

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)

1st Year

No. crt.	Course	Code	1 st Semester					2 nd 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

2nd Year

No. crt.	Course	Code	3 rd Semester					4 th 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	Materials selection and 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

3rd Year

No. crt.	Course	Code	5 th Semester					6 th Semester						
			C	S	L	P	Cred	C	S	L	P	Cred		
01	Data acquisition and distribution systems	SADD	2		2		4							
02	Basics of cutting surface on machine-tools	BGSA	3		2		5							
03	Computer aided parametric design	PPAC	2		2		4							
04	Machine elements II	OM2	2		1		4							
05	Machine elements II - Project	OMP				2	3							
06	Tolerances and dimensional control	TCD	2		2		5							
07	Finite elements method	MEF	2		2		5							
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	Databases	BD						2		2				3
14	Internship (90 hours/year)	PRAS												4
15	CAD/ CAPP/ CAM Systems	CADM						2		2			4	
	Product quality control	CCP												

4th Year

No. crt.	Course	Code	7 th Semester					8 th Semester						
			C	S	L	P	Cred	C	S	L	P	Cred		
01	Cold-pressing technologies II	TPR2	1			2	4							
02	Automation of manufacturing processes	APT	2		2		4							
03	Numerical control	CN	2		2		4							
04	Fixture design II	PD2	2		1		3							

05	Fixture design II - Project	PD2P				2	3						
06	Manufacturing technologies 2	TCM2	1		1	1	4						
07	Computer aided design of products – CAD systems	PACP	2		2		4						
	Quality assurance	AFSI											
08	Robotics in manufacturing processes	RPT	2		2		4						
	Certification in quality management	CIC											
09	Basics of manufacturing processes optimisation	BOPT						2		1			2
10	Developing computer applications in engineering	DCAI						2		2			2
11	Manufacturing technologies III	TCM3						2					1
12	Manufacturing technologies III – Project	MCTCM										2	2
13	Computer aided manufacturing	FAC						1		2			3
	Reliability	FIA											
14	Flexible manufacturing systems	SFF						2		2			3
	Computer aided quality	CAQ											
15	Concurrent engineering	ISIM						1		2			3
	Risk management	MRSC											
16	Elaboration diploma project	APIII										6	4
17	Internship for diploma project (60 hours)	DPRD											10