University of Gdańsk

Subject card

Subject name and code	Environmental protection, PG_00192999		
Field of study	Geology		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2028/2029
Education level	Bachelor's studies	Subject group	Obligatory subject group in the field of study Optional subject group
Mode of study	full-time studies	Mode of delivery	at the university
Year of study	3	Language of instruction	Polish
Semester of study	5	ECTS credits	2.0
Learning profile	academic	Assessment form	credit
Conducting unit	Laboratory of Toxic Substances Transformation -> Department of Chemical Oceanography and Marine Geology -> Faculty of Oceanography and Geography -> Rector		
Name and surname of lecturer (lecturers)	Subject supervisor	dr Iga Nehring	
	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	2.0	18.0	50

Subject objectives

Familiarizing the student with the issue of environmental protection; indication of the impact of anthropogenic activities on environmental degradation; getting acquainted with pro-ecological activities undertaken on a global and local scale; indication of various sources of contamination, their effects on water, air and soil, and their impact on human and animal health.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[GEOLL3_U02] has the skill of analytical and synthetic way of reasoning leading to correct inference based on the results obtained or the facts presented	has the ability to analytically and synthetically understand the processes related to pollution of the natural environment	[SU4] test/exam - oral or written
[GEOLL3_U08] is able to write, report and properly illustrate scientific work in Polish and English on the basis of available sources on a selected topic in the field of geological issues	can report a scientific work in Polish in the field of protection environment	[SU2] presentation/project/paper/ report
[GEOLL3_W07] knows the anthropogenic transformation of the natural environment, including the effects of the exploitation of mineral resources	knows the consequences of anthropogenic activities on the environment natural environment and human health	[SW4] test/exam - oral or written
[GEOLL3_K03] is willing to exercise caution and criticism in receiving information from scientific literature, the Internet and other media related to natural sciences	is ready to be careful and critical when accepting information from scientific literature, the Internet and other media relating to environmental protection	[SK2] presentation/project/paper/ report
[GEOLL3_W02] knows and understands the terminology appropriate in science and natural sciences	knows and understands the terminology related to pollution chemicals and environmental protection	[SW4] test/exam - oral or written

Subject contents	1 Properties of organic and inorganic endocrine disruptors flowing into the sea. 2. Toxicity of metals, their sources and importance for the environment. 3. Toxic warfare agents lying at the bottom of marine sediments. 4. Radiation threats and protection against them. 5. Conventions and legislation on the monitoring of toxic substances to the marine environment. 6. Are sewage treatment plants efficient in dealing with toxic compounds? 7. Soil and sediments as a reservoir and source of toxic substances. 8. Pollution and air protection. The impact of burning fossil fuels on the quality of inhaled air. 9. The problem of microplastics in the environment. 10. Renewable energy sources and clean technologies
Prerequisites and co-requisites	

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
test	51.0%	50.0%
oral presentation	51.0%	50.0%

Recommended reading

Basic literature	Bolałek J., Protection of the marine environment. From theory to practice. University of Gdańsk , Gdańsk 2016 Chemical Munitions Dumped in the Baltic Sea, HELCOM Report, 2013 Sonesten, L., Undeman, E., Svendsen, L. M., Frank-Kamenetsky, D., & Haapaniemi, J. (2021). Inputs of hazardous substances to the Baltic Sea. S. Zakrzewski. Basics of environmental toxicology. PWN, Warsaw 2000.
Supplementary literature	S.E. Manahan. Fundamentals of Environmental and Toxicological Chemistry: Sustainable Science. Wyd. CRC Press, 2013. K. Górka, B. Poskrobko, W. Radecki. Environmental Protection. PWE, Warsaw 2001 Kenig - Witkowska M., International environmental law. C.H. Beck, Warsaw 2011
eResources addresses	

Example issues/ example questions/ tasks being completed	Knowledge of the main institutions and conventions on environmental protection. Knowledge of the main inputs of pollutants into the marine environment. Ability to describe the impact of burning fossil fuels on the quality of the environment. The ability to link the cause and effect of the influx of pollutants into the environment with climate change.
Work placement	Not applicable

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