

I. ПЛАН НА УЧЕБНИЯ ПРОЦЕС

ECTS Subject code T IE SN

- T - type of course: B for BEng, M for MEng
- BCSTg – “Computer Systems and Technologies” in German
- FBEE – F fundamental, B - bachelor program, EE – electrical engineering group of specialties
- SN - subsequent number of the subject

Lectures (L), tutorials (Tut.), labs (Lab.);

exam (E), continuous assessment (CA); semester projects (SP)/ semester assignment (course work) (SA)

№	ECTS Subject code	Subject	Semester Load						Assesment				ECTS credits
			L	Tut	Lab	Audit. Total	Self Study	Total	E	CA	SP	SA	
Semester I													
1	BCSTg01	Mathematics – Preliminary	30	30	0	60	90	150	1				5
2	BCSTg02	Key Competences And Methods	60	0	0	60	90	150		1			5
3	BCSTg03	Introduction to programming	30	0	45	75	105	180	1	1		1	6
4	BCSTg04	Introduction to informatics	45	15	30	90	150	240	1				8
5	BCSTg05	Modeling	30	0	30	60	90	150	1				5
6	BCSTg06	Sports	0	0	0	0	30	30		1			1
Total			195	45	105	345	555	900	4	3	0	1	30
Semester II													
7	BCSTg07	Mathematics I– Linear Algebra	60	30	0	90	150	240	1				8
8	BCSTg08	Programming Paradigms	45	0	30	75	75	150	1				5
16	BCSTg09	Logic	30	0	30	60	90	150	1				5
10	BCSTg10	Development of software projects I	45	45	0	90	90	180		1			6
11	BCSTg11	Fundamentals of theoretical informatics I	45	0	30	75	75	150	1				5
12	BCSTg12	Sports	0	0	0	0	30	30		1			1
Total			225	75	90	390	510	900	4	2	0	0	30
Semester III													
13	BCSTg13	Mathematics II – Analysis	60	30	0	90	150	240	1				8
14	BCSTg14	Algorithms And Data Structures	45	0	45	90	90	180	1				6
15	BCSTg15	Fundamentals of C++ programming	45	0	30	75	75	150	1				5
16	BCSTg16	Technical Informatics I	30	0	30	60	90	150	1				5
17	BCSTg17	Development of software projects II	15	0	15	30	60	90		1			3
18	BCSTg18	Regional Studies Germany I	15	15	0	30	30	60		1		1	2
19	BCSTg19	Sports	0	0	0	0	30	30		1			1
Total			210	45	120	375	525	900	4	3	0	1	30
Semester IV													
20	BCSTg20	Mathematics III	45	30	0	75	105	180	1				6
21	BCSTg21	Fundamentals of theoretical informatics II	30	0	30	60	90	150	1				5
22	BCSTg22	Technical Informatics II	30	0	30	60	90	150	1				5
23	BCSTg23	Computer Architectures	30	0	30	60	60	120		1			4
24	BCSTg24	Analysis And Synthesis Of Digital Circuits	30	0	30	60	60	120		1		1	4
25	BCSTg25	Databases	30	0	30	60	90	150	1				5
26	BCSTg26	Sports	0	0	0	0	30	30		1			1
Total			195	30	150	375	525	900	4	3	0	1	30

