

# Transilvania University of Braşov, Romania

## Study program: Industrial Environmental Engineering and Protection

Faculty: Product Design and Environment

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)

### 1<sup>st</sup> Year

No. crt.	Course	Code	1 <sup>st</sup> Semester					2 <sup>nd</sup> Semester				
			C	S	L	P	Cr	C	S	L	P	Cr
1.	Mathematical analysis	DIAM01	2	3			5					
2.	Chemistry I	DICH01	2		2		5					
3.	Computer programming and programming languages	DIPC01	1		2		4					
4.	Descriptive geometry	DIGD01	2		1		4					
5.	Technical drawing and infographics I	DIDT01	2		2		4					
6.	Materials science and engineering	DISM01	3		2		5					
7.	Pollution sources, processes and products	DIPC02						1		1		3
8.	Technical drawing and infographics II	DIDT02						1		2		3
9.	Mechanics	DIMC02						3	2			4
10.	Physics	DIFZ02						2	1	1		4
11.	Linear algebra, analytical and differential geometry	DIAGAD						2	2			4
12.	Chemistry II	CHIMAN						3		2		6
13.	General economy	DIDC02						1	1			3
14.	English language or French language or German language or Spanish language	LS01/ LS02	1	1			3	1	1			3
15.	Physical education and sport	EF01/ EF02		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	Cr	C	S	L	P	Cr
1.	Special mathematics	DIMS03	2	2			4					
2.	Databases and statistical processing	DIBDPS	1		1		3					
3.	Strengths of materials	DIRM03	3	1	1		4					
4.	Chemistry III	SMCO03	3		3		6					
5.	Thermodynamics	SMCF03	2		2		6					

6.	Applied informatics	DIM3D						1		1		3
7.	Sustainable development	DIDD04						2		1		3
8.	Transport phenomena and unit operations I	DITMT						2		1		3
9.	Electrochemistry and corrosion	ECHC04						3	1	2		4
10.	Mechanical engineering	DIOM04						3		2		4
11.	Fluids mechanics	DIMF04						2		1		3
12.	Domain practice (90 h)	PR04						90			4	
13.	<i>Electrotechnics or Electronics</i>	DIEA03 MAE04	2		2			5				
14.	English language or French language or German language or Spanish language	LS03 / LS04	1	1				2				
15.	Eco-toxicology /or Natural resources	SMCA04 SMRN04						2		1		4
16.	Physical education and sport	EF03/EF04		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	Cr	C	S	L	P	Cr
1.	Product ecological design I	BPP05	2			2	4					
2.	Environmental chemistry	SMCM5	2		2		4					
3.	Soil science and soil depollution	SSPDS06	2		1		3					
4.	Information technology	DIMEF5	2		3		4					
5.	Instrumental analysis	SMAI05	2		3		5					
6.	Separation methods for pollutants	SMSEP05	1		1		3					
7.	Communication	DIDC05	1	1			3					
8.	Meteorology and Climatology	MET05	1		2		4					
9.	Chemometry	SMCH05						1		1		2
10.	Transfer phenomena and unit operations II	SMFT05						2	1		1	4
11.	Ecology	ECOIPMI						1		1		3
12.	Product ecological design II	DIDC06						2	1			2
13.	Project – Products ecological design II	DIDCP06									1	2
14.	Analysis and synthesis of the technological processes	ASPT						2		3		3
15.	Tehnologies and equipment for water and wastewater treatment I	TRATAP						2		2		4
16.	Tehnologies and equipment for air treatment	PEPA06						2		1		3
17.	Speciality practice (90 h)	PR06						90			4	
18.	Colloids and surfaces /or Interface processes	SMSP6 INT06						2		2		3

No. crt.	Course	Code	7 <sup>th</sup> Semester					8 <sup>th</sup> Semester				
			C	S	L	P	Cr	C	S	L	P	Cr
1.	Product ecological design III	DP07	2			2	4					
2.	Biomass based energy systems	BIO07	2		2		4					
3.	Tehnologies and equipment for water and wastewater treatment II	APE07	2		2		5					
4.	Environment quality acquisition, monitoring and diagnosis techniques	MONIT07	2		2		5					
5.	Automation of technological and biotechnological processes	COM07	2		2		4					
6.	Engineering of the depollution processes	DEPOL07	2	1			3					
7	Engineering of the depollution processes-Project	DEPOLP07				2	2					
8.	Environment and society	MSOC07	1	2			3					
9.	Wastes treatment and recycling technologies (10 weeks)	DES08						2		2		4
10	Impact studies (10 weeks)	IMP08						2	2			5
11	Environmental legal frame (10 weeks)	LEG08						1	1			3
12	Practical work for the Diploma project (4 wweks x 22 h /week = 88 h > 60 h)	PR08							88			2
13	Developing the Diploma project (14 weeks x 4 h/week = 56 h)	LIC08									4	4
14.	<i>Industrial ecology (10 weeks) / or Implementing renewable energy systems (10 weeks)</i>	EIND08 EPE08						2		2		4
15.	<i>Integrated wastes management (10 weeks) or Ecological management (10 weeks)</i>	MCM08 MNGEC08						2	2			4
16.	<i>Environmental projects development and management (10 weeks) / or Health and security at the working place management (10 weeks)</i>	PRO08 INT08						2			2	4