COURSE DESCRIPTION CARD - SYLLABUS

Course name
Methods of project team management [S2FT2>MZZP]

Course

Field of study
Technical Physics

Year/Semester
2/3

Area of study (specialization)
–

Profile of study
general academic

Level of study
second-cycle

Course offered in
Polish

Form of study
full-time

Requirements
compulsory

Number of hours

Lecture
0

Laboratory classes
0

Other
0

Tutorials
0

Projects/seminars
15

Number of credit points

1,00

Coordinators

dr inż. Małgorzata Spychała
malgorzata.spychala@put.poznan.pl

Lecturers

Prerequisites

Knowledge: Student knows the basic concepts related to working in a team Skills: The student has the ability to perceive, associate and interpret the phenomena occurring during teamwork Social competences: The student is aware of the importance of teamwork in professional and private life

Course objective

Gain knowledge of the importance of teamwork. To gain knowledge about organizing project work. Gaining the ability to use project work methods

Course-related learning outcomes

Knowledge:
The student acquires the basic knowledge needed to implement projects, which is also used to understand non-technical aspects of engineering activities. He learns the importance of economic aspects, especially the management of human and material resources in the implementation of project goals. The aspects of teamwork learned by the Student allows a better understanding of issues in the area of social norms, optimization of work organization solutions

Skills:
The student gains the ability to solve problems while performing tasks as a team. He/she is able to properly plan tasks in a project team while gaining the ability to interact with other team members. The student acquires the ability to organize project tasks, in particular, by developing a proper schedule of activities and disposing of available resources. Teamwork influences the student's awareness of the need for continuous training and improvement of professional, personal and social competencies.

Social competences:
The student is aware of the need for interdisciplinary implementation of project tasks, in particular, relying on teamwork. The student perceives cause and effect relationships in the implementation of project activities. The student is able to demonstrate the potential to initiate activities for the development of the immediate environment, the growth of social awareness and environmental protection in the area of issues related to technical physics.

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Students carry out the project in groups.
In terms of the applied methods of verification of the achieved learning outcomes, the following assessment thresholds are applied:
50.1-60% dst;
60.1-70% dst+;
70.1-80% db;
80.1-90% db+;
from 90.1% bdb.

Programme content

Analysis of the methods and tools needed to carry out project tasks. Analysis of the required competencies needed for teamwork. Practical exercises on establishing roles and functions in the team. How to create a good project team. Planning activities for organizing a project. Analysis and development of the various stages of the project. Critical analysis of project tasks. Methods and tools used in financial analysis of projects. The main benefits of implementing teamwork - analysis of examples.

Course topics

Analysis of the methods and tools needed for project tasks - Agile, Lean, Scrum, Kanban, Six Sigma, Waterfall, Prince2, PMI and the critical path method
Analysis of required competencies needed for teamwork - This analysis includes identification of key competencies such as communication, collaboration, conflict resolution, leadership and adaptation. Participants learn how to assess and develop these 4 competencies in the context of teamwork.
Practical Exercises on Determining Roles and Functions in a Team - These exercises are designed to provide a practical understanding of various roles and functions in a team and how to assign them effectively. Participants learn how to recognize the strengths of individual team members and adjust roles in a way that maximizes team productivity and harmony.
Analysis of examples helps to understand the practical aspects of teamwork. How to create a good project team Participants learn how to recruit, select and form an effective project team. Key characteristics of a good team, such as diversity of skills, good communication, common goals and mutual trust, will be discussed.
Planning Activities in Organizing a Project - These exercises include creating a project plan, defining goals, identifying tasks and assigning responsibilities. Participants learn how to plan activities effectively to ensure that the project is completed on time and on budget.
Analyzing and Developing Project Stages Participants analyze each stage of the project cycle, from initiation to closure, and learn how to develop detailed plans for each of these stages. Analysis includes identification of key tasks, resource allocation and scheduling.
Critical Analysis of Project Tasks - These exercises focus on identifying and analyzing critical tasks in a project that are critical to its success. Participants learn how to prioritize tasks, manage risks and monitor project progress.
Key Benefits of Implementing Teamwork - Case Studies Participants analyze various case studies to

understand the benefits of teamwork, such as better creativity, faster problem solving and higher levels of employee engagement.

Teaching methods

Project classes are conducted on the basis of case studies (case studies) with the use of discussion, students work (perform tasks) in predetermined groups. Project classes require independent (in consultation with the instructor) solution of the problem posed.

Bibliography

Basic:
Metodyki i standardy zarządzania projektami, red. nauk. Trocki M., Polskie Wydawnictwo Ekonomiczne, Warszawa, 2017.
Mackin D., (2011), Budowanie zespołu. Zestaw narzędzi, Poznań, Wydaw. Rebis,
Żmigrodzki M., Zarządzanie projektami dla początkujących: jak zmienić wyzwanie w proste zadanie, Wyd. Helion, Gliwice, 2018
Wyrwicka M., Zarządzanie projektami, Wydawnictwo Politechniki Poznańskiej, Poznań, 2011.

Additional:
KatzenbachJ.R., SmithD.K. , (2001),Siła zespołów. Wpływ pracy zespołowej na efektywność organizacji, Dom Wydawniczy ABC, Kraków,
Głodziński E., Efektywność w zarządzaniu projektami : wymiary, koncepcje, zależności, Polskie Wydawnictwo Ekonomiczne, Warszawa, 2017.

Breakdown of average student's workload

	Hours	ECTS
Total workload	25	1,00
Classes requiring direct contact with the teacher	15	0,50
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	10	0,50