

Subject card

Subject name and code	Chemical and radiochemical environmental analysis, PG_00082497						
Field of study	Chemistry						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2026/2027		
Education level	Master'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	2		Language of instruction		Polish		
Semester of study	4		ECTS credits		3.0		
Learning profile	academic		Assessment form		credit		
Conducting unit	Laboratory of Environmental Analytics and Radiochemistry -> Department of Environmental Chemistry and Radiochemistry -> Faculty of Chemistry -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		prof. dr hab. Bogdan Skwarzec				
	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		5.0		40.0	75
Subject objectives	The aim of the course is to familiarize students with radiochemical methods						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[CHEMMU2_W11] Demonstrates general knowledge about the current trends in the development of chemistry as a science and the latest discoveries in this field.		has knowledge of current directions in the development of chemistry		[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion		
	[CHEMMU2_W01] Uses knowledge of spectroscopic methods of chemical compound analysis.		has knowledge of spectroscopic methods		[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion		
	[CHEMMU2_W05] Has extended knowledge in the field of the specialisation studied.		has knowledge about the studied specialty		[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion		
	[CHEMMU2_K01] Knows the limitations of her/his own knowledge; understands the need for further education and can inspire other people to do so.		understands the needs for further education		[SK1] oral statement/conversation/ discussion [SK4] test/exam - oral or written		
Subject contents	natural and artificial radioactivity radial analytical methods determination and separation of radionuclides in environmental samples						
Prerequisites and co-requisites	analytical chemistry and basics of radiochemistry						
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	written exam		51.0%		100.0%		
Recommended reading	Basic literature		Bogdan Skwarzec, Environmental radiochemistry, UG Publishing House, 2021				
	Supplementary literature		not applicable				

	eResources addresses	
Example issues/ example questions/ tasks being completed	List the radianalytic methods Discuss methods for determining radionuclides in environmental samples	
Work placement	Not applicable	

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