



## 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			210	150	360	7
2	Physics	1				30		15		210	165	375	7
3	Chemistry	1				30		15		180	135	315	6
4	Applied Geometry and Engineering Graphics		1			15		30		180	135	315	6
5	English, part 1				1		30			60	30	90	2
6	Optional Subject				1					30	30	60	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	60	1
<b>Total for the 1 semestar:</b>		<b>3</b>	<b>1</b>		<b>3</b>	<b>90</b>	<b>75</b>	<b>60</b>		<b>900</b>	<b>675</b>	<b>1575</b>	<b>30</b>
8	Mathematics, part 2	2				30	30			150	90	240	5
9	Material Science and Technology	2				30		30		150	90	240	5
10	Introduction to the Speciality		2			15	15			90	60	150	3
11	Technical Mechanics	2				30	30			150	90	240	5
12	Programming Fundamentals		2			15		30		150	105	255	5
13	Interchangeability and Technical Measurements		2			15		15		150	120	270	5
14	English, part 2				2		30			60	30	90	2
15	Optional Subject				2					30	30	60	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	60	1
<b>Total for the 2 semestar:</b>		<b>3</b>	<b>3</b>		<b>3</b>	<b>135</b>	<b>105</b>	<b>75</b>		<b>960</b>	<b>645</b>	<b>1605</b>	<b>32</b>
17	Strength of Materials	3				30		30		150	90	240	5
18	CAD Systems		3					45		150	105	255	5
19	Fluid Mechanics	3				30		30		150	90	240	5
20	Machine Elements		3			30		30		150	90	240	5
21	Thermodynamics and Heat Transfer, part 1	3				30		30		180	120	300	6
22	Modern Ethical Problems				3		15			30	15	45	1
23	English, part 3				3		30			60	30	90	2

No	Subject Name	Types of term control				Semester auditorium load					Unsuper vided 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	Optional Subject				3					30	30	60	1
24a	Specialized Sport Activities, part 3				3						30	30	1
24b	Sports Management, part 1				3						30	30	1
<b>Total for the 3 semestar:</b>		<b>3</b>	<b>2</b>		<b>3</b>	<b>120</b>	<b>45</b>	<b>165</b>		<b>900</b>	<b>570</b>	<b>1470</b>	<b>30</b>
25	Heating Techniques	4				30		30		150	90	240	5
26	Thermodynamics and Heat Transfer, part 2	4				30		30		150	90	240	5
27	Hydraulic and Pneumatic Machines	4				30		30		150	90	240	5
28	Heat Exchangers	4				30		15	15	105	60	165	4
29	Refrigeration Engineering	4				30		30		150	90	240	5
30	Electrical Engineering and Electronics		4			15		30		150	105	255	5
31	Optional Subject				4					30	30	60	1
31a	Specialized Sport Activities, part 4				4						30	30	1
31b	Sports Management, part 2				4						30	30	1
<b>Total for the 4 semestar:</b>		<b>5</b>	<b>1</b>		<b>1</b>	<b>165</b>		<b>165</b>	<b>15</b>	<b>885</b>	<b>555</b>	<b>1440</b>	<b>30</b>
32	Electrical Part of Power Plants		5			30		15		150	105	255	5
33	Refrigerators and Cooling Installations	5				30		30		180	120	300	6
34	Heating Techniques, project			5					30	30	30	60	2
35	Control Theory and Practice of Thermal Processes	5				15		30		150	105	255	5
36	Combustion Engineering and Technologies	5				30		30		180	120	300	6
37	Thermal Engineering Measurements and Devices	5				30		30		180	120	300	6
<b>Total for the 5 semestar:</b>		<b>4</b>	<b>1</b>	<b>1</b>		<b>135</b>		<b>135</b>	<b>30</b>	<b>870</b>	<b>600</b>	<b>1470</b>	<b>30</b>
38	Geothermal Technologies		6			30		15		150	105	255	5
39	Hydrokinetic and Cogeneration Systems	6				30		30		150	90	240	5
40	Industrial Thermal and Mass Transfer Systems	6				30		15	15	165	120	285	6
41	Industrial Ventilation and Dust Removing	6				30		30		150	90	240	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		150	105	255	5
44	Specialized Practice				6					90	90	180	3
<b>Total for the 6 semestar:</b>		<b>3</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>150</b>		<b>105</b>	<b>45</b>	<b>885</b>	<b>630</b>	<b>1515</b>	<b>31</b>
45	Heat and Gas Supply	7				30		30		210	150	360	7
46	Industrial Ventilation and Dust Removing, project			7					30	30	30	60	2
47	Drying Techniques	7				30		15	15	195	150	345	7
48	Technical Safety		7			30		15		150	105	255	5
49	Biogas Sources and Technologies	7				30		15		180	135	315	6
50	Optional Subject		7			15		15		120	90	210	4
50a	Engineering Ecology		7			15		15		30	90	120	4
50b	Business Economics		7			15		15		30	90	120	4
<b>Total for the 7 semestar:</b>		<b>3</b>	<b>2</b>	<b>1</b>		<b>135</b>		<b>90</b>	<b>45</b>	<b>885</b>	<b>660</b>	<b>1545</b>	<b>31</b>
51	Energy Efficiency, project			8					30	150	150	300	6
52	Air Conditioning	8				30		30		210	150	360	7
53	Air Conditioning, project			8					30	150	150	300	6
54	Thermal Farm	8				30			15	165	135	300	6
<b>Total for the 8 semestar:</b>		<b>2</b>		<b>2</b>		<b>60</b>		<b>30</b>	<b>75</b>	<b>675</b>	<b>585</b>	<b>1260</b>	<b>25</b>

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
<b>Total for all courses of education:</b>		<b>26</b>	<b>12</b>	<b>5</b>	<b>11</b>	<b>990</b>	<b>225</b>	<b>825</b>	<b>210</b>	<b>6960</b>	<b>4920</b>	<b>11880</b>	<b>239</b>

### 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**

Protokol No 27 / 29.01.2018

**Valid for 2017 / 2018 г. academic year.**

Head of Department TE:

/ Assoc. Prof. PhD Pavlova I. /

Dean of Faculty FSB:

/ Assoc. Prof. PhD Hadzhidimov I. /