№	ECTS Subject code	Subject	Semester Load						Assesment				ECTS credits
			L	Tut.	Lab.	Audit. Total	Self Study	Total	E	CA	SP	SA	
Semester V													
27	BCSTg27	Software engineering and IT project management	30	0	30	60	90	150	1			1	5
28	BCSTg28	Application systems	30	0	30	60	90	150	1				5
29	BCSTg29	Elective Subject - (List 10)	30	30	0	60	90	150		1		1	5
30	BCSTg30	Elective Subject - (List 1)	30	0	30	60	90	150	1				5
31	BCSTg31	Elective Subject - (List 2)	30	0	30	60	90	150	1				5
32	BCSTg32	Elective Subject In Module - (List 7)*	30	0	30	60	90	150		1		1	5
Total			180	30	150	360	540	900	4	2	0	3	30
Semester VI													
33	BCSTg33	Computer Networks	30	0	30	60	90	150	1				5
34	BCSTg34	Software Project	0	0	0	0	150	150			1		5
35	BCSTg35	Intelligent Systems	30	0	30	60	90	150	1				5
36	BCSTg36	Elective Subject In Module - (List 8)*	30	0	30	60	90	150		1		1	5
37	BCSTg37	Elective Subject - (List 3)	30	0	30	60	90	150	1				5
36	BCSTg38	Secure Systems	30	30	0	60	90	150	1				5
Total			150	30	120	300	600	900	4	1	1	1	30
Semester VII													
37	BCSTg39	Scientific Seminar	30	30	0	60	90	150		1		1	5
38	BCSTg40	Elective Subject In Module - (List 9)*	30	0	30	60	90	150		1		1	5
39	BCSTg41	Elective Subject - (List 4)	30	0	30	60	90	150	1				5
40	BCSTg42	Elective Subject - (List 5)	30	0	30	60	90	150	1				5
41	BCSTg43	Elective Subject - (List 6)	30	0	30	60	90	150	1				5
42	BCSTg44	Proseminar	30	15	15	60	90	150	1			1	5
Total			180	45	135	360	540	900	4	2	0	3	30
№	ECTS Subject code	Subject	Semester Load						Assesment				ECTS credits
			L	Tut.	Lab.	Audit. Total	Self Study	Total	E	CA	SP	SA	
Semester VIII													
45	BCSTg45	Practice 20 weeks, 6 hours a day Total - 600 Hours	0	0	0	0	600	600	Practice report				20
46	BCSTg46	Bachelor work	0	0	0	0	300	300	Diploma defense				10
Total							900	900	0	0	0	0	30

*Remark: Subjects with equal numbers in lists 7, 8 and 9 build obligatory modules

**Remark: The form of control in the discipline "Sport" is "Respected / Not Respected"

***Remark: The course "German language" from the list of optional subjects in the I and II semesters is mandatory, according to the decision of the AC Protocol 8 / 29.09.2021

****Remark: The updated plan takes effect from the winter semester of the academic year 2024/2025

List with Elective subjects

List 1 - Elective subjects		ECTS = 5	
1	Computer Graphics I - Fundamentals of Computer Graphics	BCSTg30.1	
2	Neural networks	BCSTg30.2	
3	XML-technologies	BCSTg30.3	
List 2 - Elective subjects		ECTS = 5	
1	Bioinformatics	BCSTg31.1	
2	Human Machine Interaction	BCSTg31.2	
3	Fundamentals of image processing	BCSTg31.3	
List 3 - Elective subjects		ECTS = 5	
1	Machine learning and data stream processing	BCSTg37.1	
2	Image Processing II	BCSTg37.2	
3	Discrete simulation	BCSTg37.3	
List 4 - Elective subjects		ECTS = 5	
1	Computational intelligence in games	BCSTg41.1	
2	Compilers	BCSTg41.2	
3	Virtual reality	BCSTg41.3	
List 5 - Elective subjects		ECTS = 5	
1	Information technologies in organizations	BCSTg42.1	
2	Fundamentals of computer game development	BCSTg42.2	
3	Ethics in the Age of Digitalization	BCSTg42.3	
List 6 - Elective subjects		ECTS = 5	
1	Management - information systems	BCSTg43.1	
2	IT forensic	BCSTg43.2	
3	Evolutionary algorithms	BCSTg43.3	
List 7 - Obligator elective subjects		ECTS = 5	
1	Fundamentals of Computer Vision	BCSTg32.1	
2	Programming of industrial controllers	BCSTg32.2	
3	Machine learning	BCSTg32.3	
List 8 - Obligator elective subjects		ECTS = 5	
1	Medical image processing	BCSTg36.1	
2	Clean code development	BCSTg36.2	
3	Information retrieval	BCSTg36.3	
List 9 - Obligator elective subjects		ECTS = 5	
1	Computer diagnostics and therapy	BCSTg40.1	
2	Software testing	BCSTg40.2	
3	Introduction to Deep Learning	BCSTg40.3	
List 10 - Elective subjects		ECTS = 5	
1	Discrete structures	BCSTg29.1	
2	Numerical methods in programming	BCSTg29.2	
3	Numerical methods in computer graphics	BCSTg29.3	