



<b>Course ID:</b> HDOB33	<b>Course name: NATURAL COMPOUNDS AS ANTIOXIDANTS</b>		
<b>Cycle: THIRD</b>	<b>Year: FIRST</b>	<b>Semester: II</b>	<b>ECTS credits: 15</b>
<b>Course status: ELECTIVE</b>	<b>Total course hours:</b> Lectures: Laboratory:		
<b>Teaching participants:</b>	<b>Teachers and associates with expertise in the field to which the subject belongs</b>		
<b>Prerequisite for enrollment:</b>	-		
<b>Course aims:</b>	Introducing students to the characterization, properties and methods for determining natural antioxidants.		
<b>Thematic course units:</b>	<ol style="list-style-type: none"><li>1. Biological oxidations and antioxidants</li><li>2. Significance and sources of antioxidants</li><li>3. Enzymes</li><li>4. Vitamins</li><li>5. Polyphenols and flavonoids</li><li>6. Terpenes and carotenoids</li><li>7. Methods for determining antioxidant activity</li></ol>		
<b>Learning outcomes:</b>			
<b>Teaching methodology:</b>			
<b>Assessment methods and grading system<sup>1</sup>:</b>	<b>Grading criteria</b>		
	Criteria	Maximal score	Required score
	1. Class attendance		
	2. Class activities		
	3. Seminars	1 × 50	25
	4. Final exam	50	30
	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	

<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

	95-100	10	A
<b>Literature<sup>2</sup>:</b>	<p>Mandatory literature:</p> <ol style="list-style-type: none"> <li>1. N. Smirnoff (2005) Antioxidants and Reactive Oxygen Species in Plants, Blackwell Publishing.</li> <li>2. L. Packer (2001) Handbook of Antioxidants, CRC Press.</li> <li>3. E. T. Denisov, I. B. Afanas'ev (2005) Oxidation and Antioxidants in Organic Chemistry and Biology, CRC Press.</li> <li>4. L. J. Cseke, A. Kirakosyan, P. B. Kaufman, S. Warber, J. A. Duke, H. L. Brielmann (2006) Natural Products from Plants, Taylor &amp; Francis.</li> <li>5. Scientific journals that follow the issues natural antioxidants (Free Radical Biology and Medicine, Food Chemistry, Food Control, Food and Chemical Toxicology, Life Sciences, Biochemical Pharmacology, European Journal of Pharmacology, Chemistry of Natural Compounds, Journal of Agricultural and Food Chemistry, Analytical Chemistry, Journal of Natural Products, Journal of Medicinal Chemistry, itd.</li> </ol>		

<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