



Form SP2

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UNIVERSITY OF SARAJEVO – FACULTY OF SCIENCE Department of Chemistry

Course ID: HOA476	Course name	rse name: CHEMISTRY OF COMPLEX COMPOUNDS							
Cycle: FIRST	Year: FOURT	ГН	Semester: VII		ECTS cr	edits:3			
Course status: MAN	DATORY		Total course hours: 45 Lectures: 30 Laboratory: 15						
Teaching participa	nte. I	Teachers and associates with expertise in the field of Inorganic Chemistry							
Prerequisite for enrollment:	-								
Course aims:		Learning basic concepts and theories from the chemistry of complex compounds.							
Thematic course u	2. 3. 4. 5. nits: 6. 7. 8. 9. 10.	 Basic definitions, isomerism and nomenclature. Molecular symmetry and its application. Electronic structure of complex compounds. Crystal field theory. Ligand field theory. Molecular orbital theory. Influence of coordination on standard electrode potentials. Infrared spectra of complex compounds Electronic spectra of complex compounds Magnetic properties of complex compounds Methods of obtaining complex compounds Practical significance of metal complexes in engineering, catalysis and medicine. New trends. 					ystal		
Learning outcomes	: -	After the course the student will be able to: - name coordination compounds and write structural formulas - predict and interpret the structure of coordination compounds based on valence bond theory, crystal and ligand field theory and molecular orbital theory - predict and explain the spectroscopic and magnetic properties of coordination compounds - interpret and propose methods for the synthesis of coordination compounds - comment on the practical importance of coordination							

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	compounds in the living world, medicine and catalysis							
Teaching methodology:	Auditory lectures, laboratory exercises							
	Grading criteria							
		Criteria	Maximal score	Required score				
	 Class atte 	ndance	5	3				
	2. Class acti		5	2				
	3. Midterms		40	22				
	4. Final exa		40	22				
A		Total	100	55				
Assessment methods	Scores and grading							
and grading system ¹ :	Score		Grade (BiH)	Grade (ECTS)				
		< 55	5	F, FX				
		55-64	6	Е				
		65-74	7	D				
		75–84	8	С				
		35-94	9	<u>B</u>				
		5-100	10	A				
	Mandatory literature:							
	1. Kahrović, E. (2011). Uvod u eksperimentalnu							
	anorgansku hemiju, Prirodno-matematički fakultet.							
	2. Atkins, P., & Overton, T. (2010). Shriver and Atkins'							
	inorganic chemistry. Oxford University Press, USA.							
Literature ² :	3. Miessler, G. L. And Tarr, D. A. (1999). Inorganic							
	Chemistry, Prentice-Hall.							
	Supplementary literature:							
	1. Filipović, S. Lipanović, Opća i anorganska kemija,							
	Školska knjiga, Zagreb, 1995.							
	2. Grdenić, D. (1989). Molekule i kristali: uvod u							
	strukturnu kemiju. Školska knjiga.							

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¹The 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

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