University of Gdańsk

Subject card

Subject name and code	Water Monitoring - discussion classes, PG_00192645						
Field of study	Water Management and Protection of Water Resources						
Date of commencement of studies	October 2027		Academic year of realisation of subject		2029/2030		
Education level	Bachelor's studies		Subject group		Obligatory subject group in the field of study Optional subject group Subject group related to practical vocational preparation		
Mode of study	full-time studies		Mode of delivery		at the university		
Year of study	3		Language of instruction		English		
Semester of study	6		ECTS credits		2.0		
Learning profile	practical		Assessment form		credit		
Conducting unit	Centrum Monitoringu i Ochrony Wód -> Faculty of Oceanography and Geography -> Rector						
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	20.0	0.0	0.0	0.0	0.0	20
	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	20		1.0		29.0	50
Subject objectives	Introduction to basic methods of water monitoring in Poland and worldwide. The course includes auditorium and field classes. Classes conducted in block form at the Center for Water Monitoring and Protection in Borucino.						

Learning outcomes

Course outcome	Subject outcome	Method of verification
[GWOZWL3-K05] take responsibility for the safety of his own work and that of others, dealing with emergencies, exercising caution in the laboratory and in the field, responsibility for entrusted equipment and apparatus.	Student is responsible for the safety of his own and others' work, conduct in states of danger, exercise caution in the laboratory and in the field, responsibility for the entrusted equipment and apparatus.	[SK6] demonstration of practical skills
[GWOZWL3-U14] speak a foreign language at the level of B2 of the Common European Framework of Reference for Languages.	The student is able to speak a foreign language at the level of B2 of the Common European Framework of Reference for Languages.	[SU1] oral statement/conversation/ discussion
[GWOZWL3-W03] the organisation and legal framework of environmental protection, nature conservation and water management, as well as the principles governing the organisation and operation of hydrological and meteorological services and the fundamentals of Integrated Environmental Monitoring.	Student knows the organization and legal basis for the protection of the aquatic environment, as well as the principles of organization and functioning of the monitoring in Poland (PMŚ). He has well-established knowledge in the field of measurement and interpretation of monitoring data.	[SW1] oral statement/ conversation/discussion
[GWOZWL3-W08] advanced knowledge and understanding of the key concepts and issues within their field of study in foreign language.	Knows the indicators of pollution of the aquatic environment. Knows basic concepts and explains issues in English.	[SW1] oral statement/ conversation/discussion [SW2] presentation/project/paper/ report
[GWOZWL3-U13] read with understanding specialized scientific texts in Polish and foreign language.	Student reads with understanding specialized scientific texts and formulates opinions on water quality in English.	[SU1] oral statement/conversation/ discussion
[GWOZWL3-U02] select and independently apply basic research techniques and tools, with adhering to established analytical procedures in the field of environmental research in water management, adequately to the considered research problem.	Is able to select and independently apply basic research techniques and tools, in compliance with established analytical procedures, in the field of aquatic environment study.	[SU2] presentation/project/paper/ report

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
completing a final paper - conducting research and presenting its results	51.0%	100.0%

Recommended reading

Basic literature	- water 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	

Example issues/ example questions/ tasks being completed

Work placement

Not applicable

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