

Implementation of an Interdisciplinary Approach

NN	ECTS	Subject	Block of content modules	Content module	Interdisciplinary			
1	2,0	Sustainable Development Strategy	Theoretical principles of sustainable development	The concept of system and development	M4			
				International and national documents, legal acts which takes into account principles of socio-economic systems				
				Education and sustainable development and their concepts				
			Socio-economic aspects of sustainable development	Socio-economic status of the society during the transition to sustainable development	M4			
				Environmental Policy and Alternative Technologies				
				Strategies of local sustainable development, their monitoring; scenarios and plans forecast based on the consumption of the available environment-friendly products				
2	4,5	Radioecology (by branches)	General principles of Radiology	Scientific basis of Radiology and stages of development	M1			
				Current radiation situation in Ukraine and radiological consequences of the Chernobyl accident	M1			
				Methodological principles, basic principles and concepts of modern radioecological research	M1			
			Radioecology of natural ecosystems	Radioecology of forest ecosystems	M1			
				Radioecology of aquatic ecosystems	M1			
				Migration of radionuclides in open and mountainous landscapes	M1			
			Radioecology of agrocenosis and of urbanized territories	The behavior of radionuclides in agrocenosis	M1			
				Migration of radionuclides to humans through a food chain	M2			
				Character of the radionuclides transfer, their distribution and redistribution in urban systems	M1			
			3	3,0	Radiation monitoring	Organization of environmental radiation monitoring	Scientific basis, aims and objects of radiation monitoring	M2
							Radioecological monitoring of contaminated ecosystems	
							Basic principles of the integrated radiation monitoring	
Dosimetric and radiometric equipment								
Sampling, and database formation and processing								
Methods and tools for radiation monitoring	Application of GIS technologies in radiation monitoring							
4	3,0	Radiation safety	Norms and standards for radiation safety	Norms and principles of radiation safety	M3			
				Radiation Safety organization of a territory, a facility, staff and of	M3			

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				the public	
				Management decisions and organizational measures to ensure radiation safety	M3
			Radioactive waste utilization	Environmental risks of the nuclear fuel cycle	
				Regulations in the field of nuclear technology	
				Nuclear fuel and radioactive waste utilization	
5	3,0	Rehabilitation of contaminated areas	Autorehabilitation of ecosystems and rehabilitation semi-natural territories	Environmental rehabilitation of natural ecosystems, of agroecosis and of the Chernobyl zone	M1
				Countermeasures used in the Chernobyl zone	
				Optimization of nature use on contaminated territories	M2
			Technologies and measures to minimize the intake of radionuclides into economic production	Countermeasures to prevent and reduce contamination of agriculture, fishery and forestry products	M2
				Technological processing and recycling of products contaminated by radionuclides	M2
				The use of the applied GIS technologies and mathematical models to predict the situations and to make decisions as for the rehabilitation of contaminated areas	
6	3,0	International environmental activities (in Radiology)	International and Ukrainian organizations and institutions	Institutions and official organizations working in the field of nuclear safety and nuclear technologies	M4
				Social movement in the field of nuclear technology use	M4
			Legal regulation of the use of nuclear technologies and of radiation safety	International and interstate agreements that govern radiation safety	M4
				Recommendations UNSCEAR, NCRP	M4