



Subject card

Subject name and code	Soil Mechanics, PG_00062609						
Field of study	Civil Engineering						
Date of commencement of studies	October 2022		Academic year of realisation of subject		2023/2024		
Education level	first-cycle studies		Subject group		Obligatory subject group in the field of study Subject group related to scientific research in the field of study		
Mode of study	Full-time studies		Mode of delivery		at the university		
Year of study	2		Language of instruction		Polish		
Semester of study	4		ECTS credits		5.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Department of Geotechnical and Hydraulic Engineering -> Faculty of Civil and Environmental Engineering						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Rafał Ossowski				
	Teachers		dr inż. Jakub Konkol dr inż. Witold Tisler dr inż. Krzysztof Szarf dr inż. Paweł Więclawski dr inż. Rafał Ossowski dr inż. Marzena Wójcik				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	30.0	15.0	0.0	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		0.0		0.0	60
Subject objectives	An introduction to the basics of soil mechanics as a building substrate and building material.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[K6_W02] Demonstrate knowledge and understanding of the processes and established methods of analysis / solution of engineering issues & problems in the field of civil engineering and of their limitations.	The student has knowledge of phenomena occurring in subsoil and the effects of water on physical and mechanical properties of soil. Students shall be able to assess threats to engineering structures related to from filtration phenomena, subsidence, consolidation, landslides	[SW1] Assessment of factual knowledge
	[K6_U05] Conducts research (obtaining information, simulations, experimental methods) in the field of construction in order to solve specific tasks and report research results.	Student will be able to determine the physical characteristics, strength and filtration parameters, compaction and compressibility characteristics of the soil and apply them to solve problems in the field of soil mechanics.	[SU5] Assessment of ability to present the results of task [SU1] Assessment of task fulfilment [SU2] Assessment of ability to analyse information
	[K6_U02] Analyse & solve engineering issues & problems in the field of civil engineering by applying appropriate and relevant established analytical, numerical and experimental methods.	The student determines and analyses stress distributions in the ground medium, calculates physical characteristics, analyses water flow in the ground, calculates bearing capacity and settlement of foundations and slope stability	[SU4] Assessment of ability to use methods and tools [SU3] Assessment of ability to use knowledge gained from the subject
Subject contents	Origin and classification of soil. Physical characteristics. Water in the soil. Stress in the soil. Compressibility, consolidation, settlement. Shear strength of soils. Slope stability. Active and passive pressure. Bearing capacity of direct foundations. Investigations of the subsoil.		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
		100.0%	0.0%
		55.0%	100.0%
Recommended reading	Basic literature	Lecture materials made available on the eNauczanie platform	
	Supplementary literature	<ul style="list-style-type: none">• Z. Wiłun: Zarys geotechniki , different issues• S. Pisarczyk: Mechanika gruntów, different issues• App in eNauczanie with 3D laboratory models.	
	eResources addresses	Adresy na platformie eNauczanie:	
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		

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