University of Gdańsk

Subject card

Subject name and code	Bioindication and Biomonitoring of Water - laboratory classes, PG_00201437		
Field of study	Water Management and Protection of Water Resources		
Date of commencement of studies	October 2027	Academic year of realisation of subject	2028/2029
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	1.0
Learning profile	practical	Assessment form	credit
Conducting unit	Laboratory of Biodiversity and Benthic Functioning -> Department of Marine Ecology -> Faculty of Oceanography and Geography -> Rector		
Name and surname of lecturer (lecturers)	Subject supervisor	dr Halina Kendzierska	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	0.0	0.0	15.0	0.0	0.0	15

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	15	1.0	9.0	25

Subject objectives

Development of knowledge on the assessment of threats to aquatic ecosystems related to human activities, the search for solutions aiming at sustainable management of aquatic areas and the improvement of the quality of aquatic ecosystems. To learn about and be able to select methods for the biological assessment of aquatic environmental quality and sustainability.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[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.	Can select basic research techniques and tools, following established analytical procedures for water biomonitoring.	[SU2] presentation/project/paper/ report [SU3] text preparation/written work
[GWOZWL3-U03] observe and describe the changes taking place in water management and predict further directions of its development as well as conduct a critical analysis of case studies of problems of water management and protection of water resources in terms of impact on ecological, social and economic systems; natural valorization and assessment of quality of the environment.	Can carry out a critical analysis of threats to water resources using a biological assessment of the quality of the water environment.	[SU8] observation of student's independent or team work

Subject contents

Assessment of the quality of a selected aquatic biotope based on environmental and laboratory studies; Laboratory studies including identification of selected protected species and alien species.

Prerequisites and co-requisites

<table>
<tr><td>Assessment methods and criteria</td><td colspan="2"><table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>activity in class, being prepared for class</td><td>51.0%</td><td>10.0%</td></tr>
<tr><td>assesstment works, reports</td><td>51.0%</td><td>70.0%</td></tr>
<tr><td>poster presentation of scientific paper</td><td>51.0%</td><td>20.0%</td></tr>
</table></td></tr>
<tr><td rowspan="3">Recommended reading</td><td>Basic literature</td><td>Kołodziejczyk, A., Koperski, P., 2000. Freshwater invertebrates of Poland. Klucz do oznaczania oraz podstawy biologii i ekologii makrofauny.
University of Warsaw Publishing House.
Sea Water Monitoring Programme, Report to the European Commission, 2014, Prepared by the Chief Inspector of Environmental Protection, Warsaw.
Wiech A.K., Marciniewicz-Mykieta M., Toczko B., 2018, San environment in Poland Report 2018, Inspekcja Ochrony Środowiska, Biblioteka
Environmental Monitoring Library,Warsaw
Walker C.H., Hopkin S.P., Sibly R.M., Peakall D.B., 2002, Fundamentals of ecotoxicology, Wyd. PWN, Warszawa</td></tr>
<tr><td>Supplementary literature</td><td>-</td></tr>
<tr><td>eResources addresses</td><td></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td colspan="2"></td></tr>
<tr><td>Work placement</td><td colspan="2">Not applicable</td></tr>
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