



Subject card

Subject name and code	Technical, Economical and Ecological aspects of Ship propulsion, PG_00045230						
Field of study	Transport and Logistics, Transport and Logistics						
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	5		ECTS credits		2.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Department of Ship and Land Based Power Plants -> Faculty of Ocean Engineering and Ship Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Piotr Bzura				
	Teachers		dr inż. Piotr Bzura				
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						
	Additional information: Classes conducted remotely and conducted on the MS Teams platform						
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	Familiarize 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_W08] has knowledge regarding the principles of sustainable development		The student is able to assess the efficiency of various ship propulsion systems.		[SW2] Assessment of knowledge contained in presentation		
	[K6_W05] has an organized knowledge on design, construction and operation of means and systems of transport		The student is able to assess the engine exhaust emission		[SW2] Assessment of knowledge contained in presentation		
	[K6_W06] has an organized knowledge on engineering methods and design tools allowing the conducting of projects within the construction and operation of means and systems of transport		The student is able to find the relationship between efficiency and economy of the drive. He can determine the influence of the type of propulsion on ecological threats.		[SW2] Assessment of knowledge contained in presentation		
Subject contents	Technical requirements for ship propulsion, selection of propulsion for transport tasks, influence of economic criteria on the choice of ship propulsion, impact of propulsion type on environmental pollution.						
Prerequisites and co-requisites	Basic information about heat and electric engines.						
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	Test		50.0%		100.0%		

Recommended reading	Basic literature	<p>Literature</p> <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 Mates. 2004 Elsevier
	eResources addresses	<p>Adresy na platformie eNauczanie:</p> <p>Techniczne, ekonomiczne i ekologiczne aspekty napędu statku, W, STW, sem.05, zimowy 22/23 - Moodle ID: 26329</p> <p>https://enauczanie.pg.edu.pl/moodle/course/view.php?id=26329</p>
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	