GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Shipbuilding drawings, PG_00060576						
Field of study	Design and Construction of Yachts						
Date of commencement of studies	October 2024		Academic year of realisation of subject		2024/2025		
Education level	first-cycle studies		Subject group		Obligatory subject group 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		3.0		
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. Cezary Żrodowski				
	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	30.0	0.0	45
	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	45	5.0	25.0	75

Subject objectives	1. Consolidation of the principles of general technical drawing 2. Introduction to the specificity of ship/yacht drawing 3. Introduction to modern methods of creating ship documentation (3D)

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[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 draw an element of the ship's hull based on a 3D model, recreate a 3D model based on a drawing and assess the correctness of both operations, working in tandem with another student.	[SU3] Assessment of ability to use knowledge gained from the subject [SU2] Assessment of ability to analyse information [SU1] Assessment of task fulfilment
	[K6_W04] has knowledge in the field of computer science, electronics, electrical engineering, automation and control, information technology, computer graphics, useful for understanding the possibilities of their use in ocean engineering	The student correctly selects the methods of solving geometric tasks and the software supporting them.	[SW3] Assessment of knowledge contained in written work and projects
	[K6_W01] has knowledge of mathematics, including algebra, elements of logic, geometry, mathematical analysis, and probabilistic necessary to describe and analyse the operation of yachts and devices installed on them	The student demonstrates the knowledge of geometry at a level that allows for the correct parameterization of 2D sketches and 3D models of ship's hull elements.	[SW3] Assessment of knowledge contained in written work and projects

Subject contents	1. Repetition - the main principles of general technical drawing, natural and conventional drawing.
	2. Ship drawing - deviations from the rules of relation to general engineering
	3. Theoretical lines, elevation table, convention, quality assessment tools.
	4. Master plan, convention, level of detail.
	5. Sheathing extension, convention, purpose.
	6. Sections (structure drawings)
	7. Technological documentation.
	8. Documentation of composite and wooden hulls.
	9. Sketches, relations, and parameters.
	10. Tolerances.
	11. Surfaces, continuity classes, relations and parameters. Freeform and d-sub surfaces.
	12. 3D models and automatic generation of associative drawings. Manual reconstruction of 3D models from 2D projections.
	13. Elements of machine drawing, installation, architectural, used in shipbuilding.
	14. Automatic editing of drawing/model, geometry optimization.

Prerequisites and co-requisites	

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Completion of drawing tasks	60.0%	100.0%

Recommended reading	Basic literature	Dobrzański T.: Rysunek techniczny maszynowy, WNT 2014
		Romanowicz P.: Rysunek techniczny maszynowy z elementami CAD, PWN 2021
		Domański Z.: Rysunek techniczny maszynowy i okrętowy, Wydawnictwo Morskie, 1982
		Skupnik D., Markiewicz R.: Rysunek techniczny maszynowy i komputerowy zapis konstrukcji, Kram 2013
	Supplementary literature	e-leatrning course on eNauczanie platform
	eResources addresses	Adresy na platformie eNauczanie:

Example issues/ example questions/ tasks being completed	1. Draw projections necessary to fully recreate a given 3D model of selected ship elements.
	2. Build a 3D model based on delivered 2D drawings, identify gaps/ambiguities and convention limitations.
	3. Draw a parametric sketch that is consistent when you change the specified parameters within a specified range of values.

Work placement	Not applicable