University of Gdańsk

Subject card

Subject name and code	Oceanographic instruments and measurements - Lecture, PG_00054993		
Field of study	Oceanography		
Date of commencement of studies	October 2024	Academic year of realisation of subject	2024/2025
Education level	postgraduate studies	Subject group	Obligatory subject group in the field of study
Mode of study	full-time studies	Mode of delivery	at the university
Year of study	1	Language of instruction	Polish Polish
Semester of study	1	ECTS credits	2.0
Learning profile	academic	Assessment form	
Conducting unit	Faculty of Oceanography and Geography		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. Dorota Burska	
	Teachers	dr hab. Dorota Burska dr Dominik Pałgan dr Jakub Idczak	

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	30.0	0.0	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	4.0	20.0	54

Subject objectives

Theoretical knowledge of the principles of instruments/devices and measurement platforms used today inoceanographic research and the use of the existing database to solve research, environmental,management problems.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[OCEANMU2-W03] knows and understands research methods used in oceanography and related sciences	knows and understands in an advanced way the research methods used in assessographic surveying, in terms of modern sensors and devices used for in situ measurements and specialized software used for conducting measurements, describing and interpreting phenomena and processes occurring in the aquatic environment, especially the	[SW4] test/exam - oral or written
[OCEANMU2-K04] is ready to critically evaluate his/her knowledge and received content in the field of natural sciences in in particular in the field of the studied specialty, a in problematic situations, supports oneself with knowledge experts	is ready to critically evaluate his knowledge of modern equipment and sensors used in oceanographic surveying and to support himself with expert knowledge in solving problems.	[SK4] test/exam - oral or written

Subject contents	1Principle of operation of selected instruments/equipment used in modern marine physics, chemistry andgeology research. 2 Measurement platforms (manned/unmanned vessels, floating buoys, moored, etc.):principle of operation, measurement range, data sharing. 3 Methods and equipment used for atmospheric,marine and seabed sampling, depending on the material or measurement required. 4 Samplingrequirements, methodology and strategies related to the design of scientific and environmental monitoringprograms.	
Prerequisites and co-requisites		
Assessment methods and criteria	Subject passing criteria	Passing threshold / Percentage of the final grade
	test3	51.0% / 33.3%
	test2	51.0% / 33.3%
	test1	51.0% / 33.4%
Recommended reading	Basic literature	1 Różdżyński K., (1996) Oceanographic surveying, vol. 1-12, IMGW, Warsaw (in Polish).2 Bolałek J., (red.) 2010, Physical, biological and chemical studies of marine bottom sediments. 2010.Wydawnictwo UG, Gdańsk (in Polish).3.Lekkerkerk, H. J., Van der Velden, R., Roders, J., Haycock, T., De Vries, R., Jansen, P., Beemster ,C. (2006) Handbook of Offshore Surveying- Acquisition and Processin. Clarkson Research Services, London.
	Supplementary literature	1. Instructions for use of equipment/instrumentation.2. Reports from IMGW, WIOŚ, HELCOM, hydrodynamic model of thesouthern Baltic Sea, weather forecasts, SatBaltic platform, GOOS,NOA, scientific articles.
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed	1 Determination of dissolved oxygen can be carried out using electrochemical sensors (galvanic,polarographic), among others. Give the most important characteristics of these sensors.2 State in whatrange is the relative spectral emissivity of water in the band 8 - 14 mm in the direction perpendicular to thewater surface .3. Detailed studies (according to the protocol of probing studies of SMS deposits) are carriedout with what platforms?	
Work placement	Not applicable	

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