

Sabancı University

Econ 201C: Games and Strategies

Fall 2021

Thursday 14.40-17.30 Recitation 14:40-15:30  
online

## INSTRUCTOR

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## COURSE CONTENT

This course is an introduction to Game Theory which consists of a coherent set of concepts and analytical tools to examine interactive or strategic situations between decision makers, where the well being of one depends not only what s/he does but also on what others do. Hence in deciding how best to act, each person needs to consider how others are likely to act as well.

Game Theory has become a widely used tool of analysis in a wide range of disciplines, including economics, management, engineering; political science, law, international relations; biology.

The mathematical requirements of this course are not high, and topics covered under the first year mathematics sequence (MATH 101 and 102) are more than sufficient to master the content of this course. Yet the course does require the student to think and reason in an analytically rigorous and systematic manner and supply steady work.

## TEXTBOOK and LECTURE NOTES

The textbook for this course is *An Introduction to Game Theory* by Martin Osborne, Oxford University Press. A pdf copy will be uploaded in SuCourse.

There will also be a number of *Lecture Notes* and other material posted in SuCourse.

## ATTENDANCE, EXAMS, QUIZZES

Class participation is of utmost importance. Attendance will be taken regularly. There will be two exams, one in the middle of the semester, the other in the last week. There will be quizzes in class and during recitation.

## HOMEWORK

A set of exercises will be given weekly. Students are expected to devote serious effort to homework questions in addition to textbook readings. Homework will be submitted usually at the start of the recitation hour where the T.A. will discuss selected exercises and at times conduct quizzes. The T.A. will additionally be available for individual help during office hours. Written solutions to homework questions will not be supplied and thus students are strongly urged to attend the recitations.

## GRADING

Homework Quiz Attendance 30 %

1. Midterm 35%
2. Midterm 35%

## RULES OF CONDUCT

Students are strongly encouraged to cooperate in homeworks but not “copy” another’s work. A student who (i) does not turn in a homework or (ii) is not present during the start of a quiz will be given a grade of 0.

Make-up exams are granted only in case of a valid and documented reason (in which case the instructor reserves the right to choose between a make-up exam

and a transfer of one midterm's credits to the other). Absence in exams without any valid documented reason will result in a grade of 0 from that exam. In case of an illness, the student is required to produce a formal doctor's note from a hospital within five business days of the report's termination. (A doctor's note taken from a doctor's private practice does not count as formal.) In case of private hospitals, the doctor's note has to be verified by the university health service within five business days.

The definition for scholastic dishonesty is given in the rules and regulations of the Sabancı University. In the case of scholastic dishonesty, no credits will be given for that particular work. Cheating during written work will result in an F for the course. All incidents of scholastic dishonesty will be reported to FASS for disciplinary action.

## COURSE OUTLINE

- I. Introduction; Games in Strategic Form, Dominant Strategy Solution, Nash Equilibrium (Osborne Ch 1,2,3)
- II. Mixed Strategy Nash Equilibrium (Ch 4)
- III. Games in Extensive Form (Selected Parts of Ch 5, 6)
- IV. Games with Incomplete Information (Selected Parts of Ch 9,10)
- V. Introduction to Cooperative Games