University of Gdańsk

Subject card

Subject name and code	Water monitoring, PG_00119876						
Field of study	Geography						
Date of commencement of studies	October 2024		Academic year of realisation of subject		2026/2027		
Education level	undergraduate studies		Subject group		Obligatory subject group in the field of study Optional subject group Subject group related to scientific research in the field of study		
Mode of study	full-time studies		Mode of delivery		at the university		
Year of study	3		Language of instruction		English		
Semester of study	5		ECTS credits		3.0		
Learning profile	academic		Assessment form				
Conducting unit	Centrum Monitoringu i Ochrony Wód -> Faculty of Oceanography and Geography						
Name and surname of lecturer (lecturers)	Subject supervisor		prof. dr hab. inż. Julita Dunalska				
	Teachers						
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		5.0		50.0	85
Subject objectives	Familiarization with the basic methods of water monitoring in Poland and in the world. The course includes auditorium and field classes. Classes are carried out in a blocked form at the Center for Water Monitoring and Protection in Borucino.						

Learning outcomes

Course outcome	Subject outcome	Method of verification
[GEOGRL3-U06] apply methods and research tools of geographic sciences, including conducting observations and field measurements, and assess their suitability for the tasks in which the application objective of geography can be achieved	Is able to select and independently apply basic research techniques and tools, in compliance with established analytical procedures, in the field of aquatic environment research.	[SU1] oral statement/conversation/ discussion [SU2] presentation/project/paper/ report [SU8] observation of student's independent or team work
[GEOGRL3-W07] on advanced level methods of aquiring data on the natural and anthropogenic environment, including operation of specialized equipment	Knows the principles of environmental sampling.	[SW5] implementation of a problem task
[GEOGRL3-K04] social action, including cooperation to preserve the ecological balance and protect the Earth's resources and its sustainable development, using forms of own entrepreneurship for this purpose	It is responsible for the protection of the natural environment.	[SK1] oral statement/conversation/ discussion [SK2] presentation/project/paper/ report [SK8] observation of student's independent or team work
[GEOGRL3-W08] at an advanced level methods and principles development of data on the natural and anthropogenic environment, and methods of their analysis and interpretation	Student has well-established knowledge in the field of measurement and interpretation of monitoring data. Knows the indicators of pollution of the aquatic environment.	[SW5] implementation of a problem task
[GEOGRL3-U08] use scientific language and express themselves and discuss topics concerning geographic issues in Polish and in a foreign language	Student reads with understanding specialized scientific texts and formulates opinions on water quality in English.	[SU1] oral statement/conversation/ discussion [SU2] presentation/project/paper/ report [SU8] observation of student's independent or team work

Subject contents

Getting to know the specifics of field work and the laboratory of environmental research, the principles of creating monitoring in Poland (PMŚ) and the flow of information at the national and international level; getting acquainted with the role of volunteers in water monitoring as part of citizen science; performing measurements to assess the condition of environmental components using modern equipment and measurement devices and high frequency data; interpretation of the obtained results of monitoring tests and cause-and-effect analysis.

Prerequisites and co-requisites

Knowledge of English

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
	51.0%	100.0%

Recommended reading

Basic literature	Water Framework Directive
Supplementary literature	Marcé R et al. 2016. Automatic High Frequency Monitoring for Improved Lake and Reservoir Management. Environmental Science&Technology, 50(20): 10780-10794
eResources addresses	Adresy na platformie eNauczanie:

Example issues/ example questions/ tasks being completed

Work placement

Not applicable

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