

## Subject card

Subject name and code	Degree seminar, PG_00103579						
Field of study	Environmental Protection						
Date of commencement of studies	October 2025		Academic year of realisation of subject			2027/2028	
Education level	Bachelor's 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			Polish	
Semester of study	6		ECTS credits			3.0	
Learning profile	academic		Assessment form			credit	
Conducting unit	Faculty of Chemistry -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. Joanna Makowska				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	0.0	0.0	30.0	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		40.0	75
Subject objectives	consolidation and extension of knowledge in the field of the chosen specialty or / and the topic of diploma project developing the skills to prepare factually scientific and technically corrected multimedia presentations, developing the skills to conduct scientific discussions.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[OŚL3_U06] Uses available sources of information and understands literature in the field of environmental protection, chemistry and natural sciences.	<ul style="list-style-type: none"> <li>- The student independently uses literature databases and critically selects source texts.</li> <li>- The student is aware of the consequences of disrespecting intellectual property.</li> </ul>	[SU2] presentation/project/paper/report [SU3] text preparation/written work
	[OŚL3_U05] Prepares oral scientific presentations in Polish/English. Communicates in English in accordance with the requirements specified for level B2 of the Common European Framework of Reference for Languages.	<ul style="list-style-type: none"> <li>- Student independently uses literature databases and critically selects source texts on a given or independently selected topic</li> <li>- Student reads with comprehension, analyzes and evaluates simple scientific texts in Polish and English</li> <li>- Student has the ability to prepare an oral presentation on a given topic in English and Polish</li> <li>- Student discusses in a substantive way the topic presented during his/her own or someone else's presentation</li> </ul>	[SU2] presentation/project/paper/report
	[OŚL3_U03] Independently plans and develops her/his own lifelong learning.	<ul style="list-style-type: none"> <li>- Student develops the ability to think critically and assess the quality of information regarding the context of research and evaluation of results.</li> <li>- through reading scientific texts, student learns to analyze and synthesize information, extract key concepts and understand complex chemical issues</li> <li>- student is able to define a clear goal or task that he or she wants to achieve.</li> <li>- Student understands the need to independently search for information in the scientific literature; can formulate appropriate questions</li> </ul>	[SU5] implementation of a problem task

	Course outcome	Subject outcome	Method of verification
	[OŚL3_U13] Assesses the performance of tasks.	<p>Student:</p> <p>can use the computer as an auxiliary tool to search for information, communicate, analyze data, prepare reports or present results</p> <p>is able to conduct a discussion on environmental protection using the correct terminology in the field of environmental protection and the nomenclature of individual disciplines related to it</p> <p>can search for relevant information by reading and understanding simple scientific texts in their native language and in English</p> <p>can use various sources to find information on the state of the environment uses basic mathematical and statistical methods and IT techniques to describe phenomena and analyze data</p> <p>draws conclusions on the basis of collected experimental and literature data; combines natural and exact content with legal, sociological and economic issues</p> <p>is able to independently prepare and deliver a presentation on environmental protection, participates in a focused discussion using the correct terminology</p> <p>knows how to prepare a documented study of environmental protection problems in Polish attempts to solve some problems related to the quality of the environment and human life as well as sustainable development, can present them in the form of a documented study</p>	[SU5] implementation of a problem task

	Course outcome	Subject outcome	Method of verification
	[OŚL3_W02] Characterises the relationships and relationships between various disciplines of natural sciences and science, uses knowledge of mathematics, physics, chemistry and biology in the description of basic concepts, concepts and principles in environmental protection.	<p>Student:</p> <p>knows the basic and more complex relationships between various disciplines of natural and exact sciences, uses knowledge of mathematics, physics, chemistry and biology to describe natural phenomena and processes understands the importance of experimental research in the description and interpretation of natural phenomena and processes</p> <p>knows the course of natural processes occurring in nature as well as phenomena and processes caused by anthropopressure</p> <p>knows the basic and more complex relationships between the content of specific pollutants and the state of the environment (including human health),</p> <p>describes the occurrence of adverse phenomena on a local, regional and global scale</p> <p>understands the mechanisms of economic and consumption pressure on the environment;</p> <p>characterizes the possibilities of limiting it lists and describes the basic and more advanced research techniques and tools in environmental protection</p> <p>knows the basic methods, techniques and tools for rational management of natural resources lists and describes the basic legal regulations and instruments of law application in environmental protection</p> <p>knows the basic concepts and principles of intellectual property protection and the principles of using patent information resources</p>	[SW4] test/exam - oral or written
	[OŚL3_W04] explains the meaning and indispensability of empirical data in the description and interpretation of natural phenomena and processes (occurring in the environment).	<p>- On the basis of empirical data, student is able to draw conclusions about the causes, effects and mechanisms of the processes taking place.</p> <p>- Student knows how to interpret data that allow them to understand why and what phenomena occur.</p> <p>- Student has the knowledge that empirical data are necessary to make rational decisions about sustainable development</p>	<p>[SW1] oral statement/ conversation/discussion</p> <p>[SW2] presentation/project/paper/ report</p>

	Course outcome	Subject outcome	Method of verification
	[OŚL3_U08] Correctly concludes based on the available data from various sources.	The student has the ability to analyze information, draw logical conclusions, and formulate appropriate conclusions based on the available facts. - the student is able to assess the reliability and quality of information sources, such as scientific articles, reports, statistical data or field research.- the student is able to connect facts, use logical rules and draw conclusions based on available evidence. - the student has the ability to analyze information, draw logical conclusions and formulate appropriate conclusions on the basis of the facts available. In practice, this means: - The student is critical in expressing opinions and remains open to the opinion of the co-discussants.	[SU1] oral statement/conversation/discussion [SU2] presentation/project/paper/report
Subject contents	The program content is varied and depends on to the scope of the selected specialty or / and the topic of the diploma project		
Prerequisites and co-requisites	Knowledge of basic issues in the field of environmental protection and / or related fields of science		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Preparation and presentation of several multimedia presentations on the research topic	100.0%	100.0%
Recommended reading	Basic literature	Literature required to pass the course A.1. Literature used during classes Books and scientific articles related to the selected specialty and / or subject of the diploma project  A.2. Literature for individual studies Books and scientific articles related to the selected specialty and / or subject of the diploma project	
	Supplementary literature	Extracurricular readings  Books and scientific articles related to the selected specialty and / or subject of the diploma project	
	eResources addresses		
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		

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