

## GDAŃSK UNIVERSITY

## Subject card

Subject name and code	, PG_00055303							
Field of study	Ocean Engineering							
Date of commencement of studies	October 2021		Academic year of realisation of subject			2023/2024		
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	3		Language of instruction			Polish		
Semester of study	6		ECTS credits			3.0		
Learning profile	general academic profile		Assessment form			assessment		
Conducting unit	Zakład Mechaniki i Konstrukcji Morskich -> Institute of Ocean Engineering and Ship Technology -> Faculty of Mechanical Engineering and Ship Technology							
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. inż. Karol Niklas					
	Teachers		dr hab. inż. Karol Niklas					
Lesson types and methods	Lesson type	Lecture	Tutorial	Laboratory	Projec	t	Seminar	SUM
of instruction	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 ir classes includi plan		I didactic         Participation in           ed in study         consultation hours		Self-study		SUM	
	Number of study hours	30		5.0		40.0		75
Subject objectives	Design of the prefabrication plan for selected ship section.							
Learning outcomes	Course out	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 is able to make a 3D model and assembly sketches of the block on the basis of the developed 2D drawing.			[SW3] Assessment of knowledge contained in written work and projects		
	[K6_W05] has an organized knowledge on design, construction and operation of ocean technology objects and systems		The student has a structured knowledge of shipbuilding technology and, on the basis of this knowledge, knows how to develop an individual block construction project.			[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 has a general knowledge of the manufacturing processes of a ship's hull and can develop a selected computer model of a ship block.			[SU4] Assessment of ability to use methods and tools [SU1] Assessment of task fulfilment		

Subject contents							
	The instructions should include:1. Site selection and construction method:1.1 Description of the vessel, purpose, technical characteristics. Selection in the magazine (e.g., significant ship) of an example general cargo ship/container/ bulk carrier corresponding to the dimensions of the vessel under development describe the main information about the vessel, interpretation of class symbols may be the vessel from the previous project under TBO II1.2 Select the shipyard and construction site of the block under development identify the block making equipment.1.3 Carry out the division of the block into space sections and lobe sections1.4 Develop the procedure for acceptance of steel and welding materials (PRS)2. design of the framework technology of construction of the selected hull block2.1 Ideogram of the sequence of technological operations of block assembly2.2 Instruction for measuring during assembly determination of base planes2.3 Instruction for welding block: techniques for making connections, preparation of edges for welding and welding parameters, welding materials, order and directions of welds in the block, welding of connecting elements2.4 Instruction for acceptance of the finished block: measuring on acceptance (what is measured, tolerances)2.5 Determination of the storage area needed to store the materials for making the selected block and for 5 similar blocks.2.6 Instruction for transporting the block to the site of the hull assembly arrangement of transport handles						
Prerequisites and co-requisites							
Assessment methods and criteria	Subject passing criteria	Passing threshold 51.0%	Percentage of the final grade 100.0%				
Recommended reading	Basic literature       1. Eyres D.J., Bruce G.J., Ship Construction, ISBN         978-0-08-097239-8, DOI: 10.1016/C2010-0-68324-6, 2012         2. Manuals: NX, Solid Edge, Nupas Cadmatic, Rhino 3D, inne.         3. G. Farin, J. Hoschek, M. Kim: Handbook of computer aided         geometric design, 2002 Elsevier, ISBN: 978-0-444-51104-1						
	Supplementary literature	Shipbuilding design regulations of selected classification societies, e.g. DNV, LR, PRS.					
	eResources addresses	Adresy na platformie eNauczanie: Praca projektowa III, P, sem.6, lato23/24, PG_00055303 - Moodle ID: 36898 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=36898					
Example issues/ example questions/ tasks being completed	<ol> <li>Analysis of input data</li> <li>Making a 3D computer model of the ship block, taking into account selected structural and technological aspects.</li> <li>Analysis of the transport of the block. (Execution of the design of transport stiffeners, transport handles, etc.).</li> <li>Making a completion list of the ship block.</li> </ol>						
Work placement	Not applicable						