



Subject card

Subject name and code		Soil Mechanics, PG_00062609						
Field of study		Civil Engineering						
Date of commencement of studies		October 2023	Academic year of realisation of subject			2024/2025		
Education level		first-cycle studies	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		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						
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_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			[SU3] Assessment of ability to use knowledge gained from the subject [SU4] Assessment of ability to use methods and tools		
		[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.			[SU2] Assessment of ability to analyse information [SU1] Assessment of task fulfilment [SU5] Assessment of ability to present the results of task		
		[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		
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		
			55.0%			100.0%		
			100.0%			0.0%		

Recommended reading	Basic literature	Lecture materials made available on the eNauczenie platform
	Supplementary literature	<ul style="list-style-type: none"> • Z. Wilun: Zarys geotechniki , different issues • S. Pisarczyk: Mechanika gruntów, different issues • App in eNauczenie with 3D laboratory models.
	eResources addresses	Adresy na platformie eNauczenie:
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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