

UNIVERSITY "ECONOMICS ACADEMY" BRCKO DISTRICT OF BOSNIA AND HERZEGOVINA  
 FACULTY OF TECHNICAL SCIENCES  
 THIRD CYCLE – DOCTORAL ACADEMIC STUDIES  
 PhD in Technical Sciences, major in Chemical Engineering and Technologies – 180 ECTS

CURRICULUM

No.	Code	Course Title	Sem.	Type	Status	Hours of Active Teaching			ECTS
						L	P	C	
FIRST YEAR									
1.	DZ01	Methodology of Scientific Research Work	1		M	4	2		8
2.	DZ02	Knowledge Management	1		M	4	2		8
3.	DZ03	<i>Elective 1</i>	1		E	2	2		7
		Simulation Modeling							
		Ecosystem Ecology							
		Arrangement and Supervision of Fire Protection							
		Modern Technology of Vegetable Production							
		Machines in Plant Protection							
		Selected Chapters of Food-processing Engineering							
		Catalytic Processes in the Chemical Industry							
		Modern Methods in Teaching Biology							
4.	DZ04	Research Work for Topic Selection and Literature Review for Doctoral Dissertation	1		M	0	4		7
Total:						10	10		30
5.	DZ05	<i>Elective 2</i>	2		E	3	1		7
		Biomass Energy							
		Environmental Engineering							
		Explosion Protection							
		Applied Entomology							
		Diagnosis of Plant Diseases							
		Sustainable Technologies in Food-processing Engineering							
		Selected Methods of Mathematical Modeling of Chemical and Biochemical Reactors							
		Scientific Achievements in Biology							
6.	DZ06	<i>Elective 3</i>	2		E	3	1		7
		Geothermal Energy							
		Digital Methods and Technologies							
		Fire Risk Sources							
		Pomology in Fruit Growing							
		Acarology and Nematology							
		Selected Topics in Food Toxicology							
		Selected Chapters in Chemical Industry Technology							
		Selected Chapters in Animal Biosystematics and Physiology							
7.	DZ07	Creation and Publication of the First Scientific Work	2		M	0	6		7

8.	DZ08	Doctoral Dissertation-Topic Research 1	2		M	0	6		9
Total:						6	14		30
Total Hours of Active Teaching in the First Year of Doctoral Academic Studies:						24 0	36 0		60
<b>SECOND YEAR</b>									
1.	DZ09	Change Management	3		M	4	2		8
2.	DZ10	<i>Elective 4</i>	3		E	3	1		7
		Systems Management Theory							
		Information Theory and Coding							
		Fire Protection Legislation							
		Organic Livestock Production							
		Agroecosystem Protection							
		Selected Chapters in Alcoholic and Non-Alcoholic Beverage Technology							
		Phase Equilibria in Chemical Technology							
		Contemporary Research in Biology							
3.	DZ11	<i>Elective 5</i>	3		E	3	1		7
		Discrete Mathematics							
		Robotics and Automation							
		Toxicology							
		Ethology and Welfare of Domestic Animals							
		Healing plants and Herbs							
		Modeling and Optimization in Food Engineering							
		Selected Chapters in Process Systems Engineering							
		Selected Chapters in Plant Ecology							
4.	DZ12	Doctoral Dissertation – Topic Research 2	3		M	0	6		8
Total:						10	10		30
5.	DZ13	<i>Elective 6</i>	4		E	3	1		7
		Solar Thermal Systems							
		Intelligent Systems							
		Protection During Internal Transport							
		Selected Chapters of Advanced Microbiology							
		Selected Chapters of Pesticide Chemistry							
		Macro- and Microelements in Food and Biological Processes							
		Isolation and Application of Natural Compounds in Industry							
		Selected Chapters of Animal Ecology							
6.	DZ14	Creation and Publication of the Second Scientific Work	4		M	0	6		8
7.	DZ15	Doctoral Dissertation - Topic Research 3	4		M	0	10		15
Topic:						3	17		30
Total Hours of Active Teaching in the Second Year of Doctoral Academic Studies:						19 5	40 5		60
<b>THIRD YEAR</b>									

1.	DZ16	Doctoral Dissertation – Topic Research 4	5		M	0	10		15
2.	DZ17	Doctoral Dissertation Writing (Data Processing of a Doctoral Dissertation)	5		M	0	10		15
Total:						0	20		30
3.	DZ18	Creation and Publication of the Third Scientific Work	6		M	0	6		8
4.	DZ19	Doctoral Dissertation – Topic Research 5	6		M	0	6		8
5.	DZ20	Doctoral Dissertation Defense	6		M	0	8		14
Total:						0	20		30
Total Hours of Active Teaching in the Third Year of Doctoral Academic Studies:						0	60 0		60
Total ECTS									180

**A student who defends his/her doctoral dissertation after passing all the subjects provided for in the curriculum for six semesters receives a certificate of completion of the study program with 180 ECTS points, namely the PhD in in Technical Sciences, major in Chemical Engineering and Technologies - 180 ECTS**