COURSE DESCRIPTION CARD - SYLLABUS

Course name
Engineering graphics [N1Log2>GI]

Course

Field of study
Logistics

Year/Semester
1/2

Area of study (specialization)
–

Profile of study
general academic

Level of study
first-cycle

Course offered in
Polish

Form of study
part-time

Requirements
elective

Number of hours

Lecture
8

Laboratory classes
10

Other
0

Tutorials
0

Projects/seminars
0

Number of credit points

2,00

Coordinators

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Lecturers

Prerequisites

Basic knowledge of high school in geometry and drawing.

Course objective

Introduction of the most important information from the field of technical drawing including Polish standards. Familiarization with electrical, architectural and construction drawings and machine construction based on the information from the machine drawing. The ability to read technical drawing.

Course-related learning outcomes

Knowledge:
1. The student knows the basic issues related to the description of structures, technologies and techniques related to logistics in technical drawings [P6S_WG_01]

Skills:
1. The student is able to evaluate and critically analyze engineering projects presented in technical drawings from an economic perspective, falling within the framework of logistics and its detailed issues [P6S_UW_06]

2. The student is able to identify changes in requirements, standards, regulations, technical progress and the reality of the labor market, and on their basis determine the need to supplement knowledge in the field of making and reading technical drawings [P6S_UU_01]

Social competences:
1. The student is aware of initiating activities related to the formulation and transfer of CAD design information and cooperation in society in the area of logistics [P6S_KO_02]

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Lecture: Formative assessment: on the basis of answers to questions about the material covered in previous lectures. Summative assessment: passing a multiple-choice test.
Laboratory: Formative assessment: on the basis of the assessment of the current progress in the implementation of laboratory tasks from the technical drawing. Summative assessment: credit in the form of technical drawings of the implemented program content.
Passing threshold: 51% of points.
Grading system:
Points Grade:
0 - 50 Fail (2)
51 - 59 Satisfactory (3)
60 - 69 More than satisfactory but less than good (3+)
70 - 79 Good (4)
80 - 89 Very good (4+)
90 - 100 Excellent (5)

Programme content

Lecture: Types of drawings, sheet formats, types and arrangement of projections, views and sections, dimensioning, elements of electrical and architectural drawings. Laboratory: Drawings: Executives, assemblies, graphs and nomograms.

Course topics

Lecture: The program of subject includes the following topics: types of drawings, sheet formats, standardized technical drawing elements, types and distribution of sections, views and intersections, dimensioning, tolerance of dimensions, shape and position , determination of surface roughness and waviness, connection of machine parts, axles, arbour, bearings, clutches and brakes. Drawing and reading of schemes: mechanical, hydraulic, pneumatic, thermal energy and vacuum technology, electrical drawing elements, chemical and architectural - construction.
Laboratory: Drawings: Executives, assemblies, graphs and nomograms.

Teaching methods

Lecture: Monographic lecture using a computer with the division of program content into separate thematic issues in relation to the thematic scope of the exercises.
Laboratory: exercise method with elements of demonstration method and causerie method according to the program content.

Bibliography

Basic:
1. Gruszka J., Wróbel K., Radecki A., Zarządzanie doborem narzędzi inżynierskiej grafiki komputerowej w projektowaniu ergonomicznym, Wydawnictwo Politechniki Poznańskiej, Poznań, 2024.
2. Agaciński P., Grafika inżynierska, Wydawnictwo Politechniki Poznańskiej, Poznań, 2014.
3. Dobrzański T., Rysunek techniczny maszynowy, Wydawnictwo Naukowe PWN, Warszawa, 2019.
4. Zakres aktualnych aktów normatywnych z zakresu rysunku technicznego.

Additional:
1. Molasy R., Rysunek techniczny: chropowatość i falistość powierzchni, tolerancje geometryczne i tolerowanie wymiarów, Wydawnictwo Politechniki Świętokrzyskiej, Kielce, 2016.

Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,00
Classes requiring direct contact with the teacher	18	1,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	32	1,00