GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Descriptive Geometry, PG_00058734		
Field of study	Environmental Engineering		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2026/2027
Education level	first-cycle studies	Subject group	Obligatory subject group in the field of study
Mode of study	Full-time studies	Mode of delivery	at the university
Year of study	1	Language of instruction	Polish
Semester of study	1	ECTS credits	2.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Mechanics of Materials and Structures -> Faculty of Civil and Environmental Engineering -> Faculties of Gdańsk University of Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Karol Daszkiewicz	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	0.0	15.0	0.0	15.0	0.0	30

E-learning hours included: 0.0

Learning activity and number of study hours

Learning activity	Participation in didactic classes included in study plan	Participation in consultation hours	Self-study	SUM
Number of study hours	30	5.0	20.0	55

Subject objectives

Preparation for recording engineering structures in a technical drawing, projection principles. Presentation of basic constructions in geometric projections (Monge projection, topographic projection). Getting knowledge how to use geometry to solve basic engineering problems

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_W15] knows the rules of descriptive geometry and technical drawing regarding the recording and reading of architectural drawings, construction and surveying drawings, as well as their preparation with the use of CAD	knows the basics of the topographic and Monge projection	[SW1] Assessment of factual knowledge
[K6_U07] can read architectural, construction and geodesy drawings, and can use the known computer programs to prepare a drawing part of technical documentation for the sanitary industry	can read construction drawings, can apply the basics of the topographic and Monge projection	[SU1] Assessment of task fulfilment

Subject contents

Course content – exercises
Topographic projection. Lines and planes in topographic projection. Spacial relations and common elements. Design of slopes, embankments and excavations for squares and roads.

Monge projection. Location of a point, line and plane in space. Mutual position of lines and planes. Common elements (intersection line). Basic constructions. Transformation and its applications. Projection of polyhedra. Intersection of polyhedrons with a straight line or a plane.

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
ocena kolokwium	60.0%	50.0%
ocena rozwiązania ćwiczeń	60.0%	50.0%

Recommended reading	Basic literature	1. Otto F., Otto E.: *Podręcznik geometrii wykreślnej*, PWN Warszawa, 1998 (i inne wydania). 2. Bieliński A.: *Geometria wykreślna*, Oficyna Wydawnicza Politechniki Warszawskiej, 2005. 3. Grochowski B.: *Elementy geometrii wykreślnej*, PWN Warszawa, 2002. 4. Jankowski W.*: Geometria Wykreślna,* Wydawnictwo Politechniki Poznańskiej, 1999. 5. Bieliński A.: *Ćwiczenia z geometrii wykreślnej*, Oficyna Wydawnicza Politechniki Warszawskiej, 2002. 6. Błach A.: *Inżynierska geometria wykreślna. Podstawy i zastosowania,* Wydawnictwo Politechniki Śląskiej, Gliwice 2006.
	Supplementary literature	1. Kotarska-Lewandowska B.: *Geometria wykreślna. Zadania testowe,* skrypt elektroniczny dostępny na stronie http://www.pbc.gda.pl/, Gdańsk, 2011. 2. Wróblewska D.: *Rzut Cechowany. Odwzorowania Inżynierskie*, skrypt elektroniczny dostępny na stronie http://www.pbc.gda.pl/, Gdańsk, 2014.
	eResources addresses	
Example issues/ example questions/ tasks being completed	Slopes of excavations and embankments along the road.	
Practical activites within the subject	Not applicable	

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