



## Subject card

Subject name and code	Geodesy , PG_00059016						
Field of study	Environmental Engineering						
Date of commencement of studies	October 2024		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	Part-time studies		Mode of delivery		at the university		
Year of study	2		Language of instruction		Polish		
Semester of study	3		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	15.0	5.0	15.0	0.0	0.0	35
	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	35		6.0		84.0	125
Subject objectives	Learning and acquiring knowledge and skills in the field of basic geodetic issues as applied to the needs of environmental engineering.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_U03] can prepare documentation regarding the implementation of an engineering task/project and prepare a text or presentation including a discussion of the results of the implementation		The student is able to draw a field sketch and keep a measurement log. When presenting the results of measurements or calculations, it uses the rules used in geodesy.		[SU4] Assessment of ability to use methods and tools [SU1] Assessment of task fulfilment		
	[K6_U02] can work individually and in a team; knows how to estimate the time needed to complete the task ordered; is able to develop and implement a work schedule that ensures deadlines		The student is able to plan and carry out measurements to a limited extent/prepare appropriate documentation according to a prepared schedule.		[SU4] Assessment of ability to use methods and tools [SU1] Assessment of task fulfilment		
	[K6_W16] has basic knowledge of geodesy in the range of applied measurement equipment and techniques, geodetic information systems and documentation necessary in the preparation process, investment implementation		Knows basic geodetic tasks, units and measures used in geodesy. The student has basic knowledge of geodetic networks, geodetic instruments, and cartographic materials necessary during the implementation of the investment.		[SW1] Assessment of factual knowledge		
	[K6_U05] can apply in engineering practice the basic geodetic instruments and instruments, make measurement sketches and read information from the map and surveying documents		The student is able to perform easurements using the geometric leveling method and develop the results of these measurements. Can read the information contained in map.		[SU4] Assessment of ability to use methods and tools [SU1] Assessment of task fulfilment		
Subject contents	Geodesy and cartography - its position as a discipline in engineering theory and practice. The role and tasks of geodesy in the investment implementation process. Traditional and modern instruments for geodetic measurements (levels, theodolites, total stations, GNSS receivers, scanners, photogrammetry). Classification of leveling methods. Measuring directions and calculating angles. Situational and altitude measurements. Interpretation of the content of the map.						
Prerequisites and co-requisites							

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Final colloquium from the lecture	60.0%	55.0%
	Reports from laboratory classes	50.0%	20.0%
	Final test for exercises	60.0%	25.0%
Recommended reading	Basic literature	1. Kurałowicz Z.: Geodezja - od taśmy mierniczej i krokiewki do GPS. P. G. Gdańsk 2021. 2. Kurałowicz Z.: Geodezja - podstawowe obliczenia oraz wybrane ćwiczenia. P. G. Gdańsk 2022. 3. Przewłocki S. Geodezja dla Inżynierii Środowiska. PWN. 1997	
	Supplementary literature	1. Żurowski A.: Ćwiczenia z geodezji. Praca zbiorowa. P.G. Gdańsk 1999	
	eResources addresses		
Example issues/ example questions/ tasks being completed	1. Basic geodetic calculations 2. Operation and measurements with a technical leveler 3. Theodolite operation and measurements 4. Interpretation of map content 5. Surface area measurement methods 6. Methods of volume measurements and making cross-sections		
Work placement	Not applicable		

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