

UNIVERSITY "ECONOMICS ACADEMY" BRCKO DISTRICT OF BOSNIA AND HERZEGOVINA
 FACULTY OF TECHNICAL SCIENCES
 FIRST CYCLE - UNDERGRADUATE ACADEMIC STUDIES
 Bachelor with Honours in Electrical Engineering – Automation and Robotics – 240 ECTS

CURRICULUM:

No.	Course Code	Course Title	Sem.	Type	Status	Hours of Active Teaching			ECTS
						L	P	C	
FIRST YEAR									
1.	EL01	Informatics	1		O	2	3		7
2.	EL02	Introduction to Programming	1		O	2	3		7
3.	EL03	English Language 1	1		O	2	1		5
4.	EL04	Mathematics 1	1		O	2	2		6
5.	EL05	<i>Elective 1</i>	1		IB	2	1		5
		Introduction to Electrical Engineering							
		Introduction to electronics							
		Control Algorithms							
Total:						10	10		30
6.	EL06	Mathematics 2	2		O	2	3		7
7.	EL07	English 2	2		O	2	3		7
8.	EL08	Physics 1	2		O	2	1		5
9.	EL09	Algorithms and Data Structures	2		O	2	2		6
10.	EL10	<i>Elective 2</i>	2		IB	2	1		5
		Electrical Engineering 1							
		Electronics 1							
		Process Automation							
Total:						10	10		30
Total Hours in the First Year of Undergraduate Academic Studies						300	300		60
SECOND YEAR									
1.	EL11	Strength of Materials	3		O	2	3		7
2.	EL12	Technical Mechanics	3		O	2	3		7
3.	EL13	Physics 2	3		O	2	1		5
4.	EL14	Application of computers in Electrical Engineering and Electronics	3		O	2	2		6
5.	EL15	<i>Elective 3</i>	3		IB	2	1		5
		Electrical Engineering 2							
		Electronics 2							
		Software Design							

Total:						10	10	30
6.	EL16	Mathematics 3	4		O	2	3	7
7.	EL17	Object-Oriented Programming	4		O	2	3	7
8.	EL18	Operating Systems	4		O	2	1	5
9.	EL19	Fluid Mechanics	4		O	2	2	6
10.	EL20	<i>Elective 4</i>	4		IB	2	1	5
		Computer Graphics and Animation						
		Operational Research						
		DSP in Management						
Total:						10	10	30
Total Hours in the Second Year of Undergraduate Academic Studies						300	300	60
THIRD YEAR								
1.	EL21	Numerical Modeling in Engineering	5		O	2	3	7
2.	EL22	Operations Research and Linear Programming	5		O	2	3	7
3.	EL23	Digital Signal Processing (DSP)	5		O	2	1	5
4.	EL24	Computer Architecture	5		O	2	2	6
5.	EL25	<i>Elective 5</i>	5		IB	2	1	5
		Fundamentals of Environmental Engineering.						
		Digital Methods and Technologies.						
		Digital Automatic Control Systems						
Total:						10	10	30
6.	EL26	Database	6		O	2	3	7
7.	EL27	Probability Theory and Statistics	6		O	2	3	7
8.	EL28	Fundamentals of Information Systems	6		O	2	2	5
9.	EL29	Information Theory and Coding	6		O	2	1	6
10.	EL30	<i>Elective 6</i>	6		IB	2	1	5
		Optimization Methods in Electrical Engineering						
		Object-Oriented database						
		Automation and Robotics						
Total:						10	10	30

Total Hours in the Third Year of Undergraduate Academic Studies						300	300		60
FOURTH YEAR									
1.	EL31	Intelligent Systems	7		O	2	3		7
2.	EL32	Fundamentals of Telecommunications	7		O	2	3		7
3.	EL33	Automatic Control	7		O	2	1		5
4.	EL34	Computer Networks	7		O	2	2		6
5.	EL35	<i>Elective 7</i>	7		IB	2	1		5
		Robotics and Automation							
		Microprocessor systems Design							
		Intelligent Management							
Total:						10	10		30
6.	EL36	Professional Practice	8		O				20
7.	EL37	<i>Final Paper</i>	8		O		20		10
Total:						0	20		30
Total Hours in the Fourth Year of Undergraduate Academic Studies						150	450		60

A student who defends their final paper after passing all the courses provided by the curriculum for eight semesters, receives the title of engineer of academic studies - Bachelor with honors based on selected elective courses on the selected module - 240 ECTS.