



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 2026	Academic year of realisation of subject				2026/2027	
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 -> Faculties of Gdańsk University of Technology						
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Karol Daliga					
	Teachers						
Lesson types	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 drawing Acquiring the ability to read and create geodetic sketches Acquiring skills in using AutoCAD software in the field of surveying works Acquiring skills in using C-Geo software 						
Learning outcomes	Course outcome		Subject outcome			Method of verification	
	[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	
[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		

Subject contents	Course content – lecture <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 			
	Course content – exercises <ul style="list-style-type: none"> Development of Linear and Transversal Scales Interpretation of the Base Map Preparation of Survey Sketch Sets Mapping from Field Sketches Contour Interpolation and Terrain Profiling 			
	Course content – laboratory <ul style="list-style-type: none"> 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 			
	Course content – project <ul style="list-style-type: none"> Field Sketch Preparation Topographic Point Description Preparation of Summary and Field Sketch Documentation Architectural and Structural Inventory of a Building Section 			
Prerequisites and co-requisites				
Assessment methods and criteria	Subject passing criteria		Passing threshold	Percentage of the final grade
	Lecture content test		60.0%	15.0%
	Assessment of the use of AutoCAD		60.0%	35.0%
	Individual work		50.0%	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			
Example issues/ example questions/ tasks being completed				
Practical activities within the subject	Not applicable			

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