University of Gdańsk

Subject card

Subject name and code	, PG_00120355		
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	3.0
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 mgr Łukasz Lewandowski dr Dorota Pryputniewicz-Flis dr Jakub Idczak mgr Aleksandra Malecha-Łysakowska	

Lesson types							
	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	45.0	0.0	0.0	45
	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	45	5.0	25.0	75

Subject objectives	
	Practical knowledge of the principles of instruments/devices and measurement platforms/systems usedtoday in oceanographic research and the use of existing databases to solve research, environmental,management problems.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[OCEANMU2-U03] can plan and carry out independently advanced research and measurements, both in field and laboratory, using appropriately selected measurement and analytical techniques in the field of oceanography, adequately to the studied specialty and research problem	knows and understands in an advanced way advanced research methods used in evaluographic metrology, in in the field of modern sensors and devices used for in situ measurements and software specialized used for conduct measurements, describe and interpretation of phenomena and processes occurring in aquatic environment, in particular particularly marine.	[SU6] demonstration of practical skills
[OCEANMU2-W03] knows and understands research methods used in oceanography and related sciences	is able to independently plan and carry out research and measurements using appropriately selected measuring and analytical techniques in the field of oceanography, adapting the methods used to the research problem.	[SW2] presentation/project/paper/ report [SW3] text preparation/written work
[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	Able to use specialized computer software and mathematical and statistical methods in data analysis and description of phenomena and processes especially in the fields of chemistry, physics and marine geology.	[SK2] presentation/project/paper/ report [SK3] text preparation/written work
[OCEANMU2-U06] can use specialized computer software and advanced mathematical and statistical methods in data analysis and description of processes and phenomena occurring in the marine environment and coastal zone	is ready to critically evaluate his knowledge of modern devices and sensors used in oceanographic surveying and to support himself with expert knowledge in solving problems.	[SU2] presentation/project/paper/ report [SU3] text preparation/written work

Subject contents

1 Verification of the sources of information on marine environmental measurements, taking into account the typeuplatform, accuracy and precision of the device, availability of data,2 Measurement parameters (measurement range, precision, accuracy, sensor response time, sampling interval,recording duration)3 Preparation of instruments/devices for in situ measurement work/experimental setups (e.g.:configuration and calibration of equipment, checking the correctness of its operation, use of specializedsoftware)4 Data systems (type of data, data compression, data storage, etc...,) using examples of specialized software used in marine physics, chemistry and geology, contemporary oceanographic data bases,5 Analysis and presentation of results problem presentation based on measurement/archival data (scientific, management, monitoring)

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
report	51.0%	33.3%
data compilation	51.0%	33.3%
written answer	51.0%	33.4%

Recommended reading

Basic literature

1. Instructions for use of equipment/instrumentation.2. Reports fromIMGW, WIOŚ, HELCOM, hydrodynamic model of thesouthern BalticSea, weather forecasts, SatBaltic platform, GOOS,NOA, scientificarticles.

	Supplementary literature	1 Różdżyński K., (1996) Oceanographic surveying, vol. 1-12,IMGW,Warsaw (in Polish).3.Lekkerkerk, H. J., Van der Velden, R., Roders, J.,Haycock, T., DeVries,
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed	1.Conversions, tasks in terms of units used in oceanographic surveying.2.Development of selectedhydroacoustic data (e.g.: bathymetry, bottom structure, depth profiles).3.Development of the results of anenvironmental experiment - evaluation of changes over time.	
Work placement	Not applicable	

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