



Subject card

Subject name and code	, PG_00056286						
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	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	prof. dr hab. inż. Janusz Kozak					
	Teachers	mgr inż. Alicja Bera prof. dr hab. inż. Janusz Kozak					
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_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 designed object			[SW1] Assessment of factual knowledge		
	[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_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		
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
	laboratory	90.0%	50.0%
	lecture	60.0%	50.0%
Recommended reading	Basic literature	Ship Construction 7th Edition Authors: George Bruce, David Eyres	
	Supplementary literature	<ol style="list-style-type: none"> 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:	
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		