



## Subject card

Subject name and code	Nanotechnology in Medicine, PG_00040973						
Field of study	Biomedical Engineering, Biomedical Engineering, Biomedical Engineering						
Date of commencement of studies	October 2022	Academic year of realisation of subject				2022/2023	
Education level	second-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	1	Language of instruction				Polish	
Semester of study	2	ECTS credits				2.0	
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		prof. dr hab. inż. Bogusław Kusz				
	Teachers		prof. dr hab. inż. Bogusław Kusz dr hab. inż. Jakub Karczewski				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	15.0	0.0	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		4.0		16.0	50
Subject objectives	The goal is to broaden knowledge about the use of nanotechnology in medicine.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K7_W02] Knows and understands, to an increased extent, selected laws of physics and physical phenomena, as well as methods and theories explaining the complex relationships between them, constituting advanced general knowledge in the field of technical sciences related to the field of study		The student knows some physical phenomena as well as methods and theories explaining the complex relationships between them.		[SW2] Assessment of knowledge contained in presentation		
	[K7_U51] can conduct complex laboratory work connected with chemistry and biochemistry, specific to biomedical engineering		The student knows how to use the basic research methods in the field of research of living objects.		[SU2] Assessment of ability to analyse information		
	[K7_U52] can examine tissues, materials and biomaterials used in biomedical engineering		Student umie skorzystać z mikroskopii AFM i SEM w celu zbadania tkanek.		[SU3] Assessment of ability to use knowledge gained from the subject		
Subject contents	Everything at the interface between nanotechnology and medicine						
Prerequisites and co-requisites	Basics of nanotechnology						
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	Lab		51.0%		51.0%		
	Lecture		51.0%		49.0%		
Recommended reading	Basic literature		internet				
	Supplementary literature		internet				
	eResources addresses						
Example issues/example questions/tasks being completed	Nanotechnology in the treatment of cancer. Nanotechnology in regenerative medicine. Risks resulting from the use of nanotechnology						

