



Subject card

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|---|--|--|---|-------------------------------------|--|------------|-----|
| Subject name and code | Environment Protection, PG_00056226 | | | | | | |
| Field of study | Transport and Logistics | | | | | | |
| Date of commencement of studies | October 2021 | | Academic year of realisation of subject | | 2024/2025 | | |
| Education level | first-cycle studies | | Subject group | | Optional subject group Humanistic-social subject group | | |
| 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 | | 2.0 | | |
| Learning profile | general academic profile | | Assessment form | | assessment | | |
| Conducting unit | Institute of Ocean Engineering and Ship Technology -> Faculty of Mechanical Engineering and Ship Technology | | | | | | |
| Name and surname of lecturer (lecturers) | Subject supervisor | | dr inż. Roman Liberacki | | | | |
| | Teachers | | | | | | |
| Lesson types and methods of instruction | Lesson type | Lecture | Tutorial | Laboratory | Project | Seminar | SUM |
| | Number of study hours | 15.0 | 0.0 | 0.0 | 0.0 | 0.0 | 15 |
| | 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 | 15 | | 2.0 | | 33.0 | 50 |
| Subject objectives | To acquaint students with the technical and legal issues of environmental protection in transport, especially marine transport. | | | | | | |
| Learning outcomes | Course outcome | | Subject outcome | | Method of verification | | |
| | [K6_K02] can work in a team, assuming various roles, can act in a rational and ethical way | | The student is able to discuss issues related to environmental protection. | | [SK4] Assessment of communication skills, including language correctness | | |
| | [K6_U04] has self-education skills in order to improve professional qualifications, is ready to work in industrial environment, adheres to HSE rules and regulations | | The student is able to select the environmental protection devices used on ships. | | [SU1] Assessment of task fulfilment | | |
| | [K6_W07] has a general knowledge on humanities, social and economical sciences. Knows the rules of creating the forms of personal entrepreneurship and economic activity, has knowledge on the protection of intellectual property rights and industrial property rights and copyrights | | The student has knowledge of ensuring the environmental safety of vehicles and ships. | | [SW1] Assessment of factual knowledge | | |
| | [K6_U07] applies knowledge on humanities, social and economical science in solving problems | | The student applies the law in order to select appropriate environmental protection devices for the vessel. | | [SU2] Assessment of ability to analyse information | | |
| Subject contents | The concept of sustainable development. Methods of reducing the pollution from means of transportation to atmosphere. Equipment of ships with environment protection devices (oil separators of bilge water and oily water from tank cleaning, sewage treatment plants, waste incinerators, ballast water cleaning systems, SCR reactors and scrubbers). Safety devices and procedures used during operations of reloading of goods and bunkering of fuels and oils. Harbors equipment with means of environment protection. | | | | | | |
| Prerequisites and co-requisites | | | | | | | |
| Assessment methods and criteria | Subject passing criteria | | Passing threshold | | Percentage of the final grade | | |
| | Written test | | 50.0% | | 50.0% | | |
| | Task to do | | 100.0% | | 50.0% | | |

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| Recommended reading | Basic literature | 1. Kaniewski E., Tymański S.: Ochrona środowiska. Gdynia, WSM, 1987. 2. Małaczyński M.: Ochrona środowiska morskiego przed zanieczyszczeniami ze statków. PG, Gdańsk, 1980. 3. Wiewióra A.: Ochrona środowiska morskiego w eksploatacji statków. WSM, Szczecin, 1999 r. |
| | Supplementary literature | 1. International Convention for the Prevention of Pollution from Ships MARPOL 73/78. 2. ISO 14001 Standard. |
| | eResources addresses | Adresy na platformie eNauczanie: |
| Example issues/ example questions/ tasks being completed | 1. Annexes to the Marpol Convention 2. Pollutants emitted from vehicles and ships. 3. Make selection of environment protection devices for a given ship. | |
| Work placement | Not applicable | |