University of Gdańsk

Subject card

Subject name and code	Mineralogy with elements of crystalography - lecture, PG_00191262		
Field of study	Geology		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2026/2027
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	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		

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

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_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
[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

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

<table>
<tr><td>Assessment methods and criteria</td><td colspan="2"><table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>test/exam - oral or written</td><td>51.0%</td><td>90.0%</td></tr>
<tr><td>oral statement/conversation/ discussion</td><td>51.0%</td><td>10.0%</td></tr>
</table></td></tr>
<tr><td rowspan="3">Recommended reading</td><td>Basic literature</td><td>Parafiniuk J., 2024. Atlas minerałów, Multico, Warszawa
Szełęg E., 2023. Minerały 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 Videograff 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</td></tr>
<tr><td>Supplementary literature</td><td>Klein C., Philpotts A.R., 2012. Earth Materials, Cambridge University Press
Nesse W.D., 2000. Introduction to Mineralogy, Oxford University Press
Parafiniuk J., 2004. Minerały systematyczny katalog 2004, TG Spirifer, Warszawa
Manecki A., 2004. Encyklopedia minerałów. Minerały Ziemi i materii kosmicznej, Wyd. AGH, Kraków</td></tr>
<tr><td>eResources addresses</td><td></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td colspan="2">Minerals of medium-temperature hydrothermal environments, greisen minerals, ore minerals.
Structural structure of silicates including layered silicates.</td></tr>
<tr><td>Work placement</td><td colspan="2">Not applicable</td></tr>
</table>

Document generated electronically. Does not require a seal or signature.