

。 GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Landfills, PG_00041421								
Field of study	Civil Engineering								
Date of commencement of studies	February 2025		Academic year of realisation of subject			2025/2026			
Education level	second-cycle studies		Subject group			Optional subject group			
Mode of study	Full-time studies		Mode of delivery			at the university			
Year of study	2		Language of instruction			Polish			
Semester of study	3		ECTS credits			3.0			
Learning profile	general academic profile		Assessment form			assessment			
Conducting unit	Department of Geote	fraulic Engineering -> Faculty of Civil and Environmental Engineering							
Name and surname	Subject supervisor		prof. dr hab. inż. Lech Bałachowski						
of lecturer (lecturers)	Teachers								
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Projec	t	Seminar	SUM	
	Number of study hours	0.0	0.0	0.0	0.0		30.0	30	
	E-learning hours included: 0.0								
Learning activity and number of study hours	Learning activity	Participation in classes includ plan	n didactic ed in study	Participation in consultation hours		Self-study		SUM	
	Number of study hours	30		5.0		40.0		75	
Subject objectives	Discussion of problems related with wastes management and design, exploitation, closure and recultivation of landfills								
Learning outcomes	Course outcome Subject outcome Method of verificat					fication			
	[K7_K02] Rocognizes the significance of knowledge in solving cognitive and practical problems; reliably evaluates results of his own and team research		Student knows the requirements concerning the localization and monitoring of landfills.			[SK1] Assessment of group work skills			
	[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		Student is able to design impermeable barriers in landfills.			[SW1] Assessment of factual knowledge			
	[K7_W14] knows and applies building codes and obeys the Construction Law; has knowledge on environmetal impact of investment realisation		Student knows the law concerning the waste management and landfilling.			[SW1] Assessment of factual knowledge			
	[K7_U15] has advanced skills in civil engineering within offered specialization/profile		Student is able to calculate the waste settlements in landfills.			[SU3] Assessment of ability to use knowledge gained from the subject			
Subject contents	Circular economy. Waste types. By-products and their use. Parameters of wastes. Localization of landfills, impermeable barriers, landfills closure and monitoring. Recultivation of landfills, use of biogaz. Wastes compaction.								
Prerequisites and co-requisites	Knowledge of soil mechanics, soil improvement, geoengineering and hydraulics								
Assessment methods and criteria	Subject passing criteria		Passing threshold			Percentage of the final grade			
	Presenting		70.0%			60.0%			
	Active participation		80.0%			40.0%			
Recommended reading	Basic literature http://www.smocs.eu								

	Supplementary literature	Environmental geotechnology DredgDikes guidelines Smocs guidelines			
	eResources addresses	Adresv na platformie eNauczanie			
Example issues/ example questions/ tasks being completed	Drainage system on landfills				
	Impermeable barriers in landfills				
	Compaction of municipal wastes				
	Management and use of by-products				
Work placement	Not applicable				

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