GDAŃSK UNIVERSITY OF TECHNOLOGY

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 presenatation	50.0%	20.0%

Recommended reading

Basic literature	1. As above (in polish language). 2. Robert Taggart(Editor), *Ship Design and Construction*, 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 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=31989

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