



Subject card

Subject name and code	MARINE CIVIL ENGINEERING AND OCEAN ENGINEERING, PG_00042258						
Field of study	Civil Engineering						
Date of commencement of studies	February 2024	Academic year of realisation of subject			2024/2025		
Education level	second-cycle studies	Subject group			Optional subject group 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	2	ECTS credits			4.0		
Learning profile	general academic profile	Assessment form			exam		
Conducting unit	Department of Geotechnics, Geology and Marine Civil Engineering -> Faculty of Civil and Environmental Engineering						
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. inż. Waldemar Magda					
	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	30.0	0.0	60
	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	60		5.0		35.0	100
Subject objectives	Presentation of basic problems related with design and operating of offshore structures.						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	[K7_W11] has deep knowledge of marine and inland hydrotechnical constructions; has knowledge about hydraulical and hydrological constrains in design and exploitation of buildings	A student has an extended knowledge on offshore structures and types of loadings acting on structures.			[SW1] Assessment of factual knowledge		
	[K7_U01] can evaluate and list any loads acting on constructions	A student is able to estimate and complete hydrostatic and hydrodynamic loads acting on: jack-up rigs and semi-submersible rigs, anchoring systems and submarine pipelines.			[SU1] Assessment of task fulfilment		
	[K7_U10] can analyse complicated environmental loads acting on a construction; can apply proper processes to design marine and hydroengineering constructions taking into consideration hydrological and hydraulical impact	A student is able to analyze complex patterns of environmental loadings acting on: jack-up rigs, semi-submersible rigs, anchoring systems, and submarine pipelines.			[SU1] Assessment of task fulfilment		
Subject contents	Minerals dissolved in sea water and mineral resources of the seabed. Exploration investigations and systems for operating, storage and production of hydrocarbons, especially natural gas and crude oil. Submarine pipelines (operating parameters, classical methods of pipe laying on a seabed, vertical stability of pipelines buried in seabed sediments. Mooring systems of floating offshore structures (e.g. semi-submersibles). Systems of natural gas utilization on drilling and production platforms.						
Prerequisites and co-requisites							
Assessment methods and criteria	Subject passing criteria	Passing threshold			Percentage of the final grade		
	written test	60.0%			50.0%		
	design case	60.0%			50.0%		

Recommended reading	Basic literature	<ol style="list-style-type: none"> 1. Magda W.: Budownictwo morskie. Wybrane zagadnienia wraz z przykładami obliczeniowymi. Wydawnictwo Naukowe PWN, Warszawa, 2020. 2. Magda W.: Rurociągi podmorskie. Zasady projektowania. Wydawnictwo-Naukowo Techniczne, Warszawa, 2004. 3. Mazurkiewicz B.: Oceanotechnika. Zagadnienia wybrane. Politechnika Gdańska, Gdańsk, 1996. 4. Mazurkiewicz B.: Stałe pełnomorskie platformy żelbetowe. Wydawnictwo Morskie, Gdańsk, 1985. 5. Mazurkiewicz B.: Stałe pełnomorskie platformy stalowe. Wydawnictwo Morskie, Gdańsk, 1988. 6. Karlic S.: Zarys górnictwa morskiego. Wydawnictwo „Śląsk”, Katowice, 1983.
	Supplementary literature	<ol style="list-style-type: none"> 1. Brahtz J. F.: Oceanotechnika. Wydawnictwo Morskie, Gdańsk, 1974. 2. Inżynieria Morska i Geotechnika (dwumiesięcznik, biblioteka Wydziału). 3. Zeszyty naukowe Katedry Budownictwa Morskiego PG, seria - Studia i Materiały (biblioteka Wydziału).
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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