



Subject card

Subject name and code	, PG_00064501						
Field of study	Materials Engineering, Materials Engineering						
Date of commencement of studies	February 2024		Academic year of realisation of subject		2024/2025		
Education level	second-cycle studies		Subject group		Optional subject group 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		5.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Division of Nanomaterials Physics -> Institute of Nanotechnology and Materials Engineering -> Faculty of Applied Physics and Mathematics						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Kamil Kolincio				
	Teachers		dr inż. Kamil Kolincio				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	15.0	30.0	0.0	60
	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	60		0.0		0.0	60
Subject objectives	The goal is to make student familiar with basics of mineralogy, being one of material engineering precursors						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	K7_K01		Student makes effort to independently gain the knowledge. Student seizes the consultation hours when the solution cannot be found on one's own, and is able to define the elements which cannot be understood without the support		[SK2] Assessment of progress of work		
	K7_U01		Student independently searches for the literature on the subject, finds required information in books and publications. Student is able to systematize and supplement the possessed knowledge		[SU1] Assessment of task fulfilment		
	K7_W07		Student is aware of the newest trends and directions in materials engineering, which are associated with mineralogy		[SW1] Assessment of factual knowledge		
Subject contents	<p>Lecture:</p> <ul style="list-style-type: none">- Basic concepts and definitions- Macroscopic and microscopic methods of mineral identification- Analysis of the structure and chemical composition of minerals- Characterization of minerals of special interest in materials engineering- Engineering of synthetic analogs of minerals <p>Laboratory: Methods of identification and description of morphological and physicochemical characteristics of minerals</p> <p>Project: identification and study of physical properties of real samples prepared/sampled by students</p>						
Prerequisites and co-requisites	The basics of crystallography knowledge, from the "Crystallography" and/or "Crystallography II" courses will be an advantage						

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Project: report	50.0%	40.0%
	Laboratory: report	50.0%	20.0%
	Lecture: written test	50.0%	40.0%
Recommended reading	Basic literature	1. "Mineralogia ogólna", Andrzej Bolewski, Wydawnictwa geologiczne, 1975 or later edition 2. "Mineralogia szczegółowa", Andrzej Bolewski, Wydawnictwa geologiczne, 1982 or later edition	
	Supplementary literature	1. "Krystalografia" Zbigniew Bojarski, Marek Gigla, Kazimierz Stróż, Marian Surowiec, PWN any edition 2. Elementy Mineralogii i Krystalografii, Tadeusz Penkala, PWN any edition	
	eResources addresses	Adresy na platformie eNauczanie: Podstawy mineralogii - Moodle ID: 41812 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=41812	
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		

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