

Subject card

Subject name and code	Marine Environment Protection I - lecture, PG_00181442						
Field of study	Marine Hydrography						
Date of commencement of studies	October 2024		Academic year of realisation of subject			2024/2025	
Education level	Bachelor's 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	1		Language of instruction			Polish	
Semester of study	1		ECTS credits			1.0	
Learning profile	practical		Assessment form			credit	
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. Dominika Saniewska				
	Teachers		dr hab. Dominika Saniewska				
Lesson types	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		1.0		9.0	25
Subject objectives	To familiarize students with the main issues related to marine environmental protection.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[HML3-U05] when identifying, formulating and solving engineering tasks, integrate knowledge from various fields and disciplines and perceive their systemic and non-technical aspects, including ethical aspects	Is able to formulate and solve problems related to marine environmental protection, taking into account legal and environmental aspects.	[SU4] test/exam - oral or written
	[HML3-W11] rules, regulations and procedures related to the carriage of cargo by sea, in particular the physico-chemical characteristics of cargoes accepted on board and the rules for their handling	Knows the types and properties of hazardous substances transported by sea and is able to select appropriate methods for oil spill response.	[SW4] test/exam - oral or written
	[HML3-W13] global environmental problems resulting from the development of civilisation, in particular strong anthropopressure in the coastal regions of seas and oceans	Knows and understands the problems related to the pollution of seas and oceans by crude oil and its derivatives, chemical warfare agents, and radioactive waste.	[SW4] test/exam - oral or written
	[HML3-W02] selected phenomena and processes occurring in the hydrosphere, atmosphere, lithosphere and biosphere, their interconnections and relations, as well as practical applications of this knowledge in professional activities related to the field of study	Describes complex phenomena and processes occurring in nature, including those related to the dispersion of anthropogenic pollutants.	[SW4] test/exam - oral or written
	[HML3-W14] basic legal regulations regarding the sustainable development of the marine environment and nature protection	Knows and understands the basic national legal regulations concerning marine environmental protection.	[SW4] test/exam - oral or written
Subject contents	A.1 Selected Polish legislation concerning marine environmental protection a. Maritime areas of the Republic of Poland, b. Responsibilities of the maritime administration in the field of marine environmental protection; A.2 Protection of the sea from pollution caused by ships: a. Pollution from the normal (non-accidental) operation of ships, b. Tanker and offshore drilling platform disasters, c. Prevention of oil spills at sea, d. Removal of oil spills using physicochemical methods (sorbents, dispersants, burning), e. Oil spills in the Baltic Sea, f. Hazardous substances transported in bulk; A.3 Disposal of hazardous substances and waste in the sea as a method of their elimination: a. Chemical warfare agents (CWAs) dumped in the Baltic Sea, b. Nuclear arsenals in seas and oceans, c. Dredged material from waterway deepening.		

Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	test	51.0%	100.0%
Recommended reading	Basic literature	Bolalek J., 2016. Ochrona środowiska morskiego - od teorii do praktyki. Wyd. Uniw. Gdańskiego, Gdańsk. Korzeniewski K., 1998. Ochrona środowiska morskiego. Wyd. Uniw. Gdańskiego, Gdańsk. Ustawa z dnia 21 marca 1991 r o obszarach morskich RP (Dz.U. z 1991 r. Nr 32, poz.131 z późniejszymi zmianami).	
	Supplementary literature	Graczyk T., Piskorski Ł., Siemianowski R., 2001. Ochrona środowiska morskiego przez zanieczyszczeniami z obiektów oceanotechnicznych. Politechnika Szczecińska, Szczecin. Wiewióra A., 2004. Ochrona środowiska morskiego w eksploatacji statków. Fund. Rozw. WSM w Szczecinie, Szczecin. Information from available sources on current environmental disasters at sea.	
	eResources addresses		
	Example issues/ example questions/ tasks being completed	How should contaminated dredged material be handled? List the main methods of oil spill cleanup. What are radioactive isotopes?	
Work placement	Not applicable		

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