



Subject card

Subject name and code	, PG_00057300						
Field of study	Ocean Engineering						
Date of commencement of studies	February 2023	Academic year of realisation of subject			2023/2024		
Education level	second-cycle studies	Subject group			Optional subject group Subject group related to scientific research in the field of study		
Mode of study	Part-time studies	Mode of delivery			at the university		
Year of study	1	Language of instruction			Polish		
Semester of study	2	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. Michał Krężelewski				
	Teachers		dr inż. Michał Krężelewski				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	9.0	0.0	0.0	9.0	0.0	18
	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	18	5.0		27.0	50	
Subject objectives	The student recognizes and calculates ship propulsors, explains basic rules of special ship propulsors, knows basic design rules of high speed crafts.						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	[K7_W05] has an organized, widened knowledge on design, construction and operation of ocean technology objects and systems	The student recognizes and calculates ship propulsors, explains basic rules of special ship propulsors, knows basic design rules of high speed crafts.			[SW1] Assessment of factual knowledge		
	[K7_W06] has an organized, widened knowledge on engineering methods and design tools allowing the conducting of advanced projects within the construction and operation of ocean technology objects and systems	The student recognizes and calculates ship propulsors, explains basic rules of special ship propulsors, knows basic design rules of high speed crafts.			[SW3] Assessment of knowledge contained in written work and projects		
	[K7_U04] can apply mathematical methods and models and computer simulations to analyse, design, and assess the functioning of ocean technology objects and systems and their elements	The student recognizes and calculates ship propulsors, explains basic rules of special ship propulsors, knows basic design rules of high speed crafts.			[SU2] Assessment of ability to analyse information		
Subject contents	Basic propulsion problem. Rules of sizing and selection ship propulsors. Principles and rules of selection controllable pitch propellers, supercavitating propellers and surface piercing propellers. Special propulsors: waterjets and Voith Schneider Propeller. Rules of sizing bow and stern thrusters. Matematical models for ship manoeuvring. Main rules in design catamarans, planning crafts, hydrofoil crafts and air cushion vehicles.						

Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	kolokwia w czasie semestru Midterm colloquium	50.0%	50.0%
	laboratory	100.0%	50.0%
Recommended reading	Basic literature	<p>Dudziak Jan TEORIA OKRĘTU WYDAWNICTWO MORSKIE GDAŃSK 1988</p> <p>Kreżelewski Mieczysław HYDROMECHANIKA OGÓLNA I OKRĘTOWA CZ.II SKRYPT PG GDAŃSK 1982</p> <p>Wełnicki Wiesław MECHANIKA RUCHU OKRĘTU SKRYPT PG GDAŃSK 1988</p>	
	Supplementary literature	Faltinsen O.M. Hydrodynamics of High Speed Marine Vehicles, Cambridge University Press 2005.	
	eResources addresses		
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		