

Economics 482
Game Theory and Economics

Tue/Thu 1:10–2:30

Scott Hall 119

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Final: Friday, May 5 8–11 AM

New Jersey Hall 402

Office hours: 3:00–4:00 PM Wed/Thu or by appointment

This class is an “upper level elective” for purposes of getting an economics major at Rutgers. It has the following prerequisites:

- Intermediate Microeconomics
- Calculus II (640:136 or 152)
- Statistics (960:211 or 285)

It will be assumed that all students have a good command of the material taught in these courses. It is strongly suggested that you review this material at the beginning of this course.

Students who successfully complete Econ 482 will understand the basic formalism of modern game theory and its fundamental theoretical results, and will understand those theoretical results well enough to apply them to examples, especially examples that are common in economics.

The text for this course is:

Steven Tadelis, “Game Theory: An Introduction”, Princeton University
Press ISBN: 978-0691129082

This textbook should be available in the bookstores.

If a student has a good reason for missing both midterms, then a make-up exam may be arranged. **Whether a reason is “good” or not will be at the discretion of the instructor.** If a student knows (or should know) of an absence well in advance of the test, the instructor should be informed well in advance; otherwise the instructor should be notified as soon as possible. **A reason that is not made known to the instructor in a timely manner will not be deemed to be a good reason.** Made-up exams will not be easier than in class exams.

Other absences may be reported through the University absence reporting website <https://sims.rutgers.edu/ssra/> . An email will automatically be sent to me.

Topics

Week 1	introduction, decision theory	1–2
Week 2	dominance, rationalizability, best-response	3–4
February	Nash equilibrium	5, 6
February	extensive form games with perfect information	chapter 7
March	subgame-perfect Nash equilibrium	chapter 8
March	repeated games	9–10
April	games of incomplete information	chapter 12
(maybe)	mechanism design	14
(maybe)	voting	
(maybe)	special interests of the class	

As the class is an upper-level elective, there is some flexibility to adapt the pace and the choice of material to the abilities and interests of the class. While the topics listed are mostly theoretical, there will be a lot of examples applying the theoretical concepts as we go along.

Grading

There will be occasional homework assignments; the first three will count toward your grade, while later ones are solely for you to get practice and for both of us to get feedback. At the end of the semester your class grade will be calculated in three ways — dropping either of the midterms (giving higher weight to the other exams), or keeping all exams — and you will get the highest of the three results.

HW 1	7	7
HW 2	7	7
HW 3	6	6
midterm 1	80	112 or 0
midterm 2	80	0 or 112
final exam	120	168
total	300	