



Subject card

Subject name and code	Descriptive geometry, PG_00061783						
Field of study	Geodesy and Cartography						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2025/2026		
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 -> Wydział Politechniki Gdańskiej						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Bożena Kotarska-Lewandowska				
	Teachers						
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	10.0	0.0	5.0	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		25.0	60
Subject objectives	The aim of the course is to equip the student in: - knowledge of orthogonal, topographic and perspective projections; - skills of solving spatial problems in engineering practice.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_W04] has knowledge and understands the concepts of projection with elevations, Monge's and middle (perspective), has basic knowledge and understands the concepts of engineering graphics needed to work with CAD (Computer Aided Design) software in accordance with the standards and principles of geodesy, construction and IT including computer network technologies, databases and programming as well as surveying software		Student potrafi zapisać obiekty trójwymiarowe w poznanych typach rzutowania oraz potrafi rozwiązać problemy przestrzenne w praktyce inżynierskiej.		[SW3] Assessment of knowledge contained in written work and projects		
	[K6_U02] can make basic geodetic drawings and read an architectural technical drawing		The student can make basic geodetic drawings and read technical architectural drawings.		[SU1] Assessment of task fulfilment		
Subject contents	Orthographic projection, planes of reference. Invariants of parallel projections. Representation of geometric elements in the Monge projection, transformation, auxiliary views. Belonging and parallelism of points, lines and planes. Determination of common elements: piercing points, edges between planes. Operating on polyhedrons: piercing points, intersection lines. Topographic projection. Representation of points, lines and planes. Basic constructions: belonging and parallelism of geometric elements, intersection of elements. Edge and normal view of a plane. Topographic surfaces. Determination of embankment and cut planes along roads and squares. Basic rules of perspective projection, one-point perspective.						
Prerequisites and co-requisites	No requirements.						
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	test		60.0%		50.0%		
	drawing exercises		60.0%		50.0%		

Recommended reading	Basic literature	Bieliński A.: <i>Geometria wykreślna</i>, Oficyna Wydawnicza Politechniki Warszawskiej, 2005 Grochowski B.: <i>Elementy geometrii wykreślnej</i>, PWN Warszawa, 2002 Jankowski W.: <i>Geometria Wykreślna</i>, Wydawnictwo Politechniki Poznańskiej, 1999 Otto F., Otto E.: <i>Podręcznik geometrii wykreślnej</i>, PWN Warszawa, 1998 (i inne wydania)
	Supplementary literature	Bieliński A.: <i>Ćwiczenia z geometrii wykreślnej</i>, Oficyna Wydawnicza Politechniki Warszawskiej, 2002 Błach A., <i>Inżynierska geometria wykreślna. Podstawy i zastosowania</i>. Wydawnictwo Politechniki Śląskiej, Gliwice 2006
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed	Determination of embankment and cut planes along roads.	
Work placement	Not applicable	

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