

CURRICULUM

Code of the course according to ECTS

- **FTE No** – fundamental subjects;
- **TBE No**
- **T** – type of course: **B** - “bachelor”, **M** - “master”;
- **CS** - “Computer systems and technologies”;
- **No** – sequence number of the subject;

Lectures (L), tutorials (Tut), labs (Lab) weekly; Exam (E), Continuous Assessment (CA); Semester Project (SP), Semester Assignment /course work/ (SA)

No	SUBJECT	Week load						Assessment				ECTS Code	ECTS credits
		L	Tut	Lab	Acad total	Self study	Total	E	CA	SP	SA		

SEMESTER I

1	Introduction to the specialty	(1)	0	0	(1)							FBE01	0
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 Applications – I	2	0	2	4	6	10		1		1	FBE05	6
6	Bases of engineer design -1	1	0	2	3	5	8		1*		1	FBE06	4
7	Economics	2	1	0	3	4	7		1			FBE07	4
8	Foreign Language	0	(2)	0	(2)	(4)	(6)		1*			FBE08	0
9	Sport	0	(3)	0	(3)	(3)	(6)					FBE09	0
TOTAL		11	3	6	20	30	50	3	3		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	Mechanics	2	0	1	3	3	6	1			1	FBE13	5
14	Programming and Computer Applications – II	2	0	2	4	6	10		1		1	FBE14	6
15	Technology practicum	0	1	(2)	1	0	1					FBE15	1
16	Bases of engineer design - part II	1	0	2	3	4	7		1*			FBE16	3
17	Foreign Language	0	(2)	0	(2)	(4)	(6)		1*			FBE17	0
18	Sport	0	(3)	0	(3)	(3)	(6)					FBE18	0
TOTAL		12	4	7	23	27	50	4	2		2		30

* continuous assessment with one grade for two semesters

No	SUBJECT	Week load						Assessment				ECTS Code	ECTS credits
		L	Tut	Lab	Acad total	Self study	Total	E	CA	SP	SA		

SEMESTER III

19	Mathematics III	2	2	0	4	6	10	1				FBE19	6
20	Electrical Engineering Theory – Part 1	3	2	1	6	5	11	1			1	FBE20	7
21	Electrical measurements	2	0	1	3	6	9	1				FBE21	5
22	Semiconductor elements	3	0	2	5	5	10	1				FBE22	6
23	Programming and Usage of Computers Part III	2	0	2	4	6	10		1			FBE23	6
24	Foreign Language	0	(2)	0	(2)	(4)	(6)		1			FBE24	0
25	Sport	0	(3)	0	(3)	(3)	(6)					FBE25	0
TOTAL		12	4	6	22	28	50	4	2		1		30

SEMESTER IV

26	Technical safety	2	0	1	3	4	7		1			BCS26	3
27	Operating systems	2	0	2	4	5	9		1		1	BCS27	5
28	Discrete structures	2	1	1	4	5	9	1				BCS28	5
29	Synthesis and analysis of algorithms	2	0	2	4	5	9	1				BCS29	6
30	Signals and systems	2	0	2	4	4	8	1				BCS30	5
31	Analysis and design of logic circuits	2	0	2	4	4	8	1				BCS31	6
32	Foreign Language	0	(2)	0	(2)	(4)	(6)					FBE32	0
33	Sport	0	(3)	0	(3)	(3)	(6)					FBE33	0
TOTAL		12	1	10	23	27	50	4	2		1		30

SEMESTER V

34	Computer organization	2	0	2	4	4	8	1				BCS34	5
35	Microprocessors	2	0	2	4	4	8	1				BCS35	5
36	Computer peripherals	2	0	2	4	4	8		1			BCS36	5
37	Databases	2	0	2	4	5	9	1			1	BCS37	5
38	Programming languages	2	0	2	4	5	9		1		1	BCS38	5
39	Digital circuits	2	0	2	4	4	8	1				BCS39	5
TOTAL		12	0	12	24	26	50	4	2		2		30

