

## Subject card

| Subject name and code                       | INSPECTION OF PAINT COATING, PG_00064362   |   |  |            |        |  |         |     |
|---|--|---|--|------------|--------|--|---------|-----|
| 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  |            |        | 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   |            |        | 3.0  |         |     |
| Learning profile                            | general academic profile   |   | Assessment form  |            |        | assessment   |         |     |
| Conducting unit                             | Department of Corrosion and Electro  |   | chemistry -> Faculty of Chemistry ->   |            |        | · Wydziały Politechniki Gdańskiej  |         |     |
| Name and surname                            | Subject supervisor dr hab. inż. Stefan Krakowiak   |   |  |            |        |  |         |     |
| of lecturer (lecturers)                     | Teachers   |   | dr hab. inż. Stefan Krakowiak  |            |        |  |         |     |
| Lesson types and methods of instruction     | Lesson type  | Lecture                                     | Tutorial   | Laboratory | Projec | t  | Seminar | SUM |
|   | Number of study hours  | 15.0  | 0.0  | 30.0       | 0.0    |  | 0.0     | 45  |
|   | E-learning hours inclu   | uded: 0.0                                   |  | i          |        |  |         | +   |
| Learning activity and number of study hours | Learning activity  | Participation in<br>classes include<br>plan |  |            |        | Self-study   |         | SUM |
|   | Number of study hours  | 45  | 5.0  |            | 25.0   |  | 75      |     |
| Subject objectives                          | The aim of the course is to teach students procedures related to the quality testing of work leading to obtaining high-quality coating protection.   |   |  |            |        |  |         |     |
| Learning outcomes                           | Course out   | come  | Subject outcome  |            |        | Method of verification   |         |     |
|   | [K7_U08] assesses the potential for commercialisation of a product or technology based on an analysis of scientific publications and patents   |   | The student is able to use literature resources and databases related to the application and testing of paint coatings.                                |            |        | [SU4] Assessment of ability to use methods and tools [SU3] Assessment of ability to use knowledge gained from the subject [SU2] Assessment of ability to analyse information |         |     |
|   | [K7_K02] understands the non-<br>technical aspects and implications<br>of graduate activity, including the<br>impact on the environment  |   | The student is able to determine the impact of technology on the environment and knows the economic aspects of implementing anti-corrosion protection. |            |        | [SK5] Assessment of ability to solve problems that arise in practice   |         |     |
|   | [K7_W04] recognises scientific,<br>technological, organisational and<br>economic opportunities and<br>constraints in corrosion and<br>related fields   |   | The student is able to select paint coatings to protect structures, taking into account technological possibilities and ecological constraints.        |            |        | [SW1] Assessment of factual knowledge  |         |     |
| Subject contents                            | Lectures: 1. Corrosion and the Basics of Corrosion Protection; 2 - Assessment of Climatic Conditions; 3 - Types of Paints; 4 - Methods for Assessing the Quality of Paint Products; 5 - Assessment of Coating Quality; 6 - The Work of a Paint Inspector; Laboratories: 1 - Practical Assessment of Climatic Conditions; 2 - Testing Paint Coating Thickness; 3 - Testing Paint Coating Tightness; 4 - Testing Surface Cleanliness and Development; 5 - Testing Coating Adhesion; 6 - Conversion of Wet to Dry Coating Thickness, Coverage, and Indicating Paint Requirements. |   |  |            |        |  |         |     |
| Prerequisites and co-requisites             | Basic knowledge of coating protection and methods of quality control of painting works.  |   |  |            |        |  |         |     |
| Assessment methods and criteria             | Subject passing criteria   |   | Passing threshold  |            |        | Percentage of the final grade  |         |     |
|   | practical exam   |   | 90.0%  |            |        | 50.0%  |         |     |
|   | theoretical exam   |   |  |            |        | 50.0%  |         |     |
| Recommended reading                         | Basic literature   | Materials avai                              | Materials available at https://enaucza   |            |        | Strong 1 7 2   |         |     |

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|  | Supplementary literature   | Materials available at https://enauczanie.pg.edu.pl                                     |  |  |  |  |
|--|--|---|--|--|--|--|
|  | eResources addresses   | Basic   |  |  |  |  |
|  |  | https://enauczanie.pg.edu.pl/moodle/course/view.php?id=1130 -<br>Available on e-korozja |  |  |  |  |
|  |  | Supplementary   |  |  |  |  |
|  |  | https://enauczanie.pg.edu.pl/moodle/course/view.php?id=1130 -<br>Available on e-korozja |  |  |  |  |
| Example issues/<br>example questions/<br>tasks being completed | Basics of corrosion and anti-corrosion protection. Assessing climatic conditions in the area where painting work is to be performed. Testing paint coating thickness. Testing paint coating hardness. Abrasive blasting/surface profile. |   |  |  |  |  |
| Work placement   | Not applicable   |   |  |  |  |  |

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