

Subject card

Subject name and code	Sea haulage - laboratory exercises, PG_00131538						
Field of study	Marine Hydrography						
Date of commencement of studies	October 2024	Academic year of realisation of subject			2027/2028		
Education level	Bachelor's studies	Subject group			Obligatory subject group in the field of study 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		12.0	28
Subject objectives	<ol style="list-style-type: none"> Providing knowledge on the safety of cargo operations, including dangerous cargo, classification of ship cargo, and the use of cargo codes. Acquiring skills in using Draft Survey based on draft measurement, developing and using a cargo plan. 						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[HML3-U12] use engineering standards and norms and apply technologies specific to the field of study	is able to: - Calculate the amount of cargo based on the measurement of the ship's draft; plan the transport of cargo. - Take precautions when entering closed or contaminated rooms. Specify requirements for the maintenance and inspection of hatch covers.	[SU2] presentation/project/paper/report
	[HML3-K03] apply economic and legal conditions in the aspect of professional activity related to the field of study	is ready to: - Caring for cargo, preparing the hold, identifying cargo damage, supervising the crew during stevedoring work.	[SK2] presentation/project/paper/report
	[HML3-U07] effectively use information and communication techniques, including utility programs to solve professional problems	is able to: - Calculate the amount of cargo based on the measurement of the ship's draft; plan the transport of cargo. - Calculate cargo weight based on draft readings, plan loading/unloading of various types of ships. Settle the received liquid cargo, ullage report.	[SU4] test/exam - oral or written
	[HML3-W16] engineering standards and norms specific to the field of study, in particular those recommended by IHO and IMO	knows: - Cargo classification. Characteristics and properties of cargo and protection of cargo in maritime transport. Cargo units in maritime transport. Delivery procedures, qualitative and quantitative control and cargo collection. Cargo care, cargo hold preparation, cargo separation, cargo damage. Principles of cargo hold ventilation. - Transport of dangerous goods by sea. IMDG Code, division into classes, packaging and marking, separation rules, precautions for reloading and transport. - Cargo classification; codes relating to the transport of dangerous goods; cargo transportation issues.	[SW4] test/exam - oral or written [SW2] presentation/project/paper/report
	[HML3-U06] make a preliminary economic assessment of the proposed solutions and engineering activities undertaken	is able to: - Classify and characterize loads. Protect cargo and distinguish cargo units in sea transport. Characterize the procedures for deliveries, qualitative and quantitative control, cargo collection, preparation of the hold, and reporting of cargo damage. Follow the principles of cargo hold ventilation. - Use appropriate technologies for transporting cargo: bulk cargo, bulk grain, general cargo, wood, refrigerated cargo, fruit, containers. Plan loading (loading plans). - Calculate the amount of cargo based on the measurement of the ship's draft; plan the transport of cargo.	[SU4] test/exam - oral or written

	Course outcome	Subject outcome	Method of verification
	[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: - Cargo classification. Characteristics and properties of cargo and protection of cargo in maritime transport. Cargo units in maritime transport. Delivery procedures, qualitative and quantitative control and cargo collection. Cargo care, cargo hold preparation, cargo separation, cargo damage. Principles of cargo hold ventilation. - Transport of dangerous goods by sea. IMDG Code, division into classes, packaging and marking, separation rules, precautions for reloading and transport. - Cargo classification; codes relating to the transport of dangerous goods; cargo transportation issues.	[SW4] test/exam - oral or written [SW2] presentation/project/paper/report
	[HML3-U08] 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: - Calculate the amount of cargo based on the measurement of the ship's draft; plan the transport of cargo.	[SU2] presentation/project/paper/report
	[HML3-U11] use navigation devices, means of technical observation and communication as well as measuring instruments, as well as apply in practice various techniques of measurement and observation in the field of professional activity related to the field of study	is able to: - Correct performance of alarm duties. Using simulation programs regarding ship loading plans.	[SU2] presentation/project/paper/report
Subject contents	Cargo classification. Cargo units in maritime transport. Dunnage and separation materials, cargo securing equipment, cargo securing. Rules for the carriage and securing of deck cargo. Containers in sea transport: types and markings, planning of cargo operations, securing. Dangerous loads. Dry bulk cargo. Loading, unloading and transport of coal. Loading, unloading and transport of bulk grain. Cargo care. Operation of tankers, chemical tankers, gas carriers. Controlling and caring for cargo during a sea voyage. Inspections of holds, hatch covers, ballast tanks. Calculation of cargo quantity based on draft. Loading and unloading planning, stowage.		
Prerequisites and co-requisites	This subject is required by the Regulation of the Minister of Infrastructure and Development of 5 February 2014 on framework training programs and examination requirements for deck department seafarers (consolidated text: Journal of Laws of 2023, item 1566): attendance at all classes is mandatory. The Polish Naval Academy allows students to make up to 20% of their excused absence from these classes in a way that allows them to acquire the missing knowledge and skills. Students who have passed the course but, due to absences exceeding 20% of the classes or who did not make up the classes in a way that allows them to acquire the missing knowledge and skills, will not receive an entry in the supplement confirming completion of studies recognized at the operational level in coastal navigation.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	test	51.0%	50.0%
	report	51.0%	50.0%
Recommended reading	Basic literature	1. GRZYBOWSKI L., ŁĄCZYŃSKI B., NARODZONEK A., PUCHALSKI J.: Kontenery w transporcie morskim. Trademar, Gdynia 2003. 2. JURDZIŃSKI M.: Podstawy bezpiecznej eksploatacji masowców. WSM, Gdynia 1997. 3. KABACIŃSKI J., KICIŃSKA M.: Eksploatacja statków do przewozu gazów skroplonych. WSM, Szczecin 1993.	
	Supplementary literature	1. International Maritime Dangerous Goods Code. IMO, Londyn 2006. 2. International Maritime Solid Bulk Cargo Code. IMO, Londyn 2008.	
	eResources addresses		
Example issues/ example questions/ tasks being completed			

Work placement	Not applicable
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