



PROGRAMME OF STUDIES

For vintage:

FACULTY OF MECHANICAL ENGINEERING AND MANAGEMENT

Field of study **MECHARTONICS - Mechatronic Constructions**

Full-time studies, second-cycle studies

Item	Course name	No. of exams	Total number of hours					Courses per semester																
			TOTAL	Lecture	Classes	Laboratory	Project	Number of hours per semester																
								I				II				III								
		ECTS	exams	LE	C	LA	P	ECTS	exams	LE	C	LA	P	ECTS	exams	LE	C	LA	P					
Basic subject area courses																								
1	Humanities and social course 1 (elective)		30	30				3		30														
2	Humanities and social course 2 (elective)		15	15										2		15								
3	Foreign language		15		15			2		15														
4	Physical education		15		15											15								
5	Applications of Mathematics in Engineering		15		15			2		15														
6	Strength of Mechanical Construction		45	15	15	15		4		15	15	15												
7	Modelling of Materials		30	15	15			2		15	15													
8	Dynamics of Mechatronic Devices		30	15	15			2		15	15													
9	Computer Based Control		30	15		15		3		15		15												
Total in group			225	105	90	30		18		90	75	30			2		15	15						
Major courses																								
1	Technical Mechanics II	1	30	15	15			3	E	15		15												
2	Advanced Manufacturing Methods	1	30	15	15			3	E	15	15	15												
3	Intelligent Materials and Devices	1	30	15	15			3	E	15	15	15												
4	FEM in Design Analysis		30	15	15			2		15	15													
5	Industrial Management		15	15				1		15														
6	Electronics II	1	30	15	15								4	E	15		15							
7	Digital Signal Processors		30	15	15								2		15	15	15							
8	Technical Mechatronics	1	30	15	15								2	E	15	15	15							
9	Basics of Optronics		30	15	15								2		15	15	15							
10	Networks and Visualization in Automation		30	15	15								2		15	15	15							
11	Technical Computer Science		30	15	15												3		15	15				
12	Transitional Work II		45			45											5			45				
Total in group		5	360	165	150	45		12	3	75	60		12	2	75	75	8		15	15				
TOTAL		5	585	270	90	180	45	30	3	165	75	90	0	12	2	75	0	10	0	30	15	15	45	
Total hours in semester							330					150					105							
Specialization: Mechatronic Constructions (MC)																								
1	Diploma Seminar		45		45									8		15		3		30				
2	Preparation of Master Thesis																	9						
3	Devices Controlled Numerically		30	15		15							2		15		15							
4	Programming of CNC		30	15		15							2		15		15							
5	Programming of Computer Based Controllers		30		30								2			30								
6	Digital Analysis of Signals	1	30	15	15													2	E	15	15			
7	Design of Electrohydraulic Valves		30	15		15												2		15			15	
8	Elective courses 1	1	30	15	15								2	E	15	15								
9	Elective courses 2	1	30	15	15								2	E	15	15								
10	Elective courses 3	1	30	15	15													2	E	15	15			
11	Elective courses 4		30	15	15													2		15	15			
Total in group		4	315	120	45	120	30							18	2	60	15	75	15	20	2	60	30	45
TOTAL - second-cycles studies																								
TOTAL		9	900	390	135	300	75	30	3	165	75	90	0	30	4	135	15	150	15	30	2	90	45	60
Total hours in semester							330					315					255							