



Subject card

Subject name and code	Corrosion protection technologies, PG_00060756						
Field of study	Technologie ochrony przed korozją						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2027/2028		
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	6		ECTS credits		4.0		
Learning profile	general academic profile		Assessment form		exam		
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. Krzysztof Żakowski				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	0.0	30.0	0.0	0.0	60
	E-learning hours included: 0.0						
	eNauczanie source address: https://enauczanie.pg.edu.pl/moodle/course/view.php?id=15128						
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	60		5.0		35.0	100
Subject objectives	Acquiring the ability to select corrosion protection techniques depending on the operating conditions of the structure.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_U03] Uses chemical knowledge to design compounds, perform physicochemical and analytical measurements, and obtain appropriate sources of information.		The student is able to perform basic electrochemical measurements used in corrosion testing.		[SU1] Ocena realizacji zadania		
	[K6_U08] Is able to select elements of automatic control systems for simple technological processes and use computer programs to control and optimize chemical processes.		The student is able to use corrosion monitoring methods.		[SU4] Ocena umiejętności korzystania z metod i narzędzi		
	[K6_W07] Has knowledge of raw materials and technologies in the chemicaland polymer industries, also covering issues of corrosion and material protection.		The student has knowledge of construction materials used in the chemical industry and their corrosion.		[SW3] Ocena wiedzy zawartej w opracowaniu tekstowym i projektowym		
	[K6_U04] Is able to recognize and apply polymer processing methods, analyze corrosion processes of construction materials in the design of installations, taking into account systemic and non-technical aspects.		The student is able to select a method of protecting structures against corrosion depending on the existing corrosion risks.		[SU3] Ocena umiejętności wykorzystania wiedzy uzyskanej w ramach przedmiotu		

Subject contents	Course content – lecture <ul style="list-style-type: none">• Coating protection: types of coatings, application methods, control methods.• Electrochemical protection: cathodic and anodic.• Inhibitor protection: classification of corrosion inhibitors, application.• Selection of construction materials: overview of modern construction materials used in industrial installations.• Corrosion monitoring.		
	Course content – laboratory <ol style="list-style-type: none">1. Testing of paint and varnish components.2. Testing of paint products.3. Testing of paint coatings and polymer linings.4. Effectiveness of corrosion inhibitors.5. Temporary protection measures.6. Cathodic protection of steel.7. Anodic protection of stainless steel.8. Resistance of construction materials in various environments.9. Corrosion monitoring.		
Prerequisites and co-requisites	Knowledge of the basics of corrosion.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	completion of laboratory work	100.0%	50.0%
	completion of lectures	60.0%	50.0%
Recommended reading	Basic literature	not applicable	
	Supplementary literature	not applicable	
	eResources addresses		
Example issues/ example questions/ tasks being completed	Coating, inhibitor, and cathodic protection. Selection of construction materials. Corrosion monitoring.		
Practical activities within the subject	Not applicable		

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