



Subject card

Subject name and code	Descriptive Geometry, PG_00042608						
Field of study	Environmental Engineering						
Date of commencement of studies	October 2020	Academic year of realisation of subject			2020/2021		
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 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 of lecturer (lecturers)	Subject supervisor	dr inż. Bożena Kotarska-Lewandowska					
	Teachers	dr inż. Anna Sobieraj-Żłobińska dr inż. Bożena Kotarska-Lewandowska					
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	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: Geometria Wykreślna niestacjonarne - Nowy - Moodle ID: 8732 https://enauzanie.pg.edu.pl/moodle/course/view.php?id=8732						
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	27	5.0		70.0		102
Subject objectives	Introduction of main geometrical constructions and projectors 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_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			[SU1] Assessment of task fulfilment		
	[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	knows the basics of the marked projection, Monge and axonometry projection			[SW1] Assessment of factual knowledge		

Subject contents	<p>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.</p> <p>Projection of polyhedrons. Polyhedron's simple puncture, cut plane. Axonometric projection. Basic elements and constructions.</p> <p>Marking projection, basic elements and constructions. Design of slopes, embankments and excavations for the squares and roads.</p>														
Prerequisites and co-requisites	No requirements														
Assessment methods and criteria	<table border="1"> <thead> <tr> <th data-bbox="451 568 794 607">Subject passing criteria</th> <th data-bbox="794 568 1137 607">Passing threshold</th> <th data-bbox="1137 568 1487 607">Percentage of the final grade</th> </tr> </thead> <tbody> <tr> <td data-bbox="451 607 794 645">Project</td> <td data-bbox="794 607 1137 645">60.0%</td> <td data-bbox="1137 607 1487 645">10.0%</td> </tr> <tr> <td data-bbox="451 645 794 683">Exercises</td> <td data-bbox="794 645 1137 683">60.0%</td> <td data-bbox="1137 645 1487 683">40.0%</td> </tr> <tr> <td data-bbox="451 683 794 707">Test</td> <td data-bbox="794 683 1137 707">60.0%</td> <td data-bbox="1137 683 1487 707">50.0%</td> </tr> </tbody> </table>			Subject passing criteria	Passing threshold	Percentage of the final grade	Project	60.0%	10.0%	Exercises	60.0%	40.0%	Test	60.0%	50.0%
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Project	60.0%	10.0%													
Exercises	60.0%	40.0%													
Test	60.0%	50.0%													
Recommended reading	Basic literature	<ul style="list-style-type: none"> • Bieliński A.: Geometria wykreślna, Oficyna Wydawnicza Politechniki Warszawskiej, 2005 (Descriptive geometry) • Grochowski B.: Elementy geometrii wykreślnej, PWN Warszawa, 2002 (Elements of descriptive geometry) • Jankowski W.: Geometria Wykreślna, Wydawnictwo Politechniki Poznańskiej, 1999 (Descriptive geometry) • Mierzejewski W.: Geometria Wykreślna, Oficyna Wydawnicza Politechniki Warszawskiej, 2006 (Descriptive geometry) 													
	Supplementary literature	<p>web pages with some exercises and examples (also animations)</p> <ul style="list-style-type: none"> • http://matwbn.icm.edu.pl/kstresc.php?tom=16&wyd=10 • http://fluid.itcmp.pwr.wroc.pl/~eichler/program.html • http://wms.mat.agh.edu.pl/~samujlo/6.htm • http://members.chello.pl/j.paszkowski/strony/studia/elektryczny/ • http://www.studianet.pl/kreska 													
	eResources addresses	<p>Geometria Wykreślna niestacjonarne - Nowy - Moodle ID: 8732 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=8732</p>													
Example issues/ example questions/ tasks being completed															
Work placement	Not applicable														