Course ID: HOA307	**Course name: INFRARED SPECTROSCOPY OF INORGANIC COMPOUNDS**		
Cycle: FIRST	**Year: THIRD**	**Semester: V**	**ECTS credits:2**
Course status: ELECTIVE		**Total course hours: 30** Lectures: 15 Laboratory: 15	
Teaching participants:	Teachers and associates with expertise in the field of Inorganic Chemistry		
Prerequisite for enrollment:	-		
Course aims:	Introducing students to infrared spectroscopy and its application in the study of inorganic compounds		
Thematic course units:	1. Theory of normal vibrations 2. Vibration analysis of crystals 3. Application in inorganic chemistry 4. Diatomic and polyatomic molecules 5. Metal cluster compounds 6. Application in coordination chemistry 7. Complexes containing amines, amides and similar ligands 8. Metalloporphyrins 9. Complexes containing oxoacid ligands 10. Complexes containing O, N, S-donor organic molecules 11. Application in bioinorganic chemistry: myoglobin and hemoglobin		
Learning outcomes:	After the course the student will be able to: – explain the interaction of infrared radiation with a substance – explain normal vibration modes – interpret the infrared spectra of simple inorganic compounds including oxides, halides and oxosalts – distinguish structurally similar substances based on infrared spectra – assume how to estimate ligand coordination on metal		
Teaching methodology:	Auditory lectures, laboratory exercises		

Assessment methods and grading system[1]:

Grading criteria			
	Criteria	Maximal score	Required score
1.	Class attendance	5	3
2.	Class activities	5	2
3.	Midterms	40	22
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

Literature[2]:

Mandatory literature:

1. El-Azazy, M. (Ed.). (2019). Infrared Spectroscopy: Principles, Advances, and Applications. BoD–Books on Demand.
2. Nakamoto, K. (2006). Infrared and R aman spectra of inorganic and coordination compounds. Handbook of vibrational spectroscopy.

[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