nov 8<sup>th</sup> in class)  
 30% Final (Dec 10th)

### Grading Scale

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

### Homework

- There will be 5 homework assignments (see schedule in the table below).
- Each assignment is worth 4% of your grade.
- Homework assignment will be posted on eCampus one week before its due date.
- Assignments will be collected in class on the scheduled dates.
- 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/>)
- Unless, the question is “fill-in-the-blank” question, you **MUST show the work done to arrive at the final answer**. If you only write down the final answer, you will not get full credit even if it is correct.
- Assignment must be completed using PEN.
- If you have any question regarding the grading of your assignment, please come see me within one week of getting your assignment returned. There will be **NO grade change after one week**.

### Exam

- PENCIL OK
- Non-programmable calculator OK
- Must bring TAMU student ID
- 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 come see me 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

Week	Class No.	Date	Topic	HW DUE
1	1	28-Aug	Syllabus, Intro	
	2	30-Aug	Dominant Strategies	
2	3	04-Sep	Dominantce Solvability	
	4	06-Sep	Nash Equilibrium	
3	5	11-Sep	Counot Duopoly	HW1
	6	13-Sep	The Common Problem	
4	7	18-Sep	Mixed Strategies	
	8	20-Sep	Mixed Strategies	
5	9	25-Sep	Zero-sum games	HW2
	10	27-Sep	Review for Exam 1	
6	11	02-Oct	<b>Exam 1</b>	
	12	04-Oct	Extensive Form & Backward Induction	
7	13	09-Oct	Extensive Form & Backward Induction	
	14	11-Oct	Subgame Perfect Equilibrium	
8	15	16-Oct	Subgame Perfect Equilibrium	HW3
	16	18-Oct	Repeated Games	

9	17	23-Oct	Repeated Games	
	18	25-Oct	Repeated Games	
10	19	30-Oct	Moral Hazard & Incentives Theory	HW4
	20	01-Nov	Games with Incomplete Information	
11	21	06-Nov	Review for Exam 2	
	22	08-Nov	<b>EXAM 2</b>	
12	23	13-Nov	Mechanism Design	
	24	15-Nov	Auction	
13	25	20-Nov	No class	
	-	22-Nov	No class (THANKSGIVING)	
14	26	27-Nov	Auction/Signaling	
	27	29-Nov	Signaling	HW5
15	28	04-Dec	Review for Final Exam	
		10-Dec	<b>Final Exam</b>	

### 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>.