



Subject card

Subject name and code	Implants and endoprotheses, PG_00055770						
Field of study	Mechanical and Medical Engineering						
Date of commencement of studies	October 2023		Academic year of realisation of subject		2025/2026		
Education level	first-cycle studies		Subject group		Obligatory subject group in the field of study 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	3		Language of instruction		Polish		
Semester of study	6		ECTS credits		3.0		
Learning profile	general academic profile		Assessment form		exam		
Conducting unit	Institute of Manufacturing and Materials Technology -> Faculty of Mechanical Engineering and Ship Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. inż. Beata Świczko-Żurek				
	Teachers						
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	0.0	15.0	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		10.0		35.0	75
Subject objectives	The aim of the course is to show the differences between an implant and an endoprosthesis. Learning to design a simple implant, along with the selection of material and coating.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_K02] he/she is aware of importance of professional dealing and to fulfill ethics obligations, he/she understands other (non-technical) abilities of mechanical engineering professional, their influence on the society and security of environment, he/she is aware of importance of social cooperation		The student is able to work in a team.		[SK3] Assessment of ability to organize work [SK5] Assessment of ability to solve problems that arise in practice [SK1] Assessment of group work skills		
	[K6_W13] he/she has knowledge related to application of engineering approaches in medicine or application of medical devices and rehabilitation devices		Can design a simple medical device.		[SW3] Assessment of knowledge contained in written work and projects		
	[K6_U10] he/she is able to assess the human body physic and basic functioning of the body organs, he/she is able to use basic medical knowledge to solve mechanical-medical problems in the scope of the MME study		The student has knowledge of the anatomy and functioning of the human body.		[SU2] Assessment of ability to analyse information [SU3] Assessment of ability to use knowledge gained from the subject		
Subject contents	Lecture: materials for implants and endoprotheses, types for specific medical fields, coatings.						
	Project: Selection of material and design of the implant and endoprosthesis for an indywidual patient.						
Prerequisites and co-requisites	Completed material science course.						

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Lecture, project	80.0%	100.0%
Recommended reading	Basic literature	English-language articles	
	Supplementary literature	-	
	eResources addresses	Adresy na platformie eNauczanie:	
Example issues/ example questions/ tasks being completed	1. Material selection for a specific implant, endoprosthesis for an individual patient. 2. Selection of a coating for a specific implant, endoprosthesis for an individual patient. 3. Design of the implant and endoprosthesis for an individual patient.		
Work placement	Not applicable		