



## 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 2025		Academic year of realisation of subject		2025/2026		
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 -> Wydziały Politechniki Gdańskiej						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Karol Daliga				
	Teachers						
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"><li>To familiarize students with the principles of technical drawing</li><li>Acquiring the ability to read and create geodetic sketches</li><li>Acquiring skills in using AutoCAD software in the field of surveying works</li><li>Acquiring skills in using C-Geo software</li></ul>						
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"><li>Standardized elements of technical drawing</li><li>Geodetic symbols used on maps</li><li>Geodetic drawings</li><li>Basic cartographic studies</li><li>Mapping the topography of the area</li><li>Architectural and construction drawings, sketches for architectural inventory</li><li>Basics of computer-aided design. CAD systems (Computer Aided Design)</li><li>AutoCAD - Preparing work environment</li><li>AutoCAD - Drawing and editing basic flat figures, working on layers</li><li>AutoCAD - Dimensioning of drawings and preparing them for printing</li><li>C-Geo - Principles of working in the program</li><li>C-Geo - Calculations and preparation of graphic materials</li><li>C-Geo - Data preparation and planning of surveying works</li></ul>						

Prerequisites and co-requisites			
Assessment methods and criteria	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"><li>• 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)</li><li>• 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)</li><li>• Instrukcja Geodezyjna Mapa zasadnicza K-1 wydanie III (pomocniczo)</li><li>• Jagielski Andrzej Rysunki Geodezyjne z elementami topografii i kartografii, Wydawnictwo GEODPIS, 2008.</li></ul>	
	Supplementary literature	<ul style="list-style-type: none"><li>• Maciaszek, R. Gawalkiewicz J. Podstawy grafiki inżynierskiej dla studentów geodezji i inżynierii środowiska, 2007.</li><li>• Normy z zakresu Rysunek techniczny zagadnienia ogólne i rysunek techniczny budowlany i konstrukcyjny.</li><li>• Instrukcja obsługi omawianego programu AutoCAD</li></ul>	
	eResources addresses	Adresy na platformie eNauczanie:	
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		

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