University of Gdańsk

Subject card

Subject name and code	Geophysics - exercises, PG_00091144		
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	3	ECTS credits	1.0
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	mgr Aleksandra Malecha-Łysakowska	
	Teachers	mgr Aleksandra Malecha-Łysakowska	

Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	15.0	0.0	0.0	15
	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	15	12.0	10.0	37

Subject objectives	Acquiring the ability to analyse seismograms and magnetometer records.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[GEOLL3_K03] is willing to exercise caution and criticism in receiving information from scientific literature, the Internet and other media related to natural sciences	is able to identify geological objects on the basis of data geophysical data	[SK3] text preparation/written work
[GEOLL3_W04] knows and understands phenomena and processes occurring in the past and today in the interior of the Earth and on its surface, defines the methods of how to study them	knows and understands the phenomena and processes occurring in the past and phenomena and processes occurring in the past and contemporary in the Earth interior and on its surface, defines geophysical methods of their study	[SW3] text preparation/written work
[GEOLL3_U03] is able to use source information in Polish and English, including archival and electronic databases, in the field of geological issues	is ready to be cautious and critical in receiving information from scientific literature, the Internet and other media relating to geophysics	[SU3] text preparation/written work
[GEOLL3_U06] is able to identify geological objects and combine them with geological processes and anthropogenic environmental transformations	knows and understands basic geophysical phenomena	[SU3] text preparation/written work
[GEOLL3_W01] knows and understands the basic natural phenomena and explains their course in relation to geological processes	knows and understands the terminology specific to geophysics	[SW3] text preparation/written work
[GEOLL3_U02] has the skill of analytical and synthetic way of reasoning leading to correct inference based on the results obtained or the facts presented	has the ability to analytically and synthetically reasoning leading to correct inferences based on gravimetric and seismic data	[SU3] text preparation/written work
[GEOLL3_W02] knows and understands the terminology appropriate in science and natural sciences	is able to use geophysical information in the field of geological issues	[SW3] text preparation/written work

Subject contents

Application of seismic methods in geological research: reflection seismic, refraction seismic. Application of gravity methods

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

1. Lowrie W., 2007. Fundamentals of Geophysics, Wyd. Cambridge University Press
2. Fajklewicz Z., (red.), 1972. Zarys geofizyki stosowanej, Wyd. Geologiczne, Warszawa
3. Stenzel P., Szymanko J., 1973. Metody geofizyczne w badaniach hydrologicznych i geologiczno-inżynierskich, Wyd. Geologiczne, Warszawa
4. Reynolds J.M., 1997. An Introduction to Applied and Environmental Geophysics, Wiley & Sons
5. Telford W.M., Geldart L.P., Sheriff R.E., 1990. Applied Geophysics, Cambridge Univ. Press
6. Journal of Geophysical Research, The Official Magazine of the American Geophysical Union, http://www.agu.org/journals/jgr/

Supplementary literature

1. Resnick R., Halliday D., 1980. Fizyka dla studentów nauk przyrodniczych i technicznych. Tom I, II. Wydanie VI, Wyd. Naukowe PWN, Warszawa
2. Mortimer Z., 2004. Zarys fizyki Ziemi, Uczelniane Wydawnictwa Naukowo-Dydaktyczne, Kraków

eResources addresses

Example issues/ example questions/ tasks being completed

Application of seismic methods in geological studies: reflection seismic, refraction seismic. Application of gravity methods

Work placement

Not applicable

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