

## GDAŃSK UNIVERSITY

## Subject card

Subject name and code	Descriptive Geometry, PG_00042608								
Field of study	Environmental Engineering								
Date of commencement of studies	October 2021		Academic year of realisation of subject			2021/2022			
Education level	first-cycle studies		Subject group			Obligatory subject group in the field of study			
Mode of study	Part-time studies		Mode of delivery			at the	at the university		
Year of study	1		Language of instruction			Polish			
Semester of study	1		ECTS credits			4.0			
Learning profile	general academic profile		Assessment form			assessment			
Conducting unit	Department of Geodesy -> Faculty of Civil and Environmental Engineering								
Name and surname	Subject supervisor		dr inż. Bożena Kotarska-Lewandowska						
of lecturer (lecturers)	Teachers		dr inż. Anna Sobieraj-Żłobińska						
			dr inż. Bożena Kotarska-Lewandowska						
Lesson types and methods	Lesson type	Lecture	Tutorial	Laboratory	Projec	t	Seminar	SUM	
of instruction	Number of study hours	12.0	10.0	0.0	5.0		0.0	27	
	E-learning hours included: 0.0								
	Adresy na platformie eNauczanie:								
Learning activity and number of study hours	Learning activity	ng activity Participation ir classes includ plan		n didactic Participation in ed in study consultation hours		Self-study		SUM	
	Number of study hours	27		5.0		70.0		102	
Subject objectives	Introduction of main geometrical constructions and projectors of of three-dimensional objects into two dimensional drawings (orthogonal projections, axonometric projection and topographical projection). Getting knowledge how to use geometry to solve basic engineering problems. The development of spatial imaginary and abstract thinking skills.								
Learning outcomes	Course outcome		Subject outcome			Method of verification			
	[K6_W16] 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 [K6_U07] can read architectural		knows the basics of the marked projection, Monge and axonometry projection			[SW1] Assessment of factual knowledge [SU1] Assessment of task			
	construction and geodesy drawings, and can use the known computer programs to prepare a drawing part of technical documentation for the sanitary industry					fulfilment			

Subject contents	Orthogonal projections. Location of a point, line and plane in space. Relative position of lines and planes. Common elements (edges, the penetration). Penetration of polygons and their visibility. Puncture a simple polygon, intersection plane. The transformation of the position and its applications. Projection of polyhedrons. Polyhedron's simple puncture, cut plane. Axonometric projection. Basic elements and constructions. Marking projection, basic elements and constructions. Design of slopes, embankments and excavations for the squares and roads.						
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%				
	Exercises	60.0%	40.0%				
	Project	60.0%	10.0%				
Recommended reading	Basic literature	<ul> <li>Bieliński A.: Geometria wykreślna, Oficyna Wydawnicza Politechniki Warszawskiej, 2005 (Descriptive geometry)</li> <li>Grochowski B.: Elementy geometrii wykreślnej, PWN Warszawa, 2002 (Elements of descriptive geometry)</li> <li>Jankowski W.: Geometria Wykreślna, Wydawnictwo Politechniki Poznańskiej, 1999 (Descriptive geometry)</li> <li>Mierzejewski W.: Geometria Wykreślna, Oficyna Wydawnicza Politechniki Warszawskiej, 2006 (Descriptive geometry)</li> </ul>					
	Supplementary literature	web pages with some exercises and examples (also animations)					
		<ul> <li>http://matwbn.icm.edu.pl/kstresc.php?tom=16&amp;wyd=10</li> <li>http://fluid.itcmp.pwr.wroc.pl/~eichler/program.html</li> <li>http://wms.mat.agh.edu.pl/~samujllo/6.htm</li> <li>http://members.chello.pl/j.paszkowski/strony/studia/elektryczny/</li> <li>http://www.studianet.pl/kreska</li> </ul>					
	ekesources addresses						
Example issues/ example questions/ tasks being completed							
Work placement	Not applicable						