



## Subject card

Subject name and code	, PG_00056286						
Field of study	Ocean Engineering						
Date of commencement of studies	October 2022		Academic year of realisation of subject		2023/2024		
Education level	first-cycle studies		Subject group				
Mode of study	Full-time studies		Mode of delivery		at the university		
Year of study	2		Language of instruction		Polish		
Semester of study	4		ECTS credits		2.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	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 mgr inż. Alicja Bera				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	15.0	0.0	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		2.0		18.0	50
Subject objectives	Familiarisation of student with basic processing ways of material, problems of metrology, kinds of shipyard as well as with main processes of ship erection						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[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		Student is able properly planning of the project realization, define of timetable, cost flow sheet and perform of the risk analysis in relations to project realization.		[SU4] Assessment of ability to use methods and tools		
	[K6_U05] can formulate a simple engineering task and its specification within the range of design, construction and operation of ocean technology objects and systems		Student is able to formulate key topics for realised task and defines milestones for its realisation		[SU3] Assessment of ability to use knowledge gained from the subject		
	[K6_W05] has an organized knowledge on design, construction and operation of ocean technology objects and systems		Student recognizes and knows issues and physical processes in relations to deigned object		[SW1] Assessment of factual knowledge		
Subject contents	Shipyard : arrangement, organization of manufacturing processes, documentation for process of ship manufacturing. Technology of ship erection process : basic definitions. Producibility of structure : technical and economical criterion. General characteristic of processes of ship erection and fitting out. System for preparation of production process : traditional, integrated, CAD, CAM, CAQ, CIM. Ship hull structural materials : basic strength and technological characteristics. Problems of protection against corrosion. Storage of steel materials. Technological processes of manufacturing : characteristic of center for processing, equipment and processes : cutting and bending of steel and aluminum plates and profiles. Processing of special materials. tendencies in development of technological processes : automation and robotics. Center for pretreatment of hull materials. Flat and curvilinear panel production lines. Sectional and block hull arrangement. Prefabrication of sections and blocks. Methods for hull assembly. Methods of launching.						
Prerequisites and co-requisites							

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	lecture	60.0%	50.0%
	labolatory	90.0%	50.0%
Recommended reading	Basic literature	Ship Construction7th Edition Authors: George Bruce, David Eyres	
	Supplementary literature	1. E.Baker III: Introduction to Steel Shipbuilding, McGraw-Hill 1953 2. Kuzminow S.: Swarocznyje deformacji sudowych konstrukcji. Sudostrojenije 1974. 3. Wiebeck E.: Technologie des Schiffskorperbaus. Technik Berlin 1980.	
	eResources addresses	Adresy na platformie eNauczanie: Technologia budowy okrętu I , W/L, sem.4, lato 23/24, (PG 00056286) - Moodle ID: 37639 <a href="https://enauczanie.pg.edu.pl/moodle/course/view.php?id=37639">https://enauczanie.pg.edu.pl/moodle/course/view.php?id=37639</a>	
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		