University of Gdańsk

Subject card

Subject name and code	Water Biology - laboratory excercises, PG_00054165		
Field of study	Water Management and Protection of Water Resources		
Date of commencement of studies	October 2024	Academic year of realisation of subject	2024/2025
Education level	undergraduate studies	Subject group	Obligatory subject group in the field of study Subject group related to scientific research 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	1	Language of instruction	Polish Polish
Semester of study	1	ECTS credits	3.0
Learning profile	practical	Assessment form	
Conducting unit	Katedra Biologii Morza i Biotechnologii -> Faculty of Oceanography and Geography		
Name and surname of lecturer (lecturers)	Subject supervisor	dr Justyna Kobos	
	Teachers	dr Justyna Kobos	

Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	30.0	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	55.0	90

Subject objectives	Teaching practical skills for field work (collection, preservation, description and proper storage of samples) and work in a biological laboratory (preparation of slides and biological analysis of collected material)

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	is able to select and independently apply the basic techniques and research tools used in hydrobiology, with the observance of established analytical procedures, in the field of environmental research in water management, adequate to the considered research problem	[SU8] observation of student's independent or team work
[GWOZWL3-U15] by solving in groups the assigned problem situations, appropriately set priorities to achieve task defined by themselves or others	is able, by solving in groups the assigned problem situations, appropriately set priorities for the implementation of a task defined by himself or others	[SU8] observation of student's independent or team work
[GWOZWL3-U01] make basic observations of processes and phenomena occurring in the hydrosphere and carry out basic measurements of selected processes of water purification on a laboratory scale	is able to make basic observations of biological processes and phenomena occurring in the hydrosphere, as well as perform basic measurements of selected water purification processes on a laboratory scale	[SU8] observation of student's independent or team work
[GWOZWL3-W01] in advanced basic biological, physical and chemical processes and phenomena, as well as analyzes their mutual relations and course in relation to natural environment and socio-ecological systems	knows and understands to an advanced degree the basic biological processes and phenomena, and analyzes their interrelationships and course in relation to the natural environment and social-ecological systems	[SW1] oral statement/ conversation/discussion [SW5] implementation of a problem task
[GWOZWL3-K05] take responsibility for the safety of their own work and that of others, dealing with emergencies, exercising caution in the laboratory and in the field, responsibility for entrusted equipment and apparatus	Is ready to be responsible for the safety of his own work and that of others, to deal with emergencies, to be cautious in the laboratory and in the field, to be responsible for the equipment and apparatus entrusted to him	[SK8] observation of student's independent or team work

Subject contents

1. to know how to properly collect environmental samples (selection of fishing gear, maintenance, description, proper transportation and storage of samples)
2. learning basic ecological concepts
3. to learn about plant and animal organisms living in the aquatic environment
4. to learn about and describe ecological formations, their species composition and adaptations
5. to learn about the interdependence of organisms and their relationship with the environment
6. to learn about the properties of the aquatic environment that affect the functioning of aquatic ecosystems

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
determination of the passing grade on the basis of partial grades received during the semester	51.0%	100.0%

Recommended reading	Basic literature	Odum E., 1982, Podstawy ekologii, PWRiL, Warszawa Starmach K., Wróbel S., Pasternak K., 1976, Hydrobiologia. Limnologia, PWN, Warszawa Mikulski J. S., 1982, Biologia wód śródlądowych, PWN, Warszawa Pliński M., 1992, Hydrobiologia ogólna, skrypt Uniwersytetu Gdańskiego, Gdańsk Starmach K., 1973, Wody śródlądowe. Zarys hydrobiologii, skrypt Uniwersytetu Jagiellońskiego, Kraków Kajak Z., 1998, Hydrobiologia Limnologia, PWN, Warszawa Chojnacki J., 1998, Podstawy ekologii wód, Wydawnictwo Akademii Rolniczej w Szczecinie, Szczecin
	Supplementary literature	Podbielkowski Z., Tomaszewicz H., 1979, Zarys hydrobotaniki, PWN, Warszawa Thurman U., 1982, Zarys oceanologii, Wydawnictwo morskie, Gdańsk Pliński M., 2008, Biologia organizmów morskich, wydawnictwo Uniwersytetu Gdańskiego, Gdańsk Żmudziński L., Słownik hydrobiologiczny, Wydawnictwo Naukowe PWN, Warszawa
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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