



<b>Course ID: HFHI05</b>	<b>Course name: DEPLETED URANIUM IN ENVIRONMENT</b>		
<b>Cycle: FIRST</b>	<b>Year: FIRST</b>	<b>Semester: I</b>	<b>ECTS credits: 4</b>
<b>Course status: ELECTIVE</b>	<b>Total course hours: 60</b> Lectures: 45 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>	Introduction to the basic physico-chemical and radiochemical characteristics of uranium and depleted uranium, methods of detection and determination, including the biological consequences of their radiation.		
<b>Thematic course units:</b>	Uranium in nature Depleted uranium (DU) Obtaining of depleted uranium Chemical characteristics of depleted uranium Radiological characteristics of depleted uranium Uranium toxicity (health effects) Commercial application of depleted uranium Impact of depleted uranium on the environment Detection of depleted uranium in environmental samples (how to distinguish natural uranium from depleted) Monitoring of uranium and depleted uranium in the environment		
<b>Learning outcomes:</b>	Knowledge: Student will be able to understand and explain the physico-chemical and radiochemical properties of uranium, the reactivity of uranium, the origin of uranium in nature, the origin of depleted uranium in the environment  Skills: Perform sampling and detection of the presence of depleted uranium in environmental samples and develop a monitoring plan for the same  Competences: Application of radioanalytical and radiometric techniques for the determination of depleted uranium in environmental samples; Suggestion of methods for DU removal-remediation		
<b>Teaching methodology:</b>	Auditory lectures; Laboratory exercise; Field exercise		

<b>Assessment methods and grading system<sup>1</sup>:</b>	Grading criteria		
	Criteria	Maximal score	Required score
	1. Class attendance	5	3
	2. Class activities	15	8
	3. Midterms	2 × 20	2 × 11
	4. Final exam	40	22
	Total	100	55
	Scores and grading		
	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>	<p>Supplementary literature:</p> <ol style="list-style-type: none"> <li>Alexandra C. Miller, (2006), Depleted Uranium, Properties, Uses And Health Consequences, CRC Press,</li> <li>W. D. Loveland, D. J. Morrissey, G. T. Seaborg (2005) Modern Nuclear Chemistry, John Wiley&amp;Sons, USA</li> <li>E. Zovko, Z. Pujić, (2003), Radioaktivnost u prirodi, uran i osiromašeni uran, Prirodno matematički fakultet, Sarajevo</li> <li>M. Nuhanović (2016), Uran u okolinskim uzorcima, Prirodno-matematički fakultet, Sarajevo</li> <li>M. Jovanović, (1986), Kako da se zaštitimo od radioaktivnog zračenja, Medicinska knjiga, Beograd-Zagreb</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