



Subject card

Subject name and code	Ship Theory 2, PG_00053546						
Field of study	Ocean Engineering, Ocean Engineering						
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	Part-time studies	Mode of delivery			at the university		
Year of study	3	Language of instruction			Polish		
Semester of study	5	ECTS credits			3.0		
Learning profile	general academic profile	Assessment form			assessment		
Conducting unit	Department of Hydromechanics and Hydroacoustics -> Faculty of Mechanical Engineering and Ship Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. inż. Przemysław Krata				
	Teachers		dr inż. Ewelina Ciba dr hab. inż. Przemysław Krata				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	10.0	10.0	10.0	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		0.0		0.0	30
Subject objectives	The course aims at outlining the generic background of the hydrostatic calculations typically applicable to ships, yachts and other floating structures. The introduction to ship stability issues is presented in order to provide the very basics for further stability calculations routinely undertaken during a ship design process.						
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		A student is able to identify issues related to the buoyancy and stability of ships and is able to properly outline the area of engineering search for solutions.		[SU1] Assessment of task fulfilment		
	[K6_W05] has an organized knowledge on design, construction and operation of ocean technology objects and systems		A student has a well structured knowledge of the ship hydrostatics and the basics of stability concept.		[SW1] Assessment of factual knowledge		
	[K6_W03] has a basic knowledge on hydromechanics, thermodynamics, machine construction, ecology, materials science and electronics necessary to understand the construction and operation principles of ocean technology objects and equipment		A student has a basic background allowing for understanding of the hydrostatic curves and the stability booklet.		[SW3] Assessment of knowledge contained in written work and projects		
Subject contents	<ul style="list-style-type: none">Basics of the hydrostatic curves determination.Initial stability.Calculation of draft at perpendiculars.Stability for large angle of heel.Righting arm curve and its interpretation.Determination of a static angle of heel.Basics of the dynamical stability of ships.						
Prerequisites and co-requisites	Background of physics at the secondary school level.						
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	Final test		50.0%		100.0%		

Recommended reading	Basic literature	Rawson K.J., Tupper E. C., Basic Ship Theory. International Code on Intact Stability, 2008 , (2008 IS Code)
	Supplementary literature	Lewis, E. V. (ed): Principles of Naval Architecture. Hirdaris, S., Lecture Notes on Basic Naval Architecture, Aalto University, 2021.
	eResources addresses	Podstawowe https://wwwcdn.imo.org/localresources/en/KnowledgeCentre/IndexofIMOResolutions/MSCResolutions/MSC.267(85).pdf - International Code on Intact Stability, 2008 , (2008 IS Code) Uzupełniające Adresy na platformie eNauczenie: Teoria Okrętu II - hydrostatyka, stateczność zima 2022/2023 - Moodle ID: 27439 https://enauczenie.pg.edu.pl/moodle/course/view.php?id=27439
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	