Transilvania University of Braşov, Romania
Study program: Mechatronics

Faculty:	Product Design and Environment
Study period:	4 years (bachelor);
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.	Course	Code	Language of instruction	1st Semester					2nd Semester				
				C	S	L	P	Cred	C	S	L	P	Cred
01	Mathematical Analysis	MKTAM01	Romanian	2	3	-	-	5					
02	Chemistry	MKTCH01	Romanian	2	-	1	-	4					
03	Computer Aided Graphics I	DIDT01	Romanian	2	-	2	-	5					
04	Computer Programming and Programming Languages I	MKTPC01	Romanian	1	-	2	-	4					
05	Mechatronic Systems I	SIMT01	Romanian	2	2	-	-	5					
06	Science and Engineering of Materials	MKTSM01	Romanian	3	-	2	-	5					
07	Linear Algebra, Analytic Geometry and Differential Equations	DIAGAD	Romanian						2	2	-	-	4
08	Computer Aided Graphics II	MKTDT02	Romanian						2	-	2	-	5
09	Computer Programming and Programming Languages II	MKTPC02	Romanian						1	-	2	-	4
10	Physics	MKTFZ02	Romanian						2	-	1	-	4
11	Mechanics	MKTMC02	Romanian						3	2	-	-	5
12	Communication	TDCO	Romanian						1	-	1	-	3
13	Electrotechnics	MKEA02	Romanian						2	-	1	-	3
14	Foreign Languages: English	LE01/LE02	English	1	1	-	-	2	1	1	-	-	2
	Foreign Languages: French	LF01/LF02	French										
	Foreign Languages: German	LG01/LG02	German										
	Foreign Languages: Spanish	LS01/LS02	Spanish										
15	Physical Education and Sports I/II	EF01/EF02	Romanian	-	1	-	-	1	-	1	-	-	1

2nd Year

No	Course	Code	Language of instruction	3rd Semester					4th Semester				
				C	S	L	P	Cred	C	S	L	P	Cred
01	Special Mathematics and Mathematical Statistics	DIMS03	Romanian	2	1	-	-	4					
02	Strength of Materials	DIRM03	Romanian	3	1	1	-	5					
03	Applied Informatics	ANUM	Romanian	2	-	2	-	5					
04	Electronics	ELEC	Romanian	2	-	2	-	4					
05	Biomechanics	BMEC	Romanian	2	-	2	-	5					
06	Optoelectronics	OPEL	Romanian	2	-	2	-	5					
07	Digital Electronics	ELDI	Romanian						2	-	1	-	3

No.	Course	Code	Language of instruction	C	S	L	P	Cred	C	S	L	P	Cred
08	Mechanisms and Machine Elements	DIOM04	Romanian						3	-	1	1	5
09	Processing Technologies	THPL	Romanian						2	-	2	-	4
10	Numerical Methods	MNUM	Romanian						2	-	2	-	4
11	Fundamentals of Mechatronic	BSMT	Romanian						3	-	2	-	5
12	Techniques and Measurement Systems	TCDI	Romanian						2	-	1	-	3
13	Domain Practice	PRAC1	Romanian						3 weeksx30h=90h				4
14	Foreign Languages: English	LE03/LE04	English	1	1	-	-	2	1	1	-	-	2
	Foreign Languages: French	LF03/LF04	French										
	Foreign Languages: German	LG03/LG04	German										
	Foreign Languages: Spanish	LS03/LS04	Spanish										
15	Physical Education and Sports III/IV	EF03/EF04	Romanian	-	1	-	-	1	-	1	-	-	1

3rd Year

No.	Course	Code	Language of instruction	5th Semester					6th Semester				
				C	S	L	P	Cred	C	S	L	P	Cred
01	Working Machines and CNC	MLCNc	Romanian	2	-	2	-	4					
02	Working Machines and CNC - Project	MLCNp	Romanian	-	-	-	1	2					
03	Drive Systems	SIAC	Romanian	2	-	2	-	4					
04	Manufacture and Assembly in Mechatronics using Flexible Systems	FMMT	Romanian	2	-	2	-	5					
05	Fundamentals of Automated Systems	BSAT	Romanian	2	-	2	-	5					
06	Sensors and Sensory Systems	SENZ	Romanian	2	-	2	-	5					
07	Heat Engineering and Fluid Mechanics	TMFL	Romanian	3	-	2	-	5					
08	Medical Apparatus	APLAc	Romanian						2	-	1	-	3
09	Measurement and Instrumentation	MASIc	Romanian						2	-	1	-	3
10	Computer-Aided Design	PRAC	Romanian						2	-	2	-	4
11	Microcontrollers, Microprocessors	MICR	Romanian						2	-	2	-	4
12	Mechatronic Systems II	SIMT02	Romanian						2	-	2	-	4
13	Mechatronic Systems II - Project	SIMTP02	Romanian						-	-	-	2	2
14	Programming Industrial Robots	PRI	Romanian						2	-	2	-	3
15	PLCs (Programmable Logic Controllers)	AUTP	Romanian						2	-	2	-	3
16	Specialized Practice	PRAC2	Romanian						3 weeks x 30h = 90h				4

4th Year

No.	Course	Code	Language of instruction	7th Semester					8th Semester (10 weeks)				
				C	S	L	P	Cred	C	S	L	P	Cred
01	Manufacturing technologies and micro / nanotechnologies	TMNS	Romanian	3	-	1	1	6					
02	Image Processing, Artificial Vision and Medical Imaging	PIVI	Romanian	2	-	2	-	4					
03	Microcontroller Programming	MPMC	Romanian	2	-	2	-	4					
04	Microcontroller Programming - Project	MPMP	Romanian	-	-	-	1	2					
05	Artificial Intelligence	IART	Romanian	2	-	2	-	4					
06	Pneumatic and Hydraulic Automation	APHI	Romanian	2	-	2	-	5					
	Pneutronics and Hydronics	PNHI	Romanian										
07	Acquisition Systems and Interfaces	SAIN	Romanian	2	-	2	-	5					
	Signals and Systems	SESI	Romanian										

08	Mechatronics of Biomedical Systems	MTSB	Romanian						2	-	2	-	4
09	Databases and Statistical Processing	BDPS	Romanian						2	-	2	-	3
10	Coordinate Measuring Machines	MMCO	Romanian						2	-	2	-	3
11	General Economy	ECOG	Romanian						1	1	-	-	2
12	Mechatronics in Agriculture	MTAG	Romanian						1	-	1	-	2
	Automotive Mechatronics	MAUT	Romanian										
13	CAD / CAM / CIM	PCAM	Romanian						2	-	1	1	4
	CNC Programming	PMCN	Romanian										
14	Automatic Control and Service Industry	ACSI	Romanian						2	-	2	-	4
	ATMs and Commercial	AUBC	Romanian										
15	Elaboration of the Diploma Project	PTEM	Romanian						-	-	-	4	4
16	Practice for Diploma Project	PRAC3	Romanian						60 +36 hours				4