



Subject card

Subject name and code	Technical, Economical and Ecological aspects of Ship propulsion, PG_00056208						
Field of study	Transport and Logistics						
Date of commencement of studies	October 2021		Academic year of realisation of subject		2023/2024		
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	3		Language of instruction		Polish		
Semester of study	5		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 hab. inż. Damian Bocheński				
	Teachers		dr hab. inż. Damian Bocheński				
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_W05] has an organized knowledge on design, construction and operation of means and systems of transport		The student has structured knowledge related to the design of ship propulsion systems		[SW1] Assessment of factual knowledge		
	[K6_W08] has knowledge regarding the principles of sustainable development		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.		[SW1] Assessment of factual knowledge		
	[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 assess the efficiency of various ship propulsion systems.		[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: Techniczne, ekonomiczne, ekologiczne aspekty napędu statku, W, TiL, sem.5, zima 23/24 - Moodle ID: 33956 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=33956
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	