



Course ID: HDOA33	Course name: BIOINORGANIC CHEMISTRY		
Cycle: THIRD	Year: SECOND	Semester: III	ECTS credits: 10
Course status: ELECTIVE		Total course hours: Lectures: Laboratory:	
Teaching participants:	Teachers with expertise in the field of Inorganic Chemistry		
Prerequisite for enrollment:	-		
Course aims:	Adopting the principles of bioinorganic chemistry, the importance of metals in the biological systems.		
Thematic course units:	<ol style="list-style-type: none">1. The importance of the basic principles of bioinorganic chemistry.2. Biomineralization. Uptake, transport and storage of iron in the organism.3. Penetration, transport and storage of oxygen in the organism.4. Catalysis hemoproteins, cytochromes, peroxidases. Cobalt, nickel and copper in biological systems. The role of zinc in the body.5. The biological role of early transition metals.6. Alkaline earth metal ions; catalysis and regulation.7. Alkaline and alkaline earth cations as electrolytes.8. The role of some non-metals.9. Toxic metals.10. Inorganic radionuclides in diagnosis and therapy.11. Chemotherapy with compounds of non-essential elements.		
Learning outcomes:			
Teaching methodology:			
Assessment methods and grading system¹:	Grading criteria		

¹The 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

	Criteria	Maximal score	Required score
	1. Tests		2 × 15
2. Seminars		1 × 30	16,5
3. Final exam		40	22
Total		100	55
Scores and grading			
	Score	Grade (BiH)	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
Literature²:	Mandatory literature: <ol style="list-style-type: none"> 1. D. E. Fentonm, Biocoordination Chemistry, Oxford University Press, Oxford, UK, 2002 2. R. M. Roat-Malone: Bioinorganic Chemistry, A Short Course, J. Wiley & Sons, New Jersey, SAD, 2002, 3. Biological Inorganic Chemistry, I. Bertini, H. B. Gray, E. I. Stiefel, and J. S. Valentine, Univ. Science Books, Sausalito, California, SAD, 2007. 		

²The 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