

## CURRICULUM

ECTS Subject code T CSCe SN

- T - type of course: M for Meng;
- CSC – Computer Science and Engineering;
- e – training in English;
- SN - subsequent number of the subject

Lectures (L), Tutorials (Tut.), Labs (Lab.), Auditorium Total (AT), Self Study (SS) weekly; Exam (E), Continuous Assessment (CA); Semester Projects (SP), Semester Assignment (course work) (SA)

№	SUBJECT	Week Load						Assessment				ECTS code	ECTS credits
		L	Tut	Lab	AT	SS	Total	E	CA	SP	SA		

### SEMESTER I

1.	Introduction to specialty	(1)	0	0	(1)	0	(1)					BCSCe01	0
2.	Mathematics I	3	2	0	5	5	10	1				BCSCe02	6
3.	Algorithm Design and Analysis	2	0	2	4	4	8	1				BCSCe03	5
4.	Physics	2	1	0	3	5	8	1				BCSCe04	5
5.	Computer Aided Design: CAD systems	2	0	2	4	4	8	1				BCSCe05	5
6.	Computing I	2	0	2	4	6	10		1		1	BCSCe06	6
7.	Foreign Language	0	0	2	2	4	6		1			BCSCe07	3
8.	Sports	0	(3)	0	(3)	(3)	(6)					BCSCe08	0
9.	Bulgarian language*	0	(3)	0	(3)	(3)	(6)					BCSCe09	0
<b>Total</b>		<b>11</b>	<b>3</b>	<b>8</b>	<b>22</b>	<b>28</b>	<b>50</b>	<b>4</b>	<b>2</b>		<b>1</b>		<b>30</b>

### SEMESTER II

10.	Mathematics II	3	2	0	5	5	10	1				BCSCe10	5
11.	Discrete Structures	2	0	2	4	4	7		1			BCSCe11	5
12.	Semiconductor Elements	2	0	1	3	3	6	1				BCSCe12	4
13.	Digital and Microprocessor Devices	2	0	1	3	3	6	1				BCSCe13	4
14.	Computing II	2	0	1	3	3	7	1			1	BCSCe14	5
15.	Theory of Electrical Engineering	3	1	1	5	5	10		1		1	BCSCe15	5
16.	Foreign Language	0	0	2	2	2	4					BCSCe16	3
17.	Sports	0	(3)	0	(3)	(3)	(6)					BCSCe17	0
18.	Bulgarian language*	0	(3)	0	(3)	(3)	(6)					BCSCe18	0
<b>Total</b>		<b>14</b>	<b>3</b>	<b>8</b>	<b>25</b>	<b>25</b>	<b>50</b>	<b>4</b>	<b>2</b>		<b>2</b>		<b>30</b>

### SEMESTER III

19.	Information Security	2	0	1	3	4	7	1			1**	BCSCe19	4
20.	Computer Architectures	2	0	1	3	4	7	1			1**	BCSCe20	4
21.	Fundamentals of Logical Design	2	1	1	4	4	8	1			1**	BCSCe21	5
22.	Operating Systems	2	0	2	4	4	8	1			1**	BCSCe22	5
23.	Programming Languages	2	0	2	4	4	8		1		1**	BCSCe23	5
24.	Databases	2	0	2	4	4	8		1		1**	BCSCe24	5
25.	Foreign Language	0	0	2	2	2	4					BCSCe25	2
<b>Total</b>		<b>12</b>	<b>1</b>	<b>11</b>	<b>24</b>	<b>26</b>	<b>50</b>	<b>4</b>	<b>2</b>		<b>1</b>		<b>30</b>

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		L	Tut	Lab	AT	SS	Total	E	CA	SP	SA		

#### SEMESTER IV

26.	Computer Periphery	2	0	1	3	3	6	1			1***	BCSCe26	4
27.	High-Performance Computer Systems	2	0	2	4	4	8	1			1***	BCSCe27	5
28.	Development of Linux-based Software	2	0	2	4	4	8		1		1***	BCSCe28	4
29.	Object-Oriented Programming	2	0	2	4	4	8	1			1***	BCSCe29	5
30.	Computer Networks	2	0	2	4	4	8	1			1***	BCSCe30	5
31.	Programmable Logic Systems	2	0	2	4	4	8		1		1***	BCSCe31	5
32.	Foreign Language	0	0	2	2	2	4					BCSCe32	2
<b>Total</b>		<b>12</b>	<b>0</b>	<b>13</b>	<b>25</b>	<b>25</b>	<b>50</b>	<b>4</b>	<b>2</b>		<b>1</b>		<b>30</b>

