GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Project, PG_00041774		
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	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	3.0
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	0.0	0.0	0.0	30.0	0.0	30

E-learning hours included: 0.0

Adresy na platformie eNauczanie:
Praca projektowa 1 - 2021 - Moodle ID: 20441
https://enauczanie.pg.edu.pl/moodle/course/view.php?id=20441

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	5.0	40.0	75

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_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	The student independently formulates conclusions regarding the designed ship and explains their origin.	[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 student performs a simplified conceptual design of the multipurpose dry cargo ship, including: a) parametric model b) hull shape (lines) c) compartments d) freeboard e) tonnage f) estimation of stability g) a simplified general arrangement	[SU1] Assessment of task fulfilment
[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

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.

<table>
<tr><td>Prerequisites and co-requisites</td><td colspan="2"></td></tr>
<tr><td>Assessment methods and criteria</td><td colspan="2"><table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>Lecture exam</td><td>100.0%</td><td>50.0%</td></tr>
<tr><td>Project</td><td>60.0%</td><td>50.0%</td></tr>
</table></td></tr>
<tr><td rowspan="3">Recommended reading</td><td>Basic literature</td><td>1. Buczkowski L.: Podstaw Budownictwa Okrętowego, I, II, III tom, skrypt Politechniki Gdańskiej.

2. Milewski J.: Projektowanie i budowa jachtów żaglowych. Gdynia 1998.

3. Staszewski J., Paczesniak J.: Projektowanie Okretów, I, II, III tom, skrypt Politechniki Gdańskiej.

4. Marchaj C.A.: Teoria żeglowania, aerodynamika żagla. Almaress. 2001.

5. Michalski J.P.: Podstawy teorii projektowania okrętów. Wydawnictwo PG, 2013</td></tr>
<tr><td>Supplementary literature</td><td>1. Watson D.: Practical ship design , Amsterdam, Elsevier, 1998.

2. Schneekluth H.: Ship design for efficiency and economy, London,Butterworths, 1987.

3. Piskorz-Nałecki J.: Projektowanie statków morskich. Szczecin, Wyd. PS, 1982.

4. Semenov I., Sanecka K.: Teoria projektowania statków, Szczecin, Wyd. PS, 2001.

5. Nogid L.M: Teoria projektowania okretu, Gdynia Wydawnictwo Morskie, 1962.</td></tr>
<tr><td>eResources addresses</td><td>Praca projektowa 1 - 2021 - Moodle ID: 20441
https://enauczanie.pg.edu.pl/moodle/course/view.php?id=20441</td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td colspan="2">Project of multipurpose dry cargo vessel.</td></tr>
<tr><td>Work placement</td><td colspan="2">Not applicable</td></tr>
</table>