

Curriculum

ECTS Subject code
 - **FTE No** -fundamental subjects for students in Electronics, Computer Science and Technologies and Telecommunications
 - **TENo**
 • **T** – type of course: **B** for BEng, **M** for MEng
 • **E** - "for Electronics";
 • **No** – subsequent number of the subject;
 Lectures (L), Tutorials (Tut.), Labs (Lab.) weekly; exam (E), continuous assessment (CA); semester projects (SP)/ semester assignment (course work) (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 into subject	(1)	0	0	(1)	(1)	(2)					FBE01	
2	Mathematics I	3	2	0	5	5	10	1				FBE02	7
3	Physics I	2	0	1	3	5	8	1				FBE03	5
4	Chemistry	1	0	1	2	5	7	1				FBE04	4
5	Programming and Computer Application I	2	0	2	4	6	10		1		1	FBE05	6
6	Fundamentals of Engineering Design I	1	0	2	3	5	8		1*		1	FBE06	4
7	Economics	2	1	0	3	4	7		1			FBE07	4
7a	Open Source Platforms Coding Practical Work	0	0	(2)	(2)	(3)	(5)					BE25	
8	Foreign language I	0	(2)	0	(2)	(4)	(6)		1*			FBE08	
9	Sports	0	(3)	0	(3)	(3)	(3)					FBE09	
Total		11	3	6	20	30	50	3	3	0	2		30

SEMESTER II

10	Mathematics II	3	2	0	5	5	10	1				FBE10	6
11	Physics II	2	1	1	4	6	10	1				FBE11	5
12	Materials science	2	0	1	3	3	6	1				FBE12	4
13	Machines and mechanisms	2	0	1	3	3	6	1			1	FBE13	5
14	Programming and Computer Application II	2	0	2	4	6	10		1		1	FBE14	6
15	Technological practice	0	1	(2)	1	0	1					FBE15	1
16	Fundamentals of Engineering Design II	1	0	2	3	4	7		1*			FBE16	3
17	Foreign language II	0	(2)	0	(2)	(4)	(6)		1*			FBE17	
18	Sports	0	(3)	0	(3)	(3)	(6)					FBE18	
Total		12	4	7	23	27	50	4	2	0	2		30

* one common continuous assessment in respect to both semesters of the academic year

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	Mathematics III	2	2	0	4	6	10	1				FBE19	6
20	Theory of Electrical Engineering	3	2	1	6	5	11	1			1	FBE20	7
21	Electrical measurements	2	0	1	3	6	9	1				FBE21	5
22	Semiconductor devices	3	0	2	5	5	10	1				FBE22	6
23	Programming and Computer Application III	2	0	2	4	6	10		1			FBE23	6
24	Foreign language III	0	(2)	0	(2)	(4)	(6)		1			FBE24	
25	Sports	0	(3)	0	(3)	(3)	(6)					FBE25	
Total		12	4	6	22	28	50	4	2	0	1		30

SEMESTER IV

26	Signals and systems	2	0	1	3	3	6	1				BE26	3
27	Electronic circuits theory	2	1	1	4	5	9	1				BE27	5
28	Control Theory	2	0	1	3	3	6		1			BE28	4
29	Analog Electronics	2	1	2	5	7	12	1		1		BE29	7
30	Optoelectronic and Sensor Devices	2	0	1	3	3	6		1			BE30	4
31	Digital electronics	2	1	2	5	6	11	1			1	BE31	7
32	English language	0	(2)	0	(2)	(2)	(4)					BE32	
33	Sports	0	(3)	0	(3)	(3)	(6)					BE33	
Total		12	3	8	23	27	50	4	2	1	1		30

SEMESTER V

34	Mixed-signal and pulse circuits	2	1	2	5	5	10	1			1	BE34	6
35	Microprocessor circuits design	2	1	2	5	5	10	1				BE35	6
36	Power supply	2	1	2	5	5	10	1		1		BE36	7
37	Electronic measurement systems	2	0	2	4	5	9	1				BE37	5
38	Practical Work in Electronic Circuits	0	0	2	2	2	4					BE38	2
39	Optional subject (list 1)	2	1	0	3	4	7		1			BE39	4
40	English language	0	(2)	0	(2)	(2)	(4)		1			BE40	
Total		10	4	10	24	26	50	4	2	1	1		30

