



Subject card

Subject name and code	Technical drawing and CAD systems, PG_00061784						
Field of study	Geodesy and Cartography						
Date of commencement of studies	October 2023	Academic year of realisation of subject			2023/2024		
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			5.0		
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. arch. Dominika Wróblewska dr inż. Karol Daliga dr inż. Tadeusz Widerski mgr inż. Kamil Łapiński					
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	10.0	5.0	30.0	15.0	0.0	60
	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	60	5.0		60.0	125	
Subject objectives	<ul style="list-style-type: none">To familiarize students with the principles of technical drawingAcquiring the ability to read and create geodetic sketchesAcquiring skills in using AutoCAD software in the field of surveying worksAcquiring skills in using C-Geo software						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	[K6_W04] has 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	Student has knowledge and understands the concepts of engineering graphics needed to work with CAD (Computer Aided Design) software and surveying software, in accordance with the standards and principles applicable in surveying.			[SW1] Assessment of factual knowledge		
	[K6_U02] can make basic geodetic drawings and read an architectural technical drawing	Student is able to make basic drawings and geodetic sketches by hand and using computer technology, as well as read an architectural technical drawing.			[SU1] Assessment of task fulfilment		

Subject contents	<ul style="list-style-type: none"> Standardized elements of technical drawing Geodetic symbols used on maps Geodetic drawings Basic cartographic studies Mapping the topography of the area Architectural and construction drawings, sketches for architectural inventory Basics of computer-aided design. CAD systems (Computer Aided Design) AutoCAD - Preparing work environment AutoCAD - Drawing and editing basic flat figures, working on layers AutoCAD - Dimensioning of drawings and preparing them for printing C-Geo - Principles of working in the program C-Geo - Calculations and preparation of graphic materials C-Geo - Data preparation and planning of surveying works 																				
Prerequisites and co-requisites																					
Assessment methods and criteria	<table border="1"> <thead> <tr> <th data-bbox="459 461 794 495">Subject passing criteria</th> <th data-bbox="802 461 1137 495">Passing threshold</th> <th data-bbox="1145 461 1481 495">Percentage of the final grade</th> </tr> </thead> <tbody> <tr> <td data-bbox="459 506 794 539">Individual work</td> <td data-bbox="802 506 1137 539">50.0%</td> <td data-bbox="1145 506 1481 539">15.0%</td> </tr> <tr> <td data-bbox="459 551 794 584">Assessment of the use of AutoCAD</td> <td data-bbox="802 551 1137 584">60.0%</td> <td data-bbox="1145 551 1481 584">35.0%</td> </tr> <tr> <td data-bbox="459 595 794 629">Lecture content test</td> <td data-bbox="802 595 1137 629">60.0%</td> <td data-bbox="1145 595 1481 629">15.0%</td> </tr> <tr> <td data-bbox="459 640 794 674">Assessment of the use of C-Geo</td> <td data-bbox="802 640 1137 674">60.0%</td> <td data-bbox="1145 640 1481 674">35.0%</td> </tr> <tr> <td data-bbox="459 685 794 719">Field classes</td> <td data-bbox="802 685 1137 719">60.0%</td> <td data-bbox="1145 685 1481 719">0.0%</td> </tr> </tbody> </table>			Subject passing criteria	Passing threshold	Percentage of the final grade	Individual work	50.0%	15.0%	Assessment of the use of AutoCAD	60.0%	35.0%	Lecture content test	60.0%	15.0%	Assessment of the use of C-Geo	60.0%	35.0%	Field classes	60.0%	0.0%
Subject passing criteria	Passing threshold	Percentage of the final grade																			
Individual work	50.0%	15.0%																			
Assessment of the use of AutoCAD	60.0%	35.0%																			
Lecture content test	60.0%	15.0%																			
Assessment of the use of C-Geo	60.0%	35.0%																			
Field classes	60.0%	0.0%																			
Recommended reading	Basic literature	<ul style="list-style-type: none"> Rozporządzenie Ministra Rozwoju, Pracy i Technologii z dnia 23lipca 2021 r. w sprawie bazy danych obiektów topograficznych oraz mapy zasadniczej (Dz.U. 2021 poz. 1385) Rozporządzenie Ministra Administracji i Cyfryzacji z dnia 2 listopada 2015 r. w sprawie bazy danych obiektów topograficznych oraz mapy zasadniczej (Dz.U. 2015 poz. 2028) (pomocniczo) Instrukcja Geodezyjna Mapa zasadnicza K-1 wydanie III (pomocniczo) Jagielski Andrzej Rysunki Geodezyjne z elementami topografii i kartografii, Wydawnictwo GEODPIS, 2008. 																			
	Supplementary literature	<ul style="list-style-type: none"> Maciaszek, R. Gawalkiewicz J. Podstawy grafiki inżynierskiej dla studentów geodezji i inżynierii środowiska, 2007. Normy z zakresu Rysunek techniczny zagadnienia ogólne i rysunek techniczny budowlany i konstrukcyjny. Instrukcja obsługi omawianego programu AutoCAD 																			
	eResources addresses	Adresy na platformie eNauczenie: Rysunek techniczny i systemy CAD, 1 sem. GiK (2023/2024) - Moodle ID: 30397 https://enauczenie.pg.edu.pl/moodle/course/view.php?id=30397																			
Example issues/ example questions/ tasks being completed																					
Work placement	Not applicable																				

Document generated electronically. Does not require a seal or signature.