Course ID: HDAH26	**Course name: HEAVY METALS SPECIATION IN ENVIRONMENT**		
Cycle: THIRD	**Year: FIRST**	**Semester: II**	**ECTS credits: 15**
Course status: ELECTIVE		**Total course hours: 90** Lectures: 45 Laboratory: 45	

Teaching participants:	**Teachers and associates with expertise in the field to which the subject belongs** [do not enter names in this section. Leave the wording as indicated in this section]
Prerequisite for enrollment:	-
Course aims:	Acquiring knowledge in the field of heavy metals speciation, migration and transport in environment
Thematic course units:	Basic terms and definitions Spatial and temporal characteristics of heavy metals Differentiation of the elements; igneous, sedimentary, and metamorphic rocks; physical and chemical degradation of rocks; Eh-pH diagrams Effects of the geochemical processes in soil, water and air on heavy metal speciation, health risk assessment Speciation and transport of As and Se in the environment Speciation and transport of Cd, Pb, Cr, Hg, Zn, Ni and U in the environment Heavy metals speciation analysis
Learning outcomes:	
Teaching methodology:	

Assessment methods and grading system[1]:

Grading criteria			
	Criteria	Maximal score	Required score
1.	Midterms	2x30	33
2.	Seminar work	10	5
3.	Final exam	30	17
	Total	100	55

Scores and grading		
Score	Grade (B&H)	Grade (ECTS)
< 55	5	F, FX
55–64	6	E
65–74	7	D

[1]The grading structure for each subject is determined bythe 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

	75–84	8	C
	85–94	9	B
	95–100	10	A
Literature[2]:	Supplementary literature: 1. Kabata-Pendias A. Trace Elements in Soils and Plants. Boca Raton, London, New York, Washington, DC: CRC Press LLC; 2011. 2. Sposito G. The Chemistry of Soils. Oxford University press; 2008. 3. Cornelis R. Handbook of elemental speciation: techniques and methodology. John Wiley & Sons; 2004.		

[2]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