



Course ID: HDFH33	Course name: SELECTED TOPICS OF SONOCHEMISTRY		
Cycle: THIRD	Year: FIRST	Semester: II	ECTS credits: 15
Course status: ELECTIVE	Total course hours: Lectures: 45 Laboratory: 45		
Teaching participants:	Teachers and associates with expertise in the field to which the subject belongs		
Prerequisite for enrollment:	-		
Course aims:	Acquiring knowledge of the principles of sonochemistry and scientific research achievements on the application of ultrasound in various fields of chemistry and chemical engineering.		
Thematic course units:	<ol style="list-style-type: none">1. Ultrasound.2. Cavitation. Cavitation collapse.3. Chemical and physical effects of ultrasound.4. Sources ultrasonic radiation.5. Laboratory ultrasonic equipment.6. The application of ultrasound in the synthesis of nanomaterials and polymers, electrochemical analysis, catalysis, technology, biotechnology, medicine and engineering.		
Learning outcomes:			
Teaching methodology:			
Assessment methods and grading system¹:	Grading criteria		
	Criteria	Maximal score	Required score
	1. Class attendance	5	3
	2. Class activities	15	8
	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	

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

	75-84	8	C
	85-94	9	B
	95-100	10	A
Literature²:	<p>Mandatory literature: / Supplementary literature:</p> <ol style="list-style-type: none"> 1. Original scientific papers. 2. P.M. Ashokkumar, <i>Theoretical and Experimental Sonochemistry Involving Inorganic Systems</i>, Springer, 2011. 3. M.D.L. de Castro, F.P. Capote, <i>Analytical Applications of Ultrasound, 5th Edition</i>, Elsevier, 2007. 4. T.J. Mason, J.P. Lorimer, <i>Applied Sonochemistry, The Uses of Power Ultrasound in Chemistry and Processing</i>, WILEY-VCH, 2002. 5. K.S. Suslick, M.M. Fang, T. Hyeon, M.M. Mdleleni, <i>Applications of Sonochemistry to Materials Synthesis in Sonochemistry and Sonoluminescence</i>, L.A. Crum, T.J. Mason, J. Reisse, K.S. Suslick, eds. Kluwer Publishers: Dordrecht, Netherlands, 1999, pp. 291-320. 		

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