

## 。 GDAŃSK UNIVERSITY OF TECHNOLOGY

## Subject card

Subject name and code	Materials and technologies I, PG_00039695							
Field of study	Materials Engineering, Materials Engineering							
Date of commencement of studies	February 2024		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	1		ECTS credits			4.0		
Learning profile	general academic profile		Assessment form			exam		
Conducting unit	Department Of Corrosion And Electrochemistry -> Faculty Of Chemistry -> Wydziały Politechr				iały Politechni	ki Gdańskiej		
Name and surname	Subject supervisor		prof. dr hab. inż. Juliusz Orlikowski					
of lecturer (lecturers)	Teachers							
Lesson types and methods	Lesson type	Lecture	Tutorial	Laboratory	Projec	t	Seminar	SUM
of instruction	Number of study hours	30.0	0.0	30.0	0.0		0.0	60
	E-learning hours inclu	E-learning hours included: 0.0						
Learning activity and number of study hours	Learning activity	Participation in classes includ plan	n didactic ed in study	Participation in consultation hours		Self-study		SUM
	Number of study 60 hours			5.0		35.0		100
Subject objectives	The aim of the course is to provide knowledge about technology in the food industry, water systems, corrosion protection with protective coatings and electrochemical protection.							
Learning outcomes	Course outcome Subject outcome Method of verificati					fication		
	K7_W04		The student acquires knowledge about construction materials and their physical and chemical properties			[SW1] Assessment of factual knowledge		
	K7_U01		The student obtains information about Polish and foreign standards for the classification of materials			[SU1] Assessment of task fulfilment		
	K7_K01		Knowledge based on theoretical data and laboratory classes			[SK2] Assessment of progress of work		
	K7_U04		Knowledge of the ability to read technical documentation			[SU1] Assessment of task fulfilment		
	K7_W01		Obtaining practical knowledge needed in the implementation of work after graduation			[SW1] Assessment of factual knowledge		
Subject contents	Presentation of water treatment technology, construction of pipelines, construction materials. Presentation of corrosion hazards: general corrosion, corrosion under deposists, corrosion, zinc coating. Overview of fruit juice and beer technology. Presentation of corrosion hazards in the food industry and discussion of construction materials. Overview of electrochemical protection and coating protection.							
Prerequisites and co-requisites	knowledge of organic technology and corrosion protection technologies							
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade			
	Exam		60.0%			100.0%		

Recommended reading	Basic literature	L.L. Shreir, Corrosion, Newnes-Butterworths, 1976 Karl Weber, Food Inc., A Participant Guide: How Industrial Food is Making Us Sicker, Fatter, and Poorer-And What You Can Do About It				
	Supplementary literature	A Participant Guide: How Industrial Food is Making Us Sicker, Fatter, and Poorer-And What You Can Do About It				
	eResources addresses	Adresy na platformie eNauczanie:				
Example issues/ example questions/ tasks being completed	Principles of electrochemical protection, coating protection, corrosion hazards in the food industry					
Work placement	Not applicable					

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