COURSE DESCRIPTION CARD - SYLLABUS

Course name
Principles of teamwork in project implementation [N1Energ2>ZPZ]

Course

Field of study
Power Engineering

Year/Semester
1/2

Area of study (specialization)
–

Profile of study
general academic

Level of study
first-cycle

Course offered in
Polish

Form of study
part-time

Requirements
elective

Number of hours

Lecture
20

Laboratory classes
0

Other
0

Tutorials
0

Projects/seminars
10

Number of credit points

3,00

Coordinators

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Lecturers

Prerequisites

The student has basic information on group work, is aware of the importance of teamwork in achieving the goals of business entities. The student has basic skills in the field of analysis and searching for information for the needs of professional practice. The student has basic knowledge of the humanities.

Course objective

Gaining knowledge about the importance and methods of teamwork. Gaining knowledge on how to organize work in the project. Acquiring the ability to use methods of working in a group. Acquiring the ability to organize team work. Acquiring the skills to organize group work.

Course-related learning outcomes

Knowledge:
The student acquires the basic knowledge, which is needed to understand the non-technical aspects of engineering activities, in particular, it concerns economic issues, concepts in the area of ethics and the necessary principles of ergonomics and safety rules.

Skills:

The student is prepared to properly organize his or her individual work and to organize the work of the group as part of teamwork. The student also acquires the ability to cooperate with other team members as part of team work, this also includes the scope of interdisciplinary work.
The student is aware of the need for continuous training, this applies to improving professional, personal and social competences. As part of self-improvement, the student is able to independently plan and implement his or her development.

Social competences:
The student shows the potential to initiate and undertake activities for the development of the immediate surroundings, increasing social awareness and protection of the natural environment in the area of issues related to the power industry.

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Formative assessment:
- within the scope of lectures: on the basis of oral answers covering the issues discussed during the current and already held lectures. In the case of remote work - 1. to 3. written studies from discussions in teams or assigned topics related to the pre-prepared material.
- within the scope of project activities: on the basis of reports (reports) on self-performed tasks, progress in team work on tasks assigned in the group / teams and based on the development of posters (in the case of working in real life) or graphics (in the case of remote work) summary of group work.
Summative assessment:
- within the scope of lectures: written test - based on descriptive answers to open-ended questions - passing on a minimum basis of 51% of possible points. In the case of remote work, the test.
- within the scope of project activities: assessment resulting from partial marks for activity during classes, and on the basis of the preparation of posters (in the case of working in real life) or graphics (in the case of remote work) being a summary of the group work.

Programme content

Lecture: Team work as an essential competence in the labor market. Roles and functions in the team. Benefits and threats of teamwork. Human resource management in project activities. Organization of the project. Project implementation cycle. Scheduling project tasks. Required resources in project implementation. Basics of budgeting and financial analysis in projects. Project dissemination.
Project: Analysis of the required competences needed in teamwork. Practical exercises in establishing roles and functions in a team. The most important benefits of teamwork - analysis of examples. How to create a good project team. Planning activities as part of organizing the project. Analysis and development of individual project stages. Critical analysis of design tasks. Methods and tools used in the financial analysis of projects. A proposal for disseminating the project.

Course topics

Lecture:
Teamwork as an Essential Competency in the Job Market
Teamwork is a critical skill in today's job market, enabling the achievement of organizational goals through collaboration and collective problem-solving. Effective teamwork requires communication skills, conflict resolution abilities, and the capacity for cooperation and adaptation in a dynamic environment.

Roles and Functions in a Team
In every team, there are various roles and functions that members can assume, such as leader, coordinator, expert, performer, mediator, or motivator. Each of these roles is essential for the effective functioning of the team and the achievement of shared goals. Understanding and appropriately assigning these roles can significantly improve team efficiency and harmony.

Benefits and Challenges of Teamwork
Teamwork brings many benefits, such as increased creativity, better problem-solving, faster goal achievement, and higher employee engagement and satisfaction. However, teamwork can also present challenges, such as interpersonal conflicts, communication difficulties, lack of individual accountability, and managing diversity within the team.

Human Resource Management in Project Activities
Human resource management in projects involves recruiting, training, motivating, and evaluating project team members. It is crucial to ensure that all team members have clearly defined roles and responsibilities and that effective communication and collaboration exist within the team.

