



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Engineering Workshop [S1DSwB1>PI]

Course

Field of study

Data Science in Business

Year/Semester

3/6

Area of study (specialization)

–

Profile of study

general academic

Level of study

first-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

90

Number of credit points

5,00

Coordinators

dr hab. inż. Agnieszka Misztal prof. PP
agnieszka.misztal@put.poznan.pl

Lecturers

Prerequisites

Knowledge of the basics of project management, methodologies for engineering problem analysis, and documentation of work results. Team communication skills and familiarity with the specifics of industrial operations will be particularly useful.

Course objective

The goal is to apply the acquired knowledge in practice-during workshop-based activities in a real industrial environment. Students will develop engineering project concepts, enhance their teamwork and documentation skills, and analyze the conditions for project implementation in companies.

Course-related learning outcomes

Knowledge:

Identifies the requirements and expectations of companies regarding engineering projects implemented by students [DSB1_W07]

Describes the role of an engineer in an industrial environment and the specifics of implementing project solutions in practice [DSB1_W06]

Characterizes elements of planning practical activities in the project implementation cycle within a

company [DSB1_W01]

Skills:

Plans and implements project activities in an industrial environment, considering technical and organizational requirements of the company [DSB1_U13]

Develops an implementation action plan in a company based on an analysis of needs, constraints, and possibilities [DSB1_U03]

Collaborates with business representatives in refining project assumptions and planning its execution [DSB1_U14]

Applies principles of documenting project work results in industrial conditions [DSB1_U12]

Presents the project concept and preliminary results within the company environment, justifying the value of the proposed solution [DSB1_U15]

Social competences:

Demonstrates readiness to operate in a real industrial environment and make project decisions based on business and technical analysis [DSB1_K02]

Assumes responsibility for the quality and usability of implemented project solutions in the context of their application in a company [DSB1_K05]

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Workshops conducted in industrial plants, teamwork, mentoring by a company-appointed supervisor, consultations, and presentation of results.

The final grade reflects the student's activity and engagement in carrying out the project in industrial conditions, as well as the quality of the team's output. Soft skills-such as teamwork and communication-are also important.

Grading components:

1. Participation in project work within the company - evaluated based on engagement, consistency, and quality of completed tasks - 35%

2. Final presentation and report - quality of results presentation, clarity of the report, accuracy of conclusions and recommendations - 55%

3. Team collaboration and communication with the supervisor - effectiveness of teamwork and interaction with the company representative - 10%

To pass the course, students must actively participate in the workshops and submit both a final report and presentation. A minimum of 50% is required to pass.

Programme content

The course is a practical extension of the methodological course and is delivered in the form of workshops held in an industrial environment. The aim is to apply the acquired knowledge in real company conditions-through the development of engineering project concepts, analysis of company requirements, execution of project activities, and assessment of implementation possibilities. Students learn teamwork in the context of workplace organization in companies, engage in consultations with industry representatives, and present the results of their work in a final presentation.

Course topics

- Introduction to the principles of collaboration with the company - the student's role and responsibilities
- Selection and refinement of project topics - analysis of alignment with the company's needs
- Development of a project action plan - objectives, timeline, technical assumptions
- Project implementation in the company - workshops conducted with the participation of supervisors
- Project implementation analysis - barriers, opportunities, requirements, and alignment with practice
- Summary and presentation of results - final report, conclusions, feedback from the company

Teaching methods

Workshops conducted in industrial facilities, teamwork, mentoring by a company-appointed supervisor, consultations, and presentation of results.

Bibliography

Basic:

Documentation and internal guidelines of the companies participating in the workshop.

Additional:

Examples of implemented engineering projects, industrial documentation standards.

Breakdown of average student's workload

	Hours	ECTS
Total workload	125	5,00
Classes requiring direct contact with the teacher	90	3,50
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	35	1,50