



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	February 2023	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	1	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	dr hab. inż. Jakub Karczewski prof. dr hab. inż. Bogusław Kusz					
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_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		
	[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		
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		
	Lecture	51.0%			49.0%		
	Lab	51.0%			51.0%		
Recommended reading	Basic literature	internet					
	Supplementary literature	internet					

	eResources addresses	Adresy na platformie eNauczenie: Nanotechnologia w Medycynie. - Moodle ID: 24442 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=24442
Example issues/ example questions/ tasks being completed	Nanotechnology in the treatment of cancer. Nanotechnology in regenerative medicine. Risks resulting from the use of nanotechnology	
Work placement	Not applicable	