



## Subject card

Subject name and code	Ship Designing 1, PG_00046531						
Field of study	Ocean Engineering, Ocean Engineering						
Date of commencement of studies	October 2020	Academic year of realisation of subject			2022/2023		
Education level	first-cycle studies	Subject group					
Mode of study	Part-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	Institute of Ocean Engineering and Ship Technology -> Faculty of Mechanical Engineering and Ship Technology						
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Artur Karczewski					
	Teachers	dr inż. Ewelina Ciba					
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	0.0	30.0	0.0	30
	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	30	6.0		39.0		75
Subject objectives	<p>The aim is:</p> <p>Getting to know the methodology of the preliminary ships design.</p> <p>Ability of using the effective methods to estimate the main parameters of the designed ship.</p> <p>Ability to determine the basic functional features of ships on the example of the general cargo ship.</p>						
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 solve engineering tasks in the range of: floating, stability and power plant of classical cargo ships.			[SW3] Assessment of knowledge contained in written work and projects		
	[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	The effect relies on knowing the knowledge and methods of effective determination of main parameters of the proposed ship.			[SU3] Assessment of ability to use knowledge gained from the subject [SU4] Assessment of ability to use methods and tools		
	[K6_W05] has an organized knowledge on design, construction and operation of ocean technology objects and systems	- Distinguishes and applies the basic methods of a preliminary cargo ship calculations ; - Calculates the main parameters of transport chips and makes the spatial distribution of the hull - Pre-designs ship's propulsion system: the resistance, screw's characteristics and parameters of main engine power			[SW3] Assessment of knowledge contained in written work and projects		

Subject contents	<p><i>Discussion of the individual topics of the classes of design and the data contained in the database parent ships</i></p> <ul style="list-style-type: none"> <li>- <i>Selection of a model ship according to given parameters,</i></li> <li>- <i>Determination of displacement of the designed ship</i></li> <li>- <i>Calculation of necessary stocks of fuel, food and water</i></li> <li>- <i>Determination of basic main dimensions and coefficients of the hull</i></li> <li>- <i>Creation of a design documentation of stability, buoyancy and registered tonnage of the ship</i></li> <li>- <i>Spatial distribution of the hull</i></li> <li>- <i>Design of the ships propulsion system</i></li> <li>- <i>Creation of a basic documentation of a preliminary ship design</i></li> </ul> <p><i>Sketch of the side view of a designed ship</i></p>			
Prerequisites and co-requisites	Course of principles of ship design - project I			
Assessment methods and criteria	Subject passing criteria		Passing threshold	Percentage of the final grade
	Report		100.0%	25.0%
	Test		51.0%	75.0%
Recommended reading	Basic literature		<p>Michalski J.P.: <i>Podstawy teorii projektowania okrętów</i>. Wydawnictwo Politechniki Gdańskiej. Gdańsk 2013.</p> <p>Buczowski L.: <i>Podstawy budownictwa okrętowego</i>. Tom 1, 2 i 3. Politechnika Gdańska 1974.</p> <p>Paczeński J., Staszewski J.: <i>Projektowanie morskich statków chandlowych</i>. Tom 1, 2 i 3. Politechnika Gdańska 1984.</p> <p>Watson D.G.M.: <i>Practical ship design</i>. Elsevier 1998.</p>	
	Supplementary literature		<p>Schneekluth H.: <i>Ship design for efficiency and economy</i>. London: Butterworths 1987.</p> <p>Michalski J.P.: <i>Metody przydatne do wspomaganego komputerem projektowania wstępnego statków śródlądowych</i>. Wydawnictwo Politechniki Gdańskiej. Gdańsk 2007.</p> <p>Volker B.: <i>Practical Ship Hydrodynamics</i>. Butterworths 2000</p>	
	eResources addresses		Adresy na platformie eNauczanie:	
Example issues/ example questions/ tasks being completed				
Work placement	Not applicable			