



## Subject card

Subject name and code	Geoengineering, PG_00044348						
Field of study	Civil Engineering						
Date of commencement of studies	October 2022	Academic year of realisation of subject			2023/2024		
Education level	second-cycle studies	Subject group		Optional subject group			
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			1.0		
Learning profile	general academic profile	Assessment form			assessment		
Conducting unit	Department of Geotechnics, Geology and Marine Civil Engineering -> Faculty of Civil and Environmental Engineering						
Name and surname of lecturer (lecturers)	Subject supervisor						
	Teachers						
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	10.0	0.0	0.0	0.0	0.0	10
	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	10		5.0		10.0	25
Subject objectives	The aim of the course is to familiarize students with the possibilities of using practice geoengineering issues in transport engineering.						
Learning outcomes	Course outcome		Subject outcome			Method of verification	
	[K7_U14] is able to plan and to interpret the geotechnical investigations, to analyse the foundation stability; can design direct and deep foundations in complex soil conditions for complicated static and dynamical loads		Ability to interpret geotechnical test results, assessment of embankment stability and foundation in difficult ground conditions.				
[K7_W12] has deep and theoretical firm knowledge about geotechnical investigation, the rules of geotechnical design and engineering geology; knows the complicated processes in soil, techniques of foundations, draining systems, soil strengthening, geosynthetics applications, underground constructions and earthworks		Knowledge of the principles of geotechnical design, methods of subsoil modification under communication embankments and the use of geosynthetics in road structures					
Subject contents	Geotechnical design. Slope stability. Geosynthetics in earth structures. Soil reinforcement and modification. Methods of underground communication facilities constructing.						
Prerequisites and co-requisites	Basic knowledge of soil mechanics and foundation						
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	test		60.0%		100.0%		
Recommended reading	Basic literature		Eurocode 7				
	Supplementary literature		technical and scientific journals				
	eResources addresses						

Example issues/ example questions/ tasks being completed	Geotechnical design. Slope stability. Geosynthetics in earth structures. Soil reinforcement and modification. Methods of underground communication facilities constructing.
Work placement	Not applicable