



Subject card

Subject name and code	Computer Aided Design , PG_00044793						
Field of study	Geodesy and Cartography						
Date of commencement of studies	October 2022	Academic year of realisation of subject			2022/2023		
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			7.0		
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. Karol Daliga					
	Teachers	dr inż. Tadeusz Widerski dr inż. Karol Daliga dr inż. Bożena Kotarska-Lewandowska dr inż. Angela Andrzejewska dr inż. Dawid Bruski mgr inż. Kamil Łapiński dr inż. arch. Dominika Wróblewska					
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	15.0	15.0	30.0	0.0	90
	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	90		12.0		73.0	175
Subject objectives	The development of spatial imagination. Gaining the ability of: applying basic projection methods in engineering practice, taking into account the specificities of Geodetic Surveying and Mapping. reading the information contained in the building technical documentation ability of performing technical and geodetic drawings both manually and using CAD software.						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	[K6_U02] can make basic geodetic drawings and read an architectural technical drawing	can make basic handmade and computer geodetic drawings and read an architectural drawing			[SU1] Assessment of task fulfilment		
	[K6_W04] has basic 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	has basic knowledge and understands the concepts in the field of marker, Monge and middle (perspective), has basic knowledge and understands the concepts of engineering graphics and relation to the measurements, knows the standards of CAD drawings			[SW1] Assessment of factual knowledge		

Subject contents	<p>Technical drawings - the basis Cartographical symbols used on maps Geodetic sketches Basic development of cartography: basic map, Mapping the topography. Building technical documentation, architectural sketches for building inventory. Fundamentals of computer-aided design. CAD (Computer Aided Design). Monge projection - the basic elements and their relative positions, the transformation of the position. Polyhedra and their cross sections. Perspective projection -line general principles of construction of plane figures, the basic structures. Topographical projection - the basic elements, relative position, basic designs, engineering applications</p> <p>CAD - Drawing and edition basic elements CAD - Blocks and layers CAD - preparation drawings for printing</p>																							
Prerequisites and co-requisites	no requirements																							
Assessment methods and criteria	<table border="1" data-bbox="450 609 1479 896"> <thead> <tr> <th data-bbox="450 609 794 645">Subject passing criteria</th> <th data-bbox="794 609 1142 645">Passing threshold</th> <th data-bbox="1142 609 1479 645">Percentage of the final grade</th> </tr> </thead> <tbody> <tr> <td data-bbox="450 645 794 680">GI test of knowledge</td> <td data-bbox="794 645 1142 680">60.0%</td> <td data-bbox="1142 645 1479 680">16.0%</td> </tr> <tr> <td data-bbox="450 680 794 716">GI realization of practical exercises</td> <td data-bbox="794 680 1142 716">60.0%</td> <td data-bbox="1142 680 1479 716">16.0%</td> </tr> <tr> <td data-bbox="450 716 794 752">GW test of knowledge</td> <td data-bbox="794 716 1142 752">60.0%</td> <td data-bbox="1142 716 1479 752">16.0%</td> </tr> <tr> <td data-bbox="450 752 794 788">CAD test of knowledge</td> <td data-bbox="794 752 1142 788">60.0%</td> <td data-bbox="1142 752 1479 788">16.0%</td> </tr> <tr> <td data-bbox="450 788 794 846">CAD realization of practical exercises</td> <td data-bbox="794 788 1142 846">60.0%</td> <td data-bbox="1142 788 1479 846">16.0%</td> </tr> <tr> <td data-bbox="450 846 794 896">GW realization of practical exercises</td> <td data-bbox="794 846 1142 896">60.0%</td> <td data-bbox="1142 846 1479 896">20.0%</td> </tr> </tbody> </table>			Subject passing criteria	Passing threshold	Percentage of the final grade	GI test of knowledge	60.0%	16.0%	GI realization of practical exercises	60.0%	16.0%	GW test of knowledge	60.0%	16.0%	CAD test of knowledge	60.0%	16.0%	CAD realization of practical exercises	60.0%	16.0%	GW realization of practical exercises	60.0%	20.0%
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Recommended reading	<p>Basic literature</p> <p>Supplementary literature</p> <p>eResources addresses</p>	<p>Descriptive Geometry</p> <ul data-bbox="804 985 1479 1084" style="list-style-type: none"> • Kotarska-Lewandowska B., Chróścielewski J.(red. Praca zbiorowa) • Wróblewska D., Rzut Cechowany - odwzorowania inżynierskie http://www.geomatyka.eu/publikacje/isbn9788393460991/isbn9788393460991.pdf <p>Graphics</p> <ul data-bbox="804 1164 1479 1335" style="list-style-type: none"> • Rozporządzenie Ministra Rozwoju, Pracy i Technologii z dnia 23 lipca 2021 r. w sprawie bazy danych obiektów topograficznych oraz mapy zasadniczej (Dz.U. 2021 poz. 1385) • Instrukcja Geodezyjna Mapa zasadnicza K-1 wydanie III (supporting role) • Jagielski Andrzej Rysunki Geodezyjne z elementami topografii i kartografii, Wydawnictwo GEODPIS, 2008. <ul data-bbox="804 1339 1479 1532" style="list-style-type: none"> • Bieliński A.: Geometria wykreślna, Oficyna Wydawnicza Politechniki Warszawskiej, 2005 • Mierzejewski W.: Geometria wykreślna, Oficyna Wydawnicza Politechniki Warszawskiej, 2006 • Maciaszek, R. Gawalkiewicz J. Podstawy grafiki inżynierskiej dla studentów geodezji i inżynierii środowiska, 2007. • Technical norms devoted to technical drawing • Software instructions <p>Adresy na platformie eNauczanie: Grafika Inżynierska GiK 2022/2023 - Moodle ID: 23369 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=23369</p>																						
Example issues/ example questions/ tasks being completed	Perform interpolation contour based on x, y, z values of measured points.																							
Work placement	Not applicable																							