



CURRICULUM

Professional orientation: **Communications and Computer Engineering**

Program: **Computing**

Professional qualification: **Computer Engineer**

Educational and qualifical degree: **Bachelor**

Form of study: **Full - Time**

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

No	Subject Name	Types of term control				Semester auditorium load					Unsupervised load	Total work hours	ECTS credits
		E	PA	CP	A	L	S	L	CP CPR	Total			
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Basic Mathematics for Engineering	1				30		30		60	120	180	7
2	Computer Systems Fundamentals	1				30		30		60	120	180	7
3	Programming Fundamentals	1				30		30		60	120	180	7
4	Electrical Engineering	1				30		30		60	105	165	6
5	English				1		30			30	30	60	2
6	Elective Subject				1						30	30	1
6a	Specialized Sport Activities, part 1				1						30	30	1
6b	Sport and Social Adaptation, part 1				1						30	30	1
Total for the 1 semester:		4			2	120	30	120		270	525	795	30
7	Mathematics for Computing	2				30		30		60	120	180	7
8	Algorithms and Data Structures	2				30		30		60	120	180	7
9	Analysis and Synthesis of Digital Logic	2				30		30		60	120	180	7
10	Computer Electronics	2				30		30		60	120	180	7
11	Practical Training, part 1				2						30	30	1
12	Elective Subject				2						30	30	1
12a	Specialized Sport Activities, part 2				2						30	30	1
12b	Sport and Social Adaptation, part 2				2						30	30	1
Total for the 2 semester:		4			2	120		120		240	540	780	30
13	Discrete Structures	3				30	30			60	75	135	5
14	Electronics Measurement	3				30		30		60	75	135	5
15	Object-Oriented Programming Fundamentals (C++)	3				30		30		60	120	180	7
16	Web Design		3			15		30		45	90	135	5
17	Computer Organization	3				30		30		60	120	180	7
18	Practical Training, part 2				3						30	30	1
19	Elective Subject				3						30	30	1
19a	Specialized Sport Activities, part 3				3						30	30	1
19b	Sports Management, part 1				3						30	30	1
Total for the 3 semester:		4	1		2	135	30	120		285	540	825	31
20	Advanced Object-Oriented Programming (Java)	4				30		30		60	120	180	7

No	Subject Name	Types of term control				Semester auditorium load					Unsupervised load	Total work hours	ECTS credits
		E	PA	CP	A	L	S	L	CP CPR	Total			
1	2	3	4	5	6	7	8	9	10	11	12	13	14
21	System Analysis	4				30		30		60	105	165	6
22	Microprocessors	4				30		30		60	75	135	5
23	Programming Systems	4				30		30		60	105	165	6
24	Digital Systems		4			30		30		60	105	165	6
25	Elective Subject			4					30	30	30	60	2
25a	Object-Oriented Programming Fundamentals (C++), project			4				30		30	30	60	2
25b	WEB Design, project			4				30		30	30	60	2
25c	Computer Organization, project			4				30		30	30	60	2
25d	Discrete Structures, project			4				30		30	30	60	2
25e	Computer Electronics, project			4				30		30	30	60	2
26	Elective Subject				4						30	30	1
26a	Specialized Sport Activities, part 4				4						30	30	1
26b	Sports Management, part 2				4						30	30	1
Total for the 4 semester:		4	1	1	1	150		150	30	330	570	900	33
27	Graphics and Visual Computing	5				30		30		60	105	165	6
28	Software Engineering		5			30		30		60	120	180	7
29	Data Bases	5				30		30		60	120	180	7
30	Computer Architectures	5				30		30		60	120	180	7
31	Computer Communications Fundamentals	5				30		30		60	105	165	6
32	Elective Subject			5					30	30	30	60	2
32a	Advanced Object-Oriented Programming (Java), project			5					30	30	30	60	2
32b	Microprocessors, project			5					30	30	30	60	2
32c	Programming Systems, project			5					30	30	30	60	2
32d	Digital Systems, project			5					30	30	30	60	2
32e	System Analysis, project			5					30	30	30	60	2
Total for the 5 semester:		4	1	1		150		150	30	330	600	930	35
33	Internet Programming Technologies	6				30		30		60	105	165	6
34	Microprocessor Systems	6				30		30		60	105	165	6
35	Computer Networks		6			30		30		60	75	135	5
36	Computer Peripherals	6				30		30		60	105	165	6
37	Operating Systems	6				30		30		60	120	180	7
38	Specialized Practice				6						150	150	5
39	Elective Subject			6					30	30	30	60	2
39a	Software Engineering, project			6					30	30	30	60	2
39b	Data Bases, project			6					30	30	30	60	2
39c	Computer Architectures, project			6					30	30	30	60	2
39d	Computer Communications Fundamentals, project			6					30	30	30	60	2
39e	Graphics and Visual Computing, project			6					30	30	30	60	2
Total for the 6 semester:		4	1	1	1	150		150	30	330	690	1020	37
40	Elective Subject	7				30		30		60	120	180	7
40a	Compilers and Interpreters	7				30		30		60	120	180	7
40b	Multi-User Operating Systems	7				30		30		60	120	180	7
41	Networks Administration	7				30		30		60	140	200	8
42	Embedded Systems	7				30		30		60	120	180	7
43	Elective Subject	7				15		30		45	90	135	5
43a	Web Programming	7				15		30		45	90	135	5

