## POZNAN UNIVERSITY OF TECHNOLOGY



# EUROPEAN CREDIT TRANSFER AND ACCUMULATION SYSTEM (ECTS)

pl. M. Skłodowskiej-Curie 5, 60-965 Poznań

# **COURSE DESCRIPTION CARD - SYLLABUS**

Course name

**Engineering graphics** 

Course

Field of study Year/Semester

Logistics 1/1

Area of study (specialization) Profile of study

Level of study general academic
Course offered in

First-cycle studies polish

Form of study Requirements full-time compulsory

Number of hours

Lecture Laboratory classes Other (e.g. online)

15

Tutorials Projects/seminars

15

**Number of credit points** 

2

#### Lecturers

Responsible for the course/lecturer:

Responsible for the course/lecturer:

dr hab. inż. Józef Gruszka, prof.PP

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### **Prerequisites**

Basic knowledge of high school in geometry and drawing.

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# **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

P6S WG 01 knows the basic issues of construction, technology and techniques related to logistics

Skills

P6S\_UW\_06 is able to assess and make a critical economic analysis of the selected problem, which falls within the logistics and its specific issues and supply chain management

P6S\_UU\_01 is able to identify changes in requirements, standards, regulations, technical progress and reality of the labor market, and based on them determine the needs of supplementing knowledge

Social competences

P6S\_KO\_02 is aware of initiating activities related to the formulation and transfer of information and cooperation in society in the field of logistics

# Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Formative evaluation:

- a) Exercise: based on the assessment of the current exercise progress of the technical drawing
- b) Lecture: based on the answers to questions concerning the material from previous lectures

Summary evaluation:

- a) Exercise: credit in the form of technical drawings from the implemented contents of the program
- b) Lecture: credit in the form of a selection test

# **Programme content**

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. Drawings: Executives, assemblies, graphs and nomograms.

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# **Teaching methods**

#### **Educational methods:**

- a) 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.
- b) Excercise: exercise method with elements of demonstration method and causerie method according to the program content.

# **Bibliography**

#### Basic

- 1. Dobrzański T., Rysunek techniczny maszynowy, Wydawnictwo WNT, Warszawa 2015.
- 2. Filipowicz K., Kowal A., Kuczaj M., Rysunek techniczny, Wydawnictwo Politechniki Śląskiej, Gliwice 2016.
- 3. Zakres aktualnych aktów normatywnych z zakresu rysunku technicznego? wymagania ogólne.

#### 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	2,0
Classes requiring direct contact with the teacher	30	1,5
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) <sup>1</sup>	20	0,5

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