

# Transilvania University of Braşov, Romania

## Study program: Manufacturing Engineering

Faculty:	Technological Engineering and Industrial Management
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)

### 1<sup>st</sup> Year

No. crt.	Course	Code	1 <sup>st</sup> Semester					2 <sup>nd</sup> Semester					
			C	S	L	P	Cred	C	S	L	P	Cred	
01	Mathematics	AM	2	2			4						
02	Descriptive geometry	GD	2	2			5						
03	Chemistry	CHI	2		1		3						
04	Computer programming and programming languages 1	PCL1	1		2		3						
05	Technical drawing and info- graphics 1	DTI1	2		3		5						
06	Physics	FIZ	2		2		5						
07	Professional integration and development	IDP	1	1			2						
08	Modern languages 1a (English)	LM1a	1	1			3						
	Modern languages 1b (French)	LM1b											
09	Physical training 1	EDF1		1			1						
10	Material science and engineering	SIM						3		2			5
11	Linear algebra, analytical and differential geometry	ALGA						2	2				4
12	Mechanics	MEC						2	3				5
13	Technical drawing and info- graphics 2	DTI2						1		4			5
14	Computer programming and programming languages 2	PCL2						2		2			5
15	General economics	ECG						1	1				3
16	Modern languages 2a (English)	LM2a						1	1				3
	Modern languages 2b (French)	LM2b											
17	Physical training 2	EDF2							1				1

### 2<sup>nd</sup> Year

No. crt.	Course	Code	3 <sup>rd</sup> Semester					4 <sup>th</sup> Semester					
			C	S	L	P	Cred	C	S	L	P	Cred	
01	Special mathematics	MS	2	2			4						
02	Strength of materials 1	RM1	2	1	1		5						
03	Mechanisms	MECSM	3		2		6						
04	Numerical methods	MNI	2		2		4						
05	Fluid mechanics and hydraulic equipment	MFH	2		1		3						
06	Electrotechnics and applied electronics	EEA	2		2		5						

07	Modern languages 3a (English)	LM3a	1	1		3					
	Modern languages 3b (French)	LM3b									
8	Physical training 3	EDF3		1		1					
09	Machine elements 1	OM1					2		1	1	4
10	Strength of materials 2	RM2					2	1	1		4
11	3D Modelling	M3D					2		2		4
12	Basics of Industrial engineering	BI1					2		2		4
13	Heat treatments	AMTT					2		1		3
14	Thermotechnics and heat engines	TET					2		1		3
15	Industrial Management	MIN					2	1			2
16	Internship (90 hours/ year)	PRAD									4
17	Modern languages 4a (English)	LM4a					1	1			2
	Modern languages 4b (French)	LM4b									
18	Physical training 4	EDF4						1			1

### 3<sup>rd</sup> Year

No. crt.	Course	Code	5 <sup>th</sup> Semester					6 <sup>th</sup> Semester					
			C	S	L	P	Cred	C	S	L	P	Cred	
01	Data acquisition and distribution systems	SADD	2		2								
02	Basics of surfaces cutting on machine-tools	BGSA	3		2								
03	Computer aided parametric design	PPAC	2		2								
04	Machine elements II	OM2	2		1								
05	Machine elements II - Project	OMP				2							
06	Tolerances and dimensional control	TCD	2		2								
07	Finite elements method	MEF	2		2								
08	Manufacturing technologies 1	TCM1						2		2			4
09	Machine-tools	MU						2		1			4
10	Cold-pressing technology I	TPR1						3		2			4
11	Design of cutting tools	PSA						2		1	1		4
12	Fixture design I	PD1						2		1			3
13	Manufacturing the parts of plastic and composite materials	BD						2		2			3
14	Internship (90 hours/year)	PRAS											4
15	CAD/ CAPP/ CAM Systems	CADM						2		2			4
	Product quality control	CCP											

### 4<sup>th</sup> Year

No. crt.	Course	Code	7 <sup>th</sup> Semester					8 <sup>th</sup> Semester					
			C	S	L	P	Cred	C	S	L	P	Cred	
01	Cold-pressing technologies II	TPR2	1			2							
02	Automation of manufacturing processes	APT	2		2								
03	Numerical control	CN	2		2								
04	Fixture design II	PD2	2		1								
05	Fixture design II - Project	PD2P				2							
06	Manufacturing technologies 2	TCM2	1		1	1							
07	Computer aided design of products – CAD systems	PACP	2		2								

08	Robotics in manufacturing processes	RPT	2		2		4					
09	Optimisation manufacturing processes	BOPT						2		1		3
10	Developing computer applications in engineering	DCAI						2		2		4
11	Manufacturing technologies III	TCM3						2				2
12	Manufacturing technologies III – Project	MCTCM									2	3
13	Computer aided manufacturing	FAC						1		2		3
14	Flexible manufacturing systems	SFF						2		2		4
15	Concurrent engineering	ISIM						1		2		3
16	Elaboration of diploma project	APIII									6	4
17	Internship for elaboration of diploma project	DPRD										4