



## Subject card

Subject name and code	, PG_00058699						
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	2		Language of instruction			Polish	
Semester of study	3		ECTS credits			19.0	
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						
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	0.0	0.0	0.0	0
	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	0		10.0		465.0	475
Subject objectives	Preparation of the Student for undertaking and solving scientific and technical problems as well as for elaborating complete and reliable research reports.  Diploma project implementation and preparation of the diploma thesis.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	K7_W07	Preparing a diploma thesis Student acquires knowledge about development trends and the most important new achievements in the field of materials engineering, in particular in the subject of the implemented diploma project.	[SW1] Assessment of factual knowledge
	K7_W04	Student develops the ability to analyze information and interpret measurement data, can use the knowledge of materials to describe the relationship between the chemical composition, structure, and mechanical and physical properties.	[SW3] Assessment of knowledge contained in written work and projects
	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_U01	The student is able to analyze the problem defined in the diploma project and is able to prepare proposals for its solution/realization, based on self-obtained and compiled information from literature, databases and other available sources (available mainly in English).	[SU2] Assessment of ability to analyse information
	K7_U05	Student realizing a diploma project of an experimental, computational or experimental-computational nature in the field of material engineering has the necessary knowledge about the general safety rules and potential dangers and negative biological and ecological effects associated with the study and use of hazardous and toxic compounds and materials.	[SU3] Assessment of ability to use knowledge gained from the subject [SU2] Assessment of ability to analyse information
Subject contents	Implementation of research tasks related to the selected topic of the diploma project in the team: student-project supervisor.  Preparation of the MSc thesis manuscript in accordance with suitable standards and general guidelines.		
Prerequisites and co-requisites	Completed and passed all courses from semesters 1 and 2.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Preparation and presentation of the MSc thesis	50.0%	50.0%
	Realization of laboratory tasks related to the diploma project	100.0%	50.0%
Recommended reading	Basic literature	[1] Nicholas Walliman, Research Methods, The Basics, Taylor & Francis Group, London and New York, 2011 [2] Hugh G. Gauch Jr., Scientific Methods in Brief, Cambridge University Press, 2012 [3] Scientific literature and specialist reports related to the diploma project.	
	Supplementary literature	[1] Guidelines for Authors of diploma thesis and diploma projects for higher education studies at Gdańsk University of Technology written in polish and english. [2] Scientific literature and specialist reports related to the diploma project.	
	eResources addresses	Adresy na platformie eNauczanie:	

Example issues/ example questions/ tasks being completed	Examples of topics of the diploma thesis:  - Supramolecular (nano)polyurethane materials with self-healing or shape memory properties  - The influence of graphene addition on the ability of protective coatings to absorb microwave radiation  - Surgical meshes covered with a hydrogel layer showing a high degree of biocompatibility
Work placement	Not applicable

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