No	SUBJECT	Week load						Assessment				ECTS Code	ECTS credits
		L	Tut	Lab	Acad total	Self study	Total	E	CA	SP	SA		

SEMESTER VI

40	Computer architectures	2	0	2	4	4	8	1				BCS40	5
41	Programming environments	2	0	2	4	4	8	1				BCS41	4
42	Compulsory elective subject (List 2)	2	0	2	4	4	8	1				BCS42	4
43	Compulsory elective subject (List 3)	2	0	2	4	4	8	1				BCS43	5
44	Compulsory elective subject (List 4)	2	0	2	4	4	8		1		1	BCS44	5
45	Optional management subject (List 1)	2	2	0	4	4	8		1			BCS45	4
46	Project (selection of subj. 34 ÷ 39)	0	0	0	0	2	2			1		BCS46	3
TOTAL		12	2	10	24	26	50	4	2	1	1		30

SEMESTER VII

47	Computer networks	2	0	2	4	4	8	1				BCS47	5
48	Parallel programming	2	0	2	4	4	8	1				BCS48	5
49	Compulsory elective subject (List 5)	2	0	2	4	4	8		1			BCS49	4
50	Compulsory elective subject (List 6)	2	0	2	4	4	8	1				BCS50	5
51	Computer graphics	2	0	2	4	4	8	1				BCS51	5
52	Optional subject (List 7)	2	0	2	4	4	8		1		1	BCS52	4
53	Project (selection of subj. 40 ÷ 44)	0	0	0	0	2	2			1		BCS53	2
TOTAL		12	0	12	24	26	50	4	2	1	1		30

SEMESTER VIII – 10 weeks

54	Compulsory elective subject (List 8)	3	0	2	5	6	11	1				BCS54	5
55	Compulsory elective subject (List 9)	3	0	2	5	6	11	1				BCS55	4
56	Compulsory elective subject (List 10)	3	0	2	5	6	11	1				BCS56	4
57	Compulsory elective subject (List 11)	3	0	2	5	6	11	1				BCS57	4
58	Project (selection of subj. 47 ÷ 57)	0	0	0	0	6	6			1		BCS58	3
Diploma project – 15 weeks		Diploma Project Defense										10	
TOTAL		12	0	8	20	30	50	4		1			30

Lists of optional subjects

List 1 Optional management subject (ECTS 4)

Industrial management	BCS45.1
Small firm management	BCS45.2
Marketing	BCS45.3
Management	BCS45.4

List 2 Compulsory elective subject (ECTS 4)

Microprocessor systems	BCS42.1
Object-oriented programming	BCS42.2
Expert systems	BCS42.3

List 3 Compulsory elective subject (ECTS 4)

Information and Control Systems	BCS43.1
Technology of programming	BCS43.2
Agent-based technology	BCS43.3

List 4 Compulsory elective subject (ECTS 4)

Object-oriented programming	BCS44.1
Design and testing of software	BCS44.2
Information and Control Systems	BCS44.3

List 5 Compulsory elective subject (ECTS 4)

Computer system design	BCS49.1
Analysis of operations and application programming	BCS49.2
Cryptographic methods for data protection	BCS49.3

List 6 Compulsory elective subject (ECTS 4)

Test and diagnostics of computer systems	BCS50.1
Theory of formal languages	BCS50.2
Computer modeling	BCS50.3

List 7 Optional subject (ECTS 4)

Tools and systems for processing of analog information	BCS52.1
Industrial micro-controllers	BCS52.2
Applied information systems	BCS52.3

List 8 Compulsory elective subject (ECTS 4)

High-performance computer systems	BCS54.1
Functional programming	BCS54.2
Computer intelligence	BCS54.3

List 9 Compulsory elective subject (ECTS 4)

Reconfigurable logic	BCS55.1
Language processors	BCS55.2
Digital image processing	BCS55.3

List 10 Compulsory elective subject (ECTS 4)

System programming	BCS56.1
Component programming	BCS56.2
Management of IT projects	BCS56.3

Note: lists of optional subjects can be changed prior to every corresponding semester