



Course ID: HOA471	Course name: COORDINATION COMPOUNDS IN ENVIRONMENT		
Cycle: FIRST	Year: FORTH	Semester: VII	ECTS credits: 3
Course status: MANDATORY		Total course hours: 45 Lectures: 45	
Teaching participants:	Teachers and associates with expertise in the field to which the subject belongs		
Prerequisite for enrollment:	-		
Course aims:	Introducing students to the chemistry of complex compounds with an emphasis on their appearance and importance in the environment.		
Thematic course units:	<ol style="list-style-type: none">1. The complex compounds-basic definitions.2. Theories of coordination bond: VBT, CFT, TMO.3. Irving-Williams series-spectrochemical series.4. The practical importance of complex formation in environmental chemistry.5. Modeling-selection of suitable ligands, hardness and softness of acids and bases: stereochemical assumptions for L and the metal center.6. Metal complexes in the environment: hemoglobin and chlorophyll.		
Learning outcomes:	<p><i>Knowledge:</i> To name complex compounds and show their structures. Explain coordination theories.</p> <p><i>Skills:</i> Predict and interpret the structures of complex compounds. Predict methods of complex compounds synthesis.</p> <p><i>Competences:</i> Critically assess the practical significance of the formation of complex compounds in the environment.</p>		
Teaching methodology:	Classes will be conducted in the form of lectures.		

Assessment methods and grading system¹:	Grading criteria		
	Criteria	Maximal score	Required score
	1. Class attendance	5	2
	2. Class activities	5	3
	3. Midterms	45	25
	4. Final exam	45	25
	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	
Literature²:	<p>Mandatory literature:</p> <ol style="list-style-type: none"> 1. Kahrović E. Uvod u eksperimentalnu anorgansku hemiju. Sarajevo: Prirodno- matematički fakultet; 2011. 2. Luther III GW. Inorganic Chemistry for Geochemistry and Environmental Sciences. Chichester, West Sussex: John Wiley and Sons; 2016. <p>Supplementary literature:</p> <ol style="list-style-type: none"> 1. Cox A. The Elements on Earth: Inorganic Chemistry in the Environment. Oxford: Oxford University Press; 1995. 2. Irgolic KJ, Martell AE. Environmental Inorganic Chemistry. Deerfield Beach, FL: VCH Publishers; 1985. 3. Filipović I, Lipanović S. Opća i anorganska kemija I dio. Zagreb: Školska knjiga; 1995. 4. Cotton A, Wilkinson G. Advanced Inorganic Chemistry. 6th ed. New York, Chichester, Weinheim, Brisbane, Singapore, Toronto: John Wiley and Sons; 1999. 5. Greenwood NN, Earnshaw A. Chemistry of the Elements. 2nd ed. Oxford: Butterworth – Heinemann; 1998. 		

¹ 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

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