POZNAN UNIVERSITY OF TECHNOLOGY

COURSE DESCRIPTION CARD - SYLLABUS

Course name
Engineering graphics [S1IChiP1>GI]

Course

Field of study
Chemical and Process Engineering

Year/Semester
1/1

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 (e.g. online)
0

Tutorials
0

Projects/seminars
30

Number of credit points
3,00

Coordinators	Lecturers
prof. dr hab. inż. Marek Ochowiak marek.ochowiak@put.poznan.pl	

Prerequisites

As a preliminary requirement the student should have an elementary knowledge of the basics of mathematics - geometry. He should also have the ability to solve basic technical problems based on his knowledge, the ability to obtain information from specified sources.

Course objective

Providing students with basic knowledge of the principles and rules of technical drawing and descriptive geometry, to the extent specified by the program content appropriate to the field of study. Developing student"s reading skills and independent drawing designs of machine parts used in the chemical and related industries.

Course-related learning outcomes

Knowledge:
1. has knowledge of the rules and principles in the field of technical drawing and the basis for cooperation with computer-aided design in engineering graphics. k_w15
2. has knowledge in the field of correct drawing of basic elements of machine parts and reading of assembly drawings. k_w16

2. is able to use the known rules and principles of technical drawing to properly prepare technological documentation in the design of chemical apparatus. k_u3
3. has the ability to solve typical design tasks. k_u10

Skills:
1. use the understanding of the indicated sources of knowledge (list of basic literature) and acquire

Social competences:
1. understands the need for further training and raising their professional and personal competences. k_k1
2. is able to properly set priorities for the implementation of the designated project task. k_k4
3. he correctly recognizes the problems and makes the right choices related to the implementation of projects, in accordance with the principles of professional ethics. k_k5

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Learning outcomes presented above are verified as follows:
Test, Individual performance of the technical drawings with engineering graphics problems

Programme content

The following topics are covered throughout the classes:
• Basic standardized principles of technical drawing.
• Drawing apparatus and fittings symbols used in installations in the chemical industry.
• Drawing selected geometrical structures applicable in technical drawing.
• Rectangular projection.
• Axonometric projection.
• Views, sections and layouts.
• Dimensioning.
• Connection of machine elements - detachable connection.
• Machine parts connections - permanent connection.
• Determination of cross-sectional shapes of solids with planes and mutual penetration of solids.
• Executive drawing of selected elements of technical equipment of chemical apparatus.
• Assembly drawing of apparatus applicable in the chemical industry.

Course topics

Teaching methods

Multimedia presentation, pdf materials.

Bibliography

Basic
1. Agaciński P., Grafika Inżynierska, Wydawnictwo Politechniki Poznańskiej, 2014.
2. Dobrzański T. : Rysunek techniczny maszynowy, WNT Warszawa 2015.
3. Filipowicz K., Kowal A., Kuczaj M.: Rysunek techniczny, Wyd. Politechniki Śląskiej, Gliwice 2016.
Additional
1. Oleniak J.: Rysunek techniczny dla chemików, Oficyna Wydawnicza PW, Warszawa 2013.

Breakdown of average student's workload

	Hours	ECTS
Total workload	75	3,00
Classes requiring direct contact with the teacher	50	2,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	30	1,00