

Subject card

Subject name and code	Mineralogy with elements of crystallography - lecture, PG_00091101						
Field of study	Geology						
Date of commencement of studies	October 2025		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	1		Language of instruction		Polish		
Semester of study	2		ECTS credits		2.0		
Learning profile	academic		Assessment form		exam		
Conducting unit	Laboratory of Marine Geology -> Department of Chemical Oceanography and Marine Geology -> Faculty of Oceanography and Geography -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr Agnieszka Marcinowska				
	Teachers		dr Agnieszka Marcinowska				
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		15.0		15.0	60
Subject objectives	Ability to see the relationship between the occurrence and genesis of minerals and geological processes. Familiarization with the basic elements of crystallography, systems, classes and crystallographic forms. Knowledge of basic minerals, their genesis and forms of occurrence in nature. Knowledge of the practical use of selected minerals as mineral resources.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[GEOLL3_W03] knows and identifies paleontological, mineralogical, petrographic and structural objects using appropriate methods		Knows and identifies minerals, knows how to determine their basic physical characteristics. Knows research methods to identify minerals.		[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion		
	[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 mineral-forming processes of the past and present. Knows the environments of mineral paragenesis. Knows the basic mineral resources and their use.		[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion		
	[GEOLL3_W02] knows and understands the terminology appropriate in science and natural sciences		Knows and understands the terminology of crystallography and mineralogy.		[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion		
Subject contents	1. Structure and form of crystals (symmetry, morphology, crystal formation). 2. Elements of crystallochemistry. 3. Physical properties of the minerals. 4. Methods of mineral identification and study. 5. Genesis of minerals, mineral-forming environments. 6. Detailed mineralogy (presentation of classification and discussion of the characteristics, properties and genesis of the most important minerals).						
Prerequisites and co-requisites							

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	oral statement/conversation/discussion	51.0%	10.0%
	test/exam - oral or written	51.0%	90.0%
Recommended reading	Basic literature	Parafiniuk J., 2024. Atlas minerałów, Multico, Warszawa Szeleg E., 2023. Minerality i skały Polski, Multico, Warszawa Żaba J., Żaba I.V., 2023. Naturalne kamienie szlachetne i ozdobne, Wydawnictwo SBM Żaba J., 2014. Ilustrowana encyklopedia skał i minerałów, Wydawnictwa Videograf S.A. Bolewski A., Kubisz J., Manecki A., Żabiński W., 1990. Mineralogia ogólna, Wyd. Geologiczne, Warszawa Bolewski A., Manecki A., 1993. Mineralogia szczegółowa, Wydawnictwo Polskie Agencji Ekologicznej Penkala T., 1961. Elementy mineralogii i krystalografii, Wyd. Naukowe PWN, Warszawa	
	Supplementary literature	Klein C., Philpotts A.R., 2012. Earth Materials, Cambridge University Press Nesse W.D., 2000. Introduction to Mineralogy, Oxford University Press Parafiniuk J., 2004. Minerality systematyczny katalog 2004, TG Spirifer, Warszawa Maneck A., 2004. Encyklopedia minerałów. Minerality Ziemi i materii kosmicznej, Wyd. AGH, Kraków	
	eResources addresses		
	Example issues/ example questions/ tasks being completed	Minerals of medium-temperature hydrothermal environments, greisen minerals, ore minerals. Structural structure of silicates including layered silicates.	
Work placement	Not applicable		

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