

Subject card

Subject name and code	Radiological Protection II, PG_00207688						
Field of study	Nuclear safety and radiological protection						
Date of commencement of studies	October 2026		Academic year of realisation of subject			2027/2028	
Education level	Bachelor's studies		Subject group			Obligatory subject group in the field of study 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	2		Language of instruction			Polish	
Semester of study	4		ECTS credits			4.0	
Learning profile	academic		Assessment form			exam	
Conducting unit	Faculty of Mathematics, Physics and Informatics -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Angelina Łobjko				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	30.0	0.0	0.0	0.0	60
	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	60		0.0		40.0	100
Subject objectives	not applicable						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[BJORL3_U04] Can use mathematical and computer apparatus to analyze and solve problems in radiological protection and nuclear safety.	The student is able to use appropriate mathematical apparatus and IT tools to analyze and solve problems related to radiation protection and nuclear safety. Students are able to perform calculations related to radiation doses, exposure assessment, shielding effectiveness, and radiation source parameters, as well as analyze and interpret measurement data using appropriate software and basic numerical methods.	[SU1] oral statement/conversation/discussion [SU3] text preparation/written work [SU4] test/exam - oral or written
	[BJORL3_W09] Has general knowledge of the economic, legal and ethical considerations associated with professional activities.	The student has basic knowledge of the legal and ethical conditions related to activities in the field of radiation protection and nuclear safety. The student understands the importance of national and international legal regulations, standards, and guidelines, and is able to explain the ethical aspects of professional responsibility related to working with radioactive materials, public exposure, and environmental protection.	[SW4] test/exam - oral or written [SW1] oral statement/conversation/discussion [SW3] text preparation/written work
	[BJORL3_U07] Knows how to present in an accessible way the latest developments in radiological protection and nuclear safety and can analyze their legal aspects.	The student is able to present the latest achievements and current technical and organizational solutions in the field of radiation protection and nuclear safety in an accessible and understandable manner. The student is able to analyze the related legal conditions, interpret their significance for professional practice, and assess how the implementation of new technologies and procedures affects the level of safety and compliance with applicable regulations.	[SU1] oral statement/conversation/discussion [SU3] text preparation/written work [SU4] test/exam - oral or written
	[BJORL3_K01] Is ready to critically assess the scope of their own knowledge and understands the need for continuing education.		
	[BJORL3_K05] Is ready to perform the professional role in a competent and responsible manner and to adhere to the principles of professional ethics.		
	[BJORL3_K04] Is ready to initiate activities for the public interest and to popularise radiological protection and nuclear safety.		
	[BJORL3_W06] Has advanced knowledge and understanding of computational methods used to solve typical problems in radiological protection and nuclear safety.	The student knows the basic calculation methods used in the analysis of issues related to radiation protection and nuclear safety. The student understands the principles of applying these methods to assess radiation exposure, design shielding, estimate doses, and model radiation transport processes. The student is able to identify the limitations of individual methods and understands in which situations their application is most appropriate.	[SW4] test/exam - oral or written [SW1] oral statement/conversation/discussion [SW3] text preparation/written work
	[BJORL3_W08] Knows general principles of ergonomics and occupational health and safety.		

	Course outcome	Subject outcome	Method of verification
	[BJORL3_W07] Has advanced knowledge and understanding of the construction and principles of operation of scientific apparatus used in radiological protection and nuclear safety.	The student knows the structure and basic principles of operation of equipment used in radiation protection and nuclear safety systems. The student is able to characterize the operation of the main types of radiation detectors, dosimetry devices, contamination monitors, and control systems. The student also understands their applications, technical limitations, and the importance of instrumental parameters for the correct assessment of the radiation situation.	[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion [SW3] text preparation/written work
Subject contents	not applicable		
Prerequisites and co-requisites	not applicable		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	not applicable	51.0%	60.0%
	not applicable	51.0%	40.0%
Recommended reading	Basic literature	not applicable	
	Supplementary literature	not applicable	
	eResources addresses		
Example issues/ example questions/ tasks being completed	not applicable		
Work placement	Not applicable		

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