Project Organization
Project organization involves planning, structuring, and coordinating project activities. It includes creating a project plan, defining goals, identifying resources, and establishing a task schedule. A well-organized project allows for efficient time, resource, and cost management.

Project Lifecycle
The project lifecycle consists of several stages, including initiation, planning, execution, monitoring, and closure. Each stage has specific tasks and goals that must be achieved for the project to progress to the next stage. Effective project lifecycle management ensures timely and budget-compliant project completion.

Project Task Scheduling
Project task scheduling involves determining when and in what order individual tasks will be completed. This includes creating a schedule, assigning resources, monitoring progress, and making adjustments as needed. Scheduling helps organize work and ensures that all tasks are completed on time.

Required Resources for Project Execution
Various resources are essential for project execution, such as people, time, money, materials, and technology. Identifying and managing these resources is crucial for project success. Resource management involves planning, allocating, monitoring, and optimizing resource use.

Fundamentals of Budgeting and Financial Analysis in Projects
Project budgeting involves determining the costs associated with completing specific activities and tasks. Financial analysis includes monitoring expenses, controlling costs, and assessing project profitability. Effective budgeting and financial analysis are key to keeping the project within budget and ensuring its feasibility.

Project Dissemination
Project dissemination involves communicating its results, achievements, and benefits to a broad audience. This may include promotional activities, publications, conferences, and other forms of communication. The goal of dissemination is to increase awareness of the project, its significance, and its benefits.

Project:
Analysis of Required Competencies for Teamwork
This analysis includes identifying key competencies such as communication, collaboration, conflict resolution, leadership, and adaptation. Participants learn how to assess and develop these competencies in the context of teamwork.

Practical Exercises in Assigning Roles and Functions in a Team
These exercises aim to practically understand various roles and functions within a team and effectively assign them. Participants learn how to recognize the strengths of individual team members and match roles in a way that maximizes team efficiency and harmony.

Key Benefits of Teamwork - Case Analysis
Participants analyze various case studies to understand the benefits of teamwork, such as improved creativity, faster problem-solving, and higher employee engagement. Case analysis helps 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 skill diversity, good communication, shared goals, and mutual trust, are discussed.

Planning Activities for Project Organization
These exercises involve creating a project plan, defining goals, identifying tasks, and assigning responsibilities. Participants learn how to effectively plan activities to ensure timely and budget-compliant

project execution.

Analysis and Development of Project Stages
Participants analyze each stage of the project cycle, from initiation to closure, and learn how to develop detailed plans for each stage. The analysis includes identifying key tasks, allocating resources, and scheduling.

Critical Task Analysis in Projects
These exercises focus on identifying and analyzing critical tasks in a project that are essential for its success. Participants learn how to prioritize tasks, manage risks, and monitor progress in project execution.

Methods and Tools Used in Financial Analysis of Projects
Participants learn various methods and tools for financial analysis, such as cost analysis, cash flow analysis, profitability indicators, and budgeting techniques. These exercises aim to teach participants how to assess project profitability and manage its finances.

Proposal for Project Dissemination Activities
Participants develop proposals for activities aimed at disseminating project results, such as publications, presentations, promotional campaigns, and events. These exercises aim to teach participants how to effectively communicate project achievements and increase its visibility.

Teaching methods

Lecture: information lecture with the use of a multimedia presentation illustrated with examples.
Project classes are conducted on the basis of case studies with the use of discussion, students work (carry out tasks) in previously established groups. Project classes require an independent (in consultation with the teacher) solving the given problem.

Bibliography

Basic:
Nowak M., Wspomaganie decyzji w planowaniu projektów, Wyd. Difin, Warszawa, 2014.
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:
Metodyki i standardy zarządzania projektami, red. nauk. Trocki M., Polskie Wydawnictwo Ekonomiczne, Warszawa, 2017.
Głodziński E., Efektywność w zarządzaniu projektami : wymiary, koncepcje, zależności, Polskie Wydawnictwo Ekonomiczne, Warszawa, 2017.
Prussak W., Wyrwicka M., Zarządzanie projektami, Zachodnie Centrum Organizacji, Poznań, 1997.

Breakdown of average student's workload

	Hours	ECTS
Total workload	80	3,00
Classes requiring direct contact with the teacher	30	1,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	50	2,00