

GAME THEORY - course description

General information	
Course name	GAME THEORY
Course ID	04.0-WZ-P-GT-S19
Faculty	Faculty of Economics and Management
Field of study	WEiZ - oferta ERASMUS
Education profile	-
Level of studies	Erasmus programme
Beginning semester	winter term 2023/2024

Course information	
Semester	1
ECTS credits to win	5
Course type	obligatory
Teaching language	english
Author of syllabus	

Classes forms					
The class form	Hours per semester (full-time)	Hours per week (full-time)	Hours per semester (part-time)	Hours per week (part-time)	Form of assignment
Lecture	30	2	-	-	Credit with grade

Aim of the course

Can structuralize the problem applying the method of the games theory, to recognize the type of the game and possible strategies of players and to solve problems.

Prerequisites

Basic knowing operations with matrix, basic knowing of excel program.

Scope

Introductory remarks. The origin of game theory. Strategic form game. Examples of games. Areas of application for game theory. Introduction to dominant strategies and Nash equilibrium. Weakly and strictly dominant strategies, iterative elimination of strictly dominant strategies. Formalizing a situation as a game in strategic form. Mixed strategies. Nash Equilibrium in mixed strategies. Domination by mixed strategy. Zero-sum games. Saddle point. Minimax and maximin - in pure and mixed strategies. Value of a zero-sum game. Finding minimax and maximin via a linear program and its dual counterpart. Calculation of an arbitration solution. Games against nature.

Teaching methods

lecture

Learning outcomes and methods of theirs verification

Outcome description	Outcome symbols	Methods of verification	The class form
No outcomes found			

Assignment conditions

Student receive four tasks: two theory problems, two excersises. Two task done well - mark 3, three task done well - mark 4, five tasks done well - mark 5.

Recommended reading

Teacher prepares materials and exercises than gives students week before lecture.

https://www.maa.org/sites/default/files/pdf/ebooks/GTE_sample.pdf

Further reading

Notes

Modified by dr Paweł Szudra (last modification: 30-05-2023 10:57)

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