



Subject card

Subject name and code	, PG_00039725						
Field of study	Materials Engineering, Materials Engineering, Materials Engineering, Materials Engineering						
Date of commencement of studies	October 2020	Academic year of realisation of subject			2022/2023		
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			6.0		
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		prof. dr hab. inż. Kazimierz Darowicki				
	Teachers						
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	45.0	0.0	30.0	0.0	0.0	75
	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	75		5.0		70.0	150
Subject objectives	protection against corrosion of basic construction materials						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	K6_K01	the student is able to work in a team			[SK5] Assessment of ability to solve problems that arise in practice [SK3] Assessment of ability to organize work		
	K6_W06	the student has basic knowledge of corrosion protection			[SW3] Assessment of knowledge contained in written work and projects		
	K6_U01	the student is able to work in a team			[SU3] Assessment of ability to use knowledge gained from the subject [SU4] Assessment of ability to use methods and tools		
	K6_W04	the student knows the basic research techniques in protection against corrosion			[SW1] Assessment of factual knowledge		
	K6_U03	the student understands the impact of corrosion on the environment			[SU4] Assessment of ability to use methods and tools		
Subject contents	Lecture: -Coating protection: coatings types, application methods, control methods. -Cathodic and anodic protection. -Inhibitor protection: types and application of corrosion inhibitors. -Construction materials choice: modern industry construction materials review. -Corrosion monitoring. Laboratory: 1.Examination of paints and lacquers components. 2.Examination of paint products. 3.Examination of paint coatings and polymer linings. 4.Corrosion inhibitors efficiency. 5.Temporary protectives. 6.Cathodic protection of steel. 7.Anodic protection of stainless steels. 8.Corrosion resistance of construction materials in various environments. 9.Corrosion monitoring.						
Prerequisites and co-requisites	Knowledge of corrosion basics.						
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	lab	60.0%		50.0%			
	lecture	60.0%		50.0%			

Recommended reading	Basic literature	W.v.Baeckmann, W.Schwenk, W.Prinz, Handbook of cathodic corrosion protection, Elsevier Science USA, 1997. N.Perez, Electrochemistry and corrosion science, Kluwer Academic Publishers, Boston, 2004.
	Supplementary literature	-William D. Corbett, Using Coatings Inspections Instruments, A KTA-Tator, Ins. Publication,-Electrochemical protection against corrosion (collective work edited by J. Ostaszewicza), WNT, W-wa, 1991
	eResources addresses	Adresy na platformie eNauczenie:
Example issues/ example questions/ tasks being completed	<ol style="list-style-type: none"> 1. Division of corrosion inhibitors 2. Cathodic protection criteria 3. Coating adhesion test methods. 	
Work placement	Not applicable	