

Subject card

Subject name and code	Environmental geochemistry - lecture, PG_00091141						
Field of study	Geology						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2026/2027		
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		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		10.0		13.0	53
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_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		
	[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		
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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