



## 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 <a href="https://enauczanie.pg.edu.pl/moodle/course/view.php?id=17970">https://enauczanie.pg.edu.pl/moodle/course/view.php?id=17970</a>						
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		

Subject contents	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)		
Prerequisites and co-requisites	Student should have some knowledge on theory of ships, technical mechanics, design materials and technical drawings.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Test (answers to 10 - 20 questions, written)	50.0%	100.0%
Recommended reading	Basic literature	1 M.Bogdaniuk, Lectures on Ship Construction (in polish).  2. Robert Taggart(Editor), <i>Ship Design and Construction</i> , 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.	
	Supplementary literature	1.S.Wewiórski, K.Wituszyński, <i>Konstrukcja stalowego kadłuba okrętowego</i> , Wyd. Morskie Gdańsk, 1977 (in polish only).  2.. D.J. Eyres: Ship construction. Elsevier, 5ed.	
	eResources addresses	Konstrukcja Okrętu_I - Moodle ID: 17970 <a href="https://enauczanie.pg.edu.pl/moodle/course/view.php?id=17970">https://enauczanie.pg.edu.pl/moodle/course/view.php?id=17970</a>	
Example issues/ example questions/ tasks being completed	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.		
Work placement	Not applicable		