POZNAN UNIVERSITY OF TECHNOLOGY

EUROPEAN CREDIT TRANSFER AND ACCUMULATION SYSTEM (ECTS)

COURSE DESCRIPTION CARD - SYLLABUS

Course name
Gamification in management [N2IZarz1>GwZ]

Course

Field of study
Engineering Management

Year/Semester
2/3

Area of study (specialization)
Managing Enterprise of the Future

Profile of study
general academic

Level of study
second-cycle

Course offered in
polish

Form of study
part-time

Requirements
elective

Number of hours

Lecture
10

Laboratory classes
0

Other (e.g. online)
0

Tutorials
10

Projects/seminars
0

Number of credit points

2,00

Coordinators

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Lecturers

Prerequisites

The Student defines the concepts of: production process, production costs, materials, production capacity, production logistics, marketing expertise, marketing strategy, buyer, customer, price and methods of its calculation, supply, demand (and other concepts in the field of enterprise management included in the training program). The Student characterizes the stages of the production process and assign its costs. The Student formulates opinions on the basis of group discussion, brainstorming, implemented SWOT and PEST analyzes, explain their applications, summarize and recommend corrective actions. The Student creates: financial analysis, turnover and balance statement, SWOT analysis, PEST, product life cycle; matrices: BCG, GE, McKinsey; marketing plan. The Student can create a company development plan based on available market data. The Student is able to draw conclusions from the decisions taken, plan and introduce corrective actions. The Student is responsible for the timely implementation of tasks. The Student actively participates in both lecture classes and exercises. The Student is able to work in a group and make individual and group decisions. The Student follows the norms of social life. The Student is determined to solve tasks creatively and realize assigned projects.

Course objective

Developing the potential of knowledge, skills and attitudes in making management decisions in production and market processes based on knowledge and skills acquired at the first level of education at the university and with the application of the management games.

Course-related learning outcomes

Knowledge:
The student defines and explains the role of business law in shaping legal and ethical practices in the design and implementation of management simulation games [P7S_WG_01].
The student describes how market data acquisition methods are used to design and analyze the effectiveness of simulation games and gamification techniques in a decision-making context [P7S_WG_07].
The student lists and explains ethical standards for gamification, including issues of manipulation, motivation and the impact of games on employee behavior [P7S_WK_01].

Skills:
The student independently designs simulation games and gamification techniques to support decision-making processes in an organization, applying knowledge of decision types and decision-making processes [P7S_UW_04].
The student analyzes the psychological aspects of simulation games and their impact on participant behavior, applying research methods to evaluate the effectiveness of gamification [P7S_UW_05].
The student interprets and applies game theory to the analysis and resolution of conflicts and decision-making under risk and uncertainty [P7S_UW_06].

Social competences:
The student identifies and manages key factors influencing the success of gamification, including assessing risk and effectiveness in decision-making [P7S_KK_02].
The student effectively manages projects using gamification, from the design stage to the analysis of results, in order to optimize decision-making processes in the organization [P7S_KO_01; P7S_KO_03].

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Knowledge gained during lectures: 100% of points. 50% of points can be obtained in partial tests on the ekursy.put.poznan.pl platform (tests containing the content from subsequent lectures). Another 50 % of points from the final exam (the exam can be carried out in one of three forms: oral, written open, written test). Exercises will be assessed on the basis of an oral and written report on the implemented gamification processes.
Assessment range (for lectures):
up to 50% of points - 2.0
51-60% points - 3.0
61-70% points - 3.5
71-80% points - 4.0
81-90% points - 4.5
91-100% points - 5.0

Programme content

1. Essence, goals, types of decisions.
2. Deciding and decision-making processes.
3. Features of the decision-making process.
4. Classification of decisions.
5. Criteria for making rational decisions.
6. The shaping of the decision-making process.
7. Models and decision-making methods.
8. Decision rules.
9. Barriers in making decisions.
10. Risk and uncertainty in decision making.
11. Game theory in decision making.

12. Game concepts.
13. Game history.
14. Simulation games, seriously simulation games, management games.
15. Conflicts in simulation games.
16. Psychological aspects in simulation games.
17. The course of simulation games.
18. Inference based on the results of simulation games.
19. Gamification in marketing and management

Teaching methods

Lectures, discussions, teamwork, brainstorming, management games, simulation games, psychodrama.

Bibliography

Basic:
1. Tkaczyk, P. Grywalizacja. Jak zastosować mechanizmy gier w działaniach marketingowych
2. Więcek-Janka E., Kujawińska A., Decyzje i gry marketingowe, Wydawnictwo Politechniki Poznańskiej, Poznań 2010.
3.Więcek-Janka E., (2011). Games & Decisions. Poznan : Publishing House of Poznan University of Technology
4. Amy Jo Kim (2018). Game Thinking

Additional:
1. Opracowania Szkoły Symulacji Systemów Gospodarczych (w latach 2000-2010), Wydawnictwo Politechniki Wrocławskiej, Wrocław (lata 2000-2010)
2.Zhigeng Fang (2010). Grey game theory and its applications in economic decision-making. Boca Raton : CRC Press Taylor&Francis Group

Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,00
Classes requiring direct contact with the teacher	20	1,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	30	1,00