

TECHNICAL UNIVERSITY - VARNA



Approved:

Rector:

/Prof. Ph.D. Eng. Ovid Farhi/

EDUCATIONAL PLAN

Professional orientation: **COMMUNICATIONS AND COMPUTER ENGINEERING**

Program: **COMMUNICATION ENGINEERING AND TECHNOLOGIES**

Professional qualification: **COMMUNICATIONS ENGINEER**

Educational and qualification degree: **BACHELOR**

Form of study: **FULL - TIME**

Term of study: **4 years/ 8 semesters**

No	Subjects	Forms of evaluation				In-door occupation				Out-door occ.		Full student's occupation	Credits
		Exam	Current grades	Term paper	Passed-failed	Lecturers	Seminars	Laboratory courses	Total hours	Term paper	Total hours		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Basic mathematics for engineers	*				30	30		60	*	75	135	5
2	Mathematics, part 1	*				30		30	60	*	105	165	6
3	Engineering design of communication systems		*			15		30	45		90	135	5
4	Algorithm and programming with C/C++		*			15	15	30	60		75	135	5
5	Electrotechnical materials	*				15		30	45		75	120	4
6	English Language, part 1		*				30		30		60	90	3
7	Practice in Telecommunications - part 1				*						30	30	1
8	Optional Subject				*						30	30	1
a	General Sport Activities												
b	Specialized Sport Activities												
1st semester total:		3	3		2	105	75	120	300	2	540	840	30
9	Mathematics, part 2	*				30	15	30	75		90	165	6
10	Circuit and Field Theory, part 1	*				30		30	60	*	105	165	6
11	Signals and Systems	*				30		30	60	*	105	165	6
12	Software technologies in Internet	*				30		30	60		90	150	5
13	Physics		*			30	15	15	60		90	150	5
14	English Language, part 2		*				30		30		60	90	3
15	Practice in Telecommunications - part 2				*						30	30	1
16	Optional Subject				*						30	30	1
a	General Sport Activities												
b	Specialized Sport Activities												
2nd semester total:		4	2		2	150	60	135	345	2	600	945	33
17	Circuit and Field Theory, part 2	*				30	15	15	60	*	105	165	6
18	Electrical Measurements		*			15		30	45		60	105	4
19	Semiconductor Devices and Analog Circuits	*				30		30	60		105	165	6

No	Subjects	Forms of evaluation				In-door occupation				Out-door occ.		Full student's occupation	Credits
		Exam	Current grades	Term paper	Passed-failed	Lecturers	Seminars	Laboratory courses	Total hours	Current grades	Term paper		
1	2	3	4	5	6	7	1		3	4	5	6	7
20	Computer Modeling Communication systems	*				30		30	60	*	105	165	6
21	Telecommunication Equipment Design	*				30		30	60		90	150	5
22	Business and communication		*			30	15		45		75	120	4
23	Optional Subject				*						30	30	1
a	General Sport Activities												
b	Specialized Sport Activities												
3^d semester total:		4	2		1	165	30	135	330	2	570	900	32
24	Digital and Pulse Devices	*				45		30	75	*	90	165	6
25	Information encoding and compression	*				30		30	60	*	105	165	6
26	Communication Circuits	*				30		30	60		105	165	6
27	Radio Waves and Radio Lines	*				30		30	60		105	165	6
28	Computer Communication Systems		*			30		30	60		90	150	5
29	Telecommunication Equipment Design, project			*							60	60	2
30	Optional Subject				*						30	30	1
a	General Sport Activities												
b	Specialized Sport Activities												
4th semester total:		4	1	1	1	165		150	315	2	585	900	32
31	Antennas and Microwave Devices	*				45		15	60		105	165	6
32	Microprocessor Equipment	*				30		30	60	*	105	165	6
33	Telephonometric and metric measurement	*				30		30	60		105	165	6
34	Terminal Communication Equipment	*				30		30	60	*	105	165	6
35	Power Supply Devices		*			30		30	60		90	150	5
36	Optional Subject		*			30		30	60		90	150	5
a	Multimedia Peripheral Devices												
b	Automated Design												
5th semester total:		4	2			195		165	360	2	600	960	34
37	Radio Communication Equipment	*				45		30	75		90	165	6
38	Switching and Multiplexing in Telecommunications	*				30		30	60		105	165	6
39	Video technologies	*				30		30	60		105	165	6
40	Optoelectronics and Optical Communications		*			45		15	60		105	165	6
41	Digital Switching Systems and Teletraffic	*				30		30	60		90	150	5
42	Optional Project			*							60	60	2
a	Video technologies												
b	Switching and Multiplexing in Telecommunications												
c	Radio Communication Equipment												
d	Antennas and Microwave Devices												
43	Specialized practice				*						90	90	3
6th semester total:		4	1	1	1	180		135	315		645	960	34
44	Digital Signal Processing	*				45		30	75	*	90	165	6
45	Audio Engineering	*				30		30	60	*	90	150	6
46	Digital Transfer Systems	*				30		30	60		105	165	6
47	Telecommunication Networks	*				30		30	60		105	165	6

No	Subjects	Forms of evaluation				In-door occupation				Out-door occ.		Full student's occupation	Credits
		Exam	Current grades	Term paper	Passed-failed	Lecturers	Seminars	Laboratory courses	Exam	Current grades	Term paper		
1	2	3	4	5	6	7	1		3	4	5	6	7
48	Satellite Communications		*			30		30	60		90	150	5
49	Safety at Work		*			15		15	30		60	90	3
50	Optional Project			*							60	60	2
a	Telecommunication Networks												
b	Satellite Communications												
c	Digital Transfer Systems												
d	Optoelectronics and Optical Communications												
7th semester total:		4	2	1		180		165	345	2	600	945	34
51	Data Transmission and Computer Communications	*				30		30	60	*	105	165	6
52	Mobile Communication Systems	*				45		15	60	*	105	165	6
53	Optional Subject	*				30		30	60		105	165	6
a	Radionavigation and Radiolocation												
b	Electromagnetic Compatibility												
54	Optional Subject	*				30		30	60		105	165	6
a	Digital video and audio systems												
b	Cable Telecommunications Lines												
55	Pre diploma project			*							120	120	4
8th semester total:		4		1		135		105	240	2	540	780	28
Total for the whole educational course:		31	13	4	7	1275	165	1110	2550	14	4680	7230	257
Facultative Subjects													
1	Foreign Language, part 3		4				60		60		60	120	4
2	Foreign Language, part 4		5				60		60		60	120	4
3	Introduction to Programmable Logic Devices		5			30		30	60	*	60	120	4
4	Microelectronics		5			30		30	60		60	120	4
5	Security Monitoring Systems		6			30		30	60		60	120	4
6	Ecology		6			30	30		60		60	120	4
7	Fundamentals of Law		7			30	30		60		60	120	4
8	Intellectual Property Rights Protection		7			45	15		60		60	120	4
9	Management in Communications		7			30	30		60		60	120	4

Types of graduation	semester	Out-door occupation	credits
Preparation of Diploma Thesis / Preparation for State Examination	8	300	10
Defense of Diploma Thesis / State Examination			

Accepted with decision of Academic Board of TU-Varna:

Protocol № 14 / 11.06.2012 r.

Modified with Protocol:

Valid from 2012/2013 academic year

The week training agenda is fixed in according with the accepted by the Academic board "Structure of the educational process" for the current academic year.

Head of Department:

/Assoc. Prof. N. Kostov , Ph.D./

Dean:

/Assoc. Prof. R. Dimova , Ph.D./