Course ID: HODAH27	**Course name: HEAVY METALS IN ENVIRONMENT**		
Cycle: THIRD	**Year: FIRST**	**Semester: II**	**ECTS credits: 10**
Course status: ELECTIVE		**Total course hours: 60** Lectures: 30 Laboratory: 30	

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 Differentiation of the elements Total and available metal content Geochemical processes influencing the chemistry of metal(loid)s in environments Sorption/desorption, ion exchange, complexation Migration and transport of Cd and Cr in the environment Migration and transport of Pb in the environment Migration and transport of Hg in the environment Heavy metals speciation analysis Pollution and risk assessment of heavy metals
Learning outcomes:	Acquired knowledge in the field of heavy metals speciation in environment, their transport, mobility and bioavailability as well as health risk assessment
Teaching methodology:	Lectures (oral presentation) and laboratory exercises (practical work)
Assessment methods and grading system[1]:	Grading criteria

	Criteria	Maximal score	Required score
1.	Class activities	20	11
2.	Midterms	40	22
3.	Final exam	40	22
	Total	100	55

Scores and grading		
Score	Grade (B&H)	Grade (ECTS)

[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

	< 55	5	F, FX
	55–64	6	E
	65–74	7	D
	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. 4. Tuhtar D. Zagađenje zraka i vode, Svjetlost, Sarajevo; 1990. 5. Veselinović D.E. i saradnici. Fizičkohemijski osnovi životne sredine- stanja i procesi u životnoj sredini, (knjiga I), Univerzitet u Beogradu, Beograd; 1993.		

[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