Game Theory I

Course prefix: ECON

Course number: 4180

Section: MR1

CRN
31580

Instructor first name: Maxwell

Instructor last name: Rosenthal

Semester: Spring

Academic year: 2026

Course description:

This is an upper division economics elective course in game theory. *Game theory* might be viewed as a set of tools for formally modeling and analyzing strategic interaction between rational agents. Critically, game theory is distinguished from microeconomics more broadly by its focus on interactions between multiple decision makers. While it is in principle straightforward to model the behavior of an individual rational decision maker — e.g., he maximizes a preference, a utility function, or a profit function, as in the consumer or producer theory of intermediate microeconomics — modeling interactions between multiple self-interested decision makers requires some additional care.

Game theory has many applications. It is ubiquitous not only in economics, business, and political science, but also in neighboring subjects such as industrial engineering and not-so-neighboring subjects like biology. In fact, game theory is such an important part of computer science that the discipline has developed its own methodologies for doing game theory that have diverged somewhat from the field's roots in economics. My expectation is that many students in this course will go on to use game theory in areas of study not only within economics, but in some of these other areas as well.

Academic honesty/integrity statement:

Students are expected to maintain the highest standards of academic integrity. All work submitted must be original and properly cited. Plagiarism, cheating, or any form of academic dishonesty will result in immediate consequences as outlined in the university's academic integrity policy.

Core IMPACTS statement(s) (if applicable):

This is a Core IMPACTS course that is part of the Social Sciences area. Core IMPACTS refers to the core curriculum, which provides students with essential knowledge in foundational academic areas. This course will help master course content, and support students' broad academic and career goals. This course should direct students toward a broad Orienting Question:

- How do I understand human experiences and connections?

Completion of this course should enable students to meet the following Learning Outcome:

- Students will effectively analyze the complexity of human behavior, and how historical, economic, political, social or geographic relationships develop, persist or change.

Course content, activities and exercises in this course should help students develop the following Career-Ready Competencies:

- Intercultural Competence
- Perspective-Taking
- Persuasion.