

APPROVED
by the Academic Board of
Khmelnyskyi National University

Ministry of Education and Science of Ukraine
Khmelnyskyi National University
CURRICULUM

Higher education level First (Bachelor's)

Record № 9 of 28.03.2019

For the degree of **bachelor**
degree of the higher education

Academic qualification Bachelor of Computer Engineering

Head of the Academic Board
M. Skyba
Signature

Form of study **full-time**

Official qualification Bachelor of Computer Engineering

M. Skyba
Initials, surname

Subject area **12 Information Technology**
code and name of the subject area

Duration of study 3 years 10 months
Full years and months

Enacted on 1.09 2019
Order № 107 of 27.08 2019

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

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

Rector *M. Skyba*
M.Skyba

Name of the educational program
Computer Engineering and Programming

Type of the educational program

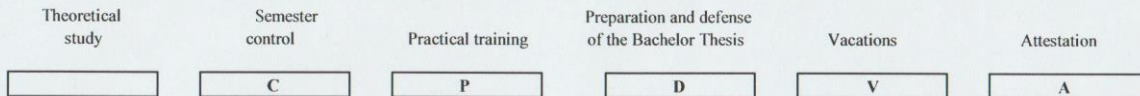
Educational and professional

Volume of the educational program 240 ECTS credits

Language(s) of instruction - English

I. CURRICULUM PLAN

Year	Month												Total time budget, weeks																																																																																																		
	September			October			November			December			January			February			March			April			May			June			July			August			Theoretical study	Semester control	Practical training	Attestation	Vacations	Total																																																																					
1	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	35	6			11	52																																																					
2																			V	C	C	C	V																																			35	6			11	52																																																
3																			V	C	C	C	V																																				34	4	3		11	52																																															
4																			V	A	C	C	V										C	P	P	P	P	D	D	D	D	D	D	D																26	3	3	9	2	43																																														
																																																					Total	130	19	6	9	35	199																																																				



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	Number of hours						Number of in-class hours per week for courses and semesters												
		Examination	Pass-fail test				Total number of hours	In-class			Independent work	I year		II year		III year		IV year							
								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				16	480	210	70		140	270	6	6											
GPC.02	Discrete Mathematics	1				6	180	68	34		34	112	4												
GPC.03	Physics	2				8	240	90	36	36	18	150		5											
GPC.04	Ukrainian (as a foreign language)		1, 2			6	180	70			70	110	2	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				5	150	54	18		36	96				3									
GPC.07	Life Safety, Occupational Safety, Civil Defense and Ecological Safety	8				5	150	54	18	18	18	96								6					
GPC.08	Computer Logic	3		3		8	240	85	34	17	34	155			5										
GPC.09	Information Technology		1			5	150	51	17	34		99	3												
GPC.10	Philosophy		7			4	120	51	17		34	69								3					
GPC.11	Culture Studies, Culture of Speech, Ethics and Aesthetics		6			4	120	51	17		34	69								3					
GPC.12	Civic Society, Economics and Management		5			4	120	51	17		34	69								3					
GPC.13	Data Processing and Multimedia Systems	5				5	150	68	17	17	34	82					3								
GPC.14	Physical Education*		2				70	70			70		2	2						4					
Total:						81	2430	971	329	139	503	1459	17	15	9	3	7	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				7	210	108	36	72		102			6										
PTC.04	System Software	5, 6		6		9	270	123	35	70	18	147													
PTC.05	Computer Circuit Design and Computer-Aided Design Systems	5		5		7	210	68	17	34	17	142													
PTC.06	Computer Architecture	6				6	180	85	17	51	17	95													
PTC.07	System Programming and Internet of Things	7				4	120	51	17	34		69						5							
PTC.08	System Modeling	4			4	8	240	90	18	36	36	150			5					3					
PTC.09	Computer and Cyberphysical Systems	7				5	150	68	34	34		82								4					
PTC.10	Object-Oriented Programming	3				7	210	102	34	34	34	108			6										

PTC.11	Computer Networks, System Administration and Cyber Security	7		7		7	210	68	17	34	17	142							4	
PTC.12	Design and Technological Practical Training		6			5	150					150								
PTC.13	Pre-Graduation Practical Training		8			5	150					150								
PTC.14	Bachelor Thesis	8				10	300					300								
PTC.15	Attestation Examination (Ukrainian)	7																		
Total:						99	2970	1026	277	522	227	1944	7	8	6	11	7	9	11	
Total for compulsory components:						180	5400	1997	606	661	730	3403	24	23	15	14	14	12	14	6
Elective Components																				
	Elective courses 3 semester					10	300	119				181			7					
	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							16	
Total for the Elective components:						60	1800	815				985			7	8	8	8	8	16
Total for the educational program:						240	7200	2812	606	661	730	4388	24	23	22	22	22	20	22	22

3. SUMMARY TABLE

Semester	1	2	3	4	5	6	7	8
Number of in-class hours per week	24	23	22	22	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	3	0**	0**	1**	2**	1**	1**
Number of course projects (works)		1	1	1	1	1	1	

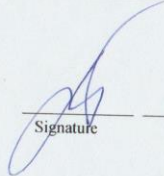
* - training at sport clubs of student's choice

** - number of tests depends on the number of the chosen elective courses

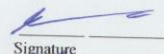
4. PRACTICAL TRAINING

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


Head of
Computer Engineering and
 System Programming Department
 Name


 Signature T. O. Hovorushchenko
 Initials, surname

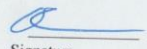
Head of
Cyber Security and Computer
 Systems and Networks Department
 Name


 Signature Yu. P. Klyots
 Initials, surname


Head of the project group


 Signature A.O. Nicheporuk
 Initials, surname

Dean of the Faculty of
Programming and Computer
 and Telecommunication Systems
 Name


 Signature O.S. Savenko
 Initials, surname


Dean of the Faculty
of International Relations
 Name


 Signature V.V. Tretko
 Initials, surname

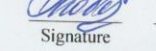
5. FINAL ATTESTATION

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 the Academic Department


 Signature O.H. Samoliuk
 Initials, surname

Head of the Educational and
 Methodological Department


 Signature L.S. Liubokhynets
 Initials, surname