GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Designing of Ship Structures, PG_00045100		
Field of study	Ocean Engineering		
Date of commencement of studies	October 2020	Academic year of realisation of subject	2023/2024
Education level	first-cycle studies	Subject group	
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	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	mgr inż. Leszek Samson	

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	0.0	0.0	0.0	45.0	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_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	[SW2] Assessment of knowledge contained in presentation [SW3] Assessment of knowledge contained in written work and projects
[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	[SW2] Assessment of knowledge contained in presentation [SW3] Assessment of knowledge contained in written work and projects
[K6_U05] can formulate a simple engineering task and its specification within the range of design, construction and operation of ocean technology objects and systems	Student is able to formulate project task from the scope of structural design of seagoing ships	[SU2] Assessment of ability to analyse information [SU1] Assessment of task fulfilment
[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

<table>
<tr><td>Subject contents</td><td>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.</td></tr>
<tr><td>Prerequisites and co-requisites</td><td>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.</td></tr>
<tr><td>Assessment methods and criteria</td><td>
<table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>Report from calculations performed is assessed</td><td>50.0%</td><td>80.0%</td></tr>
<tr><td>Project presenatation</td><td>50.0%</td><td>20.0%</td></tr>
</table>
</td></tr>
<tr><td>Recommended reading</td><td>
<table>
<tr><td>Basic literature</td><td>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.</td></tr>
<tr><td>Supplementary literature</td><td>1. IACS, Common Structural Rules for Bulk Carriers, 2006.</td></tr>
<tr><td>eResources addresses</td><td>Adresy na platformie eNauczanie:</td></tr>
</table>
</td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td>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.</td></tr>
<tr><td>Work placement</td><td>Not applicable</td></tr>
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