



Form SP2

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UNIVERSITY OF SARAJEVO – FACULTY OF SCIENCE Department of Chemistry

Course ID: HFHxxx		rse name: /SICAL CHEMISTRY OF NANOMATERIALS				
Cycle: SECOND	Year	: FIRST	Semester: I	ECTS cre	dits: 4	
Course status: ELECTIVE		Total course hours: 60 Lectures: 45 Laboratory: 15				
Teaching participants:		Teachers and associates with expertise in the field to which the subject belongs				
Prerequisite for enrollment:		-				
Course aims:		Introduction of basic knowledge about nanomaterials, their properties, preparation, characterization and application.				
Thematic course units:		 Structure and morphology of nanoparticles. Structure of nanocrystals and phase transitions Magnetism in nanomaterials Electronic structure of clusters and nanoparticles. Optical properties of nanoparticles. Mechanical and nanomechanical properties. Reactivity of metallic nanoparticles. Microporosity. Chemistry of supramolecular systems. Nanocomposites. Preparation of nanostructured materials. Application of nanostructured materials.0 				
Learning outcomes	S:	Students will have knowledge of specific phenomena in nanomaterials and nanostructured materials.,0 Knowledge: Acquired knowledge on nanomaterials. Skills: Students will be able to prepare and characterize different nanomaterials. Competences: Application of specific knowledge in other branches of chemistry.				
Teaching methodo	logy:	Lectures (Oral presentation and interactive teaching) Laboratory exercises				
Assessment metho and grading systen		1. Class at 2. Class ac 3. Midtern	Criteria tendance ctivities	Maximal score 5 15 2 × 20	Required score 3 8 2 × 11	

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 $^{^{1}}$ 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

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	4. Final exam	40	22			
	Total	100	55			
	Scores and grading					
	Score	Grade	Grade			
		(B&H)	(ECTS)			
	< 55	5	F, FX			
	55-64	6	E			
	65-74	7	D			
	75-84	8	С			
	85-94	9	В			
	95-100	10	A			
	Mandatory literature:					
	1. C. Bréchignac, P. Houdy, M. Lahmani, Nanomaterials and					
Literature ² :	Nanochemistry, SpringerVerlag 2007					
	2. V. Jokanović, Instrumentalne metode – ključ razumevanja					
	nanotehnologije i nanomedicine, Inženjerska akademija Srbije, INN					
	Vinča, Beograd, 2014.					

 $^{^2}$ 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