GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Technical, Economical and Ecological Aspects of Propulsion, PG_00046540		
Field of study	Ocean Engineering, Ocean Engineering		
Date of commencement of studies	October 2020	Academic year of realisation of subject	2023/2024
Education level	first-cycle studies	Subject group	
Mode of study	Part-time studies	Mode of delivery	at the university
Year of study	4	Language of instruction	Polish
Semester of study	8	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. Jacek Rudnicki	
	Teachers	dr inż. Jacek Rudnicki	

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	20.0	0.0	0.0	0.0	0.0	20

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	20	3.0	27.0	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_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 assess the engine exhaust emission	[SU2] Assessment of ability to analyse information
[K6_W05] has an organized knowledge on design, construction and operation of ocean technology objects and systems	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
[K6_W08] has knowledge of 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

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

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
test	50.0%	100.0%

Recommended reading

Basic literature

1. Balcerski A.: Siłownie okrętowe. Wyd. PG 1990

2. Urbański P.: Gospodarka energetyczna na statkach, Wyd. Morskie 1978

3. Woud H. K., Stapersma D.: Design of propulsion and electric power generation systems. IMarEST, London 2002

4.Kosowski K, Ship Turbine Power Plans, Wyd. PG Delft University, Gdańsk 2004

	Supplementary literature	Dr C.B.Barrass: Ship Design and Performance for Masters and Mates. 2004 Elsevier
	eResources addresses	Adresy na platformie eNauczanie: Techniczne, ekonomiczne i ekologiczne aspekty napędu, W, OCE, sem.8, letni 23/24 - Moodle ID: 35366 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=35366
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	