University of Gdańsk

Subject card

Subject name and code	Environmental geochemistry - lecture, PG_00191271		
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	3	ECTS credits	2.0
Learning profile	academic	Assessment form	exam
Conducting unit	Laboratory of Toxic Substances Transformation -> Department of Chemical Oceanography and Marine Geology -> Faculty of Oceanography and Geography -> Rector		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. Bożena Graca	
	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

To familiarise students with the knowledge of the circulation of elements in the Earth's geospheres, the consequences of environmental anthropopressure in the local and global scale.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[GEOLL3_W01] knows and understands the basic natural phenomena and explains their course in relation to geological processes	knows and understands basic natural phenomena and explains their course about geochemical processes	[SW4] test/exam - oral or written
[GEOLL3_W02] knows and understands the terminology appropriate in science and natural sciences	knows and understands terminology specific to geochemistry	[SW4] test/exam - oral or written

Subject contents

The main problems of geochemistry and its links with other sciences (hydrogeochemistry, biogeochemistry).
Geochemical characteristics of the Earth's geospheres.
Origin and classifications of elements, mechanism of their circulation in nature and geochemical factors.
Environment and geochemical processes in the lithosphere.
Global geochemical cycles. Geochemical characteristics of selected elements (biogenic elements, metals).

Effects of anthropopressure on biogeochemical cycling of elements-environmental implications.
Isotopic studies in geochemistry.
Chemical analytics in geochemistry.

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
exam/written work	51.0%	100.0%

Recommended reading

Basic literature	Migaszewski Z., Gałuszka A., 2007. Podstawy geochemii środowiska, Wyd. Nauk.-Tech., Warszawa Polański A., 1979. Izotopy w geologii, Wyd. Geologiczne, Warszawa

	Supplementary literature	Polański A., Smulikowski K., 1969. Geochemia, Wyd. Geologiczne, Warszawa Schultz H. D., Zabel M., (eds) 2000. Marine Geochemistry.Springer, Berlin.
	eResources addresses	
Example issues/ example questions/ tasks being completed	Geochemistry of hydrothermal vents Geochemical background-methods of determination Elemental composition of the Earth's spheres Anthropocene - influence on the elemental cycles	
Work placement	Not applicable	

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