University of Gdańsk

Subject card

Subject name and code	Hydrographic Survey Operations - laboratory classes , PG_00201118						
Field of study	Marine Hydrography						
Date of commencement of studies	October 2026		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	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	0.0	30.0	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	19.0	50	
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-U14] is able to use the applicable terminology in presenting and discussing problems related to the field of study	is able to correctly use the relevant 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-U08] is able to 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	is able to independently use professional literature available in both print and electronic formats, as well as the Internet; integrate, evaluate, and correctly interpret the information obtained; draw conclusions; formulate opinions; and take actions to ensure 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
[HML3-K04] is ready to 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	is ready to responsibly collect, process, and disseminate hydrographic data, in accordance with the generally accepted ethical principles of the maritime hydrographer profession	[SK2] presentation/project/paper/ report [SK5] implementation of a problem task [SK8] observation of student's independent or team work
[HML3-W08] knows and understands, at an advanced level, 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	is able to effectively use a variety of hydrographic instruments and systems employed in hydrographic work, taking into account their limitations, errors, and calibration	[SW2] presentation/project/paper/ report [SW5] implementation of a problem task
[HML3-W16] knows and understands engineering standards and norms specific to the field of study, in particular those recommended by IHO and IMO	is able 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

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., WĄŻ M.: Powstanie i rozwój technologii echosondy wielowiązkowej. Polish Hyperbaric Research, Nr 1(62), 2018. 2. GRZĄDZIEL A., WĄŻ 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) *Handbook of Offshore Surveying*. 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

Document generated electronically. Does not require a seal or signature.