

Subject card

Subject name and code	Nuclear chemistry, PG_00016490						
Field of study	Chemistry						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2026/2027		
Education level	Bachelor'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	3		ECTS credits		2.0		
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		dr Grzegorz Olszewski				
	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		15.0	50
Subject objectives	The aim of the course is to familiarize chemistry students with the content of lectures and auditorium exercises in nuclear chemistry and to consolidate the knowledge resulting from the physical and chemical processes occurring in the atomic nucleus.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[CHEML3_W09] Describes the practical applications of IT tools (computer programmes) for chemical calculations and data analysis.		chemicznych Describes the practical use of IT tools for chemical calculations		[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion		
	[CHEML3_W10] Enumerates and describes the basic aspects of the construction, operation and use of measuring apparatus and equipment used in experimental works in the field of chemistry and related sciences.		Knows the structure, operation and application of measuring equipment used in experimental work in the field of chemistry and related sciences.		[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion		
	[CHEML3_W03] Explains the relationship between the structure of matter and its observed properties.		Explains the relationship between the structure of matter and its properties		[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion		
	[CHEML3_W05] Has basic knowledge of the chemical specialisation studied.		Has knowledge in the field of studied chemical specialty.		[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion		
	[CHEML3_W01] Enumerates basic laws and theories in chemistry, physics, mathematics and biology.		Knows laws and theories in chemistry, physics, mathematics and biology.		[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion		
Subject contents	structure of matter and elementary particles, radioactivity, process of formation of chemical elements, natural and artificial radioactive elements, radiogenic heat of the Earth, nuclear energy, interaction of ionizing radiation with matter, radiation chemistry and radiolysis of water, dosimetry, radiometric and radiochemical methods, isotope separation and labeling methods compounds, use of radionuclides in science, technology and medicine.						

Prerequisites and co-requisites	knowledge of the theory of the structure of matter and atoms of chemical elements <		
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