



Course ID: HODOA21	Course name: DEVELOPMENT AND APPLICATION OF METAL COMPLEX – SELECTED TOPICS		
Cycle: THIRD	Year: FIRST	Semester: II	ECTS credits: 10
Course status: ELECTIVE		Total course hours: 60 Lectures: 30 Laboratory: 30	
Teaching participants:	Teachers with expertise in the field of Inorganic Chemistry		
Prerequisite for enrollment:	-		
Course aims:	Developing the ability to design new complex compounds, depending on the possible application		
Thematic course units:	<ol style="list-style-type: none">1. Development of metal complexes as potential drugs: the relationship between synthesis-structure-properties.2. Tumor inhibiting metal complexes. Platinum and nonplatinum complexes.3. The mechanism of action of tumor inhibitory complex.4. Ruthenium complexes. Development and design of new compounds.5. The interactions of metal ions and metal complexes with biomolecules.6. Research methods and interaction.7. Metal complexes in catalysis.8. Metal complexes as mediators		
Learning outcomes:	After the course the student will be able to present, discuss and critically review: <ul style="list-style-type: none">– metal containing drugs and structure-activity relationship– rationalize design of metal complexes toward specific targets– design and synthesis of biomimetic models and rationalize design of catalysts		
Teaching methodology:	Auditory lectures, discussion, critical review		

Assessment methods and grading system¹:	Grading criteria		
	Criteria	Maximal score	Required score
	1. Tests	2×15	16,5
	2. Seminars	1×30	16,5
	3. Final exam	40	22
	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. Original scientific papers 2. Metal Complexes in Cancer Chemotherapy, edited by B. Keppler, VCH, 1993 3. C. Jones, J. Thornback, Medicinal Applications in Coordination Chemistry RSC, 2007 4. Metal Complexes: DNA interactions, edited by Nick Hadjiliadis, Einar Sletten, Wiley, 2009 		

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