



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Grafika inżynierska (Engineering graphics)

### Course

Field of study

Technologia chemiczna (Chemical Technology)

Area of study (specialization)

-

Level of study

First-cycle studies

Form of study

part-time

Year/Semester

I/1

Profile of study

general academic

Course offered in

Polish

Requirements

compulsory

### Number of hours

Lecture

0

Laboratory classes

0

Other (e.g. online)

0

Tutorials

0

Projects/seminars

20

### Number of credit points

3

### Lecturers

Responsible for the course/lecturer:

Dr Eng. Joanna Łechtańska

Responsible for the course/lecturer:

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Faculty of Chemical Technology

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### Prerequisites

The student starting this subject should have a basic knowledge of mathematics, geometry and calligraphy. He should also be able to use tools for technical drawing.

### Course objective

The aim of the course is to provide students with basic knowledge of engineering graphics necessary for the correct design, creation and reading of technical drawings. Developing skills in using tools for drawing, planning and presenting structural and technological elements of machine parts and entire products.



### Course-related learning outcomes

#### Knowledge

1. A student demonstrates a basic knowledge of technical drawing in the scope of principles and methods of presenting technical drawing.

K\_W13

2. A student can demonstrate knowledge in the field of technical drawings of devices and apparatus.

K\_W04

#### Skills

1. A student has a good ability to use tools for drawing, sketching, constructing, designing and reading technical drawings.

KU\_03, KU\_15

2. A student is able to work individually and in a team to create technical documentation of the project.

K\_U02

3. A student is able to obtain the necessary information from the literature and standards for technical drawings, properly interprets them, draws conclusions and is able to apply them in practice.

K\_U01

#### Social competences

1. A student is able to properly set priorities for the implementation of the task.

K\_K04

2. A student demonstrates the need for continuous training and raising their professional and personal qualifications.

K\_K01

### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Knowledge and skills acquired during the projects are checked based on grades from Individual projects returned in the last class. Activity and ongoing work during the course are also assessed.

Passing threshold: 50% of points.

### Programme content

Within the course students learn the basics of technical drawing, which include: standardized elements of technical drawing (including technical writing), geometric constructions, rectangular projection by various methods, axonometric projection, views, cross-sections and their types as well as dimensions, principles and methods of dimensioning and drawing standards. Projects of engineering graphics are carried out in pencil.



## Teaching methods

1. A multimedia presentation illustrated with examples given on the blackboard by the teacher. Performing tasks ordered during projects and presenting an example solution on the blackboard.
2. Drawing and designing exercises shaping the skills in creating technical drawings in pencil.

## Bibliography

### Basic

1. Rysunek techniczny dla mechaników, Podręcznik, Lewandowski, T., WSiP: Warszawa, 2018 (in Polish)

### Additional

1. Rysunek techniczny maszynowy, Dobrzański, T., Wydawnictwo Naukowe PWN: Warszawa, 2020 (in Polish)
2. Filipowicz K., Kowal A., Kuczaj M.: Rysunek techniczny, Wyd. Politechniki Śląskiej, Gliwice 2011 (in Polish)
3. Zbiór norm do rysunku technicznego PN-EN ISO (in Polish)

## Breakdown of average student's workload

|   | Hours | ECTS |
|---|-------|------|
| Total workload  | 75    | 3,0  |
| Classes requiring direct contact with the teacher   | 30    | 1,2  |
| Student's own work (literature studies, preparation for projects, preparation for test, project preparation) <sup>1</sup> | 45    | 1,8  |

<sup>1</sup> delete or add other activities as appropriate