

CURRICULUM

ECTS subject codes **BTCEe** No

- **T** – type of course: **B** - BEng
- **TCE** - "Telecommunication engineering";
- **e** – course in English";
- **No** – subsequent number of the subject;

Lectures (L), Tutorials (Tut), Labs (Lab) weekly;

Exam (E), Continuous assessment (CA); Semester project (SP)/ Semester assignment (SA)

No	SUBJECT	Week load						Assessment				ECTS subject code	ECTS credits
		L	Tut.	Lab.	Total L+Tut.+Lab.	Self study	Total	E	CA	SP	SA		

SEMESTER I

1	Introduction to Specialty I	(1)	0	0	(1)	(0)	(1)					BTCEe01	0
2	Mathematics Part I	3	2	0	5	5	10	1				BTCEe02	6
3	Machine Science	2	0	1	3	5	8	1				BTCEe03	5
4	Physics	2	0	1	3	5	8	1				BTCEe04	5
5	Fundamentals of Engineering Design	2	0	2	4	4	8	1				BTCEe05	5
6	Computing Part I	2	0	2	4	6	10		1		1	BTCEe06	6
7	Foreign Language	0	0	2	2	4	6		1			BTCEe07	3
8	Sports	0	(3)	0	(3)	(3)	(6)					BTCEe08	0
9	Bulgarian Language*	0	(3)	0	(3)	(3)	(6)					BTCEe09	0
Total		11	2	8	21	29	50	4	2	0	1		30

*non-compulsory course

SEMESTER II

10	Mathematics Part II	3	2	0	5	5	10	1				BTCEe10	5
11	Microprocessor Devices	2	0	1	3	3	6	1				BTCEe11	4
12	Semiconductor Elements	2	0	1	3	3	6	1				BTCEe12	4
13	Programming Languages	2	0	1	3	3	6	1				BTCEe13	4
14	Computing Part II	2	0	2	4	4	8		1		1	BTCEe14	5
15	Theory of Electrical Engineering	3	1	1	5	5	10		1		1	BTCEe15	5
16	Foreign Language	0	0	2	2	2	4					BTCEe16	3
17	Sports	0	(3)	0	(3)	(3)	(6)					BTCEe17	0
18	Bulgarian Language*	0	(3)	0	(3)	(3)	(6)					BTCEe18	0
Total		14	3	8	25	25	50	4	2	0	2		30

*non-compulsory course

No	SUBJECT	Week load						Assessment				ECTS subject code	ECTS credits
		L	Tut.	Lab.	Total L+Tut.+Lab.	Self study	Total	E	CA	SP	SA		

SEMESTER III

19	Radio-wave Propagation	3	0	1	4	7	11	1				BTCEe19	7
20	Analog and Digital Devices	4	0	2	6	7	13	1				BTCEe20	7
21	Introduction to Teletraffic Engineering	2	0	2	4	6	10		1			BTCEe21	6
22	Signals and Systems	3	0	1	4	7	11	1				BTCEe22	7
23	Foreign Language	0	2	0	2	3	5		1			BTCEe23	3
Total		12	2	6	20	30	50	3	2	0	0		30

SEMESTER IV

24	Antennas and Microwave Engineering	4	0	2	6	6	12	1			1	BTCEe24	7
25	Communication Circuits	3	0	1	4	5	9	1				BTCEe25	6
26	Video and Audio Engineering	3	0	1	4	4	8	1				BTCEe26	5
27	Communications Systems and Networks	4	0	2	6	6	12	1			1	BTCEe27	7
28	Information Transmission Theory	2	2	0	4	5	9		1			BTCEe28	5
Total		16	2	6	24	26	50	4	1	0	2		30

SEMESTER V

29	Radio Communications	3	0	1	4	5	9	1			1*	BTCEe29	5
30	Video Communication Systems	3	0	1	4	4	8	1				BTCEe30	5
31	Digital Signal Processing	2	0	1	3	7	10	1			1*	BTCEe31	6
32	Data Networks and Internet Communications	3	0	1	4	6	10	1				BTCEe32	6
33	Mobile Networks and Services	4	2	0	6	6	12		1		1*	BTCEe33	7
34	Elective semester project from 25, 26 or 27					1	1			1		BTCEe34	1
Total		15	2	4	21	29	50	4	1	1	1		30

* one semester assignment optional from 29, 31 or 33

SEMESTER VI

35	Multimedia Communications	3	0	1	4	5	9	1			1*	BTCEe35	5
36	Broadband Transmission Networks	4	0	2	6	6	12	1			1*	BTCEe36	7
37	Optical Fiber Communications	3	0	1	4	6	10	1			1*	BTCEe37	6
38	Measurements in Telecommunications	3	0	1	4	6	10	1			1*	BTCEe38	6
39	Telecommunication Protocols	3	0	1	4	4	8		1		1*	BTCEe39	5
40	Elective semester project from 30 or 32	0	0	0	0	1	1			1		BTCEe40	1
Total		16	0	6	22	28	50	4	1	1	1		30

* one semester assignment optional from 35, 36, 37, 38 or 39

No	SUBJECT	Week load						Assessment				ECTS subject code	ECTS credits
		L	Tut.	Lab.	Total L+Tut.+Lab	Self study	Total	E	CA	SP	SA		

SEMESTER VII

41	Wireline and Fiber Optic Networks	2	0	1	3	7	10	1			1*	BTCEe41	6
42	Satellite Communications	2	1	0	3	7	10	1			1*	BTCEe42	6
43	Integrated Telecommunication Networks	2	0	1	3	7	10	1			1*	BTCEe43	6
44	Mobile Communications	2	0	1	3	7	10	1			1*	BTCEe44	6
45	Digital Image Processing	2	0	1	3	7	10		1		1*	BTCEe45	6
Total		10	1	4	15	35	50	4	1	0	2		30

* two semester assignments optional from 41, 42, 43, 44 or 45

SEMESTER VIII (10 WEEKS)

46	Optional subject in Module (list 1)	2	0	1	3	10	13		1		1*	BTCEe46	5
47	Optional subject in Module (list 2)	2	0	1	3	10	13		1		1*	BTCEe47	5
48	Optional subject in Module (list 3)	2	0	1	3	10	13		1		1*	BTCEe48	5
49	Optional subject in Module (list 4)	2	0	1	3	8	11		1		1*	BTCEe49	5
50	Diploma project/ State examination**	Defense of diploma project									BTCEe50	10	
Total		8	0	4	12	38	50	0	4	0	1		30

* one semester assignment optional from 46, 47, 48 or 49

** Students with average performance less than Good 4,50 take State examination

Lists of optional subjects in Modules

List 1 (BTCEe46 – ECTS 5)		
1.	Storage Area Networks	BTCEe46.1
2.	Video Compression and Broadcasting	BTCEe46.2

List 2 (BTCEe47 – ECTS 5)		
1.	Computer Simulation and Modeling in Communications	BTCEe47.1
2.	Pattern Recognition and Neural Networks	BTCEe47.2

List 3 (BTCEe48 – ECTS 5)		
1.	Audio Systems	BTCEe48.1
2.	Telecommunication Law	BTCEe48.2

List 4 (BTCEe49 – ECTS 5)		
1.	Network Management	BTCEe49.1
2.	Audio and Video Communications over Internet	BTCEe49.2

Reference: The lists of optional subject in Modules 46, 47, 48 and 49 and the rules for their selection are approved by the Faculty council annually.