

Subject card

Subject name and code	Hydrogeology, PG_00117429						
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			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	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	10.0	20.0	45		
Subject objectives	Production of analyses, maps and hydrogeological cross-sections						
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 hydrogeology			[SW5] implementation of a problem task		
	[GEOLL3_U01] is able to apply basic measurement and analytical techniques in the field and in the laboratory, plans to conduct research and measurements	is able to apply basic measuring and analytical techniques in the field and laboratory, and to plan tests and measurements in hydrogeology			[SU5] implementation of a problem task		
	[GEOLL3_W07] knows the anthropogenic transformation of the natural environment, including the effects of the exploitation of mineral resources	is familiar with anthropogenic transformation of the natural environment, including the effects of groundwater exploitation			[SW3] text preparation/written work		
	[GEOLL3_W05] knows the structure and geological development of selected regions in Poland and in the world	knows the structure and hydrogeological development of selected regions in Poland and worldwide			[SW3] text preparation/written work		
	[GEOLL3_U06] is able to identify geological objects and combine them with geological processes and anthropogenic environmental transformations	is able to identify hydrogeological objects and link them to geological processes and anthropogenic transformations of the environment			[SU5] implementation of a problem task		

Subject contents	Hydrogeological cross-section. Map of hydroisohips and hydroisobaths. Map of infiltration conditions. Determination of filtration coefficient. Analysis of the chemical composition of groundwater and marine water.		
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	Chelmicki W., 2002. Woda. Zasoby, degradacja, ochrona, Wyd. Naukowe PWN, Warszawa Macioszczyk A., Dobrzyński, 2003. Hydrogeochemia wód podziemnych strefy aktywnej wymiany, Wyd. Naukowe PWN, Warszawa Paczyński B., Sadurski A. (red.), 2007. Hydrogeologia regionalna Polski, PIG, Warszawa Pazdro Z., Kozerski B., 1989. Hydrogeologia ogólna, Wyd. Geologiczne, Warszawa Piekarek-Jankowska H., 1994. Zatoka Pucka jako obszar drenażu wód podziemnych, Wyd. Uniwersytetu Gdańskiego Turek S. (red), 1971. Poradnik hydrogeologa, Wyd. Geologiczne, Warszawa Wieczysty A., 1982. Hydrogeologia inżynierska, Wyd. Naukowe PWN, Warszawa	
	Supplementary literature	-Kleczkowski, A. S., (red.), 1984. Ochrona wód podziemnych, Wyd. Geologiczne, Warszawa Kozerski B.(red), 2007. Gdański system wodonośny, Wyd. Politechniki Gdańskiej, Gdańsk Macioszyk A., 1987. Hydrogeochemia, Wyd. Geologiczne, Warszawa Pleczyński J., 1981. Odnawialność zasobów wód podziemnych, Wyd. Geologiczne, Warszawa Kleczkowski A., Rózkowski A., 1997. Słownik hydrogeologiczny, Wydawnictwo TRIO Ustawa, Prawo wodne. z dnia 18 lipca 2001 r. (Dz. U. 2001.115.1229	
	eResources addresses		
Example issues/ example questions/ tasks being completed	Map of hydroisohips and hydroisobaths.		
Work placement	Not applicable		

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