Economics 482:01	Rutgers University	Professor Campbell
Fall 2017	Department of Economics	Office: 302 New Jersey Hall
2:50-4:10 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).

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 **Tuesday, October 17** and is worth 80 points. The second exam will be given on **Thursday, November 16** and is worth 80 points. The quiz will be given on **Tuesday, December 12** 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 a Sakai site for the course. The general Sakai address is https://sakai.rutgers.edu/portal; the course site title is "Econ 482 F17."

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, September 22.

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.

Please turn off cell phone ringers during class. If one or more of your classmates are distracting you by using electronic devices in class and you are not comfortable speaking to them about it directly, please let the instructor know about it.

Text: The required text is *Game Theory: An Introduction*, by Steven Tadelis. It has been ordered for the Rutgers bookstore. As of August 29, Amazon.com had new copies for shipment in two to four weeks for $47.04. This is less than the new price, but more than the used price, quoted by the Rutgers bookstore (also as of August 29).

Office Hours: Mondays 10:30-11:30 and Wednesdays 10:00-11:00. A few Wednesday office hours will need to be moved or cancelled; these will be announced in advance via Sakai.

Course Schedule

Week of	Material	Assigned Text Chapter(s)
September 5	Introduction; Simultaneous-Move Games; Mixed Strategies	1, 2.1-2.3, 3, 6.1, 19
September 12	Mixed Strategies; Dominance; Best Responses; Rationalizability	6.1, 4
September 19	Best Responses; Rationalizability; Nash Equilibrium	4, 5, 6.3
September 26	Nash Equilibrium; Applications of Simultaneous-Move Games	5
October 3	Applications of Simultaneous-Move Games; Mixed Strategy Nash Equilibrium	5, 6.2
October 10	Extensive Games with Perfect Information;	7
October 17	Extensive Games; Subgame Perfect Nash Equilibrium	7, 8
	First Exam Tuesday October 17	
October 24	Applications of Extensive Games	8, 11.1
October 31	Applications of Extensive Games Extensive Games with Complete Information	8, 11.1, 9
November 7	Applications of Extensive Games; Extensive Games with Complete Information	8, 9
November 14	Repeated Games	10
	Second Exam Thursday November 16	
November 21	Repeated Games	10
	Thursday November 23: No class, Thanksgiving	
November 28	Repeated Games; Games of Incomplete Information	10, 12
December 5	Bayesian Nash Equilibrium; Applications of Games of Incomplete Information	12
	Quiz Tuesday December 12	

NO FINAL EXAM DURING FINAL EXAM PERIOD