



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 2025		Academic year of realisation of subject		2025/2026		
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 -> Wydziały Politechniki Gdańskiej						
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	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).						

Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Writing test at the end of sem.	60.0%	100.0%
Recommended reading	Basic literature	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).	
	Supplementary literature	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)	
	eResources addresses	Adresy na platformie eNauczanie:	
	Example issues/ example questions/ tasks being completed	<ul style="list-style-type: none">• · 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	
Work placement	Not applicable		

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