University of Gdańsk

Subject card

Subject name and code	Applied geology - lecture, PG_00091121		
Field of study	Geology		
Date of commencement of studies	October 2024	Academic year of realisation of subject	2025/2026
Education level	Bachelor's studies	Subject group	Obligatory subject group 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	dr hab. Leszek Łęczyński	

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	12.0	10.0	52

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_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
[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

<table>
<tr><td>Subject contents</td><td>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.</td></tr>
<tr><td>Prerequisites and co-requisites</td><td></td></tr>
<tr><td>Assessment methods and criteria</td><td>
<table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>colloquium</td><td>51.0%</td><td>100.0%</td></tr>
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<tr><td>Recommended reading</td><td>
<table>
<tr><td>Basic literature</td><td>Bażyński J., Drągowski A., Frankowski Z., Kaczyński R., Rybicki S., Wysokińskil 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., Rymsza B., 1993. Badania laboratoryjne i polowe gruntów, Oficyna Wydawnicza Politechniki Warszawskiej
Wiłun Z.,1987. Zarys geotechniki, Wyd. Komunikacji i Łączności, Warszawa</td></tr>
<tr><td>Supplementary literature</td><td>Frankowski Z., Graniczny M., Bednarczyk B., Kramarska R., Pruszak Z., Przezdziecki P., Szmytkiewicz M., Werno M., Zacho-wicz 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</td></tr>
<tr><td>eResources addresses</td><td></td></tr>
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</td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td>Classification of building grounds. Division of soils, names, symbols and terms used.</td></tr>
<tr><td>Work placement</td><td>Not applicable</td></tr>
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