TECHNICAL UNIVERSITY OF VARNA

Ratified by:
Rector:…….
/Prof. Ventsislav Valchev, PhD/

C U R R I C U L U M

Professional orientation: **Electrical Engineering, Electronics And Automation**
Educational and qualification degree: **BACHELOR**
Programme: **ELECTRONICS**
Proffesional qualification: **Electronic Engineer**
Form of study: **FULL - TIME**
Term of study: **4 YEARS / 8 SEMESTERS**

Number	Subject name	Types of term control				Auditorium load						Unsupervised load	Total work hours	ECTS credits
		Examination	Progressive assesment	Course project	Approved	Lectures	Seminars			Laboratories	Total load			
							Seminar exercises	Course project	Course work					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Mathematics, part 1	*				30	45				75	120	195	7
2	Programming and Using of Computers		*			15				45	60	135	195	7
3	Electrothechnical Documentation		*			15				30	45	120	165	6
4	Standards in Electronics		*			30				15	45	120	165	6
5	Foreign Language, part 1				*		30				30	30	60	2
6	Practical Training, part 1				*						0	30	30	1
7	Optional Subject				*									
a	Specialized Sport Activities, part 1											30	30	1
b	Adapted Physical Activity*													
	Total for the 1 semester:	**1**	**3**	**0**	**3**	**90**	**75**	**0**	**0**	**90**	**255**	**585**	**840**	**30**
8	Mathematics, part 2	*				30	45				75	120	195	7
9	Physics		*			30				30	60	105	165	6
10	Electronics	*				30				30	60	105	165	6
11	Circuit and Field Theory	*				30				30	60	135	195	7
12	Foreign Language, part 2		*				30				30	30	60	2
13	Practical Training, part 2				*							30	30	1
14	Optional Subject				*									
a	Specialized Sport Activities, part 2											30	30	1
b	Adapted Physical Activity*					(30)	(15)				(45)	(75)	(120)	(4)
	Total for the 2 semester:	**3**	**2**	**0**	**2**	**120**	**75**	**0**	**0**	**90**	**285**	**555**	**840**	**30**

Number	Subject name	Types of term control				Auditorium load						Unsupervised load	Total work hours	ECTS credits
							Seminars							
		Examination	Progressive assesment	Course project	Approved	Lectures	Seminar exercises	Course project	Course work	Laboratories	Total load			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
15	Materials in Electrical Engineering		*			30				15	45	90	135	5
16	Electrical Measurements	*				30				30	60	105	165	6
17	Technical Mechanics	*				15	30				45	90	135	5
18	Electromechanical Devices	*				30				30	60	105	165	6
19	MATLAB Introduction		*			15				30	45	90	135	5
20	Design of Electronic Equipment		*			30				15	45	90	135	5
21	Optional Subject				*									
a	Specialized Sport Activities, part 3											30	30	1
b	Adapted Physical Activity*													
	Total for the 3 semester:	**3**	**3**	**0**	**1**	**150**	**30**	**0**	**0**	**120**	**300**	**600**	**900**	**33**
22	Basics of Automatic Control	*				30				30	60	135	195	7
23	Digital Circuits Design	*				30				30	60	135	195	7
24	Analysis and Synthesis of Electronic Circuits	*				30				30	60	135	195	7
25	Information and Signals Theory	*				30				30	60	135	195	7
26	Technical Safety		*			30				15	45	90	135	5
27	Optional Subject				*									
a	Specialized Sport Activities, part 4											30	30	1
b	Adapted Physical Activity*													
	Total for the 4 semester:	**4**	**1**	**0**	**1**	**150**	**0**	**0**	**0**	**135**	**285**	**660**	**945**	**34**
28	Analog Circuits	*				30				30	60	135	195	7
29	Testing and Verification of Electronic Devices		*			30				15	45	90	135	5
30	Microprocessor Systems, part 1	*				30				30	60	135	195	7
31	Electronic Design Automation	*				30				30	60	135	195	7
32	Power Supply Devices		*			30				30	60	105	165	6
33	*Optional Subject, project*			*				30			30	30	60	2
a	Analysis and Synthesis of Electronic Circuits													
b	Design of Electronic Equipment													
	Total for the 5 semester:	**3**	**2**	**1**	**0**	**150**	**0**	**30**	**0**	**135**	**315**	**630**	**945**	**34**
34	Power Electronic Converters	*				30				30	60	135	195	7
35	Microprocessor Systems, part 2	*				30				30	60	135	195	7
36	Measurement Electronics	*				30				30	60	75	135	5
37	Hardware Design Programming		*			30				30	60	105	165	6
38	Communication and Internet Technologies		*			30				15	45	90	135	5
39	*Optional Subject, project*			*				30			30	30	60	2
a	Electronic Design Automation													
b	Analog Circuits													
40	Specialized Practice				*						0	120	120	4
	Total for the 6 semester:	**3**	**2**	**1**	**1**	**150**	**0**	**30**	**0**	**135**	**315**	**690**	**1005**	**36**

