GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	, PG_00058866		
Field of study	Nanotechnology, Nanotechnology (joint Master's double-degree program)		
Date of commencement of studies	October 2024	Academic year of realisation of subject	2025/2026
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	English
Semester of study	4	ECTS credits	1.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Institute of Nanotechnology and Materials Engineering -> Faculty of Applied Physics and Mathematics -> Faculties of Gdańsk University of Technology		
Name and surname of lecturer (lecturers)	Subject supervisor		
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	0.0	0.0	0.0	0.0	15.0	15

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	15	2.0	8.0	25

Subject objectives

Preparation of the Student for undertaking and solving scientific and technical problems as well as for elaborating complete and reliable research reports.

Learning outcomes

Course outcome	Subject outcome	Method of verification
K7_W03	Student acquires general knowledge about the current trends, directions of development and the newest discoveries in the field of nanotechnology and materials engineering.	[SW1] Assessment of factual knowledge
K7_U01	Student is able to analyze the problem posed in the diploma project and is able to work on a proposal for its solution/ implementation, based on independently obtained and developed information from literature, databases and other available sources (available in English).	[SU1] Assessment of task fulfilment [SU2] Assessment of ability to analyse information
K7_W09	Student has an extensive knowledge of professional English terminology in the field of physics, materials engineering and nanotechnology.	[SW3] Assessment of knowledge contained in written work and projects
K7_U10	Student has the ability to prepare a report in English on the results of their own research and an oral presentation showing the progress achieved at each stage of the project thesis.	[SU3] Assessment of ability to use knowledge gained from the subject [SU5] Assessment of ability to present the results of task

<table>
<tr><td>Subject contents</td><td>Course content – seminar
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.</td></tr>
<tr><td>Prerequisites and co-requisites</td><td>Completed and passed all courses from semesters 1-3.</td></tr>
<tr><td>Assessment methods and criteria</td><td>
<table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>Realization of laboratory tasks related to the diploma project</td><td>100.0%</td><td>50.0%</td></tr>
<tr><td>Preparation and presentation of the MSc thesis</td><td>50.0%</td><td>50.0%</td></tr>
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<tr><td>Recommended reading</td><td>
<table>
<tr><td>Basic literature</td><td>[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</td></tr>
<tr><td>Supplementary literature</td><td>[1] Guidelines for Authors of diploma thesis and diploma projects for higher education studies at Gdańsk University of Technology written in polish or english.

[2] Scientific literature and specialist reports related to the diploma project</td></tr>
<tr><td>eResources addresses</td><td></td></tr>
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<tr><td>Example issues/ example questions/ tasks being completed</td><td>Cobalt (III) oxide particles and their redox reactions. Quantum calculations.

Silicon-based precursors in parylene CVD functionalization. Quantum calculations.

Iron (III) oxides in ionic liquids environment and the redox reactions. Quantum calculations.</td></tr>
<tr><td>Practical activites within the subject</td><td>Not applicable</td></tr>
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