



Subject card

Subject name and code	Ship Designing 1, PG_00045060						
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	Full-time studies		Mode of delivery		at the university		
Year of study	3		Language of instruction		Polish		
Semester of study	5		ECTS credits		3.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Zakład Projektowania Okrętu -> Institute of Ocean Engineering and Ship Technology -> Faculty of Mechanical Engineering and Ship Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Tomasz Hinz				
	Teachers		dr inż. Tomasz Hinz dr inż. Maciej Reichel dr hab. inż. Przemysław Krata dr inż. Artur Karczewski				
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		7.0		28.0	80
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	- pre-design the ship's propulsion system: resistance, propeller parameters and propulsion engine parameters; - make a subdivision of the ship's hull; - Prepare prescribed loading conditions - Check stability requirements	[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	- pre-design the ship's propulsion system: resistance, propeller parameters and propulsion engine parameters; - make a subdivision of the ship's hull; - Prepare prescribed loading conditions - Check stability requirements	[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	- pre-design the ship's propulsion system: resistance, propeller parameters and propulsion engine parameters; - make a subdivision of the ship's hull; - Prepare prescribed loading conditions - Check stability requirements	[SW3] Assessment of knowledge contained in written work and projects
Subject contents	<ul style="list-style-type: none"> - development of design documentation for stability and buoyancy as well as registered tonnage of the ship, - methodology of designing the propulsion system of the ship, - hull spatial division, - determination of hull retaining characteristics; - catalog engine selection; - determination of propeller parameters; - cavitation verification; - speed forecast under contract conditions; - preparation of basic documentation of the preliminary design of the ship. 		
Prerequisites and co-requisites	Pass the exam of Basic ships and yachts design		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Test	51.0%	75.0%
	Raport	100.0%	25.0%
Recommended reading	Basic literature	<p><i>Literatura podstawowa:</i></p> <p>Michalski J.P.: Podstawy teorii projektowania okrętów. Wydawnictwo Politechniki Gdańskiej. Gdańsk 2013.</p> <p>Buczkowski L.: Podstawy budownictwa okrętowego. Tom 1, 2 i 3. Politechnika Gdańska 1974.</p> <p>Paczeński J., Staszewski J.: Projektowanie morskich statków chandlowych. 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 wspomagania 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	<p>Adresy na platformie eNauczanie:</p> <p>Projektowanie okrętów I (O:098220) - Moodle ID: 25674 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=25674</p> <p>Projektowanie okrętów I (O:098220) - Moodle ID: 25674 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=25674</p>
Example issues/ example questions/ tasks being completed	Ship resistance estimation based on its main designing parameters .	
Work placement	Not applicable	