



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Basics of engineering graphics [N1MiBM1>PGI1]

Course

Field of study

Mechanical 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

part-time

Requirements

compulsory

Number of hours

Lecture

14

Laboratory classes

0

Other (e.g. online)

0

Tutorials

6

Projects/seminars

0

Number of credit points

3,00

Coordinators

Lecturers

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Prerequisites

KNOWLEDGE: the student has basic knowledge of elementary geometry. **SKILLS:** the student has the ability to obtain information and to select the correct sources of information. **SOCIAL COMPETENCES:** the student understands the need for self-education, is able to interact in a group and define tasks and priorities for their implementation.

Course objective

Passing on the knowledge of the fundamentals of engineering graphics covered by the program content, acquisition of skills of shaping and developing spatial imagination, practical creation of technical drawing documentation.

Course-related learning outcomes

Knowledge:

Students have the knowledge to record the construction in engineering graphics in accordance with the rules (standards).

Skills:

Students have the ability to self-learn, among other things to improve his/her professional competence. Students can reproduce and dimension machine elements and apply other elements of drawing documentation.

Social competences:

Students understand the need for lifelong learning; can inspire and organise the learning of others.

Students can interact and work in a group, assuming different roles.

Students can identify priorities for achieving a specific task or tasks.

Students can correctly identify and resolve professional dilemmas.

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

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written credit from the lecture, control of the exercise tasks as they are done.

Programme content

Introduction: graphical communication technique, standardized elements of the construction record. (1) Recording of geometric form of machine elements: rectangular projection, views, cross-sections, layouts. (2) Recording of the dimensional system: graphical form, rules of arrangement, dimensioning of geometrical elements of the object, general dimensioning rules, dimensioning rules resulting from construction, measurement and technological needs. (3) Simplifications in recording the construction: drawing of threads, splines and threaded, spline, welded, soldered, glued connections, drawing of springs, gears, seals and bearings. (4) Recording of surface condition: tolerances, fits, tolerance of shape and position, roughness, heat treatment and coating marks. (5) Analysis and correct interpretation of assembly drawings.

Teaching methods

1. Lecture with multimedia presentation.

2. Exercises - practical presentation of sample tasks supported by a multimedia presentation, drawing tasks.

Bibliography

Basic

1. Dobrzański T., Rysunek techniczny maszynowy, WNT, W-wa 2020.

2. Lewandowski T., Rysunek techniczny dla mechaników, WSiP, W-wa 2018.

Additional

1. Bober A, Dudziak M., Zapis konstrukcji, PWN, W-wa 1999, 2001.

2. Rydzanicz I., Rysunek techniczny jako zapis konstrukcji Zadania, WNT, Warszawa, 2004.

Breakdown of average student's workload

	Hours	ECTS
Total workload	75	3,00
Classes requiring direct contact with the teacher	40	1,60
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	35	1,40