GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Ship Structure 1, PG_00045029		
Field of study	Ocean Engineering, Ocean Engineering		
Date of commencement of studies	October 2020	Academic year of realisation of subject	2021/2022
Education level	first-cycle studies	Subject group	
Mode of study	Full-time studies	Mode of delivery	at the university
Year of study	2	Language of instruction	Polish
Semester of study	3	ECTS credits	2.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Institute of Ocean Engineering and Ship Technology -> Faculty of Mechanical Engineering and Ship Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Marian Bogdaniuk	
	Teachers	dr inż. Marian Bogdaniuk	

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	30.0	0.0	0.0	0.0	0.0	30

E-learning hours included: 0.0

Adresy na platformie eNauczanie:
Konstrukcja Okrętu_I - Moodle ID: 17970
https://enauczanie.pg.edu.pl/moodle/course/view.php?id=17970

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	30	2.0	18.0	50

Subject objectives

To give students basic information on:

- International Conventions related to exploitation of ships and Rules of Classification Societies,

- strength of ship hulls,

- ship steel hull structures.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_W05] has an organized knowledge on design, construction and operation of ocean technology objects and systems	Student knows basic requirements of International Conventions related to ship exploitation and requirements of Classification Societies Rules. Student understands problem of strength of ship hull structures(predicting stress values, buckling and fatigue strength analysis. Student is able to make sketches showing typical arrangements of ship hull structures.	[SW1] Assessment of factual knowledge [SW3] Assessment of knowledge contained in written work and projects
[K6_W08] has knowledge of the principles of sustainable development	Student understands influence of criteria used at designing of ship hull structure on amount of material required to build ship hull reducing and on risk of loosing watertightness of ship hull or sinking of a ship.	[SW1] Assessment of factual knowledge [SW3] Assessment of knowledge contained in written work and projects

<table>
<tr><td>Subject contents</td><td>International Conventions and Classification Rules.

Arrangement of basic types of sea-going ships hulls.

Strength of ship hull structures.

Design of basic regions of sea-going ships hulls (bottom, sides, decks, bulkheads, end parts, foundations for main engines and auxiliary machines, ice strengthenings, superstructures and deckhouses)</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 drawings.</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>Test (answers to 10 - 20 questions, written)</td><td>50.0%</td><td>100.0%</td></tr>
</table>
</td></tr>
<tr><td>Recommended reading</td><td>
<table>
<tr><td>Basic literature</td><td>1 M.Bogdaniuk, Lectures on Ship Construction (in polish).

2. Robert Taggart(Editor), Ship Design and Construction, The soc. Of Nav. Arch. And Marine Eng., New York,1980.

3. Polski Rejestr Statków, Rules for classification and building of sea-going ships, Part II Hull, Gdańsk, 2021.</td></tr>
<tr><td>Supplementary literature</td><td>1.S.Wewiórski, K.Wituszyński, Konstrukcja stalowego kadłuba okrętowego, Wyd. Morskie Gdańsk, 1977 (in polish only).

2.. D.J. Eyres: Ship construction. Elsevier, 5ed.</td></tr>
<tr><td>eResources addresses</td><td>Konstrukcja Okrętu_I - Moodle ID: 17970
https://enauczanie.pg.edu.pl/moodle/course/view.php?id=17970</td></tr>
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<tr><td>Example issues/ example questions/ tasks being completed</td><td>Give some information on influence of an international convention on ship hull arrangement and structure.

Role and scope of classification societies activities.

Describe problem of global, zone or local strength of ship hull structures.

Make some sketches showing a part of ship hull structure.</td></tr>
<tr><td>Work placement</td><td>Not applicable</td></tr>
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