



## Subject card

|   |   |  |   |                                     |  |            |     |
|---|---|--|---|-------------------------------------|--|------------|-----|
| Subject name and code                       | ENVIRONMENTAL MANAGEMENT SYSTEMS - TEAM PROJECT, PG_00061401  |  |   |                                     |  |            |     |
| Field of study                              | Engineering Management  |  |   |                                     |  |            |     |
| Date of commencement of studies             | October 2024  |  | Academic year of realisation of subject   |                                     | 2025/2026  |            |     |
| Education level                             | first-cycle studies   |  | Subject group   |                                     | Obligatory subject group in the field of study<br>Subject group related to scientific research in the field of study |            |     |
| Mode of study                               | Part-time studies   |  | Mode of delivery  |                                     | at the university  |            |     |
| Year of study                               | 2   |  | Language of instruction   |                                     | Polish   |            |     |
| Semester of study                           | 4   |  | ECTS credits  |                                     | 6.0  |            |     |
| Learning profile                            | general academic profile  |  | Assessment form   |                                     | exam   |            |     |
| Conducting unit                             | Department Of Management Engineering And Quality -> Faculty Of Management And Economics -> Wydziały Politechniki Gdańskiej  |  |   |                                     |  |            |     |
| Name and surname of lecturer (lecturers)    | Subject supervisor  |  | dr hab. inż. Piotr Grudowski  |                                     |  |            |     |
|   | Teachers  |  |   |                                     |  |            |     |
| Lesson types and methods of instruction     | Lesson type   | Lecture  | Tutorial  | Laboratory                          | Project  | Seminar    | SUM |
|   | Number of study hours   | 16.0   | 0.0   | 0.0                                 | 16.0   | 0.0        | 32  |
|   | 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   | 32   |   | 7.0                                 |  | 111.0      | 150 |
| Subject objectives                          | Designs management systems using applicable legal regulations, taking into account the impact of the company's operations on the broadly understood environment   |  |   |                                     |  |            |     |
| Learning outcomes                           | Course outcome  |  | Subject outcome   |                                     | Method of verification   |            |     |
|   | [K6_K01] demonstrates awareness of legal, ethical and cultural diversity issues by making socially responsible decisions  |  | makes socially responsible decisions in line with the goals of sustainable development                  |                                     | [SK5] Assessment of ability to solve problems that arise in practice   |            |     |
|   | [K6_U03] demonstrates professional and effective teamwork, both as a leader and as a team member  |  | designs and implements pro-ecological management systems by performing tasks as a member or team leader |                                     | [SU3] Assessment of ability to use knowledge gained from the subject   |            |     |
|   | [K6_W01] identifies the determinants of the processes taking place in the analyzed systems and selects methods to solve them using the accumulated knowledge, taking into account the mutual relations between the analyzed phenomena |  | applies the principles of sustainable development in the design of enterprise management systems        |                                     | [SW1] Assessment of factual knowledge  |            |     |

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| Subject contents   | <p>LECTURE</p> <p>Basic concepts and terminology in the field of management and environmental protection. Origins and foundations of sustainable economic development</p> <p>UN Sustainable Development Goals (SDGs). Environmental management models, elements, relationships</p> <p>History and review of the concept of a systemic approach to environmental management</p> <p>Environmental management system compliant with PN-EN ISO 14001. Genesis. Structure of type HLS of ISO Type A standards</p> <p>The context of the organization. Leadership</p> <p>Planning. Support</p> <p>Operations</p> <p>Performance evaluation</p> <p>Improvement</p> <p>Implementation of an environmental management system according to ISO 14001</p> <p>EMS audits. EMS Certification</p> <p>Other standards for EMS in the ISO 14000 family. Management system compliant with the EMAS Regulation</p> <p>Energy management system compliant with EN ISO 50001</p> <p>Benefits of EMS. Life Cycle Assessment (LCA), creation of an eco-balance, factors and sources of information obtained</p> <p>EMS in integrated management systems</p> <p>PROJECT</p> <p>Sustainable development in the context of pro-ecological activities of a selected company. Identification of the achievements of selected organizations in areas corresponding to the pro-ecological objectives of the UN regarding the UA. Use of ISO 26000</p> <p>Design of EMS components according to ISO 14001 for the selected organization for the nst elements of the EMS: Environmental aspects; Risk assessment. Significant environmental aspects; Objectives and tasks in the field of the Environment; Operational management and performance evaluation; Improvement in the context of the World Improvement Environment</p> <p>Planning and conducting an internal audit of the EMS for a selected organization and designing improvement activities (follow-ups): development of an audit plan; preparation of a checklist for relevant EMS areas; reporting non-conformities and identifying improvement actions</p> |   |                               |
| Prerequisites and co-requisites                                |   |   |                               |
| Assessment methods and criteria                                | Subject passing criteria  | Passing threshold   | Percentage of the final grade |
|  | Project   | 60.0%   | 50.0%                         |
|  | Exam  | 60.0%   | 50.0%                         |
| Recommended reading  | Basic literature  | Grudowski P., Hamrol A., Zymonik Z. Zarządzanie jakością i bezpieczeństwem, PWE Warszawa 2013<br>Grudowski P., Wiśniewska M. Z., Kultura jakości, doskonałości i bezpieczeństwa, CeDeWu, Warszawa 2019<br>Kowal E., Kucińska-Landwójtowicz A., Misiólek A., Zarządzanie środowiskowe, PWE, Warszawa, 2013 |                               |
|  | Supplementary literature  | Grudowski P., Jakość, środowisko i BHP w systemach zarządzania, OPO-AJG, 2004<br>Grudowski P., Pochyluk R., Szymański J., Zasady wdrażania systemu zarządzania środowiskowego zgodnego z wymaganiami normy ISO 14001, Eko-Konsult, 1999   |                               |
|  | eResources addresses  | Adresy na platformie eNauczanie:  |                               |
| Example issues/<br>example questions/<br>tasks being completed |   |   |                               |
| Work placement   | Not applicable  |   |                               |

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