



Subject card

Subject name and code	, PG_00056422						
Field of study	Ocean Engineering, 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_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_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_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	
	Task to do		100.0%			50.0%	
	Written test		50.0%			50.0%	

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	