



## Subject card

Subject name and code	, PG_00058745						
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		
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		5.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Institute of Nanotechnology and Materials Engineering -> Faculty of Applied Physics and Mathematics						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. inż. Agnieszka Witkowska				
	Teachers		dr hab. inż. Natalia Wójcik  dr hab. inż. Agnieszka Witkowska				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	75.0	0.0	0.0	75
	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	75		5.0		45.0	125
Subject objectives	The aim of the course is to acquire knowledge and practical skills necessary for the correct implementation of the tasks set in the master's thesis. Planning experiments, learning the principles of research methods and their practical carrying out, principles and methods of analysis of results and their presentation.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	K7_W05		The student has the skills to use the methods of study structural, mechanical and physico-chemical properties.		[SW3] Assessment of knowledge contained in written work and projects		
	K7_W06		The student has knowledge of research techniques, construction and application of research equipment used in materials engineering.		[SW3] Assessment of knowledge contained in written work and projects		
	K7_U03		The student has the ability to formulate research hypotheses on the design, synthesis and properties study of the materials. He can plan an experiment, describe and justify usage of physical, chemical and mechanical methods of material testing.		[SU4] Assessment of ability to use methods and tools		
	K7_K01		The student is able to analyze the state of knowledge and conduct a discussion with the teacher and colleagues.		[SK1] Assessment of group work skills [SK4] Assessment of communication skills, including language correctness		
	K7_U04		The student has the ability to prepare research results in writing, analyze them, discuss and conclude		[SU5] Assessment of ability to present the results of task [SU2] Assessment of ability to analyse information		
Subject contents	The program includes elements of the student's individual work with the supervisor of the diploma project, as well as with a research team as part of the master's thesis subject.						
Prerequisites and co-requisites							

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Evaluation of the development of the research results	50.0%	100.0%
Recommended reading	Basic literature	Textbooks and publications agreed with the teacher taking care of the thesis.	
	Supplementary literature	Textbooks and publications agreed with the teacher taking care of the thesis.	
	eResources addresses	Adresy na platformie eNauczanie:	
Example issues/ example questions/ tasks being completed	Issues and tasks consistent with the subjects of the Master's degree projects.		
Work placement	Not applicable		

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