Number	Subject name	Types of term control				Auditorium load						Unsupervised load	Total work hours	ECTS credits
							Seminars							
		Examination	Progressive assesment	Course project	Approved	Lectures	Seminar exercises	Course project	Course work	Laboratories	Total load			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
41	Digital Signal Processing	*				30				30	60	105	165	6
42	Sensors and Signal Conditioning	*				30				30	60	105	165	6
43	Industrial Electronics		*			30				30	60	105	165	6
44	Automotive Electronics		*			30				15	45	120	165	6
45	Optional Subject	*				30				30	60	105	165	6
a	Microelectronics													
b	Devices for Imaging Diagnostics													
46	*Optional Subject, project*			*				30			30	30	60	2
a	Microprocessor Systems, part 2													
b	Power Electronic Converters													
	Total for the 7 semester:	**3**	**2**	**1**	**0**	**150**	**0**	**30**	**0**	**135**	**315**	**570**	**885**	**32**
47	Medical Electronic Equipment	*				30				30	60	135	195	7
48	Optional Subject	*				30				30	60	135	195	7
a	Smart Electronic Systems													
b	Acquisition and Processing of Biomedical Signals													
49	Optional Subject	*				30				30	60	135	195	7
a	Electronic Systems for Renewable Energy Sources													
b	Acquisition and Processing of Biomedical Images													
	Total for the 8 semester:	**3**	**0**	**0**	**0**	**90**	**0**	**0**	**0**	**90**	**180**	**405**	**585**	**21**
	Totals for the whole course of education	**23**	**15**	**3**	**8**	**1050**	**180**	**90**	**0**	**930**	**2250**	**4695**	**6945**	**250**
	Facultative Subjects													
1	Economics	1				30	15				45	60	105	4
2	Management	2				30	15				45	60	105	4
3	Philosophy	3				30	15				45	60	105	4
4	Foreign Language, specialized	4					30				30	30	60	2
5	Team Management	4				30				15	45	60	105	4
6	Energy Security	5				30				15	45	60	105	4
7	Industrial Legislation	5				30				15	45	60	105	4
8	Fundamentals of Social Entrepreneurship	6				30				15	45	60	105	4
9	Leadership and Teamwork	6				30				15	45	60	105	4
10	Communicative and Behavioral Strategies	7				30				15	45	60	105	4

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			

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.

3.* The discipline "Adapted Physical Activity" is an alternative to "Specialized Sport Activities", it is studied in the second semester and is intended for students who cannot do sports for health reasons.

Accepted from AU with

Protocol No: 17 / 01.06.2020 г., No 31 / 29.03.2021

Modified with Protocols No:62/27.02.2023.

Valid from the 2022/2023 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:
/ Assoc. Prof. E. Bekov, PhD /

Dean of Faculty:
/ Assoc. Prof. N. Nikolov, PhD /