APPROVED
by the Academic Board of
Khmelnytskyi National University

Record № 10 of 25.02 2021

Head of the Academic Board

Signature   M. Skyba
                         Initials; surname

Enacted on 1 09 2021
Order № 81 of 29.06 2021

Rector C. Л. Matyukh

Ministry of Education and Science of Ukraine
Khmelnytskyi National University
CURRICULUM

For Bachelor's Degree
egree of the higher educatic

Form of study   **full-time**

Subject area   **12 Information Technology**
                ode and name of the subject an

Specialization **123 Computer Engineering**
                Code and name of the specialization

Name of the educational program
Computer Engineering and Programming

Higher education level First (Bachelor's)

Academic qualification   Bachelor of Computer Engineering

Official qualification Bachelor of Computer Engineering

Duration of study 3 years 10 months
                              Full years and months

Based on the complete general secondary education
Previous education (academic level)

Type of the educational program
Educational and professional

Volume of the educational program 240 ECTS credits

Language of instruction - English

1. CURRICULUM PLAN

Year	September					October				November				December				January					February				March				April				May				June				July				August				Theoretical study	Semester control	Practical training	Attestation	Vacations	Total
---	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	---	---	---	---	---	---
1																		V	C	C	C	V																														35	6			11	52
2																		V	C	C	C	V																			C	C	C	V	V	V	V	V	V	V	V	V	35	6			11	52
3																		V	C	C	C	V																			C	C	C	V	V	V	V	V	V	V	V	V	35	6			11	52
4																		V	A	C	C	V																		C	P	P	P	V	V	V	V	V	V	V	V	V	34	4	3		11	52
																																C	P	P	P	D	D	D	D	D	D	D	D	D									26	3	3	9	2	43
																																																			Total	130	19	6	9	35	199

Theoretical study	Semester control	Practical training	Preparation and defense of the Bachelor Thesis	Vacations	Attestation
	C	P	D	V	A

2. CURRICULUM PLAN

Code of the educational program component	Name of the educational program component	Semester control		Course project	Course paper	Course volume, ECTS credits	Total number of hours	Number of hours In-class				Independent work	I year		II year		III year		IV year	
		Examination	Pass-fail test					Total in-class hours	Lectures	Laboratory works	Practical classes		1	2	3	4	5	6	7	8
													Semester duration (weeks)							
													17	18	17	18	17	17	17	9
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Compulsory Components																				
General Preparation Components (GPC)																				
GPC.01	Higher Mathematics	1, 2				15	450	210	70		140	240	6	6						
GPC.02	Discrete Mathematics	1				5	150	68	34		34	82	4							
GPC.03	Physics	2				8	240	108	36	36	36	132		6						
GPC.04	Ukrainian (as a foreign language)		2, 4			10	300	106			106	194	1	2	1	2				
GPC.05	Theory of Electric and Magnetic Circuits	3				5	150	68	34	17	17	82			4					
GPC.06	Probability Theory and Mathematical Statistics	4				4	120	54	18		36	66				3				
GPC.07	Life Safety, Occupational Safety, Civil Defense and Ecological Safety	8				5	150	54	18	18	18	96								6
GPC.08	Philosophy		7			4	120	51	17		34	69							3	
GPC.09	Culture Studies, Culture of Speech, Ethics and Aesthetics		6			4	120	51	17		34	69						3		
GPC.10	Civic Society, Economics and Management		5			4	120	51	17		34	69					3			
GPC.11	English for Professional Purposes		1			4	120	51			51	69	3							
	Total:					68	2040	872	261	71	540	1168	14	14	5	5	3	3	3	6
Professional Training Components (PTC)																				
PTC.01	Programming	1	2	2		14	420	191	34	87	70	229	7	4						
PTC.02	Web Technologies	2				5	150	72	18	36	18	78		4						
PTC.03	Databases	4				5	150	72	36	36		78				4				
PTC.04	System Software	5, 6		6		9	270	119	34	68	17	151					3	4		
PTC.05	Computer Circuit Design and Computer-Aided Design Systems	5		5		7	210	68	17	34	17	142					4			
PTC.06	Computer Architecture	6				6	180	85	17	51	17	95						5		
PTC.07	System Programming and Internet of Things	7				4	120	51	17	34		69							3	
PTC.08	System Modeling	4			4	8	240	108	36	36	36	132				6				
PTC.09	Computer and Cyberphysical Systems	7				5	150	68	34	34		82							4	
PTC.10	Object-Oriented Programming	3				5	150	68	17	34	17	82			4					
PTC.11	Computer Networks, System Administration and Cyber Security	7		7		7	210	68	17	34	17	142							4	

Code	Name				Credits	Hours						S1	S2	S3	S4	S5	S6	S7	S8
PTC.12	Computer Logic	3		3	8	240	102	34	34	34	138			6					
PTC.13	Information Technology		1		4	120	51	17	34		69	3							
PTC.14	Data Processing and Multimedia Systems	5			5	150	68	17	17	34	82						4		
PTC.15	Design and Technological Practical Training		6		5	150													
PTC.16	Pre-Graduation Practical Training		8		5	150													
PTC.17	Bachelor Thesis				5	150													
PTC.18	Attestation Examination (Ukrainian)	7			10	300					300								
	Total:				112	3360	1191	345	569	277	1869	10	8	10	10	11	9	11	
	Total for compulsory components:				180	5400	2063	606	640	817	3037	24	22	15	15	14	12	14	6
	Elective Components																		
	Elective courses 3 semester				10	300	136				164			8					
	Elective courses 4 semester				10	300	144				156				8				
	Elective courses 5 semester				10	300	136				164					8			
	Elective courses 6 semester				10	300	136				164						8		
	Elective courses 7 semester				10	300	136				164							8	
	Elective courses 8 semester				10	300	144				156								8
	Total for the Elective components:				60	1800	832				968			8	8	8	8	8	16
														8	8	8	8	8	16
	Total for the educational program:				240	7200	2895	606	640	817	4005	24	22	23	23	22	20	22	22

3. SUMMARY TABLE

Semester	1	2	3	4	5	6	7	8
Number of in-class hours per week	24	22	23	23	22	20	22	22
Number of ECTS credits	30	30	30	30	30	30	30	30
Number of examinations	3	3	3	3	3	2	3	1
Number of pass-fail tests	2	2	0*	1*	1*	2*	1*	1*
Number of course projects (works)		1	1	1	1	1	1	

* - number of tests depends on the number of the chosen elective courses
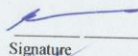
4. PRACTICAL TRAINING

Level of higher education	Type of practical training	Semester	Duration (weeks)	Number of ECTS credits
Bachelor	Design and Technological Practical Training	6	3	5
Bachelor	Pre-Graduation Practical Training	8	3	5

5. FINAL ATTESTATION

Level of higher education	Standard form of final attestation	Semester	Duration (weeks)	Number of ECTS credits
Bachelor	Attestation Examination (Ukrainian)	7	1	0
Bachelor	Bachelor Thesis	8	8	10

Head of
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System Programming Department
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                                            Initials, surname

Head of
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Name   Signature   Yu. P. Klyots
                                      Initials, surname

Head of the project group
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