

DESCRIPTION AND SYLLABUS

Name of the subject in Hungarian:	Applied Game Theory
Name of the subject in English:	Applied Game Theory
Credit value of the subject:	3
The code of the subject in the electronic study system:	BN-APGAT-03-EA
Classification of the subject:	Obligatory
Language of instruction (in case of non-Hungarian courses):	English
Institute or department responsible for the subject:	Institute of Social Sciences and International Studies
Course type and number of contact hours:	Lecture, class per week: 2, class per semester: 0
Mode of study: (Full-time / Part-time):	Full-time training
The semester in which the subject is open for registration:	2022/2023 1st semester
Prerequisite(s):	-

THE PURPOSE OF THE SUBJECT, LEARNING OUTCOMES:

In a situation where people's decisions depend on what others will do, each actor must decide whether he is willing to cooperate with others or compete with them. Game theory deals with this problem area, i.e., the systematic study of strategic interactions, whose models (e.g. prisoner's dilemma) are intensively used in various fields of social sciences. This course is an introduction to game theory, the study of strategic behavior among parties having opposed, similar or mixed interests. It presents the basic concepts and analytical tools of elementary game theory in a way that allows the student to apply them in real-life situations.

SUMMARY OF THE CONTENT OF THE SUBJECT

The goal of the course is to give an insight into the formal ways of thinking about social mechanisms and interactions. At the end of the course, the student will be able

- to formalize a strategic situation as a well-defined game;
- to choose appropriately from a basic kit of analytic tools, called solution concepts, to analyze and solve a wide variety of games and applications;
- to understand the assumptions underlying these concepts as well as their strengths and limitations;
- students will be able to think strategically and recognize strategic interaction in real-life situations.

STUDENT'S TASKS AND PLANNED LEARNING ACTIVITIES:

The evaluation is based on two achievements:

- 1) Active class work by which the student acquires the necessary theoretical and technical knowledge in Game Theory.
- 2) By the end of the semester students will develop a case study in which they are going to work on a topic related to their major and area of interest.

EVALUATION OF THE SUBJECT:

The evaluation is based on the mentioned case study. This provides accurate information on whether the student has understood the theoretical foundations and is able to apply them directly for practical purposes. No more can be expected from the side of the student for such a complex, more difficult than average optional subject.

Offered grade can be given: Yes.

OBLIGATORY READING LIST:

- Avinash Dixit, Susan Skeath: Games of Strategy, W. W. Norton & Company, 2020