GDAŃSK UNIVERSITY OF TECHNOLOGY

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 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:

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 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	knows the basics of the marked projection, Monge and axonometry 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	[SU1] Assessment of task fulfilment

<table>
<tr><td>Subject contents</td><td>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.</td></tr>
<tr><td>Prerequisites and co-requisites</td><td>No requirements</td></tr>
<tr><td>Assessment methods and criteria</td><td>
<table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>Test</td><td>60.0%</td><td>50.0%</td></tr>
<tr><td>Exercises</td><td>60.0%</td><td>40.0%</td></tr>
<tr><td>Project</td><td>60.0%</td><td>10.0%</td></tr>
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<tr><td>Recommended reading</td><td>
<table>
<tr><td>Basic literature</td><td>• 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)</td></tr>
<tr><td>Supplementary literature</td><td>web pages with some exercises and examples (also animations)

• 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/~samujllo/6.htm
• http://members.chello.pl/j.paszkowski/strony/studia/elektryczny/
• http://www.studianet.pl/kreska</td></tr>
<tr><td>eResources addresses</td><td></td></tr>
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<tr><td>Example issues/ example questions/ tasks being completed</td><td></td></tr>
<tr><td>Work placement</td><td>Not applicable</td></tr>
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