



## Subject card

Subject name and code	, PG_00056299						
Field of study	Ocean Engineering						
Date of commencement of studies	October 2021		Academic year of realisation of subject		2023/2024		
Education level	first-cycle studies		Subject group		Optional subject group Subject group related to scientific research in the field of study		
Mode of study	Full-time studies		Mode of delivery		at the university		
Year of study	3		Language of instruction		Polish		
Semester of study	6		ECTS credits		3.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Zakład Mechaniki Konstrukcji Oceanotechnicznych -> Institute of Ocean Engineering and Ship Technology - > Faculty of Mechanical Engineering and Ship Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Krzysztof Wołoszyk				
	Teachers		dr inż. Krzysztof Wołoszyk				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	15.0	30.0	0.0	45
	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	45		5.0		25.0	75
Subject objectives	Students becomes familiar with performing computations of strength of ship hull structure required by Rules for Classification and Construction of Ships.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_U06] in compliance with a formulated specification and with the aid of appropriate tools and methods, is able to complete a simple engineering task within the range of design, construction and operation of ocean technology objects and systems		Student can perform the calculations for verification of the structural strength of the ship hull based on the requirements of Classification Societies.		[SU1] Assessment of task fulfilment [SU4] Assessment of ability to use methods and tools [SU5] Assessment of ability to present the results of task		
	[K6_K03] understands non-technical aspects and effects of operation as an engineer, its influence on the environment and is aware of the responsibilities for the decisions taken		Student is able to apply structural changes, to ensure the safety of the designed structure		[SK5] Assessment of ability to solve problems that arise in practice		
	[K6_W05] has an organized knowledge on design, construction and operation of ocean technology objects and systems		Student fluently uses the typical terminology related to ship structural deisgn		[SW3] Assessment of knowledge contained in written work and projects [SW2] Assessment of knowledge contained in presentation		
	[K6_W06] has an organized knowledge on engineering methods and design tools allowing the conducting of projects within the construction and operation of ocean technology objects and systems		Student is able to use the knowledge regarging ship structures in order to optimally deisgn the part of ship hull structure		[SW3] Assessment of knowledge contained in written work and projects [SW2] Assessment of knowledge contained in presentation		

Subject contents	Strength calculations are to be performed to analyse strength of ship hull structure initially designed in the previous semester (semester V). Dimensions of the structure elements are to be corrected, if necessary.  Calculations concern general and zone strength of the structure and buckling check of structural elements are to be performed. Requirements of Polish Register of Ships Rules for Classification and Construction of Sea-going Ships, Part II - Hull are to be applied.		
Prerequisites and co-requisites	Student should have some knowledge on theory of ships, technical mechanics, design materials and technical drawing. Lectures on ship hull construction and project elaborated in the previous semester should be completed.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Report from calculations performed is assessed	50.0%	80.0%
	Project presentation	50.0%	20.0%
Recommended reading	Basic literature	1. As above (in polish language).  2. Robert Taggart(Editor), <i>Ship Design and Construction</i> , The soc. Of Nav. Arch. And Marine Eng., New York,1980.  3. D.J. Eyres: Ship construction. Elsevier, 5ed.  4. Polski Rejestr Statków, Rules for classification and building of sea-going ships, Part II - Hull, 2014.	
	Supplementary literature	1. IACS, Common Structural Rules for Bulk Carriers, 2006.	
	eResources addresses	Adresy na platformie eNauczanie: Projektowanie Konstrukcji Okrętu, P, Oce, sem. 06, letni 23/24 (PG_00056299) - Moodle ID: 31989 <a href="https://enauczanie.pg.edu.pl/moodle/course/view.php?id=31989">https://enauczanie.pg.edu.pl/moodle/course/view.php?id=31989</a>	
Example issues/ example questions/ tasks being completed	Calculations of general and zone strength of the structure and buckling check of structural elements are to be performed. Requirements of Polish Register of Ships Rules for Classification and Construction of Sea-going Ships, Part II - Hull are to be applied.		
Work placement	Not applicable		