



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 inż. Karol Niklas				
	Teachers		dr inż. Karol Niklas				
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		5.0		40.0	75
Subject objectives	Design of the prefabrication plan for selected ship section.						
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 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	<p>The instructions should include:</p> <ol style="list-style-type: none"> 1. Site selection and construction method: <ol style="list-style-type: none"> 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 II 1.2 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 sections 1.4 Develop the procedure for acceptance of steel and welding materials (PRS) 2. design of the framework technology of construction of the selected hull block <ol style="list-style-type: none"> 2.1 Ideogram of the sequence of technological operations of block assembly 2.2 Instruction for measuring during assembly determination of base planes 2.3 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 elements 2.4 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	<table border="1"> <thead> <tr> <th data-bbox="453 721 790 748">Subject passing criteria</th> <th data-bbox="794 721 1141 748">Passing threshold</th> <th data-bbox="1145 721 1492 748">Percentage of the final grade</th> </tr> </thead> <tbody> <tr> <td data-bbox="453 754 790 784">project</td> <td data-bbox="794 754 1141 784">51.0%</td> <td data-bbox="1145 754 1492 784">100.0%</td> </tr> </tbody> </table>	Subject passing criteria	Passing threshold	Percentage of the final grade	project	51.0%	100.0%		
Subject passing criteria	Passing threshold	Percentage of the final grade							
project	51.0%	100.0%							
Recommended reading	Basic literature	<ol style="list-style-type: none"> 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://enauzanie.pg.edu.pl/moodle/course/view.php?id=36898							
Example issues/ example questions/ tasks being completed	<ol style="list-style-type: none"> 1. Analysis of input data 2. Making a 3D computer model of the ship block, taking into account selected structural and technological aspects. 3. Analysis of the transport of the block. (Execution of the design of transport stiffeners, transport handles, etc.). 4. Making a completion list of the ship block. 								
Work placement	Not applicable								