GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Corrosion of industrial buildings, PG_00069272		
Field of study	Corrosion		
Date of commencement of studies	February 2025	Academic year of realisation of subject	2025/2026
Education level	second-cycle studies	Subject group	
Mode of study	Full-time studies	Mode of delivery	at the university
Year of study	1	Language of instruction	Polish
Semester of study	2	ECTS credits	3.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Corrosion and Electrochemistry -> Faculty of Chemistry -> Wydziały Politechniki Gdańskiej		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. inż. Stefan Krakowiak	
	Teachers		

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	15.0	0.0	30.0	0.0	0.0	45

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	45	5.0	25.0	75

Subject objectives

The aim of the subject is to present characteristic types of corrosion occurring on selected industrial objects. Various concepts of protecting these objects from corrosion will also be presented.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K7_U02] conducts experiments using properly selected techniques and apparatus, taking advantage of new developments in corrosion and related fields	The student is able to assess the accuracy of the selection of corrosion reduction technologies in laboratory conditions using electrochemical and spectroscopic methods. Selects and checks the effectiveness of methods of corrosion protection of industrial installations.	[SU1] Assessment of task fulfilment [SU4] Assessment of ability to use methods and tools
[K7_W01] defines the phenomena and processes used to produce consumer goods and run services	The student is able to evaluate the proposed solutions in comparison with those used in the economy.	[SW3] Assessment of knowledge contained in written work and projects
[K7_K01] critically evaluates the content of scientific and practical problems	The student is able to analyze the obtained literature information and transfer the acquired knowledge to the practice of anti-corrosion protection.	[SK5] Assessment of ability to solve problems that arise in practice

Subject contents

Corrosion hazards in sozotechnical installations.
Corrosion in the chemical industry.
Corrosion of materials used in the food industry.
Analysis of the corrosiveness of environments causing corrosion.
Research and assessment of corrosion damage.
Elements of creating a corrosion expertise.

Prerequisites and co-requisites

Knowledge of the basics of corrosion and the basics of anti-corrosion protection. Knowledge of organic and inorganic chemical technology.

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Passing the labs	60.0%	50.0%
Passing lectures	60.0%	50.0%

Recommended reading	Basic literature	R. Juchniewicz, Anti-Corrosion Technology vol. 1 - vol. 2 A. Miszczyk, M. Szociński, K. Darowicki, Paint coatings in anti-corrosion protection. Principles of application and quality control. K. Żakowski, K. Darowicki, Cathodic Protection
	Supplementary literature	RAMESH SINGH, CORROSION CONTROL FOR OFFSHORE STRUCTURES: Cathodic Protection and High-Efficiency, K. ELAYAPERUMAL, V.S. RAJA, CORROSION FAILURES Theory, Case Studies, and Solutions.
	eResources addresses	
Example issues/ example questions/ tasks being completed	What factors affect corrosion in flue gas desulfurization installations; Factors affecting corrosion of stainless steels, Corrosion hazards of sulfuric acid storage tanks; Intercrystalline corrosion of welded joints - case study; Corrosion of installations in conditions of condensation of aggressive substances.	
Work placement	Not applicable	

Document generated electronically. Does not require a seal or signature.