

Transilvania University of Brașov, Romania

Study program: Mechatronic Systems for Industry and Medicine

Faculty: Product Design and Environment

Study period: 2 years (master)

Academic year structure: 2 semesters (14 weeks per semester)

Examination sessions (two): winter session (January/February)

summer session (June/July)

Courses per years (C= course; S = seminar; L = laboratory; P = project)

1st Year

No. crt.	Course	Code	Language of instruction	1 st Semester					2 nd Semester				
				C	S	L	P	Cred	C	S	L	P	Cred
01	Complements of Physics and Applied Mathematics	CFMA	Romanian	2	1	-	-	6					
02	Finite Element Analysis of Engineering Systems	AFEM	Romanian	2	-	1	-	6					
03	Modelling And Simulation of Bio systems	MSBI	Romanian	2	-	2	-	6					
04	Advanced Methods of Quality Inspection	MAIC	Romanian	2	2	-	-	6					
05	Experimental and Investigative Methods in Industry and Medicine	MEIM	Romanian						2	-	2	-	6
06	Robotic Systems for Industry and Medicine	SRIM	Romanian						2	-	-	2	6
07	Precision Micro-Electro-Mechanical Systems	MEMS	Romanian						2	-	2	-	6
08	Protocols and Communication Interfaces in Mechatronic Systems	PICS	Romanian						2	-	2	-	6
09	Practical Activity and/or Scientific Research	PRCI	Romanian	12X14weeks=168 hours				6					
10	Practical Activity and/or Scientific Research	PRCII	Romanian						12X14weeks=168 hours				6

2nd Year

No. crt.	Course	Code	Language of instruction	3 rd Semester					4 th Semester				
				C	S	L	P	Cred	C	S	L	P	Cred
	Optional direction I: Mechatronic Systems for Industry												
01	Information Systems Management: Ethics And Academic Integrity	MPCM	Romanian	2	-	-	1	5					

02	Modern Manufacturing and Assembly Systems	SMFA	Romanian	2	-	1	-	5				
03	CAD /CAM Systems in Flexible Manufacturing	SCAD	Romanian	1		2		5				
04	Systems for Services Automation	SASV	Romanian	2		2		5				
05	Control of Processes	CCPR	Romanian	1		2		5				
06	Information Acquisition and Processing, Virtual Instrumentation	APIV	Romanian						2	-	1	-
07	Adaptive command systems	SICA	Romanian						2	-	1	-
08	Advanced mechatronic systems in the automotive industry	SAMA	Romanian						2	-	2	-
09	Practical Activity and/or Scientific Research	APCS	Romanian	12X14weeks=168 hours				4	8 X14weeks=112 hours			4
10	Dissertation Thesis Development	ELDS	Romanian						6X14weeks=84 hours			8
	Optional direction II: Mechatronic Systems in Medicine and Optometry											
01	Information Systems Management: Ethics And Academic Integrity	MPCM	Romanian	2	-	-	1	5				
02	Public Health Protection and Safety	SMFA	Romanian	2	-	1	-	5				
03	Optometry and Clinical Diagnosis	OPAC	Romanian	1		2		5				
04	Complex Systems for Visual Investigation	SCBS	Romanian	2		2		6				
05	Preventive School Optometry	OSPI	Romanian	1		2		5				
06	Complementary Methods of Experimental Bio systems Analysis	MCAB	Romanian						2	-	1	-
07	Computerized Management of Patients and of Medical and Optometric Engineering Systems	MCPS	Romanian						2	-	1	-
08	Experimental Optometry and Low Vision Prosthetics	OEPO	Romanian						2	-	2	
09	Practical Activity and/or Scientific Research	APCS	Romanian	12X14weeks=168 hours				4	8 X14weeks=112 hours			4
10	Dissertation Thesis Development	ELDS	Romanian						6X14weeks=84 hours			8