



## Subject card

Subject name and code	Polymeric Biomaterials, PG_00039684						
Field of study	Materials Engineering, Materials Engineering, Materials Engineering						
Date of commencement of studies	February 2023		Academic year of realisation of subject		2023/2024		
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 Polymers Technology -> Faculty of Chemistry						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. inż. Justyna Kucińska-Lipka				
	Teachers		dr hab. inż. Justyna Kucińska-Lipka				
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		5.0		15.0	50
Subject objectives	The aim of the course is to familiarize students with the types of polymeric biomaterials and their application.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	K7_K02		The student knows what is biocompatibility, how to study it and what is important in the design of materials for medicine		[SK1] Assessment of group work skills [SK5] Assessment of ability to solve problems that arise in practice		
	K7_U06		The student knows the methods of producing materials for use in medicine, e.g. regenerative		[SU5] Assessment of ability to present the results of task		
	K7_W01		The student knows what polymeric biomaterials are and knows their division and importance in medicine		[SW1] Assessment of factual knowledge		
Subject contents	Classification of polymeric biomaterials based on their origin, Classification of polymer materials due to their use The use of polymeric biomaterials in dentistry Application of polymeric biomaterials in regenerative medicine Application of polymeric biomaterials in cardiac surgery The use of polymeric biomaterials in orthopedics						
Prerequisites and co-requisites	Basic knowledge of polymer chemistry,						
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	laboratory		60.0%		40.0%		
	passing the lecture		60.0%		60.0%		

Recommended reading	Basic literature	Maria Cristina Tanzi  Silvia Farè" Characterization of Polymeric Biomaterials" Elsevier 2017
	Supplementary literature	Torbicz W. "Inżynieria biomedyczna" tom 4. Biomateriały PAN
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed	Designing a material that would support the regeneration of cartilage	
Work placement	Not applicable	