



## Subject card

|                                             |                                                                                                                                                                               |                                                          |                                                                                                                                                                                                                                                     |                                     |         |                                                                                                                                                                                       |     |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Subject name and code                       | CORROSION INHIBITORS, PG_00064349                                                                                                                                             |                                                          |                                                                                                                                                                                                                                                     |                                     |         |                                                                                                                                                                                       |     |
| Field of study                              | INHIBITORY KOROZJI                                                                                                                                                            |                                                          |                                                                                                                                                                                                                                                     |                                     |         |                                                                                                                                                                                       |     |
| Date of commencement of studies             | February 2026                                                                                                                                                                 |                                                          | Academic year of realisation of subject                                                                                                                                                                                                             |                                     |         | 2025/2026                                                                                                                                                                             |     |
| Education level                             | second-cycle studies                                                                                                                                                          |                                                          | Subject group                                                                                                                                                                                                                                       |                                     |         | Obligatory subject group in the field of study<br>Specialty subject group<br>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                           | 1                                                                                                                                                                             |                                                          | ECTS credits                                                                                                                                                                                                                                        |                                     |         | 2.0                                                                                                                                                                                   |     |
| Learning profile                            | general academic profile                                                                                                                                                      |                                                          | Assessment form                                                                                                                                                                                                                                     |                                     |         | assessment                                                                                                                                                                            |     |
| Conducting unit                             | Department of Corrosion and Electrochemistry -> Faculty of Chemistry -> Faculties of Gdańsk University of Technology                                                          |                                                          |                                                                                                                                                                                                                                                     |                                     |         |                                                                                                                                                                                       |     |
| Name and surname of lecturer (lecturers)    | Subject supervisor                                                                                                                                                            |                                                          | dr hab. inż. Stefan Krakowiak                                                                                                                                                                                                                       |                                     |         |                                                                                                                                                                                       |     |
|                                             | Teachers                                                                                                                                                                      |                                                          |                                                                                                                                                                                                                                                     |                                     |         |                                                                                                                                                                                       |     |
| Lesson types                                | Lesson type                                                                                                                                                                   | Lecture                                                  | Tutorial                                                                                                                                                                                                                                            | Laboratory                          | Project | Seminar                                                                                                                                                                               | SUM |
|                                             | Number of study hours                                                                                                                                                         | 15.0                                                     | 0.0                                                                                                                                                                                                                                                 | 0.0                                 | 0.0     | 15.0                                                                                                                                                                                  | 30  |
|                                             | 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                                                                                                                                                         | 30                                                       |                                                                                                                                                                                                                                                     | 5.0                                 |         | 15.0                                                                                                                                                                                  | 50  |
| Subject objectives                          | Teaching students the possibility of using corrosion inhibitors as corrosion protection technology.                                                                           |                                                          |                                                                                                                                                                                                                                                     |                                     |         |                                                                                                                                                                                       |     |
| Learning outcomes                           | Course outcome                                                                                                                                                                |                                                          | Subject outcome                                                                                                                                                                                                                                     |                                     |         | Method of verification                                                                                                                                                                |     |
|                                             | [K7_K03] can interact and work in a group, undertaking various roles within it                                                                                                |                                                          | The student is able to plan work related to the selection of corrosion protection technologies and also cooperates in their selection.                                                                                                              |                                     |         | [SK5] Ocena umiejętności rozwiązywania problemów występujących w praktyce<br>[SK4] Ocena umiejętności komunikacji, w tym poprawności językowej                                        |     |
|                                             | [K7_U02] conducts experiments using properly selected techniques and apparatus, taking advantage of new developments in corrosion and related fields                          |                                                          | The student is able to assess the accuracy of the selection of corrosion reduction technology in laboratory conditions using electrochemical and spectroscopic methods. Selects methods for monitoring the effect of inhibitors in real conditions. |                                     |         | [SU4] Ocena umiejętności korzystania z metod i narzędzi<br>[SU3] Ocena umiejętności wykorzystania wiedzy uzyskanej w ramach przedmiotu<br>[SU2] Ocena umiejętności analizy informacji |     |
|                                             | [K7_W05] recognises key developments in research, apparatus and technology in corrosion and material degradation and related fields                                           |                                                          | The student is able to select methods for assessing inhibitor effectiveness depending on the operating conditions of the installation and, on this basis, assess the accuracy of the selection of corrosion protection technology.                  |                                     |         | [SW3] Ocena wiedzy zawartej w opracowaniu tekstowym i projektowym<br>[SW1] Ocena wiedzy faktograficznej                                                                               |     |
| Subject contents                            | Course content – lecture<br>Basics of corrosion protection. Corrosion inhibitors. Effectiveness of corrosion inhibitors. Temporary protection. Voltaile corrosion inhibitors. |                                                          |                                                                                                                                                                                                                                                     |                                     |         |                                                                                                                                                                                       |     |
| Prerequisites and co-requisites             | Knowledge of the fundamentals of corrosion and corrosion protection.                                                                                                          |                                                          |                                                                                                                                                                                                                                                     |                                     |         |                                                                                                                                                                                       |     |

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|----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|-------------------------------|
| Assessment methods and criteria                                | Subject passing criteria                                                                                          | Passing threshold                                                            | Percentage of the final grade |
|                                                                | Passing the lecture.                                                                                              | 60.0%                                                                        | 70.0%                         |
|                                                                | Presentation of a multimedia presentation.                                                                        | 100.0%                                                                       | 30.0%                         |
| Recommended reading                                            | Basic literature                                                                                                  | S. Szklarska Smialowska, Corrosion inhibitors of metala, PWN, Warszawa, 1971 |                               |
|                                                                | Supplementary literature                                                                                          | available on e-learning.                                                     |                               |
|                                                                | eResources addresses                                                                                              |                                                                              |                               |
| Example issues/<br>example questions/<br>tasks being completed | Atmospheric corrosion. Classification of corrosion inhibitors. Temporary protection. Copper corrosion inhibitors. |                                                                              |                               |
| Practical activites within the subject                         | Not applicable                                                                                                    |                                                                              |                               |

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