Economics 482:01 | Rutgers University | Professor Campbell
Fall 2021 | Department of Economics |
3:00-4:20 TTh | | campbell@econ.rutgers.edu

GAME THEORY AND ECONOMICS

Course Description: This **upper-level elective course** provides an introduction to game theory and its uses in economics. Game theory is a way of modeling interactions between people or institutions. In the games we study in economics, the "players" might be consumers, firms, workers, the government, or voters, for instance. We will learn general methods for making predictions about how games will be played, and apply them to economic games in which we are interested.

Summary of Learning Outcomes: Students who satisfactorily complete Game Theory and Economics will understand and be able to discuss the fundamental formal elements of game theory, as well as numerous economic problems to which game theory has been applied. Their general understanding will also permit them to consider applications that they might encounter in other disciplines (such as political science), or that occur to them when considering economic current events.

Prerequisites: Economics 320 (Intermediate Microeconomics), Statistics 211 (Intro) or higher, Math 136 or 152 (Calculus II).

Lecture Details: In order to protect the health and well-being of all members of the Rutgers community, **masks must be worn by all persons in all non-private indoor settings, including classrooms**. Students not wearing masks will be asked to leave the classroom, and are subject to university disciplinary procedures. Masks must conform to Centers for Disease Control and Prevention guidelines and be worn such that they **completely cover the nose and mouth**; specific CDC guidance can be found at https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/about-face-coverings.htm. Before you arrive on campus or leave your residence hall on a given day, you must complete the brief survey on the My Campus Pass symptom checker self-screening app.

Method of Evaluation: Your grade will be determined by your performance on homework assignments, two in-class exams, and an in-class quiz. The homework is worth a total of 90 points. The first exam will be given on **Thursday, October 14** and is worth 80 points. The second exam will be given on **Thursday, November 18** and is worth 80 points. The quiz will be given on **Thursday, December 9** and is worth 40 points. **There will be no final exam given during the final exam period.**

All homework assignments and homework and exam solutions will be distributed via the Canvas site for the course.

Note: missed exams are excused only for medical reasons, and only with a signed form from a physician's office and confirmation of the visit by the instructor. In addition, the student or someone acting on behalf of the student must notify the instructor within 24 hours after the missed exam that a medical excuse is pending. A make-up date must be arranged if an exam is missed.

If you know that you will not be able to attend class on an exam date because of a religious holiday, you must notify the instructor of this by Friday, January 24.

If you expect to miss one or two non-exam classes because of illness or a family emergency, please use the Rutgers absence-reporting website https://sims.rutgers.edu/ssra/ to register the date and reason for your absence. An email is automatically sent to the instructor.

Text: The required text is *Game Theory: An Introduction*, by Steven Tadelis. It has been ordered for the Rutgers bookstore. As of August 31, Amazon.com had new copies for immediate shipment for $35.97, including shipping. Used copies are also for sale there for less. I don't know what the bookstore price will be, but they typically charge more for new copies than Amazon does, about the same for used copies.

OFFICE HOURS: Mondays 10:30-11:30 and Wednesdays 1:30-2:30. All office hours, and other meetings outside class, will be conducted via **Zoom**; a link will be distributed through Canvas. A few Wednesday office hours will need to be moved; these will be announced in advance via Canvas.

Course Schedule

Week of	Material	Assigned Text Chapter(s)
September 2	Introduction; Simultaneous-Move Games	1,2.1-2.3, 3,19
September 7	Mixed Strategies; Dominance; Best Responses; Rationalizability	6.1,4
September 14	Best Responses; Rationalizability; Nash Equilibrium	4,5,6.3
September 21	Nash Equilibrium; Applications of Simultaneous-Move Games	5
September 28	Applications of Simultaneous-Move Games; Mixed Strategy Nash Equilibrium	5,6.2
October 5	Dynamic Games with Perfect Information;	7
October 12	Dynamic Games; Subgame Perfect Nash Equilibrium	7,8
	First Exam Thursday, October 14	
October 26	Applications of Dynamic Games	8,11.1
November 2	Applications of Dynamic Games Dynamic Games with Complete Information	8,11.1,9
aNovember 9	Applications of Dynamic Games; Dynamic Games with Complete Information	8,9
November 16	Repeated Games	10
	Second Exam Thursday, November 18	
November 23	Repeated Games; Games of Asymmetric Information	10, 12
	Thursday, November 25: No class, Thanksgiving	
November 30	Bayes Nash Equilibrium	12
December 7	Applications of Games of Asymmetric Information	12
	Quiz Thursday, December 9	

NO FINAL EXAM DURING FINAL EXAM PERIOD