GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Nanotechnology methods in science and technology, PG_00038594		
Field of study	Nanotechnology		
Date of commencement of studies	October 2021	Academic year of realisation of subject	2024/2025
Education level	first-cycle studies	Subject group	
Mode of study	Full-time studies	Mode of delivery	at the university
Year of study	4	Language of instruction	Polish
Semester of study	7	ECTS credits	1.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Solid State Physics -> Faculty of Applied Physics and Mathematics		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. inż. Aleksandra Mielewczyk-Gryń	
	Teachers	dr hab. inż. Aleksandra Mielewczyk-Gryń	

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	15.0	0.0	0.0	0.0	0.0	15

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	15	0.0	0.0	15

Subject objectives

The aim of a class is to present students the different applications of nanotechnology methods e.g. history or biology.

Learning outcomes

Course outcome	Subject outcome	Method of verification
K6_W06	Has knowledge of the physical and chemical foundations of nanotechnology necessary to analyze the results of experimental measurements.	[SW1] Assessment of factual knowledge
K6_W07	Has knowledge of nanotechnology methods used in other fields of science.	[SW3] Assessment of knowledge contained in written work and projects [SW2] Assessment of knowledge contained in presentation

Subject contents

- Calorimetry
- Microscopy
- Resonance methods
- Spectroscopic methods
- Ion scattering methods
- Electrochemical methods

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Essay	51.0%	50.0%
Test	51.0%	50.0%

Recommended reading

Basic literature	Experimental Methods in the Physical Sciences

	Supplementary literature	scientific papers eg: J Biomol Tech. 2010 Dec; 21(4): 167193. Hyperfine Interactions 154: 159176, 2004 Proc Natl Acad Sci U S A. 2013 Apr 23; 110(17): 66516656
	eResources addresses	Adresy na platformie eNauczanie: Metody badawcze nanotechnologii w innych dziedzinach nauki i techniki - Moodle ID: 41146 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=41146
Example issues/ example questions/ tasks being completed	- Proteins denaturation analysis. - Microscopy in archeology. - photoelectric effect and it's applications	
Work placement	Not applicable	

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