University of Gdańsk

Subject card

Subject name and code	, PG_00145239		
Field of study	Nuclear safety and radiological protection		
Date of commencement of studies	October 2024	Academic year of realisation of subject	2026/2027
Education level	Bachelor's studies	Subject group	Obligatory subject group 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 not applicable
Semester of study	6	ECTS credits	3.0
Learning profile	academic	Assessment form	credit
Conducting unit			
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. Dagmara Strumińska-Parulska	
	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	0.0	20.0	50

Subject objectives

familiarizing students with all issues mentioned in the lecture program content

Learning outcomes

Course outcome	Subject outcome	Method of verification
[BJORL3_W01] has a general knowledge of the basic concepts and principles of nuclear physics and chemistry, understands their historical development and their importance not only for nuclear safety and radiation protection, but also for understanding the modern world; has a basic knowledge of biology and ecology	1. knows and understands the basic concepts related to radiochemistry and radiotoxicity, 2. understands the concept of radiotoxicity and knows its groups, 3. has knowledge about the sources of radionuclides in the human body, 4. understands the radiological effects of radionuclide intake by humans through breathing, eating food and smoking cigarettes, 5. knows the radiological effects of the disasters at nuclear power plants in Chernobyl and Fukushima	[SW1] oral statement/ conversation/discussion

Subject contents

Basic concepts of radiochemistry and radiological protection. Radioactive elements in nature. Radiotoxicity and its groups. Sources of radioactive contamination in the natural environment. Human absorption of radionuclides from air, food and water and assessment of radiation doses. Selected food products and their impact on the dose received. Radiological effects of cigarette smoking. The impact of the disasters at nuclear power plants in Chernobyl and Fukushima on radioactive contamination of food. Radioactivity of building materials.

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
oral credit	51.0%	50.0%
activity	51.0%	50.0%

Recommended reading	Basic literature	Dahlgaard H., Nordic Radioecology: The Transfer of Radionuclides through Nordic Ecosystems to Man, Elsevier, 1994, Skwarzec, Radiochemia środowiska i ochrona radiologiczna, Wydawnictwo DJ s.c, Gdańska, 2002, Szymański W., Chemia jądrowa, PWN, Warszawa 1996
	Supplementary literature	-
	eResources addresses	
Example issues/ example questions/ tasks being completed	not applicable	
Work placement	Not applicable	

Document generated electronically. Does not require a seal or signature.