


KAPITAŁ LUDZKI
 NARODOWA STRATEGIA SPÓJNOŚCI

 Projekt współfinansowany przez
 Unię Europejską w ramach
 Europejskiego Funduszu
 Społecznego

UNIA EUROPEJSKA
 EUROPEJSKI
 FUNDUSZ SPOŁECZNY


Nazwa przedmiotu		Kod ECTS	
Radionuclides in food		13.3.1225	
Nazwa jednostki prowadzącej przedmiot			
Katedra Chemii i Radiochemii Środowiska			
Studia			
wydział	kierunek	poziom	drugiego stopnia
Wydział Chemii	Biznes chemiczny	forma	stacjonarne
		moduł specjalnościowy	wszystkie
		specjalizacja	wszystkie
Wydział Chemii	Chemia	poziom	drugiego stopnia
		forma	stacjonarne
		moduł specjalnościowy	wszystkie
Wydział Chemii	Ochrona środowiska	specjalizacja	wszystkie
		poziom	drugiego stopnia
		forma	stacjonarne
Wydział Chemii	Ochrona środowiska	moduł specjalnościowy	wszystkie
		specjalizacja	wszystkie
Nazwisko osoby prowadzącej (osób prowadzących)			
dr hab. Dagmara Strumińska-Parulska, profesor uczelni			
Formy zajęć, sposób ich realizacji i przypisana im liczba godzin		Liczba punktów ECTS	
Formy zajęć		2	
Wykład		classes - 15 h	
Sposób realizacji zajęć		tutorial classes - 15 h	
zajęcia on-line, zajęcia w sali dydaktycznej		student's own work - 20 h	
Liczba godzin		TOTAL: 50 h - 2 ECTS	
Wykład: 15 godz.			
Termin realizacji przedmiotu			
2023/2024 zimowy			
Status przedmiotu		Język wykładowy	
fakultatywny (do wyboru)		angielski	
Metody dydaktyczne		Forma i sposób zaliczenia oraz podstawowe kryteria oceny lub wymagania egzaminacyjne	
Lecture based on the multimedia presentation		Sposób zaliczenia	
		Zaliczenie na ocenę	
		Formy zaliczenia	
		exam	
		Podstawowe kryteria oceny	
		The criteria according to UG regulations for students	
Sposób weryfikacji założonych efektów uczenia się			
Online test with 20 questions. Note based on the exam results.			
Określenie przedmiotów wprowadzających wraz z wymogami wstępnymi			
A. Wymagania formalne			
lack			
B. Wymagania wstępne			
lack			

Cele kształcenia	
Familiarize students with the topics of the course content.	
Treści programowe	
Radiochemistry and radiation protection basics. Sources and distribution of natural and artificial radionuclides. Radiotoxicity and its groups. Dosimetry and its units. Radiation doses. Sources of radiochemical contamination and radiation doses evaluation. Food examples and their influence on the radiation dose. The Chernobyl and the Fukushima accidents and their influence on the food products. Monitoring of radioactive food contamination. Radiological effects of smoking cigarettes	
Wykaz literatury	
Literature required to pass the course	
Course content	
Frontasyeva M., Pereygin V., Vater P., Radionuclides and Heavy Metals in Environment, Springer, 2000	
Extracurricular readings	
Dahlgaard H., Nordic Radioecology: The Transfer of Radionuclides through Nordic Ecosystems to Man, Elsevier, 1994,	
Magil J., Galy J., Radioactivity · Radionuclides · Radiation, Springer, 2005,	
-Steinhauser G., -Koizumi A., -Shozugawa K., Nuclear Emergencies, Springer, 2019	
Kierunkowe efekty uczenia się	Wiedza
Chemical Business:	1. knows and understands the basic concepts of radiochemistry, radiation protection and radiotoxicity,
K_BChII_W03: knows and understands in-depth legal and administrative procedures in chemistry and correctly interprets their international dimension	2. knows the natural and artificial radioactive elements in the environment and sources of their origin,
K_BChII_U02: is able to define his/her interests, develop them within the chosen field of study and in connection with the subject of the master's thesis by implementing the process of self-education and planning his/her professional career	3. understands the concept of radiotoxicity and knows its groups,
K_BChII_U03: is able to present, based on the current state of knowledge, scientific discoveries and the results of own research in the field of chemical and economic sciences, through skilful debate and public speeches	4. has knowledge on the radiation dose and its units,
K_BChII_K03: is willing to critically assess the level of his/her own knowledge in the light of the achievements of the studied scientific discipline	5. has knowledge about the origin of radionuclides in the human body,
K_BChII_K04: is willing to properly assess the acquired knowledge, respect it and disseminate it in order to solve specific cognitive and practical issues	6. understands the radiological effects of the accumulation of radionuclides by humans as a result of breathing, eating and smoking,
K_BChII_K05: is willing to act independently for the environment in order to fulfill certain social obligations	7. knows the goals and tasks of environmental monitoring of the radioactive contamination.
Chemistry:	Umiejętności
K_W05: has extended knowledge in the field of the specialisation studied	1. understands the basic concepts of radiotoxicology and the importance of radiation protection,
K_U03: finds necessary information in specialist literature, databases and other sources, lists basic scientific journals in chemistry	2. recognizes the most important natural and artificial radionuclides contained in man,
K_U04: applies acquired knowledge of chemistry and related scientific disciplines	3. can assess the radiological consequences of human intake of radionuclides from the air, water and food and as a result of smoking,
K_U07: defines and implements the directions of own further education	4. is able to assess the radiation doses coming from ingested radionuclides,
K_K01: knows the limitations of her/his own knowledge; understands the need for further education and can inspire other people to do so	5. is able to assess the most important radioactive hazards for humans and knows how to reduce them,
K_K03: understands the need for systematic work on various projects of a long-term nature and knows how to set priorities for the implementation of undertaken tasks	6. is able to assess radiological threats arising as a result of local or global contamination of radioactivity.
K_K06: undertakes research tasks consciously and responsibly, understanding the social aspects of the practical application of the acquired knowledge and skills and the responsibility related to it	Kompetencje społeczne (postawy)
	1. understands the need for further education in the field of monitoring of radiochemical contamination of the food products,
	2. demonstrates creativity in limiting the absorption of radionuclides by humans and makes the society aware of the effects of excessive incorporation of radionuclides,
	3. can transfer knowledge in the society about sources of radiochemical contamination in building materials,

Environmental Protection:

K_OŚII_W03: characterises the effects of human interference in the natural environment and explains the mechanisms of reaction of living organisms to its pollution
K_OŚII_U01: on the basis of the acquired knowledge, proposes to solve environmental problems
K_OŚII_U05: searches, selects and analyses the literature achievements of environmental sciences, including scientific journals and databases, reading and understanding scientific texts in her/his native
K_OŚII_K03: undertakes professional and personal challenges, shows activity, undertakes efforts and is characterized by perseverance in undertaking individual and team actions in the field of environmental protection
K_OŚII_K10: has a need for continuous professional development

Kontakt

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