

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

CURRICULUM:

No.	Course Code	Course Title	Sem.	Type	Status	Hours of Active Teaching			ECTS
						L	P	C	
FIRST YEAR									
1.	PM01	Informatics	1		M	2	3		7
2.	PM02	Descriptive Geometry	1		M	2	3		7
3.	PM03	English language 1	1		M	2	1		5
4.	PM04	Mathematics 1	1		M	2	2		6
5.	PM05	Elective 1	1		E	2	1		5
		Technical Physics							
		Engineering Graphics							
		Implementation of Automatic Systems							
Total:						10	10		30
6.	PM06	Mathematics 2	2		M	2	3		7
7.	PM07	English Language 2	2		M	2	3		7
8.	PM08	Mechanical Materials	2		M	2	1		5
9.	PM09	Electrical Engineering	2		M	2	2		6
10.	PM10	Elective 2	2		E	2	1		5
		Production techniques							
		Technical Documentation and CAD							
		Logistic Processes Management							
Total:						10	10		30
Total Hours in the First Year of Undergraduate Academic Studies						300	300		60
SECOND YEAR									
1.	PM11	Strength of materials	3		M	2	3		7
2.	PM12	Technical mechanics	3		M	2	3		7
3.	PM13	Thermodynamics	3		M	2	1		5
4.	PM14	Application of Computers in Mechanical Engineering	3		M	2	2		6
5.	PM15	Elective 3	3		E	2	1		5
		Heat and Mass transfer							
		Introduction to Automatic Control							

		Mechanisms in mechatronics							
Total:						10	10		30
6.	PM16	Mechanical elements	4		M	2	3		7
7.	PM17	Fluid mechanics	4		M	2	3		7
8.	PM18	Introduction to Automatic Control	4		M	2	1		5
9.	PM19	Means of transport	4		M	2	2		6
10.	PM20	Elective 4	4		E	2	1		5
		Process Design in Welding Technology							
		Internal Combustion Engines							
		Digital Control Electronics							
Total:						10	10		30
Total Hours in the Second Year of Undergraduate Academic Studies						300	300		60
THIRD YEAR									
1.	PM21	Numerical Modeling in Engineering	5		M	2	3		7
2.	PM22	Operations Research and Linear Programming	5		M	2	3		7
3.	PM23	Deformation Processing	5		M	2	1		5
4.	PM24	Tools and Accessories	5		M	2	2		6
5.	PM25	Elective 5	5		E	2	1		5
		Fundamentals of Environmental Engineering							
		Internal Combustion Engines Dynamics							
		Motor Vehicle Mechatronics							
Total:						10	10		30
6.	PM26	Production Systems Design	6		M	2	3		7
7.	PM27	Machines and Tools	6		M	2	3		7
8.	PM28	Quality Management	6		M	2	2		5
9.	PM29	Machine System Development	6		M	2	1		6
10.	PM30	Elective 6	6		E	2	1		5
		Digital Methods and Technologies							
		Motor Vehicles							
		Optimization Methods							
Total:						10	10		30
Total Hours in the Third Year of Undergraduate Academic Studies						300	300		60
FOURTH YEAR									

1.	PM31	Mechatronics	7		M	2	3		7
2.	PM32	Technical System Maintenance	7		M	2	3		7
3.	PM33	Production System Automation	7		M	2	1		5
4.	PM34	Computer Control of Machines and Tools	7		M	2	2		6
5.	PM35	<i>Elective 7</i>	7		E	2	1		5
		Business Process Automation							
		Diagnostics and Maintenance of engines							
		Mechatronics of Construction Machines							
Total:						10	10		30
6.	PM36	Professional Practice	8		M				20
7.	PM37	<i>Final Paper</i>	8		M		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.