University of Gdańsk

Subject card

Subject name and code	Military Aspects of Hydrography - laboratory classes , PG_00201166						
Field of study	Marine Hydrography						
Date of commencement of studies	October 2026		Academic year of realisation of subject		2029/2030		
Education level	Bachelor's studies		Subject group		Obligatory subject group in the field of study Optional subject group Subject group related to practical vocational preparation		
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		1.0		
Learning profile	practical		Assessment form		credit		
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Piotr Bekier				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	15.0	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	1. To familiarize students with military objects lying on the seabed, their basic properties and principles of operation. 2. Familiarization with safety rules when dealing with underwater objects of military origin.						

Learning outcomes

Course outcome	Subject outcome	Method of verification
[HML3-W13] knows and understands global environmental problems resulting from the development of civilisation, in particular strong anthropopressure in the coastal regions of seas and oceans	knows the safety rules when handling underwater objects of military origin	[SW3] text preparation/written work
[HML3-U08] is able to independently use the professional literature available in traditional and electronic form, make an assessment, critical analysis and synthesis as well as the correct interpretation of the information obtained	is able to determine the hazardous distance for an underwater explosion	[SU2] presentation/project/paper/ report
[HML3-U04] is able to use analytical, simulation and experimental methods to identify, formulate and solve engineering tasks	is able to determine the hazardous distance for an underwater explosion	[SU2] presentation/project/paper/ report
[HML3-U03] is able to recognise natural (including geological) and anthropogenic objects and link them to the processes leading to their formation	is able to identify underwater military objects based on their distinctive acoustic characteristics	[SU2] presentation/project/paper/ report
[HML3-W12] knows and understands, at an advanced level, the key processes occurring in the life cycle of devices, facilities, and technical systems	knows the types of military facilities lying on the seabed and their principles of operation	[SW3] text preparation/written work
[HML3-U12] is able to use engineering standards and norms and apply technologies specific to the field of study	is able to determine the hazardous distance for an underwater explosion	[SU2] presentation/project/paper/ report
[HML3-W15] knows and understands labour law and other legal bases related to the profession of hydrographer, in particular health and safety regulations and ergonomic principles	knows the threat posed by underwater military facilities to the marine environment	[SW3] text preparation/written work

Subject contents

Military objects lying on the seabed. Safety measures when handling underwater objects of military origin. Basic information about sea mines. An outline of the history of the use of sea mines in the Baltic Sea - mined water areas. Recognition of mines on a sonogram distinguishing acoustic features. Basic knowledge about the construction and operation of torpedoes and depth charges. Underwater weapons from World War II Methods of identifying and eliminating munitions (weapons) lying on the seabed. Safety aspects during neutralization and disposal of sunken weapons, designation of safety zones for underwater explosions. Organization and legal aspects of collecting and eliminating dangerous and explosive items.

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
report	51.0%	50.0%
project	51.0%	50.0%

Recommended reading

Basic literature	1. WITKA S. (red.): Problemy detekcji i utylizacji materiałów niebezpiecznych. Wojskowy Instytut Techniki Inżynieryjnej, Wrocław 2010.
Supplementary literature	1. KOMOROWSKI A.: Broń torpedowa. Bellona, 1995.
eResources addresses	

Example issues/ example questions/ tasks being completed

Work placement

Not applicable

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