



Course ID: HOA485	Course name: MECHANISMS OF INORGANIC REACTIONS		
Cycle: FIRST	Year: FOURTH	Semester: VIII	ECTS credits:4
Course status: MANDATORY	Total course hours: 45 Lectures: 30 Laboratory: 15		
Teaching participants:	Teachers and associates with expertise in the field of Inorganic Chemistry		
Prerequisite for enrollment:	Inorganic chemistry II, Chemistry of complex compounds		
Course aims:	Study of the mechanisms of inorganic reactions in selected models		
Thematic course units:	<ol style="list-style-type: none">1. Kinetics as a source of mechanistic data2. Law of velocity and mechanistic implications3. Deduction of mechanisms4. Methods of studying mechanisms5. Mechanisms of substitution reactions. Substitutions in octahedral and square-planar complexes.6. Mechanisms of redox reactions7. Isomerizations and photochemical reactions8. Predictability of the mechanism		
Learning outcomes:	After the course the student will be able to: <ul style="list-style-type: none">– state the classification of the mechanisms of inorganic reactions– propose experimental techniques and kinetic methods for deriving the law of reaction rate– interpret and comment on factors influencing the mechanisms of substitution reactions in octahedral and quadratic-planar complex species– interpret and comment on the factors that influence the mechanisms of redox reactions– make a mechanism deduction based on kinetic and thermodynamic data		
Teaching methodology:	Auditory lectures, laboratory exercises		

Assessment methods and grading system¹:	Grading criteria		
	Criteria	Maximal score	Required score
	1. Class attendance	5	3
	2. Class activities	5	2
	3. Midterms	40	40
	4. 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:	<p>Mandatory literature:</p> <ol style="list-style-type: none"> 1. Kahrović, E. (2011). Uvod u eksperimentalnu anorgansku hemiju. Prirodno-matematički fakultet. 2. Wilkins, R. G., & Talsky, G. G. (1991). Kinetics and mechanism of reactions of transition metal complexes. Wiley-VCH. 3. Atkins, P., & Overton, T. (2010). Shriver and Atkins' inorganic chemistry. Oxford University Press, USA. <p>Supplementary literature:</p> <ol style="list-style-type: none"> 1. Ašperger, S. (2003). Chemical kinetics and inorganic reaction mechanisms. Kluwer Academic/Plenum Publishers. 2. Jordan, R. B. (2007). Reaction mechanisms of inorganic and organometallic systems. Oxford University Press. 		

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

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