



## Subject card

Subject name and code	Engineering graphics 1, PG_00041650						
Field of study	Transport and Logistics, Transport and Logistics						
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 Subject group related to scientific research 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	2	ECTS credits			3.0		
Learning profile	general academic profile	Assessment form			assessment		
Conducting unit	Department of Marine Mechatronics -> Faculty of Ocean Engineering and Ship Technology						
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Agnieszka Maczyszyn					
	Teachers	dr inż. Agnieszka Maczyszyn mgr inż. Ewa Wojtowicz					
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	30.0	0.0	0.0	0.0	45
	E-learning hours included: 0.0						
GRAFIKA INŻYNIERSKA I - Moodle ID: 14010 <a href="https://enauczanie.pg.edu.pl/moodle/course/view.php?id=14010">https://enauczanie.pg.edu.pl/moodle/course/view.php?id=14010</a> Grafika inżynierska I - Moodle ID: 14174 <a href="https://enauczanie.pg.edu.pl/moodle/course/view.php?id=14174">https://enauczanie.pg.edu.pl/moodle/course/view.php?id=14174</a>							
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	45	5.0	25.0	75		
Subject objectives	Introduction to Engineering Graphics. The development of spatial imagination. Engineering graphics as a basic tool for transmitting information about machine elements. Ability to draw sketches of drawing elements of machine parts using rectangular and axonometric projections. Understanding the basics of the construction.						
Learning outcomes	Course outcome	Subject outcome		Method of verification			
	[K6_W04] has a basic knowledge in IT, electronics, automation and control, computer graphics useful to understand the possibilities of their application in transport	The student is able to interpret technical documentation prepared according to current drawing standards		[SW3] Assessment of knowledge contained in written work and projects			
	[K6_U01] can obtain information from literature, databases and other sources, can verify and organize the obtained information, interpret them and form conclusions and justified opinions	The student understands the tasks and role of engineering graphics in technology and industry.		[SU4] Assessment of ability to use methods and tools [SU2] Assessment of ability to analyse information [SU1] Assessment of task fulfilment			
Subject contents	Understanding the role of engineering graphics, the basis for standardization. Parallel, rectangular and axonometric views. Point, line, plane, determination, common points, special positions. Rotary solids and polyhedrons, puncture, intersection. Views. Dimensioning of elements, tolerance of dimensions, determination of surface condition. The types of drawings, the graphic form of the sheet, the principles of performing executive and assembly documentation.						
Prerequisites and co-requisites	Knowledge of basic machines and their construction;						
Assessment methods and criteria	Subject passing criteria	Passing threshold		Percentage of the final grade			
	2 colloquium including lectures	60.0%		50.0%			
	2 colloquia of exercises	60.0%		30.0%			
	Drawing exercises	60.0%		20.0%			

Recommended reading	Basic literature	Descriptive Geometry (9th Edition) by <a href="#">E.G. Pare</a> , <a href="#">Robert Olin Loving</a> , <a href="#">Ivan L. Hill</a> , <a href="#">R.C. Pare</a> ISBN-13: 978-0023913419 ISBN-10: 002391341X
	Supplementary literature	Monge's Legacy of Descriptive and Differential Geometry Paperback March 11, 2016 by <a href="#">Kristen R. Schreck</a>
	eResources addresses	Uzupełniająca <a href="http://fluid.itcmp.pwr.wroc.pl/~eichler/program.html">http://fluid.itcmp.pwr.wroc.pl/~eichler/program.html</a> - basics geometry <a href="http://www.grafikainzynierska.w8w.pl/Strona%20glowna.html">http://www.grafikainzynierska.w8w.pl/Strona%20glowna.html</a> - basics geometry
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	