

# Transilvania University of Braşov, Romania

## Study program: Industrial Safety Engineering

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)

### 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
1	Mathematical Analysis	SMAMA1	2	2			4					
2	Computer Basics	SMBUC1	3		1		5					
3	Descriptive Geometry	SMGDE1	2		1		4					
4	Materials science and engineering I	SMINM1	2		1		4					
5	General chemistry	SMCGB1	2		1		4					
6	Materials Technology I	SMTHM1	1		2		3					
7	Physics	SMFIZ1	2		1		4					
8	Materials Technology II	SMTHM2	2		1		5					
9	Materials science and engineering II	SMINM2	2		1		5					
10	Materials Technology II	SMTHM2						2		1		5
11	Materials science and engineering II	SMINM2						2		1		5
12	Linear Algebra, Analytical Geometry and Differential Equation	SMALG1						2	1			4
13	Technical Drawing	SMDEST						1		2		3
14	Numerical methods	SMMEN1						2		2		4
15	Mechanics	SMMEC1						2	1			3
16	Data Processing and Informatic Systems	SMPDS1						2		2		4
17	English language	SMLE01/ SMLE02	1	1			2	1	1			2
18	Physic education	SMEDF01/SMEDF02			1		1			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
1	Special mathematics	SMMS01	2	1			4					
2	Strength of Materials I	SMRM01	2	1	1		5					
3	Ecology and environmental protection	SMECOL	2		2		5					
4	Probability theory and statistics	SMTPSM	1		3		4					
5	Technical devices	SMDIST	2		2		5					
6	Dimensional control	SMCODI	3		2		5					
7	Electrotechnics	SMETH1	2		1		4					
8	Quality Control and Assurance	SMASCA						2		2		5

9	Strength of Materials II	SMRM02						2	1	1		4
10	Machine components	SMOM01						2		1		4
11	Thermodynamics	SMTERM						2		1		4
12	Bases of Technical Computer Assisted Design	SMBPTA						3		2		5
13	Practical Activity	SMPR11								30		2
14	English language	SMLE03/ SMLE04	1	1				2	1	1		2
15	Physic education	SMEDF03/SMEDF04					1	1			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	
1	Elements of Electronics in Industrial Engineering	SMEEII	2		2			5					
2	Theory of Welding Processes	SMTPS1	3		3			6					
3	Mechanical Processing	SMPRM1	2		2			4					
4	Heat treatments	SMTRTE	2		2			4					
5	Testing of Materials and Equipment for Protection	SMTMMP	2		2			4					
6	Ergonomics	SMERGS	2		1	1		5					
7	Ventilation and Air Conditioning Equipment	SMEVC1	2		1	1		5					
8	Techniques for Purification of Industrial Liquid	SMTPD1							2		2		5
9	Waste Processing Technologies	SMTPLI							2		2		4
10	Safety Assessment in Industry	SMESI1							2		1		4
11	Radiation Protection in Industry	SMRPI1							2		1		4
12	Reliability	SMFIAB							2	2			4
13	Risk Management	SMRIT1							2	1	1		4
14	Practical Activity	SMPR22									30		2

### 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	
1	Safety in Primary Sectors	SMSSP1	2	2				5					
2	Safety Systems for Mechanical Industry	SMSSPM	2	1	1			5					
3	Management and Safety for Industrial Transport	SMMSTI	2	1	1			5					
4	Safety of Advanced Production Systems	SMSSAP	2	1				4					
5	Occupational Safety Legislation	SMLSM1	2	2				4					
6	Industrial Emissions	SMNIND	3	2				5					
7	Elements of Social Medicine	SMEMM1	1	1				2					
8	Electro-security	SMELS1							2		1	1	4
9	Initiation and Conduct of Business	SMICAF							2		2		3
10	Audit and Certification of Safety Engineering in Industry	SMACSI							2		2		3
11	Bases of Experimental Research	SMBCEX							3		2		3
12	Statistical Control of Processes and Accidents	SMCSPR							2		2		3
13	High Level Design	SMMAPR							2		2		3
14	Practical Activity	SMPR23									30		2
15	Research for the Diploma Project	SMPPD2							26				10