

Transilvania University of Brașov, Romania

Study program: Entrepreneurship in materials 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)

1st Year – Not available in 2025-2026

No. crt.	Course	1 st Semester					2 nd Semester				
		C	S	L	P	Cred	C	S	L	P	Cred
01	Mathematical Analysis	3	1			5					
02	Software and Computer Programming	3		2		5					
03	Descriptive geometry	2	2			4					
04	Chemistry	2		2		4					
05	Bases of management	1	2			4					
06	Materials science and engineering	2		2		5					
07	Linear Algebra, Analytical Geometry and Differential Equations						2	2			5
08	Organizational culture						2	1			4
09	Physics						2		2		4
10	Technical drawing and infographics						2		2		5
11	Technological innovation						3	2			5
12	Communication and academic writing						2	1			4
13	English language 1/2	1	1			3	1	1			3
	French language 1/2										
	German language 1/2										
	Spanish language 1/2										
14	Physical Training 1/2			1		1			1		1

2nd Year – Not available in 2025-2026, 2026-2027

No. crt.	Course	3 rd Semester					4 th Semester				
		C	S	L	P	Cred	C	S	L	P	Cred
01	Logistics management	2	1			4					
02	Strength of Materials	2	1	1		4					
03	Quality management	2	2			5					
04	European economic politics	2	2			5					
05	Applied Informatics	3		2		5					
06	Numerical methods						2		2		4
07	Marketing						2	2			4
08	Probability and statistics						2		2		4
09	Sustainable development						2	2			4
10	Machine parts						2		1	1	4
11	Termotechnics (01)	2		1		4					
12	Intellectual property and industrial legislation (02)						2	1			3
13	Practical Activity II (90h)										4
14	English language 3/4	1	1				3	1	1		
	French language 3/4										
	German language 3/4										
	Spanish language 3/4										3
15	Physical Training 3/4			1		1				1	

3rd Year – Available only in 2025-2026

No. crt.	Course	5 th Semester					6 th Semester				
		C	S	L	P	Cred	C	S	L	P	Cred
01	Tribology	2		2	1	6					
02	Accounting	2	2			6					
03	Environmental management	2	1			5					
04	Fundamentals of computer-aided design	3		3		6					
05	Materials Technology	4		4		7					
06	Production management						2	2			4
07	Techniques for Materials Analysis and Characterization						2		2		4
08	Microscopy						2		1		3
09	Ceramic, Polymeric, and Composite Materials						3		2		5
10	Project Management						2			2	4
11	Practical Activity (90 hrs)										4
12	Production Systems Engineering (01)						2		1		3
13	Human Resources Management (02)						2	1			3

4th Year – Available in 2025-2026 and 2026-2027

No. crt.	Course	7 th Semester					8 th Semester				
		C	S	L	P	Cred	C	S	L	P	Cred
01	Business Law	2	1			4					
02	Nanomaterials and Nanotechnologies	3		1	1	5					
03	Thermal and Thermochemical Treatments	3		2	1	6					
04	Properties of Materials						2		2		5
05	Modeling and Simulation in Materials Processing						2	2			4
06	Entrepreneurship						4			2	6
07	Corporate Finance						2	2			4
08	Practical Activity (60 hrs)										4
09	Bachelor's Thesis Project										4
10	Trade Techniques	2	2			5					
11	Business Risk	2	2			5					
12	Additive Manufacturing	2		2		5					
13	Business Negotiation						2	2			3