



Subject card

Subject name and code	Computer Aided Design , PG_00044793									
Field of study	Geodesy and Cartography									
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	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. arch. Dominika Wróblewska							
	Teachers		dr inż. Paweł Burdziakowski dr inż. Karol Daliga dr inż. arch. Dominika Wróblewska dr inż. Bożena Kotarska-Lewandowska dr inż. Karol Daszkiewicz							
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 Address on the e-learning platform: https://enauczanie.pg.edu.pl/moodle/index.php?id=8729 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	90		12.0		73.0	175			
Subject objectives	Developing spatial imagination and learning by students the rules of making technical and geodetic drawings with the use of freehand and digital methods.									
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 geodetic drawings handmade and with CAD software 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, can work with CAD (Computer Aided Design) software			[SW1] Assessment of factual knowledge				

Subject contents	Technical drawings - the basis Cartografical 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				
Prerequisites and co-requisites	no requirements				
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade		
	Geometry lecture	60.0%	16.0%		
	Graphics laboratory	60.0%	15.0%		
	Graphics lecture	60.0%	10.0%		
	graphics project	60.0%	10.0%		
	Geometry exercises	60.0%	16.0%		
Recommended reading	Basic literature	Descriptive Geometry 1. Kotarska-Lewandowska B., Geometria Wykreslona zadania testowe. (https://pbc.gda.pl/Content/9921/kotarska_geometria_wykreslona_zadania_v2.pdf) 2. Wróblewska D. RZUT CECHOWANY ODWZOROWANIA INŻYNIERSKIE SKRYPT DLA STUDENTÓW STUDIÓW NIESTACJONARNYCH KIERUNKÓW BUDOWNICTWO I INŻYNIERIA ŚRODOWISKA http://www.geomatyka.eu/publikacje/isbn9788393460991/isbn9788393460991.pdf Graphics 1. Rozporządzenie Ministra Administracji i Cyfryzacji z dnia 12 lutego 2013 r. w sprawie bazy danych geodezyjnej ewidencji sieci uzbrojenia terenu, bazy danych obiektów topograficznych oraz mapy zasadniczej. (Dz.U. 2013 nr 0 poz. 383) 2. Instrukcja Geodezyjna Mapa zasadnicza K-1 wydanie III 3. Jagielski Andrzej Rysunki Geodezyjne z elementami topografii i kartografii, Wydawnictwo GEOPIS, 2008.			
	Supplementary literature	1. Bieliński A.: Geometria wykreslona, Oficyna Wydawnicza Politechniki Warszawskiej, 2005 2. Mierzejewski W.: Geometria wykreslona, Oficyna Wydawnicza Politechniki Warszawskiej, 2006 3. Maciaszek, R. Gawałkiewicz J. Podstawy grafiki inżynierskiej dla studentów geodezji i inżynierii środowiska, 2007. 4. Normy z zakresu Rysunek techniczny zagadnienia ogólne i rysunek techniczny budowlany i konstrukcyjny 5. Instrukcja obsługi omawianego programu AutoCAD			
	eResources addresses				
Example issues/ example questions/ tasks being completed	Perform interpolation contour based on x, y, z values of measured points.				
Work placement	Not applicable				