

Subject card

Subject name and code	Chemistry in shaping the environment, PG_00179654						
Field of study	Environmental Protection						
Date of commencement of studies	October 2026		Academic year of realisation of subject		2027/2028		
Education level	Master's studies		Subject group		Optional subject group		
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	academic		Assessment form		credit		
Conducting unit	Faculty of Chemistry -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr Małgorzata Czaja				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	15.0	0.0	0.0	0.0	15
	E-learning hours included: 0.0						
	Additional information:						
	Classroom activities						
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		5.0		5.0	25
Subject objectives	The aim of the course is to develop the ability to analyse, interpret and present issues related to environmental chemistry and its role in protecting and shaping the natural environment. Students learn to acquire knowledge independently, formulate opinions and conduct a substantive discussion using scientific sources.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[OŚMU2_U01] On the basis of the acquired knowledge, proposes to solve environmental problems.		Can analyse the effects of chemicals on different components of the environment. Knows methods to prevent and minimise environmental problems.		[SU1] oral statement/conversation/discussion		
	[OŚMU2_W01] Describes complex phenomena and processes occurring in nature, including those related to the spread of anthropogenic pollution.		Understands the complex relationships between chemical processes and the state of the environment.		[SW2] presentation/project/paper/report		
	[OŚMU2_K01] Behaves in a professional manner at all times; bears full responsibility for the actions taken relating to the protection of the environment and respects the principles of professional ethics and principles of intellectual honesty.		Demonstrates a pro-environmental attitude and understands the need for sustainable development.		[SK1] oral statement/conversation/discussion		
Subject contents	Basic chemical processes in the environment (air, water, soil). Chemical pollutants sources, transformations, environmental effects. Chemical processes affecting environmental quality and human health. The role of chemistry in sustainable development. Formation of pro-environmental attitudes and responsibility for the environment.						
Prerequisites and co-requisites	Passed general chemistry course						

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Activity in class and participation in discussions	51.0%	20.0%
	Quality of the prepared presentation	51.0%	80.0%
Recommended reading	Basic literature	Naumczyk J., Chemia środowiska, PWN, Warszawa 2017. Dobrzańska B., Dobrzański G., Kiełczewski D. , Ochrona środowiska przyrodniczego, PWN, Warszawa 2008. Popkiewicz M. Świat na rozdrożu Wyd. Sonia Draga, 2012.	
	Supplementary literature	PubChem https://pubchem.ncbi.nlm.nih.gov Europejska Agencja Środowiska https://www.eea.europa.eu/pl Środowiskowe raporty GIOŚ (Główny Inspektorat Ochrony Środowiska) https://www.gios.gov.pl ScienceDirect (wybrane otwarte artykuły) https://www.sciencedirect.com	
	eResources addresses		
	Example issues/ example questions/ tasks being completed	Preparation of a multimedia presentation on a selected environmental chemistry topic. Creation of an informative poster or infographic on a selected environmental chemistry topic.	
Work placement	Not applicable		

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