

Subject card

Subject name and code	Applied geology - lecture, PG_00191290						
Field of study	Geology						
Date of commencement of studies	October 2026	Academic year of realisation of subject			2027/2028		
Education level	Bachelor's 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			2.0		
Learning profile	academic	Assessment form			credit		
Conducting unit	Department of Geophysics -> Faculty of Oceanography and Geography -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. Leszek Łęczyński					
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	0.0	0.0	0.0	0.0	30
	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	30	1.0	19.0	50		
Subject objectives	Introduction to soil classification, physical properties, methods of field geological and engineering surveys, documentation of survey results.						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	[GEOLL3_U04] is able to use specialized computer software and mathematical and statistical methods in the analysis of geological data	is able to use specialised computer software and mathematical and statistical methods in the analysis of geological and engineering data			[SU4] test/exam - oral or written		
	[GEOLL3_W02] knows and understands the terminology appropriate in science and natural sciences	knows and understands the terminology specific to applied geology			[SW4] test/exam - oral or written		
	[GEOLL3_K05] is willing to comply with the principles of occupational safety and health, takes care of specialized equipment entrusted to them, is aware of the risk connected with the performed work	Understands health and safety rules, knows how to properly and safely use the equipment available in the laboratory			[SK4] test/exam - oral or written		
[GEOLL3_W08] knows the basic principles of occupational health and safety, legal regulations conditioning geological and engineering activities	is familiar with the basic principles of occupational health and safety, legal regulations governing geological and engineering activities			[SW4] test/exam - oral or written			

Subject contents	<p>Geological determinants of human engineering activities. Classification of building grounds. Division of soils, names, symbols and terms used. Macroscopic testing of soils. Mechanical properties of building soils. Anthropogenic soils. Design of geological-engineering works. Execution of geological-engineering works. Mass movements: processes, prediction, prevention and effects. Gas storage in geological structures. Protection and reclamation of degraded and devastated areas. Geological-engineering foundation conditions of offshore structures and coastal protection.</p>		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	colloquium	51.0%	100.0%
Recommended reading	Basic literature	<p>Bażyński J., Drągowski A., Frankowski Z., Kaczyński R., Rybicki S., Wysokiński L., 1999. Zasady sporządzania dokumentacji geologiczno inżynierskich, Wyd. Ministerstwo Środowiska, Warszawa Kostrzewski W., 2001, Parametry geotechniczne gruntów budowlanych oraz metody ich oznaczania. Wyd. Politechniki Poznańskiej Kostrzewski W., 1980. Mechanika gruntów. Parametry geotechniczne gruntów budowlanych oraz metody ich wyznaczania, Wyd. Naukowe PWN, Warszawa Kowalski W.C., 1988. Geologia inżynierska, Wyd. Geologiczne, Warszawa Myślińska E., 1989. Przewodnik do ćwiczeń z gruntoznawstwa, Wyd. Uniwersytetu Warszawskiego Myślińska E., 1998. Laboratoryjne badania gruntów, Wyd. Naukowe PWN, Warszawa Pisarczyk S., Rymśa B., 1993. Badania laboratoryjne i polowe gruntów, Oficyna Wydawnicza Politechniki Warszawskiej Wiłun Z., 1987. Zarys geotechniki, Wyd. Komunikacji i Łączności, Warszawa</p>	
	Supplementary literature	<p>Frankowski Z., Graniczny M., Bednarczyk B., Kramarska R., Pruszek Z., Przedziecki P., Szmytkiewicz M., Werno M., Zachowicz J., 2009. Zasady dokumentowania geologiczno - inżynierskiego warunków posadowienia obiektów budownictwa morskiego i zabezpieczenia brzegu morskiego, Wyd. PIG, Warszawa Ingut R., 1973. Terenowe badania geologiczno inżynierskie, Wyd. Geologiczne, Warszawa PN-86/B-02480 Grunty budowlane. Określenia, symbole, podział i opis gruntów PN-75/B-04481 Grunty budowlane. Badania laboratoryjne PN-88/B-04481 Grunty budowlane. Badania próbek gruntu</p>	
	eResources addresses		
Example issues/ example questions/ tasks being completed	Classification of building grounds. Division of soils, names, symbols and terms used.		
Work placement	Not applicable		

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