Transilvania University of Braşov, Romania

Study program: Mechanical engineering

Faculty: Mechanical Engineering
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	1st Semester					2nd Semester				
			C	S	L	P	Cred	C	S	L	P	Cred
01	Mathematical Analysis	ANM	3	2	-	-	5					
02	Descriptive Geometry	GD	2	2	-	-	5					
03	Chemistry	CHIM	2	-	1	-	4					
04	Materials Science	STM	2	-	1	-	3					
05	Materials Technology	TM	2	-	1	-	3					
06	Applied Informatics	INFA	2	-	2	-	5					
07	Communication and ethics	COM	2	1	-	-	3					
08	English language 1	LE01	1	1	-	-	2					
	French language 1	LF01										
	German language 1	LG01										
09	Physical training 1	EF01	-	1	-	-	1					
10	Linear algebra, analytical and differential geometry	AGAD						2	3	-	-	5
11	Technical drawing and info- graphics 1	DT01						2	-	2	-	5
12	Physics	FIZI						2	-	1	-	4
13	Mechanics 1	MEC1						3	1	1	-	5
14	Computer programming and programming languages	PCL						2	-	2	-	5
15	Electrical Engineering and Electrical Machines	ELME						2	-	1	-	4
16	English language 2	LE02						1	1	-	-	2
	French language 2	LF02										
	German language 2	LG02										
17	Physical training 2	EF02						-	1	-	-	1

2nd Year

No. crt.	Course	Code	3rd Semester					4th Semester				
			C	S	L	P	Cred	C	S	L	P	Cred
01	Economics	ECON	1	1	-	-	3					
02	Technical drawing and info- graphics 2	DT2	1	-	3	-	5					
03	Mechanics 2	MEC2	3	2	1	-	6					
04	Strength of materials 1	RM1	2	2	2	-	6					
05	Special mathematics and statistics	MSSM	2	2	-	-	4					
06	Applied Electronics	ELEA	2	-	1	-	4					

07	English language 3	LE03	1	1	-	-	2					
	French language 3	LF03										
	German language 3	LG03										
08	Physical training 3	EF03	-	1	-	-	1					
09	Numerical methods	MNUM						2	-	2	-	3
10	Fluid mechanics and hydraulic equipment	MFMH						2	-	2	-	4
11	Strength of materials 2	RM02						3	1	1	-	5
12	Mechanisms	MECS						3	-	1	1	5
13	Aided design CAD	PAC						2	-	1	1	4
14	Tolerances and Dimensional Control	TCD						2	-	1	-	3
15	English language 4	LE04						1	1	-	-	2
	French language 4	LF04										
	German language 4	LG04										
16	Physical training 4	EF04						-	1	-	-	1
17	Practical work (90 hours)	PT1						-	-	-	-	4

3nd Year

No. crt.	Course	Code	5th Semester					6th Semester				
			C	S	L	P	Cred	C	S	L	P	Cred
01	Thermodynamics and Thermal Machines	TMT	2	1	2	-	5					
02	Machine Tools and Cutting	MUPA	2	-	1	-	3					
03	Mechanical Vibrations	VIBR	2	1	1	-	5					
04	Hydro-Pneumatic Drives	AHP	2	-	1	-	4					
05	Machine Elements 1	OM1	2	-	1	1	5					
06	Elasticity and Plasticity	ELPL	2	2	-	-	4					
07	Finite Elements Method 1	MEF1	2		2	1	4					
08	Experimental Methods in Mechanical Engineering 1	MEIM1						2		1		4
09	Finite Elements Method 2	MEF2						2		2	1	4
10	Machine Elements 2	OM2						2		1	2	4
11	Manufacturing technology	TEF						1			2	3
12	Tribology	TRIB						2		2		4
13	Vibration of machinery and equipment (O1)	VIMU						2		1		3
	Vibroacoustic diagnosis of mechanical structures (O1)	DIAG										
14	Fatigue of Mechanical Structures (O2)	OBSM						2		2		4
	Reliability of mechanical systems (O2)	FIAB										
15	Technological practice	PT2						3 x 30 hours = 90 hurs				4

4th Year

No. crt.	Course	Code	7 th Semester					8th Semester				
			C	S	L	P	Cred	C	S	L	P	Cred
01	Experimental Methods in Mechanical Engineering 2	MEIM2	2		1	1	5					
02	Plates and shells	PLIN	2		2		5					
03	Technical Acoustics	ACTH	2	-	1	-	5					
04	Statics and Dynamics Stability (O3)	STAB	2	-	2	1	5					
	Active control of mechanical systems (O3)	CASM										
05	Numerical modelling in fluid mechanics (O4)	MNMF	2	2	1	-	4					
	Transfer phenomena (O4)	FETR										

06	Sustainable development in Mechanical Engineering	DEZD	1	1	-	-	3					
07	Thermal Equipment Design (O5)	PECT	2	-	-	1	3					
	Refrigeration and heating installations (O5)	IFTE										
08	Energy efficiency in Mechanical Engineering (O6)	EFEN						2	1	-	-	3
	Energy audit (O6)	AUDE										
09	Dynamics of Mechanical Structures	DINS						2	1	-	1	4
10	Composites materials mechanics	MECC						2	2	-	-	4
11	Optimizations in Mechanical Engineering	OPTI						2	1	-	1	3
12	Rheology (O7	REOL						2	2	-	-	3
	Contact mechanics (O7)	MECO										
13	Quality Management in Industry (O8)	MACA						2	1	-	-	3
	Industrial Project Management (O8)	MAPI										
14	Diploma Project Develop	PDIP						-	-	-	4	5
15	Practice for Diploma Project	PR3						6 hours x 14 weeks = 84 hours				5