



PROGRAMME OF STUDIES

For vintage:

FACULTY OF MECHANICAL ENGINEERING AND MANAGEMENT

Field of study MECHATRONICS - Mechatronic Constructions

Full-time studies, second-cycle studies

Item	Course name	No. of exams	Total number of hours					Courses per semester																		
			TOTAL	Lecture	including:		Project	Number of hours per semester																		
					Classes	Laboratory		ECTS	exams	I				ECTS	exams	II				ECTS	exams	III				
LE	C	LA	P	LE	C	LA	P	LE	C	LA	P	LE	C	LA	P	LE	C	LA	P							
Basic subject area courses																										
1	Humanities and social course 1 (elective)		30	30				3																		
2	Humanities and social course 2 (elective)		15	15																						
3	Foreign language		30			30									2				30							
4	Physical education		15			15															15					
5	Strength of Mechanical Construction		45	15	15	15		4		15	15	15														
6	Computer Based Control		30	15		15		3		15	15															
7	Applications of Mathematics in Engineering		15			15		2			15															
8	Modelling in Mechatronics		30	15		15								2		15		15								
9	Dynamics of Mechatronic Devices		30	15	15									2		15	15									
Total in group			240	105	90	45		12		60	30	30		6		30	45	15		2		15	15			
Major courses																										
10	Technical Mechanics II	1	30	15		15		3	E	15		15														
11	Advanced Manufacturing Methods	1	30	15		15		3	E	15		15														
12	Use of smart materials	1	30	15		15		3	E	15		15														
13	Electronics II	1	30	15		15		3	E	15		15										15				
14	Computational analysis of mechanical systems		30	15		15		3		15		15														
15	32-bit microcontrollers		30	15		15		2		15		15														
16	Industrial Management		15	15				1		15																
17	Flexible Manufacturing Systems	1	30	15		15								2	E	15		15								
18	Networks and Visualization in Automation		30	15		15								2		15		15								
19	Technical Computer Science		30	15		15														3		15	15			
20	Basics of Optronics		30	15		15														2		15	15			
Total in group		5	315	165		135	15	18	4	105		75	15	4	1	30		30		5		30	30			
TOTAL		5	555		270	90	180	15	30	4	165	30	105	15	10	1	60	45	45	0	7	0	45	15	30	0
		Total hours in semester					315					150					90									
Specialization: Mechatronic Constructions (MC)																										
21	Diploma Seminar		45				45							8					15	3				30		
22	Devices Controlled Numerically		30	15		15								2		15		15								
23	Fluid systems electronically controlled		30	15		15								2		15		15								
24	Programming of CNC		30	15		15								2		15		15								
25	Programming of automation systems		30			30								2				30								
26	Preparation of Master Thesis																			9						
27	Transitional Work II		45			45														5					45	
28	Digital Analysis of Signals	1	30	15		15														2	E	15		15		
29	Elective courses 1	1	30	15		15								2	E	15		15								
30	Elective courses 2	1	30	15		15								2	E	15		15								
31	Elective courses 3	1	30	15		15														2	E	15		15		
32	Elective courses 4		30	15		15														2		15		15		
Total in group		4	360	120		120	120							20	2	75		75	45	23	2	45	45	75		
TOTAL - second-cycles studies		9	915	390	90	300	135	30	4	165	30	105	15	30	3	135	45	120	45	30	2	90	15	75	75	
		Total hours in semester					315					345					255									