



Subject card

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| Subject name and code | Environment management and ecology, PG_00055069 | | | | | | |
| Field of study | Management and Production Engineering | | | | | | |
| Date of commencement of studies | October 2021 | Academic year of realisation of subject | | | 2024/2025 | | |
| Education level | first-cycle studies | Subject group | | | Obligatory subject group in the field of study | | |
| Mode of study | Full-time studies | Mode of delivery | | | at the university | | |
| Year of study | 4 | Language of instruction | | | Polish | | |
| Semester of study | 7 | ECTS credits | | | 3.0 | | |
| Learning profile | general academic profile | Assessment form | | | assessment | | |
| Conducting unit | Institute of Energy -> Faculty of Mechanical Engineering and Ship Technology | | | | | | |
| Name and surname of lecturer (lecturers) | Subject supervisor | dr inż. Blanka Jakubowska | | | | | |
| | Teachers | dr inż. Blanka Jakubowska dr inż. Bartosz Dawidowicz | | | | | |
| Lesson types and methods of instruction | Lesson type | Lecture | Tutorial | Laboratory | Project | Seminar | SUM |
| | Number of study hours | 15.0 | 0.0 | 15.0 | 0.0 | 0.0 | 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 | 8.0 | | 37.0 | | 75 |
| Subject objectives | The aim of this course is to make students familiarize with the notions: causes and effects of environmental degradation, processes of purification and restoration of environmental resources, and familiarization with the current legal status, models and concepts of environmental management and the structure of environmental management in Poland. | | | | | | |

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| Learning outcomes | Course outcome | Subject outcome | Method of verification |
| | [K6_U11] is able to identify and formulate simple engineering tasks related to the diagnostics of the technical condition of machines and devices using appropriate methods, techniques and tools | The student is able to combine social, economic and ecological issues with the issues of environmental protection. | [SU1] Assessment of task fulfilment [SU2] Assessment of ability to analyse information |
| | [K6_W08] has basic management knowledge, including process and product quality management, and detailed knowledge of integrated and standardized quality, environmental, health and safety management systems | The student knows the concept of the environmental management system model and the types of environmental protection processes. The student is able to make the characteristics of the management object and indicate the inter-system relations. The student knows and follows the principles of occupational health and safety. | [SW3] Assessment of knowledge contained in written work and projects |
| | [K6_K02] is able to interact and work in a group, assuming different roles, can inspire and organize the learning process of others, properly identifies priorities for realization of a task specified by themselves or others | The student is aware of the importance of pro-environmental activities. The student is able to make environmentally friendly decisions, cooperate in a team, presents arguments taking into account a different point of view. The student understands the need for ecological education of the society in terms of the impact of economic decisions on the environment. The student is able to assess the skills and use them in teamwork. | [SK5] Assessment of ability to solve problems that arise in practice [SK2] Assessment of progress of work |
| Subject contents | <p>Lecture: Causes and effects of environmental degradation. Methods of purification and restoring environmental resources. The concept of sustainable development. Activities in the field of environmental protection. Industrial ecology. Models and definitions of environmental management and environmental management. Environmental management systems. Ecological and legal aspects of management systems. Best practices in technique and technologies. Primary and secondary methods for the elimination or reduction of emissions harmful to the environment. Laboratory: Various techniques of environmental engineering - sorting materials, mixing, separating pollutants. Economic issues related to the valuation of the use of the environment.</p> | | |
| Prerequisites and co-requisites | Fundamentals of physics, chemistry and fluid mechanics | | |
| Assessment methods and criteria | Subject passing criteria | Passing threshold | Percentage of the final grade |
| | laboratory | 56.0% | 50.0% |
| | lecture | 56.0% | 50.0% |
| Recommended reading | Basic literature | <p>R. Zarzycki, M. Imbierowicz, M. Stelmachowski, "Wprowadzenie do inżynierii i ochrony środowiska. Ochrona środowiska naturalnego", Wydawnictwa Naukowo-Techniczne, Warszawa, 2007</p> <p>B. Poskrobko, "Zarządzanie Środowiskiem", Polskie Wydawnictwo Ekonomiczne, Warszawa, 1998</p> <p>"Ekonomia i Środowisko", Czasopismo Europejskiego Stowarzyszenia Ekonomistów Środowiska i Zasobów Naturalnych, 4 (47), 2013</p> <p>G. Dobrzański, B. M. Dobrzańska, D. Kietczewski, "Ochrona środowiska przyrodniczego", Wydawnictwo Ekonomia i Środowisko, Białystok, 1997</p> <p>J. Kuckowski, D. Laudyn, M. Przekwas, "Energetyka a ochrona środowiska", Wydawnictwa Naukowo-Techniczne, Warszawa, 1993</p> | |
| | Supplementary literature | - | |

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| | eResources addresses | Adresy na platformie eNauczenie: Zarządzanie środowiskiem i ekologia, L, ZIP, 24/25 - Moodle ID: 40096 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=40096 |
| Example issues/ example questions/ tasks being completed | <p>Explain what a product life cycle analysis is all about, which is used as an indicator in the ISO 14000 series standard</p> <p>List the motives and briefly describe the concepts of environmental protection</p> | |
| Work placement | Not applicable | |

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