



Subject card

Subject name and code	Polymers in protection against corrosion, PG_00060319						
Field of study	Materials Engineering						
Date of commencement of studies	October 2023		Academic year of realisation of subject		2025/2026		
Education level	first-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	3		Language of instruction		Polish		
Semester of study	5		ECTS credits		1.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Department of Corrosion and Electrochemistry -> Faculty of Chemistry -> Faculties of Gdańsk University of Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. inż. Michał Szociński				
	Teachers		dr hab. inż. Michał Szociński				
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	0.0	0.0	0.0	15
	E-learning hours included: 0.0						
	eNauczanie source addresses: Moodle ID: 46888 Polimery w ochronie przed korozją https://enauczanie.pg.edu.pl/moodle/course/view.php?id=46888						
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	15		2.0		8.0	25
Subject objectives	The subject provides student with the knowledge about the main anticorrosion protection technologies, which involve polymers or polymer-based materials.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_W08] Has fundamental knowledge of the development trends in the fields of science and scientific disciplines relevant to materials engineering.		Student can select polymer material for anticorrosion protection in particular service conditions.		[SW1] Assessment of factual knowledge		
	[K6_W07] Has detailed knowledge of selected problems of materials science.		Student knows about the possibilities of application of polymer materials for anticorrosion protection of industrial structures and installations. The student has knowledge on advantages and limitations of these materials.		[SW1] Assessment of factual knowledge		
Subject contents	Course content – lecture Types of polymers used for anticorrosion protection. Testing polymers for degradation resistance. Modification of the properties of polymer materials Paints, lacquers, composites. Organic coatings: types, application, mechanisms of protection.						

Prerequisites and co-requisites	Knowledge about fundamentals of corrosion and chemistry of polymers.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	final test	60.0%	100.0%
Recommended reading	Basic literature	A. Miszczyk, M. Szociński, K. Darowicki, Powłoki malarskie w ochronie przeciwkorozyjnej. Zasady stosowania i kontrola jakości, Wydawnictwo Politechniki Gdańskiej, 2022. W. Przychodzeń, K. Darowicki, Charakterystyka chemiczna żywic i rozpuszczalników do farb oraz powłok ochronnych, Wydawnictwo Politechniki Gdańskiej, 2011. M. Żenkiewicz, M. Stepczyńska, T. Karasiewicz, K. Moraczewski, P. Rytlewski, Metody badań i oceny niektórych właściwości tworzyw polimerowych i metali, Uniwersytet Kazimierza Wielkiego, 2012.	
	Supplementary literature	K. Żakowski, K. Darowicki, Ochrona katodowa konstrukcji metalowych podziemnych i zanurzonych, Wydawnictwo Politechniki Gdańskiej, 2011	
	eResources addresses		
Example issues/ example questions/ tasks being completed	Methods of accelerated aging of polymers. Influence of cathodic protection on organic coatings. Rules of selection of coating materials.		
Practical activities within the subject	Not applicable		

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