GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Introduction to Ocean Technology, PG_00060520		
Field of study	Naval Architecture and Offshore Structures		
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 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	1	ECTS credits	2.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Theory and Ship Design -> Faculty of Mechanical Engineering and Ship Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Tomasz Hinz	
	Teachers	dr inż. Tomasz Hinz	

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	30.0	0.0	0.0	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	3.0	17.0	50

Subject objectives

The aim of the subject is to make a student familiar with the basic notions and problems of ocean technology in a synthetic (top-down) approach and, in this way, preparation him to better understanding the topics covered while further learning various special subjects with the more analytic approaches during the following years of studies at the faculty.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_U04] has skills that allow for self-education and preparation for work in an industrial environment, including the application of occupational health and safety rules	The student has skills that allow for self-education and preparation for work in an industrial environment, including the application of occupational health and safety rules	[SU3] Assessment of ability to use knowledge gained from the subject [SU2] Assessment of ability to analyse information
[K6_W05] has an organized knowledge on design, construction and operation of ocean technology objects and systems	The student has structured knowledge in the field of design, construction and operation of ocean engineering facilities and systems	[SW1] Assessment of factual knowledge
[K6_K01] is aware of the need of constant improvement within the range of the possessed job and knows the possibilities of further education	The student is aware of the need for continuous improvement in the field of the profession and knows the possibilities of further education	[SK4] Assessment of communication skills, including language correctness

Subject contents

The subject and a general classification of ocean technology objects. Maritime navigation systems (MNS) and their environment. A ship as a water vehicle of ocean technology and its functional subsystems. Single purpose, multipurpose and universal ships. General, multi criteria and functional classification of ships. Basic ship terminology (Polish, English). Technical characteristics of ships: and parameters (general features, main particulars, parameters of mass, volume capacity, tonnage, propulsion; basic technical indices). Outer geometry (body form) and inner geometry and topology (compartmentation). Basic ship theory, hull structure and ship propulsion. Safety of ships (physical vs. legal), maritime casualties, their prevention and effects. Environment of MNS: social (man and ship), physical (water and wind), legal (maritime administration and classification, conventions and rules, activity of IMO, Classif. Soc., EU, ISO, ILO, MOU), geographical (shipping lines, regions of navigation, popular vessel size standards), technical (catalogues of materials and equipment, shipyards, cargoes, ports). An overall shipbuilding process: owner and operator, pre-contract studies, owners data, types, phases and acceptance of the design, contract, stages of production, surveying, trials and commissioning). Basic principles in the design and manufacturing of ships (design spiral, feasibility and effectiveness of solutions).

<table>
<tr><td>Prerequisites and co-requisites</td><td colspan="3"></td></tr>
<tr><td>Assessment methods and criteria</td><td colspan="3"><table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>Writing test at the end of sem.</td><td>60.0%</td><td>100.0%</td></tr>
</table></td></tr>
<tr><td rowspan="3">Recommended reading</td><td>Basic literature</td><td colspan="2">1. Buczkowski, L.: Podstawy Budownictwa Okrętowego (cz. I, II, III), Skrypt PG, Gdańsk 1974. (in Polish)

2. Oleksiewicz, B. Lectures Notes. Gdańsk, 2014 (electronic form).</td></tr>
<tr><td>Supplementary literature</td><td colspan="2">1. Grzywaczewski i inni: Ilustrowana Encyklopedia dla Wszystkich. Okręty i Żegluga. WNT, Warszawa 1977. (in Polish)

2. Babicz, J. Shipbuilding Dictionary English-Polish / Polish-English, Fundacja Promocji Przemysłu Okrętowego i i Gospodarki Morskiej, www.oficynamorska.pl, Gdańsk, 2004.

3. Karlic. S. Zarys Górnictwa Morskiego, Wyd. Śląsk, Katowice 1983. (in Polish)</td></tr>
<tr><td>eResources addresses</td><td colspan="2">Adresy na platformie eNauczanie:
Wprowadzenie do oceanotechnik, W, OiKM, sem. 1, zimowy, 2023/24 - Moodle ID: 35074
https://enauczanie.pg.edu.pl/moodle/course/view.php?id=35074</td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td colspan="3">• · Mention the basic types of the ocean technology objects.
• · Mention the basic subsystems of a ship as a water vehicle.
• · Mention the basic stages in the overall process of the design and manufacture of ships</td></tr>
<tr><td>Work placement</td><td colspan="3">Not applicable</td></tr>
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