



CURRICULUM

Professional orientation: **Energetics**
 Program: **Thermal Engineering and Renewable Energy Sources**
 Professional qualification: **Mechanical Engineer**
 Educational and qualificational degree: **Bachelor**
 Form of study: **Full - Time**
 Term of study: **4 years / 8 semesters**

No	Subject Name	Types of term control				Semester auditorium load					Unsupervised load	Total work hours	ECTS credits
		E	PA	CP	A	L	S	L	CP CPR	Total			
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Mathematics, part 1	1				15	45			60	150	210	7
2	Physics	1				30		15		45	165	210	7
3	Chemistry	1				30		15		45	135	180	6
4	Applied Geometry and Engineering Graphics		1			15		30		45	135	180	6
5	English, part 1				1		30			30	30	60	2
6	Elective Subject				1						30	30	1
6a	Specialized Sport Activities, part 1				1						30	30	1
6b	Sport and Social Adaptation, part 1				1						30	30	1
7	Practical Training, part 1				1						30	30	1
Total for the 1 semester:		3	1		3	90	75	60		225	675	900	30
8	Mathematics, part 2	2				30	30			60	90	150	5
9	Material Science and Technology	2				30		30		60	90	150	5
10	Introduction to the Speciality		2			15	15			30	60	90	3
11	Technical Mechanics	2				30	30			60	90	150	5
12	Programming Fundamentals		2			15		30		45	105	150	5
13	Interchangeability and Technical Measurements		2			15		15		30	120	150	5
14	English, part 2				2		30			30	30	60	2
15	Elective Subject				2						30	30	1
15a	Specialized Sport Activities, part 2				2						30	30	1
15b	Sport and Social Adaptation, part 2				2						30	30	1
16	Practical Training, part 2				2						30	30	1
Total for the 2 semester:		3	3		3	135	105	75		315	645	960	32
17	Strength of Materials	3				30		30		60	90	150	5
18	CAD Systems		3					45		45	105	150	5
19	Fluid Mechanics	3				30		30		60	90	150	5
20	Machine Elements		3			30		30		60	90	150	5
21	Thermodynamics and Heat Transfer, part 1	3				30		30		60	120	180	6
22	Modern Ethical Problems				3		15			15	15	30	1
23	English, part 3				3		30			30	30	60	2

No	Subject Name	Types of term control				Semester auditorium load					Unsupervised load	Total work hours	ECTS credits
		E	PA	CP	A	L	S	L	CP CPR	Total			
1	2	3	4	5	6	7	8	9	10	11	12	13	14
24	Elective Subject				3						30	30	1
24a	Specialized Sport Activities, part 3				3						30	30	1
24b	Sports Management, part 1				3						30	30	1
Total for the 3 semester:		3	2		3	120	45	165		330	570	900	30
25	Heating Techniques	4				30		30		60	90	150	5
26	Thermodynamics and Heat Transfer, part 2	4				30		30		60	90	150	5
27	Hydraulic and Pneumatic Machines	4				30		30		60	90	150	5
28	Heat Exchangers	4				30		15	15	60	60	120	4
29	Refrigeration Engineering	4				30		30		60	90	150	5
30	Electrical Engineering and Electronics		4			15		30		45	105	150	5
31	Elective Subject				4						30	30	1
31a	Specialized Sport Activities, part 4				4						30	30	1
31b	Sports Management, part 2				4						30	30	1
Total for the 4 semester:		5	1		1	165		165	15	345	555	900	30
32	Electrical Part of Power Plants		5			30		15		45	105	150	5
33	Refrigerators and Cooling Installations	5				30		30		60	120	180	6
34	Heating Techniques, project			5					30	30	30	60	2
35	Control Theory and Practice of Thermal Processes	5				15		30		45	105	150	5
36	Combustion Engineering and Technologies	5				30		30		60	120	180	6
37	Thermal Engineering Measurements and Devices	5				30		30		60	120	180	6
Total for the 5 semester:		4	1	1		135		135	30	300	600	900	30
38	Geothermal Technologies		6			30		15		45	105	150	5
39	Hydrokinetic and Cogeneration Systems	6				30		30		60	90	150	5
40	Industrial Thermal and Mass Transfer Systems	6				30		15	15	60	120	180	6
41	Industrial Ventilation and Dust Removing	6				30		30		60	90	150	5
42	Refrigerators and Cooling Installations, project			6					30	30	30	60	2
43	Technologies for Solar Energy Conversion into Heat and Electricity		6			30		15		45	105	150	5
44	Specialized Practice				6						90	90	3
Total for the 6 semester:		3	2	1	1	150		105	45	300	630	930	31
45	Heat and Gas Supply	7				30		30		60	150	210	7
46	Industrial Ventilation and Dust Removing, project			7					30	30	30	60	2
47	Drying Techniques	7				30		15	15	60	150	210	7
48	Technical Safety		7			30		15		45	105	150	5
49	Biogas Sources and Technologies	7				30		15		45	135	180	6
50	Elective Subject		7			15		15		30	90	120	4
50a	Engineering Ecology		7			15		15		30	90	120	4
50b	Business Economics		7			15		15		30	90	120	4
Total for the 7 semester:		3	2	1		135		90	45	270	660	930	31
51	Energy Efficiency, project			8					30	30	150	180	6
52	Air Conditioning	8				30		30		60	150	210	7
53	Air Conditioning, project			8					30	30	150	180	6
54	Thermal Farm	8				30			15	45	135	180	6
Total for the 8 semester:		2		2		60		30	75	165	585	750	25

No	Subject Name	Types of term control				Semester auditorium load					Unsuper vised load	Total work hours	ECTS credits
		E	PA	CP	A	L	S	L	CP CPR	Total			
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Total for all courses of education:		26	12	5	11	990	225	825	210	2250	4920	7170	239

Facultative subjects

No	Subject Name	Types of term control				Semester auditorium load incl:					Unsuper-vised load	Total work hours	ECTS credits
		E	PA	CP	A	L	S	L	CP CPR	Total			
1	2	3	4	5	6	7	8	9	10	11	12	13	14

Types of graduation	Semester	Unsupervised load	ECTS credits
Preparation of Diploma Thesis / Preparation for State Examination	8	300	10
Defence of Diploma Thesis / State Examination	8		

Accepted from AU with

Protocol No 27 / 29.01.2018

Valid from the 2017 / 2018 academic year.

The weekly allocation of the classes is fixed according to the "Structure of the Learning Process" Academic Board adopted for the current academic year.

Head of Department TE:

/ Assoc. Prof. PhD Pavlova I. /

Dean of Faculty FSB:

/ Assoc. Prof. PhD Hadzhidimov I. /