GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	INSPECTION OF CATHODIC PROTECTION SYSTEMS, PG_00064363		
Field of study	INSPEKCJA SYSTEMÓW OCHRONY KATODOWEJ		
Date of commencement of studies	February 2025	Academic year of realisation of subject	2025/2026
Education level	second-cycle studies	Subject group	Obligatory subject group in the field of study Specialty 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	4.0
Learning profile	general academic profile	Assessment form	exam
Conducting unit	Department of Corrosion and Electrochemistry -> Faculty of Chemistry -> Wydziały Politechniki Gdańskiej		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. inż. Krzysztof Żakowski	
	Teachers	dr hab. inż. Krzysztof Żakowski	

Lesson types

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

eNauczanie source address: https://enauczanie.pg.edu.pl/moodle/course/view.php?id=24458

Moodle ID: 24458 Inspekcja systemów ochrony katodowej 2025/26 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=24458

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	10.0	45.0	100

Subject objectives

Mastering the basic measurement methods used during the operation of cathodic protection systems.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K7_U07] includes ethical issues and regulations in research planning and design of products and processes	Student is able to make responsible decisions in their research work.	[SU2] Ocena umiejętności analizy informacji
[K7_U04] predicts the properties of the materials obtained and the processes involving them, based on knowledge of corrosion and related fields	Student is able to evaluate the effectiveness of the cathodic protection of metal structures.	[SU3] Ocena umiejętności wykorzystania wiedzy uzyskanej w ramach przedmiotu
[K7_K02] understands the non-technical aspects and implications of graduate activity, including the impact on the environment	The student understands that an engineer's actions can have a positive impact on the natural environment.	[SK5] Ocena umiejętności rozwiązywania problemów występujących w praktyce
[K7_W06] integrates knowledge from different disciplines, principles of intellectual property protection and patent law, relevant for appropriate interpretation and application in scientific, sustainable economic activities	Student knows the technologies for implementing cathodic protection of underground and underwater structures.	[SW1] Ocena wiedzy faktograficznej

Subject contents

- Measurement of the ON and OFF-potential.
- Measurement of the output paraqmeters of the cathodic protection station.
- Measurement of anode system resistance.
- Measurement of current flowing through the pipeline.
- Location of underground pipelines.
- Location of underground pipeline insulation defects.

<table>
<tr><td>Prerequisites and co-requisites</td><td colspan="3">General knowledge of electrical engineering. Basic knowledge of cathodic protection.</td></tr>
<tr><td>Assessment methods and criteria</td><td colspan="3"><table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>laboratory</td><td>60.0%</td><td>50.0%</td></tr>
<tr><td>test</td><td>60.0%</td><td>50.0%</td></tr>
</table></td></tr>
<tr><td rowspan="3">Recommended reading</td><td>Basic literature</td><td colspan="2">not applicable</td></tr>
<tr><td>Supplementary literature</td><td colspan="2">not applicable</td></tr>
<tr><td>eResources addresses</td><td colspan="2"></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td colspan="3">Measurement of the OFF-potential of underground tank.
Measurement of the cathodic protection current.
Measurement of anode system resistance.
Location of underground gas pipeline.</td></tr>
<tr><td>Practical activites within the subject</td><td colspan="3">Not applicable</td></tr>
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