



Subject card

Subject name and code	, PG_00056282						
Field of study	Ocean Engineering						
Date of commencement of studies	October 2021		Academic year of realisation of subject		2022/2023		
Education level	first-cycle studies		Subject group		Optional subject group Subject group related to scientific research in the field of study		
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		4.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Department of Theory and Ship Design -> Faculty of Mechanical Engineering and Ship Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Cezary Żrodowski				
	Teachers		dr inż. Cezary Żrodowski				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	0.0	30.0	0.0	45
	E-learning hours included: 0.0						
	Address on the e-learning platform: https://enauczanie.pg.edu.pl/moodle/course/view.php?id=14448						
	Additional information: The lecture can be provided in remote mode in case of necessity.						
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		6.0		49.0	100
Subject objectives	Introduction to ship design theory, presentation of ship design process, basic tools and professional vocabulary.						
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		The student can prepare a technical report in accordance with the formal and technical requirements, including a simplified initial design of the ship		[SW3] Assessment of knowledge contained in written work and projects		
	[K6_U03] can use computer-aided design, production and operation tools for ocean technology objects and systems		Studnet is able to draw the General Plan of the designed vessel.		[SU1] Assessment of task fulfilment [SU5] Assessment of ability to present the results of task		
	[K6_W08] has knowledge of the principles of sustainable development		The student chooses technical solutions supporting sustainable development.		[SW3] Assessment of knowledge contained in written work and projects		
Subject contents	Rules for design calculations: measurement units, mathematical models, presentation and explanation of calculation results. Physical phenomena, theoretical and empirical design relationships. Functional and safety criteria. Buoyancy equation. Calculation of main design parameters on example of multipurpose dry cargo ship. Compartmentation. Calculation of buoyancy, stability and register tonnage.						
Prerequisites and co-requisites	Completed course "Basics of ship design"						
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	Project report		80.0%		100.0%		

Recommended reading	Basic literature	<p>1. Buczkowski L.: Podstaw Budownictwa Okrętowego, I, II, III tom, skrypt Politechniki Gdańskiej.</p> <p>2. Milewski J.: Projektowanie i budowa jachtów żaglowych. Gdynia 1998.</p> <p>3. Staszewski J., Paczesniak J.: Projektowanie Okrętów, I, II, III tom, skrypt Politechniki Gdańskiej.</p> <p>4. Marchaj C.A.: Teoria żeglowania, aerodynamika żagla. Almaress. 2001.</p> <p>5. Michalski J.P.: Podstawy teorii projektowania okrętów. Wydawnictwo PG, 2013</p>
	Supplementary literature	<p>1. Watson D.: Practical ship design , Amsterdam, Elsevier, 1998.</p> <p>2. Schneekluth H.: Ship design for efficiency and economy, London, Butterworths, 1987.</p> <p>3. Piskorz-Nalecki J.: Projektowanie statków morskich. Szczecin, Wyd. PS, 1982.</p> <p>4. Semenov I., Sanecka K.: Teoria projektowania statków, Szczecin, Wyd. PS, 2001.</p> <p>5. Nogid L.M: Teoria projektowania okrętu, Gdynia Wydawnictwo Morskie, 1962.</p>
	eResources addresses	<p>Adresy na platformie eNauczenie:</p> <p>Projektowanie okrętu I, W, P, Oceanotechnika, sem.03, zimowy 22/23 - Moodle ID: 20441</p> <p>https://enauczanie.pg.edu.pl/moodle/course/view.php?id=20441</p>
Example issues/ example questions/ tasks being completed	Project of multipurpose dry cargo vessel.	
Work placement	Not applicable	