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 2023	Academic year of realisation of subject	2023/2024
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 Opportunity of passing as part of KSTO KORAB activity.
Semester of study	2	ECTS credits	3.0
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. Cezary Żrodowski	
	Teachers	dr inż. Cezary Żrodowski mgr inż. Dariusz Duda	

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_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
[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_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.	[SU1] Assessment of task fulfilment [SU2] Assessment of ability to analyse information [SU3] Assessment of ability to use knowledge gained from the subject

<table>
<tr><td>Subject contents</td><td>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.</td></tr>
<tr><td>Prerequisites and co-requisites</td><td></td></tr>
<tr><td>Assessment methods and criteria</td><td><table><tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr><tr><td>Completion of drawing tasks</td><td>60.0%</td><td>100.0%</td></tr></table></td></tr>
<tr><td>Recommended reading</td><td><table><tr><td>Basic literature</td><td>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</td></tr><tr><td>Supplementary literature</td><td>e-leatrning course on eNauczanie platform</td></tr><tr><td>eResources addresses</td><td>Adresy na platformie eNauczanie:</td></tr></table></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td>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.</td></tr>
<tr><td>Work placement</td><td>Not applicable</td></tr>
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