GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Team research project II, PG_00069434		
Field of study	Nanotechnology		
Date of commencement of studies	October 2025	Academic year of realisation of subject	2026/2027
Education level	second-cycle studies	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	3.0
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	dr inż. Marek Chmielewski	
	Teachers	dr inż. Marek Chmielewski	

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	0.0	0.0	0.0	40.0	0.0	40

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	40	3.0	32.0	75

Subject objectives

The aim of the research project is to conduct a process in which students verify a research hypothesis set by an external client or university employee. The project may require the creation of a product, e.g. an application or device, and the conduct of appropriate research, analysis of results, etc.
A mandatory outcome of a research project with a research hypothesis is a report in the form of a publication formatted in accordance with the IEEE template (or another global publisher), prepared in English. An additional element related to the implementation of research project topics may be the creation of a technology company.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K7_W101] is able to make an in-depth identification of key objects and phenomena related to the field of study, as well as theories that describe them and applicable analytical and design methods	The student applies advanced research techniques to verify the research thesis. They are able to use the knowledge acquired in their course of study in a proper way, taking into account practical, experimental and theoretical aspects. They are able to assemble the right set of scientific tools to achieve the final result.	[SW2] Assessment of knowledge contained in presentation [SW3] Assessment of knowledge contained in written work and projects
[K7_U101] is able to formulate complex research problems and adopts appropriate methods, obtaining innovative solutions, cooperating with other people, both as a leader and a team member	When performing tasks related to research topics, indicates the correct methodology for conducting an experiment, performs and understands the need for a multi-faceted analysis of the results obtained. Correctly performs verification procedures and effectively applies them to determine the parameters of unknown elements under investigation. Is able to use group activities to solve research problems and coordinate the activities of a research team.	[SU2] Assessment of ability to analyse information [SU4] Assessment of ability to use methods and tools
[K7_K101] acknowledges the importance of knowledge related to the field of study in solving cognitive and practical problems, critically assessing the information obtained	The student is able to effectively use the knowledge acquired during the educational process at the university. Thanks to the acquired skills, he/she solves research problems. He/she is able to plan an experiment to verify the validity of a thesis. He/she has the skills to critically analyse the results of measurements or observations in terms of their practical application. He/she is able to identify the economic benefits of using the results achieved.	[SK1] Assessment of group work skills [SK5] Assessment of ability to solve problems that arise in practice [SK2] Assessment of progress of work

Subject contents

Course content – project
Carrying out research tasks aimed at verifying the thesis put forward by the project commissioner.

Preparing reports on the progress of research work.

Organising and coordinating team activities.

Preparing and presenting the final results of the research work in a form agreed with the project supervisor.

Prerequisites and co-requisites

Depending on the requirements of the project supervisor.

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Report in the form of a scientific article	100.0%	100.0%

Recommended reading

Basic literature	Determined by the supervisor of the topic
Supplementary literature	Determined by the supervisor of the topic
eResources addresses	

Example issues/ example questions/ tasks being completed

Modelling of X-ray propagation using directional Gaussian beams

Proton-conducting ceramics with an ordered microstructure

Advanced magnetoacoustic emission signal analysis system

Practical activites within the subject

Not applicable

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