



Subject card

Subject name and code	Concept Design in Nanotechnology, PG_00069340						
Field of study	Nanotechnology						
Date of commencement of studies	October 2024		Academic year of realisation of subject		2025/2026		
Education level	first-cycle studies		Subject group		Obligatory subject group 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	4		ECTS credits		2.0		
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		prof. dr hab. inż. Wojciech Sadowski				
	Teachers		prof. dr hab. inż. Wojciech Sadowski				
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	0.0	30
	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	30		3.0		17.0	50
Subject objectives	The aim of the course is to familiarize students with the principles of implementing team projects while taking into account various aspects of nanotechnology.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_U71] is able to apply knowledge from humanistic, social, economic or legal sciences in order to solve problems in a social environment		The student is able to apply knowledge of economic sciences to solve problems in the social environment.		[SU1] Assessment of task fulfilment		
	[K6_K04] can cooperate and work in a team, adopting different roles.		The student is able to cooperate and work in a group, assuming various roles.		[SK1] Assessment of group work skills		
	[K6_W71] has general knowledge in humanistic, social, economic or legal sciences		The student has general knowledge in the field of economic sciences.		[SW3] Assessment of knowledge contained in written work and projects		
Subject contents	An introductory lecture on the current state and prospects of civilizational development. Introduction to project management. Intellectual property protection. Patent protection for project elements. Project analysis: need and desirability, assessment of project implementation capacity. Selection of project topic, determination of team members and leaders. Development of the project concept and schedule (Gantt chart). Project monitoring, consultations on design element solutions, and reporting. Preparation of the project study. Project presentation. Project evaluation.						
Prerequisites and co-requisites	Course: Introduction to Nanotechnology.						
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	Evaluation of presentations and project documentation.		100.0%		100.0%		

Recommended reading	Basic literature	<p>Springer Handbook of Nanotechnology. Bharat BhushanSpringer-Verlag Berlin and Heidelberg GmbH & Co. KG</p> <p>Introduction to Project Management. Javid Hamdard</p> <p>https://www.academia.edu/19956521/Introduction_to_Project_Management</p>
	Supplementary literature	Springer Handbook of Nanotechnology. Bharat BhushanSpringer-Verlag Berlin and Heidelberg GmbH & Co. KG
	eResources addresses	
Example issues/ example questions/ tasks being completed	<p>Suggested project topics:</p> <ol style="list-style-type: none"> 1. Energy-efficient house using nanotechnology elements. 2. Application of nanomaterials in construction (facades, energy passivity). 3. Seawater purification and desalination system (for the Baltic Sea). 4. Thermal and antibacterial clothing. 5. Devices for people with disabilities. 6. Sports equipment (type to be determined). 7. Backpack using nanotechnology solutions. 8. Student-designed project. 	
Work placement	Not applicable	

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