



<b>Course ID: HRH407</b>	<b>Course name: ENVIRONMENTAL RADIOACTIVITY</b>		
<b>Cycle: FIRST</b>	<b>Year: FOURTH</b>	<b>Semester: VIII</b>	<b>ECTS credits: 3</b>
<b>Course status: ELECTIVE</b>	<b>Total course hours: 45</b> Lectures: 30 Laboratory: 15		
<b>Teaching participants:</b>	<b>Teachers and associates with expertise in the field to which the subject belongs</b>		
<b>Prerequisite for enrollment:</b>	Radiochemistry		
<b>Course aims:</b>	Introducing students to the possibility of the presence of radionuclides of natural and artificial origin in the environment, as well as methods of detection and measurement of radioactivity in environmental samples		
<b>Thematic course units:</b>	Sources of radioactive radiation in environment External radiation Radioactivity of air Radioactivity of water Radioactivity of soil Radioactivity of food Specific methods of detection and measurement of radioactivity		
<b>Learning outcomes:</b>	Knowledge: After the course the student will be able to understand the origin of radionuclides in the environment; acquire knowledge related to the presence of various radionuclides in air, water, soil, plant and animal material (food); understand and explain the transfer of radionuclides in natural media (food chain)  Skills: Identifying radiation risks in the living and working environment  Competences: Student will be able to explain and apply the method of detection and measurement of radioactivity in environmental samples		
<b>Teaching methodology:</b>	Auditory lectures; Laboratory exercise		

<b>Assessment methods and grading system<sup>1</sup>:</b>	<b>Grading criteria</b>		
	Criteria	Maximal score	Required score
	1. Class attendance	5	3
	2. Class activities	10	5
	3. Midterms	45	25
	4. Final exam	40	22
	Total	100	55
	<b>Scores and grading</b>		
	Score	Grade (B&H)	Grade (ECTS)
	< 55	5	F, FX
	55-64	6	E
	65-74	7	D
75-84	8	C	
85-94	9	B	
95-100	10	A	
<b>Literature<sup>2</sup>:</b>	<b>Supplementary literature:</b> <ol style="list-style-type: none"> <li>1. V.Valkovic: Radioactivity in the environment, 1<sup>st</sup> Edition, Elsevier 2000</li> <li>2. David A. Atwood (2010). Radionuclides in the Environment, John Wiley &amp; Sons, London</li> <li>3. UNSCEAR (2000), Source and Effects of ionizing radiation, UN, New York</li> <li>4. Klaus Froehlich (2010). Environmental Radionuclides, 1st Edition, Elsevier, UK</li> </ol>		

<sup>1</sup> The grading structure for each subject is determined by the Council of the organizational unit before the beginning of the academic year in which the subject is taught as per Article 64, paragraph 6 of the Law on Higher Education of Sarajevo Canton

<sup>2</sup> The Senate of the higher education institution, as an institution, or the Council of the organizational unit of the higher education institution, as a public institution, determines by a special decision, which is published on its website before the beginning of the academic year obligatory, mandatory and recommended textbooks and manuals, as well as other recommended literature based on which exams are prepared and taken as per Article 56, paragraph 3 of the Law on Higher Education of the Sarajevo Canton