

SPRING 2025 COURSE INFORMATION

Format: In person
Location: SHH (Oak) 110
Time: MW 3:35–4:50

INSTRUCTOR INFORMATION

Professor: Mike Shor
Office: SHH (Oak) 321
E-mail: mike.shor@uconn.edu
Hours: T 2:00-3:00 & by appointment
Course web site: <http://www.mikeshor.com/courses/gametheory/>

COURSE DESCRIPTION

People rarely make decisions in a vacuum. The right choice for us may depend upon the choices made by others. In turn, the profits and happiness of these other individuals depend on the actions that we will take. This course introduces the core principles of game theory, offering a systematic way of analyzing strategic decision-making in interactive situations.

As it is a course in “theory,” we take an analytical and often quantitative approach. We will use equilibrium analysis to study topics including the use of credible threats and promises, strategic use of information, negotiation and bargaining, and bidding in and designing auctions.

Game theory is the *science* of strategic interaction. The ultimate goal of this course is to help you *think strategically* in complex, interactive situations. In class, we’ll use simple examples to highlight important principles of strategic interaction. For a broader understanding, it is necessary for the student to recognize the similarities between these simple games and real situations.

Most weeks. You’ll participate in fun, simple online games with classmates. These games illustrate general principles of behavior. Additionally, required readings will delve deeper into the theory and explore game theory’s applications to fields as diverse as economics, sports, movies, and popular culture.

ON THINGS MORE IMPORTANT THAN CLASSES

This is a stressful and uncertain time for many, and your well-being is what matters most. While this class requires effort, it should not add to your stress or worsen challenges to your health and well-being. If it ever does, please don’t hesitate to reach out. I’m happy to offer reasonable flexibility or accommodation. More broadly, if you’re facing difficulties—whether class-related or personal—know that my door is always open. Please feel free to reach out. I will help where I can or connect you with the help and resources you need.

GRADING

The following is my “default” rubric for grading. At the end of the semester, I may slightly adjust the weight of components that better reflect your positive efforts.

- Midterm Exam 20%

The midterm will cover core concepts with most questions closely paralleling in-class problems, sample problems, and quizzes. Some questions may test your understanding of online readings or require critical thinking about the material.

- Final Exam 35%

The final exam is cumulative, following a similar format to the midterm. No make-up or early exams will be given except with written permission from the Office of Student Services & Advocacy.

- Class Participation 10%

You are expected to be prepared for class and contribute to class discussions. You may be called upon without notice, especially about your decisions in online games. If you occasionally do not wish to be called on, let me know before class—no explanation needed.

- Participation in Games 10%

You will be required to participate in online games each week. Performance in the games is not graded, but participation is required and failure to participate reduces one’s grade.

- Quizzes & Assignments 25%

Quizzes: There will be six quizzes, with the best five counting toward your grade.

Assignments: Students have the option to complete assignments (available online) that replace a lower-scoring or missed quiz. These assignments ask you to analyze a specific situation that requires game-theoretical analysis and offer advice about the best course of action. Write a short, concise response of fewer than 750 words (not including figures, tables, or equations). Assignments are substantially more labor-intensive than studying for quizzes. Also, these assignments are not intuitive, and therefore you may submit an early draft and rewrite after receiving feedback. *Assignments must be submitted by the last day of class.*

- Extra Credit up to 5%

Game theory is everywhere! If you come across a news story, movie, novel, song, or real life situation with a game-theoretic theme during your day, email me a brief description and explanation of how it connects to the course material. Your explanation should demonstrate a clear and thoughtful understanding of the game-theoretic concepts we've covered in class.

Each submission is worth about 2-5 quiz points, up to a maximum of 100 points (equivalent to 5% added to your course average). More details on extra credit are available on the course web site. Extra credit submissions are accepted up to the last day of class with additional submissions permitted up to the final exam for those who submitted at least one prior to the last week of class.

READINGS

Readings are available online on the course web site. Ranging from whimsical to serious, these readings allow you to dive deeper into the material or may cover important concepts not directly addressed in class. Readings are regularly updated, so check the web site at the end of each topic. **All online readings are required** and quiz and exam questions may directly reference them.

An *optional* text is:

Games of Strategy. Avinash Dixit and Susan Skeath (and David McAdams or David Reiley). New York: WW Norton.

We will not reference this text in class, but it may be helpful for reviewing course concepts. Any edition of this book (there are at least six) will work.

ONLINE GAMES

Some weeks, students will find a link to online games on the course web site. Participation in these games is mandatory; however, your performance in the games will not impact your grade.

Games will typically become available Thursday morning and must be played by *midnight* on Sunday. No make-ups for missed or late games are possible. No studying or preparation is necessary prior to participating, and most games will take no more than ten minutes to complete.

ACADEMIC INTEGRITY

Academic misconduct will not be tolerated in any form. Any violation of the academic integrity policy will result in failure of the course and likely referral to the Academic Misconduct Hearing Board for further sanctions. The following specific guidelines apply to this class:

EXAMS & QUIZZES are closed-book, closed-note, individual efforts. Students who have not yet taken an exam or quiz may not discuss its content or difficulty with those who have.

ASSIGNMENTS AND EXTRA CREDITS must be completed individually, without consultation with others. They must be original work, and any outside sources must be properly cited and documented. Plagiarism includes any use of non-cited online materials, uncited use of AI writing tools, or use of previous years' materials, unless explicitly permitted.

GAMES: The educational value of the online or in-class games is diminished with prior knowledge of the game. It is a violation of academic integrity to discuss the content of these games with students who have not yet participated or to seek prior knowledge about the games.

GENERAL: Ambiguity in academic integrity policies is not an excuse for violations. If you have any questions about how the policy applies to specific scenarios, please discuss them with me in advance.

Course Calendar

(tentative)

Wk	Date	Day	Topic (tentative)	Exams
1	Jan 22	W	1. Introduction	
2	Jan 27	M	1. Introduction	
	Jan 29	W	2. Simultaneous games	
3	Feb 3	M	2. Simultaneous games	Quiz 1
	Feb 5	W		
4	Feb 10	M	3. Sequential games	
	Feb 12	W		
5	Feb 17	M	3. Sequential games	Quiz 2
	Feb 19	W	4. Mixed strategies	
6	Feb 24	M	No Class	
	Feb 26	W		
7	Mar 3	M	4. Mixed Strategies	Quiz 3
	Mar 5	W		
8	Mar 10	M	Review	Midterm Exam
	Mar 12	W		
	Mar 17-19		Spring Break	
9	Mar 24	M	5. Repeated Games	
	Mar 26	W		
10	Mar 31	M	6. Strategic Moves	
	Apr 2	W		
11	Apr 7	M	7. Information	Quiz 4
	Apr 9	W		
12	Apr 14	M	7. Information	Quiz 5
	Apr 16	W		
13	Apr 21	M	8. Auctions	
	Apr 23	W		
14	Apr 28	M	8. Auctions	Quiz 6
	Apr 30	W	Review	
	TBA			Final Exam

Online game due dates are posted on the course web site.