



Subject card

Subject name and code	Ship Design II, PG_00060552						
Field of study	Naval Architecture and Offshore Structures						
Date of commencement of studies	October 2023		Academic year of realisation of subject		2025/2026		
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	6		ECTS credits		4.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Institute of Naval Architecture -> Faculty of Mechanical Engineering and Ship Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Tomasz Hinz				
	Teachers						
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	0.0	45.0	0.0	60
	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	60		6.0		34.0	100
Subject objectives	The aim of the course is to develop design skills and to acquire knowledge in the assessment of damaged ship stability.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_U06] in compliance with a formulated specification and with the aid of appropriate tools and methods, is able to complete a simple engineering task within the range of design, construction and operation of ocean technology objects and systems		Students can carry out basic stability calculations.		[SU1] Assessment of task fulfilment		
	[K6_W05] has an organized knowledge on design, construction and operation of ocean technology objects and systems		The student has structured knowledge in the design, construction and operation of ocean engineering systems		[SW3] Assessment of knowledge contained in written work and projects		
	[K6_U02] can work individually and in a team, communicate through various techniques in professional environment and also record, analyse, and present the results of work, can estimate the time needed to complete a given task		The student is able to prepare a basic stability booklet.		[SU1] Assessment of task fulfilment		
Subject contents	<div>1. The concept of ship damage stability and subdivision.</div> <div>2. Measures of ship damage stability and applied calculation techniques.</div> <div>3. Deterministic assessment of ship damage stability.</div> <div>4. Probabilistic assessment of ship damage stability.</div> <div>5. Modeling of ship hull with spatial subdivision in NAPA software.</div> <div>6. Calculations of damage stability in NAPA.</div>						
Prerequisites and co-requisites							

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Report	100.0%	100.0%
Recommended reading	Basic literature	1) International Convention for the Safety of Life at Sea (SOLAS)	
		2) International Convention for the Prevention of Pollution from Ships (MARPOL)	
		3) International Convention on Load Lines	
		4) NAPA Manual	
	Supplementary literature	Ruponen, Pekka: Principles of Ship Buoyancy and Stability	
	eResources addresses	Adresy na platformie eNauczanie:	
Example issues/ example questions/ tasks being completed	Perform and present selected stability calculations.		
	Discuss the watertight subdivision of a ship's hull.		
	Generate a set of damages meeting SOLAS regulations.		
Work placement	Not applicable		

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