



<b>Course ID:</b> HOB475	<b>Course name: CHEMISTRY OF NATURAL PRODUCTS</b>		
<b>Cycle: FIRST</b>	<b>Year: FOURTH</b>	<b>Semester: VII</b>	<b>ECTS credits:5</b>
<b>Course status: MANDATORY</b>	<b>Total course hours: 75</b> Lectures: 30 Laboratory: 45		
<b>Teaching participants:</b>	Teachers and associates with expertise in the field to which the subject belongs		
<b>Prerequisite for enrollment:</b>	NO		
<b>Course aims:</b>	The aim of this course is to acquire the basic principles of isolation, purification, identification, characterization and structure determination of the most important classes of natural products. Introduction of function of these compounds in organisms that produce them with an emphasis on secondary metabolites.		
<b>Thematic course units:</b>	<ol style="list-style-type: none"><li>1. Introduction, classification and origin of compounds as products of primary and secondary metabolism</li><li>2. Classes of natural products (terpenoids, alkaloids, flavonoids, coumarins, polyketides, fatty acids, steroids, fenilpropanoids)</li><li>3. Methods of isolation of natural products</li><li>4. Identification of natural products</li><li>5. The biosynthesis of secondary metabolites</li><li>6. Biological and environmental function</li></ol>		
<b>Learning outcomes:</b>	<b>Knowledge:</b> The student distinguishes, classifies and identifies natural products. <b>Skills:</b> The student can apply the basic principles of isolation, purification, identification, and characterization of the most important class of natural products. <b>Competences:</b> The student knows how to independently apply the learned theories and methods to solve the problem of isolation and identification of natural compounds from natural materials.		
<b>Teaching methodology:</b>	Classroom lectures and laboratory exercises		

<b>Assessment methods and grading system<sup>1</sup>:</b>	<b>Grading criteria</b>		
	Criteria	Maximal score	Required score
	1. Class attendance	5	3
	2. Class activities	10	5
	3. Midterms	45	25
	4. Final exam	40	22
	Total	100	55
	<b>Scores and grading</b>		
	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	
<b>Literature<sup>2</sup>:</b>	<p><b>Mandatory literature:</b></p> <ol style="list-style-type: none"> <li>Petrović, S., Mijin, D., Stojanović, N. (2005) Hemija prirodnih organskih jedinjenja, Tehnološko-metalurški fakultet, Beograd.</li> </ol> <p><b>Supplementary literature:</b></p> <ol style="list-style-type: none"> <li>James, R., Hanson, (2003) Natural Products: The Secondary Metabolites, The Royal Society of Chemistry.</li> <li>Buchanan B., Gruissem W., Jones R. (2000) Biochemistry and Molecular Biology of Plants American Society of Plant Physiologists, 2000.</li> <li>Vermeris W., Nicholson R., (2006) Phenolic Compound Biochemistry, Springer.</li> </ol>		

<sup>1</sup> 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

<sup>2</sup> 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