Transilvania University of Braşov, Romania

Study program: Engineering of Renewable Energy Systems

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)

1st Year

No. crt.	Course	Code	1st Semester					2nd Semester				
			C	S	L	P	Cred	C	S	L	P	Cred
01	Mathematical analysis	DIAM01	2	3			5					
02	Chemistry	DICH01	2		1		4					
03	Computer programming and Programming Languages I	DIPC01	1		3		6					
04	Computer assisted graphics I	DIGA01	2		4		6					
05	Materials science and engineering	DISM01	3		2		6					
06	Linear algebra, analytical and differential geometry	DIAG01						2	2			4
07	Computer programming and Programming Languages II	DIPC02						1		3		4
08	Computer assisted graphics II	DIGA02						1		3		5
09	Mechanics	DIMC02						3	2			5
10	Physics	DIFZ02						2	1	1		4
11	General economy	DIEG02						1	1			2
12	Renewable energy systems	SER02						1		1		3
13	Modern languages (English, French, German, Spanish)	LS01/02	1	1			3	1	1			3
14	Physical education and sport	EF01/02		1			1		1			1

2nd Year

No. crt.	Course	Code	3rd Semester					4th Semester				
			C	S	L	P	Cred	C	S	L	P	Cred
01	Special mathematics	DIMS03	2	2			4					
02	Databases and statistical processing	DIBDPS	1		1		4					
03	Numerical methods	DIMN03	2		2		5					
04	Strength of materials	DIRM03	3	1	2		5					
05	Mechanisms I	DIME03	3		1	1	6					
06	Electrotechnics	DIEA03	2		2		4					
07	Basics of computer-aided design	DIM3D						1		3		3
08	Sustainable development	DIDD04						2		1		3
09	Fluid mechanics and hydraulic machines	DIMF04						2		1		3

10	Electrochemistry and corrosion	ECHC04						3		1		4
11	Thermotechnics and thermal machines	DITMT						2		1		3
12	Mechanisms II and Machine elements	DIOM04						3		1	1	5
13	Domain practical work	ERPR04						90				4
14	Electrical machines and actuation or Elements of electronics	MEA04 EE04						2		1		3
15	Modern languages (English, French, German, Spanish)	LS03/04	1	1			2	1	1			2
16	Physical education and sport	EF03/04		1			1		1			1

3rd Year

No. crt.	Course	Code	5th Semester					6th Semester				
			C	S	L	P	Cred	C	S	L	P	Cred
01	Finite element method	DIMEF5	2		3		5					
02	Product design and development	BPP05	2			2	4					
03	Solar thermal systems	CES05DI	2		2	1	6					
04	Assisted modeling of mechanisms	MAS05DI	3		2		6					
05	Machine elements II	DIOM05	2			2	4					
06	Communication	DIDC05	1	1			2					
07	Photovoltaic systems	SFOT06						2		2	1	5
08	Conceptual design	DIDC06						2	2		2	5
09	Wind systems	SEOL06						2		2	1	5
10	Micro-hydropower systems	SMH06						2		2	1	5
11	Speciality practical work	PR06						90				3
12	Recyclable materials or Special materials	DIMR05 MS05	2		1		3					
13	Tolerances and dimensional control or Mechanical vibrations	DITCD06 DIVM06						2		2		3
14	Aesthetics and Ergonomics or Ecodesign	DIEE06 TREC						2			1	4

4th Year

No. crt.	Course	Code	7 th Semester					8th Semester				
			C	S	L	P	Cred	C	S	L	P	Cred
01	Measurement, command and control systems	SMCC07	2		3		6					
02	Product development I	DP07	2			2	5					
03	Hybrid systems and cogeneration	MST07	2		2		5					
04	Biomass based energy systems	SEB07	2		2		5					
05	Marketing	DIMKT	1	1			2					
06	Environment and society	MEDSOC	1	1			3					
07	Product development II	PD08						1			3	3
08	Project management	MP08DI						1			1	2
09	Hydrogen technology	TEH07						2		1		2
10	Clean technologies	TC08						2		1		2
11	Systems maintenance	MSIST08						1	1			2

12	Practical work for BSc Thesis elaboration (10 weeks x 6h/week)	PRD08						60				10
13	Project (10 weeks x 6h/week)	ISERPR2									2	2
14	Geothermal energy or Waste management	ISER08 MDES08						2		2		3
15	Energy management or Management of environmental quality and audit	MEN08 MCMA08						2	2			2
16	Smart products or Mechatronic products	PI07 PM07	2		1	1	4					
17	Intellectual property or Environmental legislation	DPI08 LMED08						1	1			2