

Innovation Management - course description

General information	
Course name	Innovation Management
Course ID	06.9-WM-MaPE-P-IM-23
Faculty	Faculty of Mechanical Engineering
Field of study	Management and Production Engineering
Education profile	academic
Level of studies	First-cycle studies leading to Engineer's degree
Beginning semester	winter term 2023/2024

Course information	
Semester	6
ECTS credits to win	4
Course type	optional
Teaching language	english
Author of syllabus	<ul style="list-style-type: none">mgr Karol Dąbrowski

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
Project	30	2	-	-	Credit with grade

Aim of the course

The purpose of the course is to acquire knowledge, skills and competencies in the management of innovation projects.

Prerequisites

Knowledge of business management and conducting operations research.

Scope

Lectures

- 1 Basic information on the management of innovation projects.
2. Innovation in terms of the level of technological readiness.
3. Process innovation, product innovation, secondary innovation - methods and tools for generating innovation ideas.
4. Identification of the research problem. Methods of building a research experiment.
5. Project management methods.
6. Phases of an innovation project.
7. Milestones of the innovation project.
8. Schedule and budget of the innovation project.
9. Management of the project team.
10. Directions of development of the concept of project management and management by projects.
11. Organization and resources in an innovation project.
12. Schedules by workload and fixed duration tasks.
13. Critical path, Gantt chart. Time and cost analysis, limited resources.
14. IT tools to help manage an innovation project, characteristics. Risks and errors in the design, management and accounting for innovation projects.
15. Colloquium on the content of the subject.

Project

- P1. Characteristics of MS Project program (environment, views, working with the program). Using MS Project program to manage an innovation project.
- P2 - P3. Development of assumptions for selected innovation projects in the area of production and/or service issues - presentation and analysis of submitted ideas.

P4 - P5. Planning of an innovation project (division into project phases).

P6. Verification of submitted projects according to TRL methodology (according to levels of technological readiness).

P7 - P8. Identification of technological problem in submitted innovation projects.

P9 - P10. Identification and evaluation of milestones to prepared/developed innovation projects.

P11. Evaluation of prepared/developed schedules for innovation projects.

P12 - P13. Organization and allocation of resources for implementation of prepared/developed innovation projects.

P14. Project budget.

P15. Presentation of the innovation project concept.

Teaching methods

Conventional lecture.

Project - individual and group work of students using literature and lecture notes and specialized computer programs.

Learning outcomes and methods of theirs verification

Outcome description	Outcome symbols	Methods of verification	The class form
Structured, general knowledge of basic marketing and customer relationship management, strategic management as well as project and innovation management.	<ul style="list-style-type: none">• K_W17	<ul style="list-style-type: none">• a project• an evaluation test	<ul style="list-style-type: none">• Lecture• Project
Ability to think and act in an entrepreneurial way.	<ul style="list-style-type: none">• K_K06	<ul style="list-style-type: none">• a project• an evaluation test	<ul style="list-style-type: none">• Lecture• Project
Ability to select and apply appropriate optimization methods to solve engineering tasks related to Mechanical Engineering.	<ul style="list-style-type: none">• K_U14	<ul style="list-style-type: none">• a project• an evaluation test	<ul style="list-style-type: none">• Lecture• Project

Assignment conditions

Lecture

Assessment given on the basis of a written colloquium including verification of knowledge of basic issues.

Project

The grade is determined on the basis of the average of the grades from the written elaboration of the project and the final multimedia presentation of the project.

Final evaluation - the arithmetic mean of the grades from individual classes. The prerequisite for passing the course is the completion of all its forms.

Recommended reading

1. M. Dodgson, Oxford Handbook of Innovation Management, Oxford University Press, 2015.

2. J. Tidd, J. Bessant, Managing Innovation, John Wiley & Sons Inc, 2020.

Further reading

1. D. S. Kerzner, Project Management: A Systems Approach to Planning. Scheduling and Controlling. 13th Edition, 2022.

Notes

Modified by mgr Karol Dąbrowski (last modification: 30-04-2023 15:27)

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