

Subject card

Subject name and code	Hydrographic survey operations -audit exercises, PG_00131490						
Field of study	Marine Hydrography						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2026/2027		
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	2		Language of instruction		Polish		
Semester of study	4		ECTS credits		2.0		
Learning profile	practical		Assessment form		credit		
Conducting unit	Laboratory of Physical Oceanography -> Department of Physical Oceanography and Climate Research -> Faculty of Oceanography and Geography -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr Jakub Idczak				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	30.0	0.0	0.0	0.0	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		1.0		20.0	51
Subject objectives	To master the skills necessary for planning and directing hydrographic work at sea and in ports, using various devices and measurement systems.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[HML3-K04] perform professional roles responsibly, taking into account moral and ethical challenges, including in the international environment and care for the achievements and traditions of the profession	Responsible acquisition, processing, and dissemination of hydrographic data, taking into account the generally accepted principles of ethics in the profession of marine hydrography.	[SK2] presentation/project/paper/report [SK5] implementation of a problem task [SK8] observation of student's independent or team work
	[HML3-U14] use the applicable terminology in presenting and discussing problems related to the field of study	To correctly use the applicable terminology when presenting and discussing issues related to hydrography.	[SU2] presentation/project/paper/report [SU5] implementation of a problem task [SU8] observation of student's independent or team work
	[HML3-W16] engineering standards and norms specific to the field of study, in particular those recommended by IHO and IMO	To plan, organize, and conduct hydrographic measurements in accordance with national regulations and international standards.	[SW2] presentation/project/paper/report [SW5] implementation of a problem task
	[HML3-W08] principles of operation and use of measuring instruments used in professional activities related to the field of study, including principles for their calibration and accuracy assessment	To practically utilize various hydrographic devices and systems used in hydrographic work, taking into account limitations, errors, and calibration.	[SW2] presentation/project/paper/report [SW5] implementation of a problem task
	[HML3-U08] independently use the professional literature available in traditional and electronic form, make an assessment, critical analysis and synthesis as well as the correct interpretation of the information obtained	Independently utilize professional literature available in both traditional and electronic formats, as well as the Internet, to integrate, evaluate, and correctly interpret the obtained information, draw conclusions, formulate opinions, and take actions for the effective and safe execution of hydrographic work.	[SU2] presentation/project/paper/report [SU5] implementation of a problem task [SU8] observation of student's independent or team work
Subject contents	1. Project work with specialized software used for planning hydrographic surveys. 2. Exercises with selected hydrographic equipment.		
Prerequisites and co-requisites	Fundamentals of physics and mathematics		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	report	51.0%	100.0%
Recommended reading	Basic literature	1. GRZĄDZIEL A., WAŻ M.: Powstanie i rozwój technologii echosondy wielowiązkowej. Polish Hyperbaric Research, Nr 1(62), 2018. 2. GRZĄDZIEL A., WAŻ M.: System echosondy wielowiązkowej w pomiarach batymetrycznych planowanych tras żeglugowych. Logistyka, Nr 6, 2014. 3. Podręcznik Normalizacji Obronnej Hydrografia Morska. Organizacja i zasady prowadzenia badań (PDNO-06-A072). 4. Podręcznik Normalizacji Obronnej Hydrografia Morska. Zasady gromadzenia danych i przedstawiania wyników (PDNO-06-A073). 5. Przegląd Hydrograficzny, Nr 1-8, BHMW, 2005-2013. 6. IHO C-13 Manual on Hydrography. 7. IHO M-2 The Need for National Hydrographic Services. 8. IHO S-5A Standards of Competency for Category A Hydrographic Surveyors. 9. IHO S-44 IHO Standards for Hydrographic Surveys. 10. IHO S-100 IHO Universal Hydrographic Data Model.	
	Supplementary literature	Lekkerkerk, H. J., Van der Velden, R., Roders, J., Haycock, T., De Vries, R., Jansen, P., Beemster, C. (2006) <i>Handbook of Offshore Surveying</i> . Clarkson Research Services, London	
	eResources addresses		
Example issues/ example questions/ tasks being completed	Configure the measurement system for the multibeam echosounder based on measurement device simulators, using the hydrographic software Qinsy for this purpose.		
Work placement	Not applicable		