



załącznik nr 4a do uchwały Nr 3/III/3/2019 z dnia 1 marca 2019 r.
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:			Number of hours per semester																	
					Classes	Laboratory	Project	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		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	##	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	15	3	E	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	##		##	15	18	4	##	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	##		##	##						20	2	75	75	45	23	2	45	45	75	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								