



Subject card

Subject name and code	Group project, PG_00052039						
Field of study	Nanotechnology						
Date of commencement of studies	October 2023		Academic year of realisation of subject		2024/2025		
Education level	second-cycle studies		Subject group		Optional subject group		
Mode of study	Full-time studies		Mode of delivery		at the university		
Year of study	2		Language of instruction		English		
Semester of study	3		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						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. inż. Agnieszka Witkowska				
	Teachers		dr hab. inż. Agnieszka Witkowska				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	0.0	60.0	0.0	60
	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	60		5.0		35.0	100
Subject objectives	Preparing to work in a group by carrying out a project consisting of a team analysis of the problem, presenting a proposal of a solution of the problem, performing tests/measurements and preparing a report and presentation on the team's work results.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	K7_K03		The student is able to cowork and work in a 2-3-person team and to develop and prepare in a group a report and presentation of the results obtained during the project realization. The multi-stage and complexity of project tasks allows students to assume various roles in the team.		[SK1] Assessment of group work skills [SK4] Assessment of communication skills, including language correctness [SK3] Assessment of ability to organize work		
	K7_W06		The student has an extended knowledge needed to work in a physical laboratory, to carry out research, measurements and engineering work related to the project tasks.		[SW3] Assessment of knowledge contained in written work and projects		
	K7_U01		The student is able to analyze the problem define in the project and is able to prepare proposals for its solution/realization, based on self-obtained and compiled information from literature, databases and other available sources (available mainly in English).		[SU1] Assessment of task fulfilment [SU2] Assessment of ability to analyse information		
	K7_U07		The student can apply the acquired specialist knowledge to the implementation of multidisciplinary project tasks.		[SU1] Assessment of task fulfilment		
Subject contents	The realized group projects concern issues in the field of experimental and computational nanotechnology and material engineering.						
Prerequisites and co-requisites							

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Preparation of the slideshow and oral presentation of the project results	100.0%	20.0%
	Project realization and preparation of the report	100.0%	80.0%
Recommended reading	Basic literature	Scientific literature and specialist reports related to the group project.	
	Supplementary literature	Scientific literature and specialist reports related to the group project.	
	eResources addresses	Adresy na platformie eNauczanie: Group project NT2-eng. 2024 - Moodle ID: 37669 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=37669	
Example issues/ example questions/ tasks being completed	1. Fabrication of metal nanostructures using AFM lithography. 2. A computer program for generating initial structure of penta-graphene nanotubes. 3. Resorbability study of calcium phosphate based bioglasses and bioceramics. 4. Macroscopic mechanical models of molecular auxetics. 5. The microscopic beauty of air pollution. 6. Baltic amber (succinite) and other fossil resins. 7. Design, construction and testing of free-standing structures for electroanalytical applications, made with the use of 3D printing. 8. Characteristics of thin CVD-grown films on RVC electrodes for the use in an electrolyzer.		
Work placement	Not applicable		

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