GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Corrosion protection of industrial installations and Risk Based Inspection(RBI), PG_00048867		
Field of study	Engineering and Technologies of Energy Carriers		
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 Subject group related to practical vocational preparation
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	practical profile	Assessment form	assessment
Conducting unit	Department of Electrochemistry, Corrosion and Materials Engineering -> Faculty of Chemistry		
Name and surname of lecturer (lecturers)	Subject supervisor	prof. dr hab. inż. Juliusz Orlikowski	
	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	15.0	0.0	60

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	60	10.0	30.0	100

Subject objectives

Theory of corrosion in the refinery. Knowledge of the API 571 and 581 Standards and correct identyfication of corrosion mechanism in the materials degradation cards.

Learning outcomes

Course outcome	Subject outcome	Method of verification
K7_W08	student is able to design a technological process, choose construction materials	[SW1] Assessment of factual knowledge
K7_U01	Theory of corrosion in the refinery. Knowledge of the API 571 and 581 Standards and correct identyfication of corrosion mechanism in the materials degradation cards.	[SU5] Assessment of ability to present the results of task
K7_W11	student understands the impact of corrosion on the environment	[SW1] Assessment of factual knowledge
K7_U04	Theory of corrosion in the refinery. Knowledge of the API 571 and 581 Standards and correct identyfication of corrosion mechanism in the materials degradation cards.	[SU1] Assessment of task fulfilment

Subject contents

Theoretical knowledge of crude oil refination technology, corrosion processes and construction materials.

Practical skills of various corrosion mechanisms identyfication and basic techniques of corrosion monitoring applied in refinery.

Project based on creation of degradation cards for the atmospheric distillation unit based on chemistry of the stream, working temperatures, construction materials etc.

Prerequisites and co-requisites

Chemistry and chemical engineering

<table>
<tr><td>Assessment methods and criteria</td><td colspan="2"><table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>exam</td><td>60.0%</td><td>70.0%</td></tr>
<tr><td>project</td><td>70.0%</td><td>30.0%</td></tr>
</table></td></tr>
<tr><td rowspan="3">Recommended reading</td><td>Basic literature</td><td>API 571

API 581</td></tr>
<tr><td>Supplementary literature</td><td>none</td></tr>
<tr><td>eResources addresses</td><td>Adresy na platformie eNauczanie:</td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td colspan="2">1. List the corrosion mechanisms of corrosion - high temperature
2. List the corrosion mechanisms causing structural degradation
3. In which refinery units there is a metal dusting mechanism</td></tr>
<tr><td>Work placement</td><td colspan="2">Not applicable</td></tr>
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