GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Diploma laboratory, PG_00062937						
Field of study	Nanotechnology						
Date of commencement of studies	February 2025		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	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 -> Wydziały Politechniki Gdańskiej						
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	100.0	0.0	0.0	100
	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	100		5.0	20.0	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, development of a methodology for implementing the research project and practical implementation of the research, including results analysis and report preparation.						

<table>
<tr><td>Learning outcomes</td><td>
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<tr><th>Course outcome</th><th>Subject outcome</th><th>Method of verification</th></tr>
<tr><td>[K7_U07] can apply the obtained specialist knowledge to the problems within exact sciences, natural or technical sciences.</td><td>The student is able to apply the acquired specialist knowledge in nanotechnology to issues in other areas of science, natural sciences, or engineering, thereby being able to perceive their research problem in a broader application-oriented context.</td><td>[SU3] Assessment of ability to use knowledge gained from the subject</td></tr>
<tr><td>[K7_U02] has enhanced abilities in laboratory work.</td><td>The student has in-depth skills in working in a physical and/or computer laboratory, related to conducting research and measurements and all work related to the tasks of the master's project. She/he knows the rules of occupational health and safety to the extent that allows independent work in a research laboratory.</td><td>[SU4] Assessment of ability to use methods and tools</td></tr>
<tr><td>[K7_U05] can plan and conduct experimental and critical research and analyze their results, draw conclusions and formulate reasoned conclusions – within their specialization.</td><td>Implementing the MSc project in the field of experimental nanotechnology the student is able to plan and conduct experimental research and critically analyze their results, draw conclusions and formulate motivated opinions on issues related to the subject of the project.</td><td>[SU4] Assessment of ability to use methods and tools
[SU1] Assessment of task fulfilment</td></tr>
<tr><td>[K7_K09] is aware of the importance and understands non-technical aspects and results of engineering work, including its influence on the environment, and the related responsibility for decisions made.</td><td>Implementing the MSc project, the student understands the non-technical aspects and effects of his research activity and the related responsibility for the decisions made.</td><td>[SK5] Assessment of ability to solve problems that arise in practice</td></tr>
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<tr><td>Subject contents</td><td>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.</td></tr>
<tr><td>Prerequisites and co-requisites</td><td></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>Evaluation of research implementation, analysis and interpretation of the obtained results</td><td>50.0%</td><td>100.0%</td></tr>
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<tr><td>Recommended reading</td><td>
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<tr><td>Basic literature</td><td>Textbooks and publications agreed with the teacher taking care of the thesis.</td></tr>
<tr><td>Supplementary literature</td><td>Textbooks and publications agreed with the teacher taking care of the thesis.</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>Issues and tasks consistent with the subjects of the Master's degree projects.</td></tr>
<tr><td>Work placement</td><td>Not applicable</td></tr>
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