GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	, PG_00056100		
Field of study	Mechanical and Medical Engineering		
Date of commencement of studies	October 2021	Academic year of realisation of subject	2023/2024
Education level	first-cycle studies	Subject group	
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	2.0
Learning profile	general academic profile	Assessment form	assessment
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 Świeczko-Żurek	
	Teachers		

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	0.0	0.0	30

Subject objectives

The aim of the course is the selection of materials for dental implants and antibacterial coatings for an individual patient and the production of a specific material.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_W04] he/she has skills in the field mechanical testing of materials used in engineering and mechanical-medical area	Has knowledge of dental materials and their production` technology.	[SW3] Assessment of knowledge contained in written work and projects
[K6_W07] he/she is able to design, manufacture and utilize machine parts and technical devices, he/she can prepare a technical documentation	He can design a dental implant with a coating.	[SW3] Assessment of knowledge contained in written work and projects
[K6_K01] he/she knows his/her proficiencies and his/her limitations in performing professional tasks, he/she is aware of needing to improve his/her skills through the whole life, he/she has entrepreneurship and innovation skills, he/she is aware of engineering skills from the society point of view	The student is able to use the acquired knowledge in the field of mechanical and medical engineering.	[SK3] Assessment of ability to organize work [SK5] Assessment of ability to solve problems that arise in practice [SK2] Assessment of progress of work
[K6_W13] he/she has knowledge related to application of engineering approaches in medicine or application of medical devices and rehabilitation devices	The student has knowledge of materials for dentistry.	[SW2] Assessment of knowledge contained in presentation [SW3] Assessment of knowledge contained in written work and projects
[K6_U07] he/she is able to identify the problem and list simple engineering tasks to solve this problem in practice, he/she is able to critically analyze the proposed technical solutions and conclude whether these solutions can be implemented to solve problems related to design of mechanical devices and mechanical-medical devices	The student is able to use the available tools and analyze the existing solution.	[SU2] Assessment of ability to analyse information [SU3] Assessment of ability to use knowledge gained from the subject

Subject contents	Lecture: getting to know the materials used in dentistry, coatings used for dental implants. Laboratory: creating and applying coatings on dental implants.
Prerequisites and co-requisites	Completed material science course.
Assessment methods and criteria	

Subject passing criteria	Passing threshold	Percentage of the final grade
Lecture, laboratory	70.0%	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. Materials used for dental implants. 2. Antibacterial coatings	
Work placement	Not applicable	

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