



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="456 468 794 495">Subject passing criteria</th> <th data-bbox="801 468 1139 495">Passing threshold</th> <th data-bbox="1145 468 1482 495">Percentage of the final grade</th> </tr> </thead> <tbody> <tr> <td data-bbox="456 504 794 530">Individual work</td> <td data-bbox="801 504 1139 530">50.0%</td> <td data-bbox="1145 504 1482 530">15.0%</td> </tr> <tr> <td data-bbox="456 539 794 582">Assessment of the use of AutoCAD</td> <td data-bbox="801 539 1139 582">60.0%</td> <td data-bbox="1145 539 1482 582">35.0%</td> </tr> <tr> <td data-bbox="456 591 794 618">Lecture content test</td> <td data-bbox="801 591 1139 618">60.0%</td> <td data-bbox="1145 591 1482 618">15.0%</td> </tr> <tr> <td data-bbox="456 627 794 654">Assessment of the use of C-Geo</td> <td data-bbox="801 627 1139 654">60.0%</td> <td data-bbox="1145 627 1482 654">35.0%</td> </tr> <tr> <td data-bbox="456 663 794 689">Field classes</td> <td data-bbox="801 663 1139 689">60.0%</td> <td data-bbox="1145 663 1482 689">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%
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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																				

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