



Subject card

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%		

Recommended reading	Basic literature	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 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	