

Subject card

Subject name and code	Hydrographic data management - lecture, PG_00131522						
Field of study	Marine Hydrography						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2027/2028		
Education level	Bachelor's studies		Subject group		Obligatory subject group in the field of study Subject group related to practical vocational preparation		
Mode of study	full-time studies		Mode of delivery		at the university		
Year of study	3		Language of instruction		Polish		
Semester of study	5		ECTS credits		1.0		
Learning profile	practical		Assessment form		credit		
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Dominik Iwen				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	20.0	0.0	0.0	0.0	0.0	20
	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	20		1.0		7.0	28
Subject objectives	Providing knowledge in the field of hydrographic data management.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[HML3-W16] engineering standards and norms specific to the field of study, in particular those recommended by IHO and IMO		know; - Methods of ongoing control of measurements.		[SW4] test/exam - oral or written		
	[HML3-W04] the issue of measurements related to the exploration of sea basins and inland waters and tools allowing to describe, interpret and present the results of measurements		know: - Methods of preliminary processing of measurement results. - Methods of creating digital bottom models. - Data acquisition process in the hydrographic system.		[SW4] test/exam - oral or written		
Subject contents	Lectures: Introduction to the subject. Hydrographic data acquisition including real-time quality control. Types and formats of collected data in the context of their subsequent analysis and storage in databases. Bathymetric data processing. Accuracy of bathymetric survey. Digital seabed model creation and visualization. Hydrographic databases. Hydrographic data in marine spatial information systems. Data visualization, visualization of bottom models. Documentation in hydrographic measurements, description of the data processing process.						
Prerequisites and co-requisites							
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	colloquium		51.0%		100.0%		

Recommended reading	Basic literature	1. LONGLEY P. A. et al.: GIS. Theory and practice. PWN Scientific Publishing House, 2008. 2. PDNO-06-A072 Marine hydrography. Organization and principles of conducting research. 3. PDNO-06-A073 Marine hydrography Principles of data collection and presentation of results.
	Supplementary literature	1. *IHO, 2022. IHO Standards for Hydrographic Surveys. Special Publication No. 44. S-44. International Hydrographic Organization, Monaco. 2. IHO 2005 Manual of Hydrography, C-13 International Hydrographic Organization, Monaco. 3. LINZ Land Information New Zealand, 2020. Contract specifications for Hydrographic Surveys V2.0, 28 June. 4. USDOC U.S. Department of Commerce, NOAA National Oceanic and Atmospheric Administration, NOS National Ocean Service, 2018. Hydrographic surveys specifications and deliverables. April. USACE US Army Corp of Engineering, 2013. Hydrographic Surveying. EM 1110-2-1003, USA
	eResources addresses	
Example issues/ example questions/ tasks being completed	1. List and briefly describe reporting materials related to hydrographic measurements. 2. Characterize the reference systems and projections used in the Republic of Poland.	
Work placement	Not applicable	

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