



## CURRICULUM

Professional orientation: **Electrical Engineering, Electronics And Automation**

Program: **Electronics**

Professional qualification: **Electronic Engineer**

Educational and qualifical 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	135	195	7
2	Physics	1				30		30		60	135	195	7
3	Programming C++/C#		1			30		30		60	105	165	6
4	Standards in Electronics		1			15		30		45	120	165	6
5	English, part 1				1		30			30	30	60	2
6	Practical Training, part 1				1						30	30	1
7	Elective Subject				1						30	30	1
7a	Specialized Sport Activities, part 1				1						30	30	1
7b	Sport and Social Adaptation, part 1				1						30	30	1
<b>Total for the 1 semester:</b>		<b>2</b>	<b>2</b>		<b>3</b>	<b>90</b>	<b>75</b>	<b>90</b>		<b>255</b>	<b>585</b>	<b>840</b>	<b>30</b>
8	Mathematics, part 2	2				30	30			60	105	165	6
9	Circuit and Field Theory	2				30		30		60	135	195	7
10	Electronic Components		2			30		30		60	135	195	7
11	Materials in Electrical Engineering	2				30		30		60	105	165	6
12	English, part 2				2		30			30	30	60	2
13	Practical Training, part 2				2						30	30	1
14	Elective Subject				2						30	30	1
14a	Specialized Sport Activities, part 2				2						30	30	1
14b	Sport and Social Adaptation, part 2				2						30	30	1
<b>Total for the 2 semester:</b>		<b>3</b>	<b>1</b>		<b>3</b>	<b>120</b>	<b>60</b>	<b>90</b>		<b>270</b>	<b>570</b>	<b>840</b>	<b>30</b>
15	MATLAB Introduction		3			15	15	30		60	105	165	6
16	Automatic Control Theory	3				30		15		45	90	135	5
17	Semiconductor Devices and Integrated Circuits	3				30		30		60	105	165	6
18	Electrical Measurements	3				30		30		60	105	165	6
19	Electromechanical Systems		3			30		15		45	90	135	5
20	English, part 3		3				30			30	30	60	2
21	Elective Subject				3						30	30	1
21a	Specialized Sport Activities, part 3				3						30	30	1
21b	Sports Management, part 1				3						30	30	1

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
<b>Total for the 3 semester:</b>		<b>3</b>	<b>3</b>		<b>1</b>	<b>135</b>	<b>45</b>	<b>120</b>		<b>300</b>	<b>555</b>	<b>855</b>	<b>31</b>
22	Digital Circuits Design	4				30		30		60	135	195	7
23	Signals and Systems		4			30		30		60	105	165	6
24	Analysis and Synthesis of Electronic Circuits	4				30		30		60	135	195	7
25	Technical Safety		4			30		15		45	90	135	5
26	Design of Electronic Equipment	4				30		30		60	135	195	7
27	Elective Subject				4						30	30	1
27a	Specialized Sport Activities, part 4				4						30	30	1
27b	Sports Management, part 2				4						30	30	1
<b>Total for the 4 semester:</b>		<b>3</b>	<b>2</b>		<b>1</b>	<b>150</b>		<b>135</b>		<b>285</b>	<b>630</b>	<b>915</b>	<b>33</b>
28	Analog Circuits	5				30		30		60	135	195	7
29	Optoelectronic and Laser Devices		5			30		15		45	90	135	5
30	Microprocessor Systems, part 1	5				30		30		60	135	195	7
31	Electronic Design Automation	5				30		30		60	135	195	7
32	Power Supply Devices		5			30		30		60	105	165	6
33	Elective Subject			5					30	30	30	60	2
33a	Analysis and Synthesis of Electronic Circuits, project			5					30	30	30	60	2
33b	Design of Electronic Equipment, project			5					30	30	30	60	2
<b>Total for the 5 semester:</b>		<b>3</b>	<b>2</b>	<b>1</b>		<b>150</b>		<b>135</b>	<b>30</b>	<b>315</b>	<b>630</b>	<b>945</b>	<b>34</b>
34	Power Electronic Converters	6				30		30		60	135	195	7
35	Microprocessor Systems, part 2	6				30		30		60	135	195	7
36	Measurement Electronics	6				30		30		60	75	135	5
37	VHDL/Verilog Programming for Hardware Design		6			30		30		60	105	165	6
38	Communication Engineering		6			30		15		45	90	135	5
39	Elective Subject			6					30	30	30	60	2
39a	Electronic Design Automation, project			6					30	30	30	60	2
39b	Analog Circuits, project			6					30	30	30	60	2
40	Specialized Practice				6						120	120	4
<b>Total for the 6 semester:</b>		<b>3</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>150</b>		<b>135</b>	<b>30</b>	<b>315</b>	<b>690</b>	<b>1005</b>	<b>36</b>
41	Digital Signal Processing	7				30		30		60	105	165	6
42	Sensors and Signal Conditioning	7				30		30		60	105	165	6
43	Industrial Electronics		7			30		30		60	105	165	6
44	Technical Devices for Automation		7			30		30		60	105	165	6
45	Elective Subject	7				30		30		60	105	165	6
45a	Microelectronics	7				30		30		60	105	165	6
45b	Devices for Imaging Diagnostics	7				30		30		60	105	165	6
46	Elective Subject			7					30	30	30	60	2
46a	Microprocessor Systems, part 2 - project			7					30	30	30	60	2
46b	Power Electronic Converters, project			7					30	30	30	60	2
<b>Total for the 7 semester:</b>		<b>3</b>	<b>2</b>	<b>1</b>		<b>150</b>		<b>150</b>	<b>30</b>	<b>330</b>	<b>555</b>	<b>885</b>	<b>32</b>
47	Medical Electronic Equipment	8				30		30		60	135	195	7
48	Elective Subject	8				30		30		60	135	195	7
48a	Smart Electronic Systems	8				30		30		60	135	195	7
48b	Acquisition and Processing of Biomedical Signals	8				30		30		60	135	195	7
49	Elective Subject	8				30		30		60	135	195	7
49a	Electronic Systems for Renewable Energy Sources	8				30		30		60	135	195	7

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
49b	Acquisition and Processing of Biomedical Images	8				30		30		60	135	195	7
<b>Total for the 8 semester:</b>		<b>3</b>				<b>90</b>		<b>90</b>		<b>180</b>	<b>405</b>	<b>585</b>	<b>21</b>
<b>Total for all courses of education:</b>		<b>23</b>	<b>14</b>	<b>3</b>	<b>9</b>	<b>1035</b>	<b>180</b>	<b>945</b>	<b>90</b>	<b>2250</b>	<b>4620</b>	<b>6870</b>	<b>247</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		

**Note:**

1. The curriculum is valid for teaching in Bulgarian and English language.
2. Students are equally divided into elective courses after the fourth semester, with higher average success being an advantage in ranking.

**Accepted from AU with**

Protocol No 10 / 25.04.2016

Modified with Protocols No 11 / 06.06.2016

**Valid from the 2016 / 2017 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 EEME:

/ Assoc. Prof. PhD Kovachev D. /

Dean of Faculty FCA:

/ Assoc. Prof. PhD Nikolov N. /