GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Geoengineering, PG_00044348		
Field of study	Civil Engineering		
Date of commencement of studies	October 2025	Academic year of realisation of subject	2026/2027
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 -> Wydziały Politechniki Gdańskiej		
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Angelika Duszyńska	
	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 investigatons, to analyse the foundation stability; can design direct and deep foundations in complex soil conditions for complcated statical and dynamical loads	Ability to interpret geotechnical test results, assessment of embankment stability and foundation in difficult ground conditions.	
[K7_W12] has deep and theoreticaly firm knowledge about geotechnical investigation, the rules of geotechnical design and engineering geology; knows the complcated 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	Adresy na platformie eNauczanie:

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

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