University of Gdańsk

Subject card

Subject name and code	Hydrographic Data Management - lecture, PG_00201140		
Field of study	Marine Hydrography		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2028/2029
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	4.0	25

Subject objectives

Providing knowledge in the field of hydrographic data management.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[HML3-W04] knows and understands, at an advanced level, 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	knows: - methods for the preliminary processing of measurement results; - methods for creating digital seabed models; - the data acquisition process in a hydrographic system	[SW4] test/exam - oral or written
[HML3-W16] knows and understands engineering standards and norms specific to the field of study, in particular those recommended by IHO and IMO	knows methods for ongoing monitoring of measurement procedures	[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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