POZNAN UNIVERSITY OF TECHNOLOGY

EUROPEAN CREDIT TRANSFER AND ACCUMULATION SYSTEM (ECTS)

COURSE DESCRIPTION CARD - SYLLABUS

Course name
Technical drawing with CAD [N1ZiIP2>RTzC]

Course

Field of study	Year/Semester
Management and Production Engineering	1/1
Area of study (specialization)	Profile of study
–	general academic
Level of study	Course offered in
first-cycle	Polish
Form of study	Requirements
part-time	compulsory

Number of hours

Lecture	Laboratory classes	Other
8	8	0

Tutorials	Projects/seminars
8	0

Number of credit points

4,00

Coordinators	Lecturers

Prerequisites

Basic knowledge of mathematics and technology. Ability to use drawing instruments. Basic computer skills.

Course objective

The aim of the course is to familiarize students with techniques for mapping spatial shapes on a plane, to provide the basics of technical drawing and the principles of creating technical documentation.

Course-related learning outcomes

Knowledge:
1. Knowledge of the principles of preparing technical drawings.

Skills:
1. Representation of spatial objects on a plane.
2. Ability to prepare technical documentation in a CAD environment.

Social competences:
1. Demonstrates creativity in solving problems posed.
2. Is able to acquire knowledge independently.

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Lecture: assessment based on a colloquium consisting of closed and open questions scored on a scale of 0-2; the colloquium is passed after obtaining at least 51% of the points. The colloquium is held at the end of the semester.
Assignment of grades to percentage ranges of results: <90-100> very good; <80-90) good plus; <70-80) good; <60-70) satisfactory plus; <50-60) satisfactory; <0-50) unsatisfactory.
Laboratory classes: based on an assessment of the current progress in the implementation of the tasks from the instructions.
Tutorials: based on an assessment of the current progress in the implementation of the tasks from the instructions.

Programme content

Issues related to the basics of engineering graphics and the preparation of 2D documentation in analog (manual) and digital (CAD system) form.

Course topics

Lectures:
- Basics of engineering graphics part 1
- Basics of engineering graphics part 2
- Product life cycle and design process
- Development of technical drawing
- Technical documentation - types and importance
- Methods and tools supporting engineers in design
- CAx class systems
Laboratory classes:
Tasks on using the CAD system according to the instructions.
Tutorials:
Manual drawing exercises according to the instructions.

Teaching methods

Lecture: multimedia presentation illustrated with examples.
Laboratory classes: practical exercises, solving problems at a computer station.
Tutorials: practical exercises.

Bibliography

Basic:
1. T. Dobrzański, Rysunek Techniczny Maszynowy, WNT, Warszawa 2021
2. J. Bajkowski, J.M Bajkowski, Podstawy Zapisu Konstrukcji, PWN, Warszawa 2019
3. Pikoń A., AutoCAD 20214 PL. Pierwsze kroki, Helion, 2023 Gliwice

Additional:
1. M. Sydor, Wprowadzenie do CAD. Podstawy komputerowo wspomaganego projektowania, PWN, 2019

Breakdown of average student's workload

	Hours	ECTS
Total workload	100	4,00
Classes requiring direct contact with the teacher	24	1,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	76	3,00