SYLLABUS

Name: Introduction to project work based on PBL method

Name in Polish: Wprowadzenie do pracy projektowej metodą PBL
Name in English: Introduction to project work based on PBL method

Information on course:

Course offered by department:	Faculty of Organisation and Management
Course for department:	Silesian University of Technology
Study level and form:	Bachelor's degree, Full-time
Term:	summer semester 2023/2024
Coordinator of course edition:	Dr Kinga Stecuła

Default type of course examination report:

zal / passed

Language:

English

Course homepage:

https://platforma.polsl.pl/roz/

ECTS

4 ECTS

Short description:

The aim of the course is to familiarize students with working using Project Based Learning (PBL) method.

Description:

Lectures includes the following topics and terms:
- definition of a project
- definition, features and types of projects,
- areas of management and production engineering in the context of research, directions of modern research
- types of scientific research
- research methods and techniques
- research tools
- determining the purpose of research
- identifying a research gap
- theses and hypotheses
- determination of engineering and non-engineering problems
- conducting scientific research
- analysis and interpretation of results
- presentation of research results
- drawing conclusions from research
- how to write a scientific article?
- PBL method
- individual work versus team work
- synergy effect.

Project includes development of a project in the field of management and production engineering. Students work in groups in which they determine the topic of the project, define its scope, goal, research problem. Then students work on the procedure on how the project should be implemented step by step. Students prepare a project report and present it.

15 hours of lectures
15 hours of projects

ECTS points: 4.

NUMBER OF HOURS
Number of hours of classes with direct participation of academic teachers or other people conducting classes and students
- Lecture: 15 h
- Project: 15 h

Number of hours allocated to the student's own work: 90 h, including:
- Acquaintance with literature: 20 h
- Preparation for project and preparation of a final paper: 70 h

Total number of hours: 120 h

Bibliography:

- Christiansen, E. T., Kuure, L., Mørch, A., & Lindström, B., PROBLEMBASED LEARNING FOR THE 21st CENTURY: New Practices and Learning Environments, 2013, Aalborg Universitetsforlag
- Barret T., A New Model of Problem based learning, 2017, All Ireland Society for Higher Education (AISHE)
- Ansarian L., Teoh M. L., Problem-based Language Learning and Teaching, 2018, SpringerBriefs in Education
- Orey, M., Emerging Perspectives on Learning, Teaching, and Technology, 2010, Global Text Project.

Learning outcomes:

KNOWLEDGE: knows and understands

Basic engineering processes and technologies in the life cycle of technical equipment, objects and systems and ways of solving typical engineering tasks, particularly in relation to the organization of production processes and production management. K1A_W3
- in the field of project work using the PBL method

Skills: can:
Identify, formulate and solve complex and unusual engineering problems related to the field of management and production engineering by applying the principles of engineering, science and mathematics, as well as perform tasks under conditions that are not fully predictable. K1A_U1
- in the field of project work using the PBL method
Make a critical analysis of the functioning of existing technical and technological solutions in production systems function, evaluate these solutions and suggest appropriate improvements and innovations in this regard. K1A_U5
- in the field of project work using the PBL method
Work individually and in a team, assuming different roles in it, plan and organize this work, as well as interact with other people as part of teamwork (also of an interdisciplinary nature) using specialist terminology and modern information and communication technologies, and take part in the debate. K1A_U7
- in the field of project work using the PBL method
Solve practical engineering tasks taking into account engineering standards and norms and applying specific technologies appropriate to production engineering, using experience gained in a professional engineering environment. K1A_U8
- in the field of project work using the PBL method

Social competence: is ready to:
Critical evaluation of knowledge and received content, recognition of the importance of knowledge in solving cognitive and practical problems, and consulting experts in the event of difficulties in solving problems on their own. K1A_K1
- in the field of project work using the PBL method

Assessment methods and assessment criteria:

Project includes development of a project in the field of management and production engineering. Students work in groups in which they determine the topic of the project, define its scope, goal, research problem. Then students work on the procedure on how the project should be implemented step by step. Students prepare a project report and present it.

Practical placement:

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