



Subject card

Subject name and code	SEMINAR ON PORTS AND WATERWAYS, PG_00041433						
Field of study	Civil Engineering						
Date of commencement of studies	February 2025	Academic year of realisation of subject			2025/2026		
Education level	second-cycle studies	Subject group			Optional subject group		
Mode of study	Full-time studies	Mode of delivery			at the university		
Year of study	2	Language of instruction			Polish		
Semester of study	3	ECTS credits			3.0		
Learning profile	general academic profile	Assessment form			assessment		
Conducting unit	Department of Geotechnics, Geology and Marine Civil Engineering -> Faculty of Civil and Environmental Engineering						
Name and surname of lecturer (lecturers)	Subject supervisor	prof. dr hab. inż. Lech Bałachowski					
	Teachers						
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	0.0	0.0	30.0	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		5.0		40.0	75
Subject objectives	Enlarged knowledge in the domain of port design, port and hydrotechnic structures, and waterways.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K7_U15] has advanced skills in civil engineering within offered specialization/profile		Student is able to analyze the behavior of marine and hydrotechnic structures.				
	[K7_W11] has deep knowledge of marine and inland hydrotechnical constructions; has knowledge about hydraulical and hydrological constrains in design and exploitation of buildings		Student knows the questions related to construction and maintenance of marine and hydrotechnic structures.				
	[K7_K04] understands the necessity of dissemination civil engineering knowledge in the society and to support the professional ethos of a civil engineer		Student gives presentation concerning marine and hydrotechnic civil engineering.				
	[K7_K02] Recognizes the significance of knowledge in solving cognitive and practical problems; reliably evaluates results of his own and team research		Student is able to know and analyse polish and foreign bibliography in the considered domain.				
Subject contents	Construction and maintenance of ports. Port structures. Coast protection. The use of dredged materials. Soil improvement in marine civil engineering. Canals in Poland. Hydrotechnic structures on waterways. Water power stations. Offshore structures.						
Prerequisites and co-requisites	Knowledge of soil mechanics, hydraulics, hydrology, concrete technology, foundation engineering, soil improvement and earthworks.						
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	presentation		60.0%		50.0%		
	presence and activity		70.0%		50.0%		

Recommended reading	Basic literature	Journal of Ports and Waterways www.dredgdikes.eu www.smocs.eu
	Supplementary literature	Lech Bałachowski, Norbert Kurek, Deep soil compaction of sandy soils, Studia Geotechnica et Mechanica, 4/2014 Lech Bałachowski, Physical modelling of geotechnical structures in ports and offshore, Journal of Maritime Research, 4/2017
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed	Port constructions in Poland and abroad Waterways Soil improvement in ports	
Work placement	Not applicable	

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