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 VI

41	Power electronic converters	2	0	2	4	4	8	1				BE41	5
42	Quality and Reliability in Electronics	2	1	1	4	4	8	1				BE42	5
43	Microelectronics	2	0	2	4	5	9		1			BE43	5
44	Optional subject (list 2)	2	0	0	2	3	5		1			BE44	3
45	Control Systems	2	0	2	4	4	8	1			1	BE45	5
46	Computer systems	1	0	1	2	4	6		1			BE46	4
47	Practical work in microcontroller programming	0	0	3	3	3	6			1		BE47	3
Total		11	1	11	23	27	50	3	3	1	1		30

SEMESTER VII

48	Electromechanical devices	2	0	1	3	5	8		1			BE48	5
49	Computer aided design in Electronics	2	0	2	4	3	7	1				BE49	5
50	Optional subject ** (list 3)	2	0	2	4	3	7	1				BE50	5
51	Optional subject ** (list 4)	2	0	2	4	3	7	1				BE51	5
52	Optional subject ** (list 5)	2	0	2	4	5	9		1			BE52	5
53	Practical work (according to the subject chosen from optional lists 3, 4 or 5)	0	0	2	2	2	4					BE53	1
54	Course Project (according to the subject chosen from optional lists 3, 4 or 5)					2	2			1		BE54	2
55	Practical work in application of graphical program environments		1	2	3	3	6				1	BE55	2
Total		10	1	13	24	26	50	3	2	1	1		30

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 VIII – 10 weeks

56	Telecommunications	2	0	2	4	4	8	1				BE56	3
57	Optional subject (list 6)	2	0	2	4	5	9		1			BE57	4
58	Optional subject ** (list 7)	3	0	2	5	6	11	1				BE58	5
59	Optional subject ** (list 8)	3	0	2	5	6	11		1			BE59	5
60	Practical work in design of electronic equipment	0	0	3	3	4	7				1	BE60	2
61	Course project in the subject					4	4			1		BE61	1
Diploma project		Diploma defense									BE62	10	
Total		10	0	11	21	29	50	2	2	1	1		30

Remark::

** Subjects 50.1, 51.1, 52.1, 58.1, 59.1, 54 (Course project in 50.1, 51.1 or 52.1), form module “Biomedical and industrial electronics”

** Subjects, 50.2, 51.2, 52.2, 58.2, 59.2, 54 (Course project in 50.2, 51.2 or 52.2), form module “ Electronic devices and systems”

LIST OF OPTIONAL SUBJECTS

List 1 (ECTS =4)	
1. Marketing	BE39.1
2. Innovation Management	BE39.2

List 2 (ECTS =3)	
1. Business Ethics	BE44.1
2. Industrial legislation	BE44.2

List 3 (ECTS =5)	
1. Medical electronic equipment	BE50.1
2. Electronic devices for measuring non-electrical quantities	BE50.2

List 4 (ECTS =5)	
1. Methods, devices and systems of data acquisition and transformation	BE51.1
2. Real-time microprocessor based applications	BE51.2

List 5 (ECTS =5)	
1. Analysis, modeling and design of power electronic converters	BE52.1
2. Optoelectronic and laser industrial devices	BE51.2

List 6 (ECTS =5)	
1. Microprocessor system diagnostic and servicing	BE57.1
2. Microprocessor circuits design II	BE57.2
3. Sensors and transducers	BE57.3
4. Specialized power supply	BE57.4
5. Design of electronic devices	BE57.5
6. Automation of electronic production	BE57.6

List 7 (ECTS =4)	
1. Optoelectronic and laser devices in medicine	BE58.1
2. Information systems with laser radiation	BE58.2

List 8 (ECTS =5)	
1. Electronic Technology Devices	BE59.1
2. Applied laser complexes and automatic control	BE59.2