

CURRICULUM
Bachelor's degree program in Mechatronics
as of 2021/2022 academic year

ECTS Subject code T MEH No													
- T – type of course: B for BEng, M for MEng;													
- I - IV semester – fundamental subjects - professional field 5.1 Mechanical Engineering,													
- MEH – “Mechatronics”;													
- No – number of the subject;													
Lectures (L), Tutorials (Tut.), Labs (Lab.), Auditorium Total (AT), Self-Study (SS), Exam (E),													
Continuous Assessment (CA), Semester Project (SP), Semester Assignment (course work) (SA).													
ECT S Subj	Code	SUBJECT	Semester Load						Assesment				ECTS credits
			L	Tut.	Lab.	AT	SS	Total	E	CA	SP	SA	
SEMESTER I													
1	MAT12	Mathematics Part I	30	30	0	60	150	210	1				7
2	PHY01	Physics	45	15	30	90	120	210	1				7
3	CHE01	Chemistry	30	0	15	45	105	150		1			5
4	CCE23	Information and communication technologies	30	0	45	75	165	240	1				8
5	LNG01	Foreign language I	0	30	0	30	30	60		1			2
6	SPR01	Sports	0	0	0	0	30	30					1
Total			135	75	90	300	600	900	3	2	0	0	30
SEMESTER II													
7	MAT22	Mathematics Part II	30	30	0	60	120	180	1				6
8	ENG01	Material Science	45	0	45	90	120	210	1			1	7
9	MEC01	Mechanics I	30	15	15	60	150	210	1			1	7
10	EEA21	Electronics and Electrical engineering	30	0	30	60	90	150		1			5
11	LNG02	Foreign language II	0	30	0	30	30	60		1			2
12	PRC01	Practicum	0	0	0	0	60	60		1			2
13	SPR02	Sports	0	0	0	0	30	30		1			1
Total			135	75	90	300	600	900	3	4	0	2	30
SEMESTER III													
14	MAT31	Mathematics Part III	30	30	0	60	120	180	1				6
15	MEC02	Mechanics II	30	0	30	60	150	210	1			1	7
16	MEC03	Strength of Materials	45	0	30	75	135	210	1			1	7
17	ENG02	Engineering Graphics	30	0	45	75	105	180		1		1	6
18	CCE24	Internet technologies	15	15	0	30	60	90		1			3
19	SPR03	Sports	0	0	0	0	30	30		1			1
Total			150	45	105	300	600	900	3	3	0	3	30
SEMESTER IV													
20	MEC04	Machine Elements	45	15	30	90	120	210	1				7
21	MEC08	Hydraulic and Pneumatic Systems	30	0	30	60	90	150	1				5
22	EEA22	Theory of Signals and Measuring Transducers	30	0	15	45	45	90	1				3
23	MEC09	Theory of Mechanisms and Machines	30	0	15	45	75	120	1			1	4
24	EEA23	Analog and digital circuitry	30	15	15	60	90	150		1		1	5
25	MEC07	Machine Elements - Course project	0	0	0	0	90	90			1		3
26	PRC02	Practicum	0	0	0	0	60	60		1			2
27	SPR04	Sports	0	0	0	0	30	30		1			1
Total			165	30	105	300	600	900	4	3	1	2	30