#### SEMESTER V

33.	Parallel Software Engineering	2	0	2	4	4	8	1			1***	BCSCe33	5
34.	Advanced Software Technologies (C#)	2	0	2	4	4	8	1			1***	BCSCe34	5
35.	Integrated Digital Technologies	2	0	1	3	3	6		1		1***	BCSCe35	4
36.	Software Design and Software Testing	2	0	2	4	4	8	1			1***	BCSCe36	5
37.	Embedded System	2	0	2	4	4	8		1		1***	BCSCe37	4
38.	Programming Frameworks	2	0	2	4	5	9	1			1***	BCSCe38	5
39.	Semester Project	0	0	0	0	3	3			1		BCSCe39	2
<b>Total</b>		<b>12</b>	<b>0</b>	<b>11</b>	<b>23</b>	<b>27</b>	<b>50</b>	<b>4</b>	<b>2</b>	<b>1</b>	<b>2</b>		<b>30</b>

#### SEMESTER VI

40.	Agent-Based Technologies	2	0	1	3	3	6	1			1***	BCSCe40	4
41.	Computer Graphics	2	0	2	4	5	9	1			1***	BCSCe41	5
42.	Bioinformatics	2	0	2	4	5	9	1			1***	BCSCe42	5
43.	Java Technologies	2	0	2	4	4	8		1		1***	BCSCe43	5
44.	Programming Technologies for Secure Code	2	0	2	4	4	8		1		1***	BCSCe44	5
45.	Optional subject 1 (List 1)	2	0	1	3	4	7	1			1***	BCSCe45	4
46.	Semester Project	0	0	0	0	3	3			1		BCSCe46	2
<b>Total</b>		<b>12</b>	<b>0</b>	<b>10</b>	<b>22</b>	<b>28</b>	<b>50</b>	<b>4</b>	<b>2</b>	<b>1</b>	<b>2</b>		<b>30</b>

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		L	Tut	Lab	AT	SS	Total	E	CA	SP	SA		

### SEMESTER VII

47.	Optional subject 2 (List 2)	2	0	1	3	4	7	1			1***	BCSCe47	4
48.	Optional subject 3 (List 3)	2	0	1	3	4	7		1		1***	BCSCe48	4
49.	Fundamentals for Internet Programming	2	0	2	4	5	9	1			1***	BCSCe49	5
50.	Artificial Intelligence	2	0	2	4	4	8	1			1***	BCSCe50	5
51.	Metaheuristics	2	0	2	4	4	8	1			1***	BCSCe51	5
52.	Management of IT projects	2	0	2	4	4	8		1		1***	BCSCe52	5
53.	Semester Project	0	0	0	0	3	3			1		BCSCe53	2
<b>Total</b>		<b>12</b>	<b>0</b>	<b>10</b>	<b>22</b>	<b>28</b>	<b>50</b>	<b>4</b>	<b>2</b>	<b>1</b>	<b>2</b>		<b>30</b>

### SEMESTER VIII – 10 weeks

54.	Virtual Reality	2	0	2	4	6	10	1			1**	BCSCe54	4
55.	Multimedia Systems	2	0	2	4	6	10	1			1**	BCSCe55	4
56.	Image Processing	2	0	2	4	6	10		1		1**	BCSCe56	4
57.	Information Systems	2	0	2	4	6	10		1		1**	BCSCe57	4
58.	Optional subject 4 (List 4)	2	2	0	4	6	10		1		1**	BCSCe58	4
Diploma Project		Diploma Project Defense											10
<b>Total</b>		<b>10</b>	<b>2</b>	<b>8</b>	<b>20</b>	<b>30</b>	<b>50</b>	<b>2</b>	<b>3</b>		<b>1</b>		<b>30</b>

\* Facultative (optionally studied) discipline.

\*\* Students prepare one coursework, the subjects of the semester project and the coursework should be different.

\*\*\* Students prepare two courseworks, the subjects of the semester project and the coursework should be different.

### LIST OF OPTIONAL SUBJECTS

<b>List 1 (ECTS=4)</b>		
1	Programming Embedded Systems	BCSCe45.1
2	Systems on Chip Design	BCSCe45.2
<b>List 2 (ECTS =4)</b>		
1	Distributed systems and Computer Communications	BCSCe47.1
2	Computer Integrated Manufacturing	BCSCe47.2
<b>List 3 (ECTS =4)</b>		
1	Intelligent Systems	BCSCe48.1
2	Software Patterns	BCSCe48.2
<b>List 4 (ECTS =4)</b>		
1	Marketing in High Technologies	BCSCe58.1
2	Business Economics	BCSCe58.2

