

Transilvania University of Braşov, Romania

Study program: Economic engineering in mechanics

Faculty: Materials Science and Engineering
 Study period: 4 years
 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	Mathematical Analysis	SMAMA1	3	2			6					
02	Intellectual property and industrial legislation	SMLECO	2	1			3					
03	Materials Science; fundamentals	SMINM1	2		2		4					
04	Software and Computer Programming	SMPRG1	3		2		6					
05	Chemistry	SMCGB1	2	1	1		5					
06	Mechanics	SMMEC1	2	1			4					
07	Physics	SMFIZ1						2		1		4
08	Linear Algebra, Analytical Geometry and Differential Equations	SMALG1						2	1			4
09	European economic policies	SMPEE1						2	1			4
10	Technical Drawing	SMDEST						1		2		3
11	Numerical Methods	SMMEN1						2		1		4
12	Economy; fundamentals	BE						2	1			3
13	Bases of management	SMASE1						1	2			3
14	Communication and academic writing	SMTCP1						2	1			3
15	English language 1/2	SMLE01/SMLE02	1	1			2	1	1			2
	French language 1/2	SMLF01/SMLF02										
	German language 1/2	SMLG01/SMLG02										
	Spanish language 1/2	SMLS01/SMLS02										
16	Physical Training 1/2	SMEF01/SMEF02		1			1		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	SMMSP1	2	1			4					
02	Strength of Materials	SMRM01	2	1			4					
03	General Management	SMMEFL	2	1			3					
04	Applied Informatics	SMINFA	2	2			5					

05	Materials Selection and Properties	SMTSPM	2	1	2		5						
06	Entrepreneurship	SMANTR	2		2		4						
07	Electrotechnics; fundamentals	SMETH1	2		1		3						
08	Probabilities and statistics	SMTPSM						1	2				4
09	Thermotechnics	SMTERM						2	1				3
10	Machine parts	SMOM01						2		1	1		4
11	Value Analysis	SMAVAL						2	1		1		4
12	Commercial trade	SMSMTC						2	2				4
13	Manufacturing Systems Engineering [O2]	SMISP1						2	1		2		5
14	Practical Activity II (90h)	SMPR41											4
15	English language 3/4	SMLE03/SMLE04	1	1			2	1	1				2
	French language 3/4	SMLF03/SMLF04											
	German language 3/4	SMLG03/SMLG04											
	Spanish language 3/4	SMLS03/SMLS04											
16	Physical Training 3/4	SMEF03/SMEF04		1				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	Environmental Management	SMTCSM	2	1			4						
02	Quality Management	SMMGCL	2	2			4						
03	Sustainable Development	SMVRSO	2			2	4						
04	Computer Aided Design	SMPCAL	2		2		5						
05	Basic of Nanomaterials and Nanotechnologies	SMNANO	2			1	5						
06	Accounting and Costs Estimation	CONTA	2	2			4						
07	Logistics and Maintenance Management [O3]	SMMEAL	2	2			4						
	Management of research and development [O3]	SMMACD											
08	Operational Research	SMCOP1						2	1				3
09	Microscopy and Image Analysis	SMMAIM						2	1				4
10	Production Management	SMMAPR						2	2				3
11	Finance	FIN						2	2				5
12	Automation and Commands	SMACTA						2		1			3
13	Modeling and Simulation of Industrial Processes	SMMOPI						2	2				4
14	Project Management	SMMPRO						2	2				4
15	Practical activity (90h)	SMPR42											2

4th Year

No. crt.	Course	Code	7 th Semester					8 th Semester				
			C	S	L	P	Cred	C	S	L	P	Cred
01	Casting Technology	SMPMSL	2		1	1	4					
02	Plastic Deformation Technology	SMTDPL	2		1	1	5					
03	Heat treatment	SMTTER	2		2		5					
04	Economic Legislation	SMLECO	2	1			4					
05	Casting Equipment	SMEPSL	2		1	1	4					
06	Industrial Robotics [05]	SMROBO	2	1			4					
	Virtual Instrumentation [05]	SMINVR										
07	Cutting Processing Technologies [06]	SMTPPA	2	1		1	4					
	Identification and Control of Industrial Processes [06]	SMICPI										
08	IT Management	SIM					2		2		4	
09	Rapid prototyping	SMRCAD					2		2		4	
10	Plastic Deformation Equipment	SMEPSS					2		2	2	5	
11	Finite Element Method	SMMEFI					2			2	4	
12	Automatics - Sensors and Actuators[07]	SMSENZ					2	2			4	
	Measurement Systems and Instrumentation [07]	SMSMIN										
13	Thermochemical treatments [04]	SMTTCH					2		1	1	4	
	Surface engineering [04]	SMISUP										
14	Practical Activity (60h)	SMPRS4									2	
15	Diploma Project Preparation (104h)	SMPPD4									3	