



Subject card

Subject name and code	Technical, Economical and Ecological Aspects of Propulsion, PG_00045097						
Field of study	Ocean Engineering, Ocean Engineering						
Date of commencement of studies	October 2020		Academic year of realisation of subject		2022/2023		
Education level	first-cycle studies		Subject group				
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		2.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Faculty of Ocean Engineering and Ship Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. inż. Damian Bocheński				
	Teachers						
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	0.0	0.0	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		3.0		17.0	50
Subject objectives	To acquaint students with the technical, economic and ecological aspects of the selection and operation of a ship's propulsion						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[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		The student is able to prepare a specification of the ship's main propulsion system designed by him		[SU1] Assessment of task fulfilment		
	[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 knows the basic methods and tools of designing the marine propulsion system		[SW1] Assessment of factual knowledge		
	[K6_W08] has knowledge of the principles of sustainable development		The student has knowledge of economic and ecological issues related to the propulsion of transport and special ships		[SW1] Assessment of factual knowledge		
Subject contents	Technical requirements for ship propulsion, selection of propulsion system for various types of transport ships. Analysis of the selection of the ship's propulsion and energy system, taking into account the influence of economic criteria (investment and operating costs). Impact of the type of ship propulsion on environmental pollution.						
Prerequisites and co-requisites							
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	test		60.0%		100.0%		

Recommended reading	Basic literature	<p>1. Balcerski A.: Siłownie okrętowe. Wyd. PG 1990</p> <p>2. Urbański P.: Gospodarka energetyczna na statkach, Wyd. Morskie 1978</p> <p>3. Woud H. K., Stapersma D.: Design of propulsion and electric power generation systems. IMarEST, London 2002</p> <p>4. Kosowski K, Ship Turbine Power Plans, Wyd. PG Delft University, Gdańsk 2004</p>
	Supplementary literature	Dr.C.B.Barrass: Ship_Design_and_Performance_for_Masters_and_Mate Elsevier
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	