№	Code	SUBJECT	Semester Load						Assesment				ECTS credits
			L	Tut.	Lab.	AT	SS	Total	E	CA	SP	SA	
SEMESTER V													
28	BMEH01	Engineering Metrology	30	0	30	60	90	150	1			1	5
29	BMEH02	Automation of Discrete Mechanical Engineering	45	0	15	60	90	150	1				5
30	BMEH03	Manufacturing Technologies	30	0	15	45	75	120	1				4
31	BMEH04	Elements and Mechanism of Mechatronic Systems	30	0	15	45	75	120		1			4
32	BMEH05	Microelectronics	15	0	15	30	90	120		1			4
33	BMEH06	Basics of the Mechatronic Systems Design Process	45	0	15	60	90	150	1				5
34	BMEH07	Automation of Discrete Mechanical Engineering- Course Project	0	0	0	0	90	90			1		3
Total			195	0	105	300	600	900	4	2	1	1	30
SEMESTER VI													
35	BMEH08	Optical Technics	30	0	30	60	60	120	1				4
36	BMEH09	Programming of Automatica Production Mashines	30	0	15	45	75	120	1			1	4
37	BMEH10	Sensors and Actuators	30	0	15	45	75	120		1			4
38	BMEH11	Industrial Robots	30	0	30	60	90	150	1				5
39	BMEH12	Measuring Technics	30	0	30	60	90	150	1				5
40	BMEH13	Technical Logistics	15	0	15	30	60	90		1			3
41	BMEH14	Course project subjects BMEH08, BMEH10, BMEH11 or BMEH12	0	0	0	0	90	90			1		3
42	PRC03	Practicum	0	0	0	0	60	60		1			2
Total			165	0	135	300	600	900	4	3	1	1	30
SEMESTER VII													
43	BMEH15	Modeling and Simulation of Mechatronic Systems	45	0	30	75	105	180	1				6
44	BMEH16	Electronic Regulating and Controlling Devices and Systems	30	0	30	60	90	150	1				5
45	BMEH17	Precise Mechanical Systems in Mechatronics	45	0	30	75	105	180	1				6
46	BMEH18	Robotic Technologies	30	0	15	45	105	150	1				5
47	BMEH19	Microprocessor Technics	30	15	0	45	105	150		1			5
48	BMEH20	Precise Mechanical Systems in Mechatronics-Course Project	0	0	0	0	90	90			1		3
Total			180	15	105	300	600	900	4	1	1	0	30
SEMESTER VIII													
49	BMEH21	Quality Management	30	0	15	45	75	120	1			1	4
50	BMEH22	Economics and Management	30	0	0	30	60	90		1			3
51	BMEH23	Reliability and Diagnostics of Mechatronic Systems	20	0	15	35	55	90	1				3
52	BMEH24	Optional Subject (List 1)	30	0	15	45	75	120	1				4
53	BMEH25	Optional Subject (List 2)	30	0	15	45	75	120	1				4
54	PRC04	Practicum	0	0	0	0	60	60		1			2
55	BMEH26	Diploma Project	0	0	0	0	300	300	Defense of diploma thesis				10
Total			140	0	60	200	700	900	4	2	0	1	30

LIST OF THE OPTIONAL SUBJECTS

List 1 Optional subject BMEH 24		ECTS =3
1	Modeling and Simulation of Robotic Systems	BMEH24.1
2	Intelligent Production Systems	BMEH24.2
List 2 Optional subject BMEH 25		ECTS = 3
1	Optoelectronic and Laser Technics	BMEH25.1
2	Office and Security Technics	BMEH25.2
3	Microtechnics	BMEH25.3

LIST OF THE FACULTATIVE SUBJECTS

№	Code	SUBJECT	Semester Load						Assesment				ECTS credits
			L	Tut.	Lab.	AT	SS	Total	E	CA	SP	SA	
SEMESTER V													
1	FaSPR05	Sport	0	0	0	<i>0</i>	30	30		1			1
2	FaBMEH01	Introduction in Network Technologies	30	30	0	60	90	150		1			5
SEMESTER VI													
1	FaSPR06	Sport	0	0	0	<i>0</i>	30	30		1			1
2	FaBMEH02	Computer Design of Mechanical Drives and Constructions	30	0	30	60	90	150		1			5
SEMESTER VII													
1	FaSPR07	Sport	0	0	0	<i>0</i>	30	30		1			1
SEMESTER VIII													
1	FaSPR08	Sport	0	0	0	<i>0</i>	30	30		1			1
2	FaBMEH03	Bussines Ethics	30	15	0	45	45	90		1			3