



Subject card

Subject name and code	SEMINAR ON HYDRO AND MARINE CIVIL ENGINEERING, PG_00041430						
Field of study	Civil Engineering						
Date of commencement of studies	February 2023	Academic year of realisation of subject			2023/2024		
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	1	Language of instruction			Polish		
Semester of study	2	ECTS credits			4.0		
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	dr hab. inż. Waldemar Magda					
	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		65.0	100	
Subject objectives	A student analyzes the knowledge obtained according to the field of study as well as the speciality of hydro- and marine civil engineering; solves an engineering problem assigned as an individual seminar work; prepares and delivers a multimedia presentation illustrating the exercise assigned.						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	[K7_U15] has advanced skills in civil engineering within offered specialization/profile	A student possesses advanced skills from the field of hydro- and marine civil engineering, within the framework of offered specialities and diploma profiles.			[SU5] Assessment of ability to present the results of task		
	[K7_K04] understands the necessity of dissemination civil engineering knowledge in the society and to support the professional ethos of a civil engineer	A student understands the need of transfer of the hydro- and marine civil engineering knowledge to the society; can do everything to fuel the ethos of hydro- and marine civil engineering profession.			[SK4] Assessment of communication skills, including language correctness		
	[K7_K02] Recognizes the significance of knowledge in solving cognitive and practical problems; reliably evaluates results of his own and team research	A student is responsible for the quality of results obtained during individual activities and team works.			[SK1] Assessment of group work skills		
[K7_W15] has deep and adequate knowledge of civil engineering, within offered specialization and profile	A student has a well-ordered and deepened knowledge from the field of hydro- and marine civil engineering, within the framework of offered specialities and diploma profiles.			[SW2] Assessment of knowledge contained in presentation			
Subject contents	Thematic lectures given by the staff of the Department and visitors from other national and international universities, as well as companies and design offices. The topics of lectures concern the newest solutions in hydro- and marine civil engineering. Elaboration and multimedia presentation of topics related to master theses together with discussion and justification of solutions proposed. There is a possibility of presentation in English.						
Prerequisites and co-requisites	No preliminary and additional requirements.						

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Presentation of advances in master thesis	60.0%	40.0%
	Presentation of the topic selected	60.0%	60.0%
Recommended reading	Basic literature	<ol style="list-style-type: none"> 1. Kulczyk J., Winter J.: Żegluga śródlądowa. 2005. 2. Selim Yalin M., Ferreira da Silva A.M.: Fluvial processes. IAHR, 2001. 3. Szling Z. Winter J.: Śródlądowe drogi wodne. Skrypt Politechniki Wrocławskiej. 1986. 4. Wielgus W.: Obliczenia hydrauliczne śluz żeglugowych. Skrypt Politechniki Krakowskiej 1980. 5. Wołoszyn J., Czamara W., Eliasiewicz R., Krężel J.: Regulacja rzek i potoków. Wydawnictwo Akademii Rolniczej we Wrocławiu, Wrocław, 1994. 6. J. Kubicki: <i>Organizacja transportu morskiego</i>. WSM, Gdynia 1994. 7. E. Lewko: <i>Portowe roboty czerpalne i podwodne</i>. WAM, Gdynia 2006. 8. Mazurkiewicz B.: <i>Encyklopedia inżynierii morskiej</i>. Wydawnictwo Morskie, Gdańsk 1986. 9. <i>Poradnik hydrotechnika</i>. Praca zbiorowa pod red. S. Massela. Wydawnictwo Morskie, Gdańsk 1992. 10. <i>Morskie budowle hydrotechniczne. Zalecenia do projektowania i wykonywania Z 1 Z45</i>. 11. Handbook Quay Walls. CUR: Centre for Civil Engineering Research and Codes, Public Works Rotterdam, Port of Rotterdam. Taylor & Francis, Gouda, The Netherlands, September 2005. 12. Hueckel S.: <i>Budownictwo morskie</i>, tom I, II, III i IV. Wydawnictwo Morskie, Gdańsk 1972. 13. Mazurkiewicz B.: <i>Hydrotechniczne konstrukcje stoczniowe</i>, cz. I i II. Wydawnictwo Morskie, Gdańsk 1981. 14. Mazurkiewicz B.: <i>Pochylnie podłużne i poprzeczne</i>. Budownictwo Wodne Nr 16 Zeszyty Naukowe Politechniki Gdańskiej, Gdańsk 1971. 15. Mazurkiewicz B.: <i>Doki suche</i>. Gdańskie Towarzystwo Naukowe, Acta Technica 16. <i>Morskie budowle hydrotechniczne. Zalecenia do projektowania i wykonywania Z 1-Z45</i>. Praca zbiorowa pod red. B. Mazurkiewicza. Fundacja Promocji Przemysłu Okrętowego i Gospodarki Morskiej, Gdańsk 2006. 17. Bednarczyk S., Bolt A., Mackiewicz S.: <i>Stateczność oraz bezpieczeństwo jazów i zapór</i>, Wydawnictwo Politechniki Gdańskiej, Gdańsk 2009 18. Bednarczyk S., Duszyński R.: <i>Hydrauliczne i hydrotechniczne podstawy rewitalizacji rzek</i>, Wydawnictwo Politechniki Gdańskiej, Gdańsk 2008 	
	Supplementary literature	<ol style="list-style-type: none"> 1. <i>Inżynieria morska i geotechnika</i> dwumiesięcznik. 2. Lambor J.: <i>Gospodarka wodna na zbiornikach retencyjnych</i>. Arkady 1962. 3. Dziewoński Z.: <i>Rolnicze zbiorniki retencyjne</i>. PWN 1974. 4. Szpindor A., Piotrowski J.: <i>Gospodarka wodna</i>. PWN 1984. 5. Mikulski M.: <i>Gospodarka wodna</i>. POWN 1997. 6. Ciepeliowski A.: <i>Gospodarowanie zasobami wodnymi</i>. SGGW 1999. 7. Budownictwo Betonowe t. XVII <i>Budownictwo wodne śródlądowe</i>. ARKADY 1969. 8. Wolski W.: <i>Zapory ziemne</i>. ARKADY 1973. 9. Fanti K.: <i>Budowle piętrzące</i>. ARKADY 1972. 10. Depczyński W., Szamowski A.: <i>Budowle i zbiorniki wodne</i>. 1999. 	
	eResources addresses	Adresy na platformie eNauczanie: Seminarium dyplomowe BWiM - magisterskie 1 - Moodle ID: 34902 https://enauzanie.pg.edu.pl/moodle/course/view.php?id=34902	
Example issues/ example questions/ tasks being completed	<ol style="list-style-type: none"> 1. Spillways and outlets. 2. Constructions of the weirs body and the stilling basin. 3. Earth dams, construction and rules of execution. 4. Earth dams - protection of the upstream slope. 5. Stability of the damming structure. 6. Damming structures - the rules of construction. 7. Water intakes. 8. Underground tanks, rules of dimensioning. 9. Conditions to be met by the waterway cross-section. 10. Flexible pipelines. 1. Types of breakwaters. Design of vertical-wall and rubble-mound breakwaters. 2. Types of quay walls. Design of sheet-pile walls with relieving platform. 3. Types of shipyard hydro-engineering structures (longitudinal and parallel slipways, dry and floating docks). 4. Rules of the dimensioning and loading of slipways during the ship construction and launching stages. 5. Mooring and fendering units and structures. 6. Sea locks. 7. Submarine tunnels. 		
Work placement	Not applicable		