No	Subject Name	Types of term control				Semester auditorium load					Unsupervised load	Total work hours	ECTS credits
		E	PA	CP	A	L	S	L	CP CPR	Total			
1	2	3	4	5	6	7	8	9	10	11	12	13	14
43b	Human Computer Interaction	7				15		30		45	90	135	5
44	Practical Training, part 3				7						30	30	1
45	Elective Subject			7					30	30	30	60	2
45a	Internet Programming Technologies, project			7					30	30	30	60	2
45b	Microprocessor Systems, project			7					30	30	30	60	2
45c	Computer Networks, project			7					30	30	30	60	2
45d	Computer Peripherals, project			7					30	30	30	60	2
45e	Operating Systems, project			7					30	30	30	60	2
Total for the 7 semester:		4		1	1	105		120	30	255	530	785	30
46	Elective Subject	8				30		30		60	105	165	6
46a	Distributed Programming	8				30		30		60	105	165	6
46b	Office Systems	8				30		30		60	105	165	6
46c	Artificial Intelligence	8				30		30		60	105	165	6
46d	Cryptography and Data Protection	8				30		30		60	105	165	6
46e	Economics and Management	8				30		30		60	105	165	6
46f	Programming Languages Semantics	8				30		30		60	105	165	6
46g	Programmable Logic Design	8				30		30		60	105	165	6
46h	Multimedia Systems and Technologies	8				30		30		60	105	165	6
46i	Real Time Systems	8				30		30		60	105	165	6
46j	Object-Oriented Applications	8				30		30		60	105	165	6
46k	E-commerce	8				30		30		60	105	165	6
46l	Business Intelligence Systems	8				30		30		60	105	165	6
46m	Computer and Network Security	8				30		30		60	105	165	6
46n	Programming for Mobile Devices	8				30		30		60	105	165	6
46o	Embedded Microcontrollers	8				30		30		60	105	165	6
46p	Information Management	8				30		30		60	105	165	6
47	Elective Subject	8				30		30		60	105	165	6
47a	Distributed Programming	8				30		30		60	105	165	6
47b	Office Systems	8				30		30		60	105	165	6
47c	Artificial Intelligence	8				30		30		60	105	165	6
47d	Cryptography and Data Protection	8				30		30		60	105	165	6
47e	Economics and Management	8				30		30		60	105	165	6
47f	Programming Languages Semantics	8				30		30		60	105	165	6
47g	Programmable Logic Design	8				30		30		60	105	165	6
47h	Multimedia Systems and Technologies	8				30		30		60	105	165	6
47i	Real Time Systems	8				30		30		60	105	165	6
47j	Object-Oriented Applications	8				30		30		60	105	165	6
47k	E-commerce	8				30		30		60	105	165	6
47l	Business Intelligence Systems	8				30		30		60	105	165	6
47m	Computer and Network Security	8				30		30		60	105	165	6
47n	Programming for Mobile Devices	8				30		30		60	105	165	6
47o	Embedded Microcontrollers	8				30		30		60	105	165	6
47p	Information Management	8				30		30		60	105	165	6
48	Elective Subject	8				30		30		60	105	165	6
48a	Distributed Programming	8				30		30		60	105	165	6
48b	Office Systems	8				30		30		60	105	165	6

No	Subject Name	Types of term control				Semester auditorium load					Unsupervised load	Total work hours	ECTS credits
		E	PA	CP	A	L	S	L	CP CPR	Total			
1	2	3	4	5	6	7	8	9	10	11	12	13	14
48c	Artificial Intelligence	8				30		30		60	105	165	6
48d	Cryptography and Data Protection	8				30		30		60	105	165	6
48e	Economics and Management	8				30		30		60	105	165	6
48f	Programming Languages Semantics	8				30		30		60	105	165	6
48g	Programmable Logic Design	8				30		30		60	105	165	6
48h	Multimedia Systems and Technologies	8				30		30		60	105	165	6
48i	Real Time Systems	8				30		30		60	105	165	6
48j	Object-Oriented Applications	8				30		30		60	105	165	6
48k	E-commerce	8				30		30		60	105	165	6
48l	Business Intelligence Systems	8				30		30		60	105	165	6
48m	Computer and Network Security	8				30		30		60	105	165	6
48n	Programming for Mobile Devices	8				30		30		60	105	165	6
48o	Embedded Microcontrollers	8				30		30		60	105	165	6
48p	Information Management	8				30		30		60	105	165	6
49	Preliminary Graduation Work			8					30	30	30	60	2
Total for the 8 semester:		3		1		90		90	30	210	345	555	20

Total for all courses of education:		31	4	5	9	1020	60	1020	150	2250	4340	6590	246
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Facultative subjects

No	Subject Name	Types of term control				Semester auditorium load incl:					Unsuper-vised load	Total work hours	ECTS credits
		E	PA	CP	A	L	S	L	CP CPR	Total			
1	2	3	4	5	6	7	8	9	10	11	12	13	14

Types of graduation	Semester	Unsupervised load	ECTS credits
Preparation of Diploma Thesis / Preparation for State Examination	8	300	10
Defence of Diploma Thesis / State Examination	8		

Note:

The curriculum is valid for teaching in Bulgarian and English language.

Accepted from AU with

Protocol No 10 / 25.04.2016

Modified with Protocols No 11 / 06.06.2016, No 25 / 27.11.2017, No 41 / 22.04.2019, No 42 / 27.05.2019

Valid from the 2018 / 2019 academic year.

The weekly allocation of the classes is fixed according to the "Structure of the Learning Process" Academic Board adopted for the current academic year.

Head of Department CSE:

/ Assoc. Prof. PhD Valchanov H. /

Dean of Faculty FCA:

/ Assoc. Prof. PhD Nikolov N. /