



## Subject card

Subject name and code	, PG_00070544						
Field of study	Civil Engineering						
Date of commencement of studies	October 2022	Academic year of realisation of subject	2025/2026				
Education level	first-cycle studies	Subject group					
Mode of study	Full-time studies	Mode of delivery	at the university				
Year of study	4	Language of instruction	Polish none				
Semester of study	8	ECTS credits	2.0				
Learning profile	general academic profile	Assessment form	assessment				
Conducting unit	Department of Geotechnical and Hydraulic Engineering -> Faculty of Civil and Environmental Engineering -> Faculties of Gdańsk University of Technology						
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. inż. Waldemar Magda					
	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						
	eNauczanie source address: <a href="https://enauczanie.pg.edu.pl/moodle/course/view.php?id=34743">https://enauczanie.pg.edu.pl/moodle/course/view.php?id=34743</a> Moodle ID: 34743 Budownictwo morskie II <a href="https://enauczanie.pg.edu.pl/moodle/course/view.php?id=34743">https://enauczanie.pg.edu.pl/moodle/course/view.php?id=34743</a>						
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	0.0	0.0	30		
Subject objectives	The aim of the subject is to familiarise the student with typical marine shipbuilding and port structures and the possible loads acting on them.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[K6_U05] Conducts research (obtaining information, simulations, experimental methods) in the field of construction in order to solve specific tasks and report research results.	The student conducts research (obtains information) in the field of marine hydrotechnical structures (port and shipyard) in order to solve specific tasks.	[SU2] Assessment of ability to analyse information
	[K6_W03] Demonstrate knowledge and understanding of the processes, established standards and design methods in the civil engineering subject area and of their limitations.	The student demonstrates knowledge and understanding of processes and established standards and design methods in the field of marine hydrotechnical structures (port and shipbuilding) and is aware of their limitations.	[SW1] Assessment of factual knowledge
	[K6_K04] Engages in independent lifelong learning and individually follows the development of science and technology in the field of civil engineering.	The student is engaged in independent lifelong learning and independently follows the development of science and technology in the area of marine hydrotechnical structures (port and shipbuilding).	[SK2] Assessment of progress of work
	[K6_K03] Can effectively, clearly and unambiguously convey information, describe activities and communicate their results/ outcomes to engineers or a wider audience using appropriate communication methods and tools.	A student can effectively, clearly and unambiguously convey information, describe activities and communicate their results to engineers or a wider audience using appropriate communication methods and tools.	[SK4] Assessment of communication skills, including language correctness
[K6_K01] Is aware of the key aspects of professional, ethical and social responsibility related to management, business operation, decision making and opinion formulation in civil engineering.	The student is aware of key aspects of professional, ethical and social responsibility related to management, business, decision-making and opinion formation in marine civil engineering.	[SK2] Assessment of progress of work	
Subject contents	<p>Course content – lecture Division of marine hydrotechnical structures. Seawater density and salinity. Freeboard and draft sign of the ship. Sea levels and water depths. Directions of development of maritime construction based on the example of breakwaters. Securing the bottom of a maritime structure against the action of ships' screw jets. Characteristics and construction solutions with respect to longitudinal and side slipways. Ship launching from longitudinal slipways (phases of launching and dynamic loadings). Types of dry docks. Calculations of slipways and dry docks. Mooring and fendering structures - types and design.</p> <p>Course content – project Design of a mooring and berthing dolphin for a selected type and size of a merchant vessel.</p>		
Prerequisites and co-requisites	A positive evaluation after the subject "Hydro and Marine Civil Engineering", semester VI, profile - Civil Engineering		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	evaluation of the design exercise	60.0%	60.0%
	oral test	60.0%	40.0%
Recommended reading	Basic literature	<ol style="list-style-type: none"> <li>Hueckel S.: Budownictwo morskie. Tom I, II, III, IV, Wydawnictwo Morskie, Gdańsk, 1972.</li> <li>Mazurkiewicz B.: Hydrotechniczne konstrukcje stoczniowe, cz. I i II. Wydawnictwo Morskie, Gdańsk 1981.</li> <li>Mazurkiewicz B.: Pochylnie podłużne i poprzeczne. Budownictwo Wodne nr 16 Zeszyty Naukowe Politechniki Gdańskiej, Gdańsk 1971.</li> <li>Mazurkiewicz b.: Doki suche. Gdańskie Towarzystwo Naukowe, Acta Technica Gedanensisia nr 8, Gdańsk 1970.</li> <li>Mazurkiewicz B.: Urządzenia cumownicze. Politechnika Gdańska, Wydział Hydrotechniki, Gdańsk 1983.</li> <li>Mazurkiewicz B.: Urządzenia odbojowe. Politechnika Gdańska, Katedra Budownictwa Morskiego, Gdańsk 1991.</li> <li>Mazurkiewicz B.: Encyklopedia Inżynierii Morskiej. Wydawnictwo Morskie, Gdańsk, 1986.</li> </ol>	
	Supplementary literature	<ol style="list-style-type: none"> <li>Poradnik hydrotechnika. Praca zbiorowa pod red. S. Massela, Wydawnictwo Morskie, Gdańsk, 1992.</li> <li>Morskie budowle hydrotechniczne. Zalecenia do projektowania i wykonawstwa Z 1 - Z 45. Praca zbiorowa pod red. B. Mazurkiewicza, FPPOiGM, Gdańsk, 2006.</li> <li>Shore Protection Manual, USA, 1984.</li> <li>Handbook Quay Walls. Rotterdam, Taylor &amp; Grancis, Gouda, The Netherlands, 2005.</li> <li>Inżynieria Morska i Geotechnika (dwumiesięcznik).</li> </ol>	
	eResources addresses		
Example issues/ example questions/ tasks being completed	none		

Practical activities within the subject	Not applicable
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