



## Subject card

Subject name and code	Analysis of Corrosion Damage, PG_00039701						
Field of study	Materials Engineering, Materials Engineering, Materials Engineering						
Date of commencement of studies	February 2023		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	2		ECTS credits		3.0		
Learning profile	general academic profile		Assessment form		exam		
Conducting unit	Department of Electrochemistry, Corrosion and Materials Engineering -> Faculty of Chemistry						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. inż. Paweł Ślepski				
	Teachers		dr hab. inż. Paweł Ślepski				
			dr hab. inż. Stefan Krakowiak				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	0.0	0.0	30.0	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 student properly investigates objects damaged by the corrosion processes. The student is able to prepare analysis of corrosion damage report.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	K7_U01		The student knows the sources of data necessary for the analysis of corrosion damage and is able to use them properly		[SU2] Assessment of ability to analyse information		
	K7_K02		102/5000 The student is aware of the rules of conduct and professional ethics resulting from engineering activities.		[SK5] Assessment of ability to solve problems that arise in practice		
	[K7_K82] is equipped to participate actively in lectures, seminars and laboratory classes conducted in foreign language		The student knows the English terminology in the field of corrosion		[SK4] Assessment of communication skills, including language correctness		
	K7_W04		The student presents typical dangers for material caused by the given environment		[SW1] Assessment of factual knowledge		
Subject contents	Analysis of corrosion damages generated by different corrosion processes (general corrosion, galvanic corrosion, pitting corrosion, crevice corrosion, intergranular corrosion, stress corrosion cracking, etc.). General description of particular corrosion processes. Review of common places of corrosion damages in industrial systems. Methods of failure analysis. Elements of prevention. Presentation of data base of corrosion damages.						
Prerequisites and co-requisites	Understanding of the theoretical basis of the corrosion processes. Understanding of the non-destructive techniques.						
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	written exam		50.0%		60.0%		
	report		100.0%		40.0%		

Recommended reading	Basic literature	<a href="https://enauczanie.pg.edu.pl">https://enauczanie.pg.edu.pl</a>  e-korozja
	Supplementary literature	1. Practical Engineering Failure Analysis, H.M. Tawancy, A. Ul-Hamid, N.M. Abbas, Marcel Dekker, New York 2004 2. Fundamentals of Metallic Corrosion, P.A. Schweitzer, CRC Press, New York 2006
	eResources addresses	Adresy na platformie eNauczenie: Analiza uszkodzeń korozyjnych - Moodle ID: 34357 <a href="https://enauczanie.pg.edu.pl/moodle/course/view.php?id=34357">https://enauczanie.pg.edu.pl/moodle/course/view.php?id=34357</a>
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	