GDAŃSK UNIVERSITY OF TECHNOLOGY

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 2024	Academic year of realisation of subject	2024/2025
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	mgr inż. Kamil Łapiński dr inż. arch. Dominika Wróblewska dr inż. Karol Daliga dr inż. Tadeusz Widerski	

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

- 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

<table>
<tr><td>Subject contents</td><td>• 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</td></tr>
<tr><td>Prerequisites and co-requisites</td><td></td></tr>
<tr><td>Assessment methods and criteria</td><td>
<table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>Field classes</td><td>60.0%</td><td>0.0%</td></tr>
<tr><td>Assessment of the use of C-Geo</td><td>60.0%</td><td>35.0%</td></tr>
<tr><td>Lecture content test</td><td>60.0%</td><td>15.0%</td></tr>
<tr><td>Assessment of the use of AutoCAD</td><td>60.0%</td><td>35.0%</td></tr>
<tr><td>Individual work</td><td>50.0%</td><td>15.0%</td></tr>
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<tr><td>Recommended reading</td><td>
<table>
<tr><td>Basic literature</td><td>• Rozporządzenie Ministra Rozwoju, Pracy i Technologii z dnia 23lipca 2021 r. w sprawie bazy danych obiektów topograficznychoraz 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.</td></tr>
<tr><td>Supplementary literature</td><td>• Maciaszek, R. Gawałkiewicz 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</td></tr>
<tr><td>eResources addresses</td><td>Adresy na platformie eNauczanie:</td></tr>
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<tr><td>Example issues/ example questions/ tasks being completed</td><td></td></tr>
<tr><td>Work placement</td><td>Not applicable</td></tr>
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