



Subject card

Subject name and code	Fundamentals of the Ship Hydrostatics, PG_00060578						
Field of study	Design and Construction of Yachts						
Date of commencement of studies	October 2026	Academic year of realisation of subject			2026/2027		
Education level	first-cycle studies	Subject group			Obligatory subject group in the field of study 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		
Semester of study	2	ECTS credits			2.0		
Learning profile	general academic profile	Assessment form			assessment		
Conducting unit	Department of Ship Design - None (Existed Previously) -> Institute of Naval Architecture -> Faculty of Mechanical Engineering and Ship Technology -> Faculties of Gdańsk University of Technology						
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. inż. Przemysław Krata					
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	0.0	15.0	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	The course aims at outlining the generic background of the hydrostatic calculations traditionally applicable to floating structures including yachts.						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	[K6_U05] able to formulate a simple engineering task and its specification in the field of yacht design, construction, and operation	A student is able to carry on hydrostatic calculations using numerical integration methods.			[SU1] Assessment of task fulfilment		
	[K6_W03] has knowledge of hydromechanics, thermodynamics, machine design, ecology, materials science necessary to understand the principles of construction and operation of ocean engineering facilities and equipment	A student gains knowledge of hydrostatics of floating bodies allowing to understand the principles of developing of hydrostatic curves.			[SW3] Assessment of knowledge contained in written work and projects		
	[K6_U01] can obtain information from literature, databases and other sources, can verify and organize the obtained information, interpret them and form conclusions and justified opinions	A student is able to identify the shape of a yacht hull using body lines drawings.			[SU4] Assessment of ability to use methods and tools		

Subject contents	<p>Course content – lecture Determination of static equilibrium of a yacht afloat.</p> <p>Introduction to numerical integration methods.</p> <p>Determination of geometrical characteristics of waterplanes.</p> <p>Determination of geometrical characteristics of stations.</p> <p>Developing of hydrostatic curves.</p>		
Prerequisites and co-requisites	Background of physics at the high-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	<p>Rawson K.J., Tupper E. C., Basic Ship Theory.</p> <p>Ruponen P., Principles of Ship Buoyancy and Stability.</p>	
	Supplementary literature	<p>Lewis, E. V. (ed): Principles of Naval Architecture.</p> <p>Hirdaris, S., Lecture Notes on Basic Naval Architecture.</p>	
	eResources addresses		
Example issues/ example questions/ tasks being completed	Determine and draw the hydrostatic curves of a yacht whose hull shape is represented by the given body lines.		
Practical activities within the subject	Not applicable		

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