

**Field:** Energy engineering  
**Study programme:** Industrial energetics

**2018-2019 academic year**

**CURRICULUM**  
**1st year of study**

No	Subject	Number of ECTS credits	Examination form	Semester
1.	Mathematical analysis	4	WO	1
2.	Linear algebra, analytic and differential geometry	4	WO	1
3.	Chemistry	4	W	1
4.	Computer programming and programming languages 1	9	O	1
5.	Communication ethics	3	O	1
7.	Materials science and engineering	3	O	1
8.	Physical education and sports 1	1	P/F	1
9.	English for engineering 1 / French for engineering 1	2	O	1
10.	Special mathematics	4	WO	2
11.	Physics	4	WO	2
12.	Computer graphics	4	O	2
13.	Computer programming and programming languages 2	3	O	2
14.	Materials technology	4	W	2
15.	Mechanics	4	W	2
16.	Physical education and sports 2	1	P/F	2
17.	General economics	4	O	2
18.	English for engineering 2 / French for engineering 2	2	O	2

W- written exam

O – oral exam

WO – written and oral exam

P/F- pass/fail

Dean,  
Prof. Ph.D.Eng. Zichil Valentin

Head of Department,  
Prof. Ph.D Eng. Culea George

**Field:** Energy engineering  
**Study programme:** Industrial energetics

**2018-2019 academic year**

**CURRICULUM**  
**2nd year of study**

No	Subject	Number of ECTS credits	Examination form	Semester
1.	Strength of materials	4	WO	1
2.	General energetics	5	O	1
3.	Electrotechnics	5	W	1
4.	Thermotechnics	4	O	1
5.	Heat and mass transfer	5	W	1
6.	Applied informatics	4	O	1
7.	Physical education and sports 3	1	P/F	1
8.	English for engineering 3/French for engineering 3	2	O	1
9.	Power electronics	3	O	2
10.	Measurement of electrical and non-electrical quantities	4	W	2
11.	Turbomachines	4	W	2
12.	Electrical machines and electric actuators	3	W	2
13.	English for engineering 4/French for engineering 4	2	O	2
14.	Fluid mechanics	3	W	2
15.	Hydraulic machines	4	O	2
16.	Automated adjustment theory	3	W	2
17.	Training - 3 weeks × 30 hours	4	O	2

W- written exam

O – oral exam

WO – written and oral exam

P/F- pass/fail

Dean,  
Prof. Ph.D.Eng. Zichil Valentin

Head of Department,  
Prof. Ph.D Eng. Culea George

**Field:** Energy engineering  
**Study programme:** Industrial energetics

**2018-2019 academic year**

**CURRICULUM**  
**3rd year of study**

No	Subject	Number of ECTS credits	Examination form	Semester
1.	Electrical networks ( project – graded separately)	7	WO	1
2.	Reliability	4	O	1
3.	Renewable energy sources applied in buildings	5	O	1
4.	Thermal equipment and installations	7	WO	1
5.	Artificial intelligence techniques	4	W	1
6.	Occupational safety and health	3	O	1
7.	Finite element method	3	O	2
8.	Electrical and thermal energy generation	6	W	2
9.	Energy agents transportation	5	W	2
10.	Electrical equipment	4	W	2
11.	The electrical part of power stations and substations	5	O	2
12.	Management	3	O	2
13.	Training - 3 weeks × 30 hours	4	O	2

W- written exam

O – oral exam

WO – written and oral exam

Dean,  
Prof. Ph.D.Eng. Zichil Valentin

Head of Department,  
Prof. Ph.D Eng. Culea George

**Field:** Energy engineering  
**Study programme:** Industrial energetics

**2018-2019 academic year**

**CURRICULUM  
4th year of study**

No	Subject	Number of ECTS credits	Examination form	Semester
1.	Design and optimization of equipment and installations	4	O	1
2.	Energy audit	4	W	1
3.	Sensors and sensory systems	3	W	1
4.	Technical creativity	3	O	1
5.	Optimization techniques in energetics	4	W	1
6.	Electrical installation protection	4	WO	1
7.	Microprocessors	4	WO	1
8.	Energetics and pollution control	4	O	1
9.	Utilisation of electrical energy	5	O	2
10.	Automation	3	WO	2
11.	Ergonomics	3	W	2
12.	Preparing and writing the Bachelor final project	4	O	2
13.	Entrepreneurship	2	O	2
14.	Human resource management	3	W	2
15.	Training for preparing and writing the Bachelor final project- 2 weeks × 30 hours	10	O	2

W- written exam

O – oral exam

WO – written and oral exam

Dean,  
Prof. Ph.D.Eng. Zichil Valentin

Head of Department,  
Prof. Ph.D Eng. Culea George