GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Engineering diploma project I, PG_00063668						
Field of study	Nanotechnology						
Date of commencement of studies	October 2024		Academic year of realisation of subject	2026/2027			
Education level	first-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	3		Language of instruction	Polish			
Semester of study	6		ECTS credits	4.0			
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	0.0	30.0	15.0	45
	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	45		10.0	45.0	100	
Subject objectives	The aim of the course is: 1. preparing students to complete an engineering diploma project, including: engineering and non-engineering aspects, proper and critical selection of source materials, literature review, planning and implementing the experimental or numerical-simulation part of an engineering project; 2. presenting students the diploma examination procedure and preparing them for an oral presentation of the results of the diploma project.						

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_K05] can present effects of their own work, provide information in a clear manner, communicate and self-evaluate, and give constructive feedback on the work of others.	The student has the ability to prepare and orally present the results of their work and participate in discussions, in Polish, on the issues analyzed in the discussed diploma projects. He is able to constructively evaluate his own results and the results of others.	[SK4] Assessment of communication skills, including language correctness
[K6_U11] can prepare dissertations, papers, oral presentations, in Polish and English, concerning detailed problems in physics and related fields and disciplines of science.	The student has the ability to prepare the proper structure of a scientific work and write its introductory part, and is able to prepare a professional presentation template for an oral presentation (in Polish), presenting issues from the diploma project.	[SU5] Assessment of ability to present the results of task [SU4] Assessment of ability to use methods and tools
[K6_U07] can conduct preliminary economic analysis of proposed solutions and undertaken engineering activities within the scope of nanotechnology.	After analyzing a simple research/ technical problem (including the engineering project selected for implementation), the student is able to perform a preliminary economic analysis of planned experiments and activities aimed at solving the problem.	[SU1] Assessment of task fulfilment
[K6_U04] can plan and conduct experiments, critically analyze their results, draw conclusions and formulate opinions. Has laboratory experience.	After getting acquainted with the research problem, the student has the ability to plan an experiment and select the appropriate experimental tools, analyse research results and conduct a critical discussion.	[SU4] Assessment of ability to use methods and tools [SU2] Assessment of ability to analyse information

Subject contents

Project:

Part 1.

- Engineering project topic selection, work schedule development;
- Diploma procedure;
- Introduction to issues related to writing a diploma thesis general guidelines and principles for preparing scientific papers.

Part 2.

- Literature databases and other sources: tools for searching databases and creating a literature list, preliminary preparation of a literature review;
- Effective and critical searching of Internet resources;
- Selected tools supporting the preparation of a diploma thesis;
- Artificial intelligence in text editing, information searching, data processingg and analysis;
- Implementation of the engineering diploma project tasks in accordance with the developed work schedule..

Seminar:

- Introduction - diploma presentation: elements of the presentation, the way of presenting the content and scientific results;
- Preparation of a presentation template;
- Students oral presentation - presentation and discussion of the preliminary results of the diploma project,

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Preparing and delivering a diploma presentation	50.0%	40.0%
P1. Consultation with supervisors, project schedule preparation; P2. Literature review; implementation of assigned tasks	50.0%	60.0%

Recommended reading

Basic literature	Hugh G. Gauch Jr., Scientific Methods in Brief, Cambridge University Press, 2012

	Supplementary literature	PN-ISO 690, 2012 "Information and documentation - Guidelines of bibliographic footnotes and references to information resources" Scientific literature and specialist reports related to the diploma project.
	eResources addresses	
Example issues/ example questions/ tasks being completed	Preparation of detailed schedule for implementation of engineering project. Present your project/idea in the most attractive form for the "investor". Find the original source of requested information and determine if and what is fake news	
Work placement	Not applicable	

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