Sabancı University
Syllabus 2023

Econ 201C Games and Strategies
Thursday 10.40-13.30 FENS L056
Recitation : Friday14:40-15:30 FASS 1103

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, computer science, 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.

We may have to revise the course plan according to the reassessment to be made countrywide, regarding higher education, at the beginning of April. The content to be delivered is certain but the method of course delivery, the number and dates of exams, and some other details are subject to change.

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 and READING

A set of exercises will be given **weekly** at the SuCourse site. In the first half of the course, the exercises will be mostly from Osborne.pdf which require an adequate reading of the associated Chapters 1-6.

The **first homework** will be given in Week 1 to be submitted in Week 2. Therefore, in particular, Chapter 1 and the initial parts of Chapter 2 in Osborne.pdf need to be read by the students in Week 1, including those who only get to enroll during the add drop period. The SuCourse website will be open to all Sabancı students. .

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 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 and Lecture Notes)**

IV. **Games with Incomplete Information (Selected Parts of Ch 9,10 and Lecture Notes)**

V. **Introduction to Cooperative Games (Lecture Notes)**