



## Subject card

Subject name and code	Design of Ship Machinery and Equipment, PG_00062689						
Field of study	Naval Architecture and Offshore Structures						
Date of commencement of studies	February 2024	Academic year of realisation of subject			2024/2025		
Education level	second-cycle studies	Subject group			Specialty 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	1	Language of instruction			Polish English		
Semester of study	2	ECTS credits			5.0		
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. Wojciech Litwin					
	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	45.0	0.0	75
	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	75		10.0		40.0	125
Subject objectives	The aim of the course is to familiarize students with the problems of designing marine machinery and equipment (lecture) and to conduct design work with students (design exercises).						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[K7_W02] Explains the essence and relationships of key components describing systems and processes in ocean engineering, utilizing current knowledge from major scientific fields related to the field of study	The student is able to evaluate the obtained calculation results	[SW1] Assessment of factual knowledge
	[K7_W06] Capable of finding and utilizing credible sources of information crucial for analyzing issues within the field of study	The student is able to use literature and online databases	[SW1] Assessment of factual knowledge
	[K7_K01] Understands the need for lifelong learning, critically evaluate acquired knowledge, and comprehend the significance of knowledge in addressing cognitive and practical problems	The student furthers his/her education by consulting current literature	[SK2] Assessment of progress of work
	[K7_W03] Demonstrates advanced skills in applying analytical methods and problem-solving techniques related to ocean engineering, using appropriate tools	The student is able to solve a design task, perform calculations and make drawings	[SW3] Assessment of knowledge contained in written work and projects
	[K7_U02] Presents convincing and logically justified arguments regarding outcomes through critical analysis of information in diverse technical contexts and an approach to their interpretation	The student is able to evaluate the obtained calculation results.	[SU2] Assessment of ability to analyse information
[K7_U01] Develops innovative strategies to solve complex and dynamic problems by synthesizing information from various sources and utilizing analytical, simulation, and experimental methods, considering environmental variability	The student is able to assess what methods he or she must use to solve a specific design task.	[SU1] Assessment of task fulfilment	
Subject contents	The lecture will discuss the design of a selected group of ship devices, such as: mooring devices, anchor devices, reloading devices, as well as components of the ship's power transmission system and others. During design classes, students design devices and their components.		
Prerequisites and co-requisites	Knowledge and skills in the field of machine design, mechanics and strength of materials.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Lecture	50.0%	50.0%
	design	50.0%	50.0%
Recommended reading	Basic literature	Knowel database  <a href="https://pg.edu.pl/biblioteka-pg/e-zasoby/bazy-danych">https://pg.edu.pl/biblioteka-pg/e-zasoby/bazy-danych</a>	
	Supplementary literature	none	
	eResources addresses	Adresy na platformie eNauczanie:	
Example issues/ example questions/ tasks being completed	Please discuss the typical method of mooring a ship, list the necessary devices of the mooring system and discuss and sketch the construction of a simple mooring winch		
Work placement	Not applicable		

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