"Approved"
Vice-Rector for research and academic affairs
Oleksandr HOLOVKO

"03" July 2026

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE

V. N. Karazin Kharkiv National University

Higher education degree:
first (bachelor's) level

Duration of study – 3 year 10 months
on the basis of complete general secondary education

Educational qualification: bachelor in computer science, theoretical and applied computer science

TRAINING PLAN for 2026-2030

Training according to the educational and professional program Theoretical and applied computer science

according to the level of higher education first (bachelor's) **field of study** F - Information technology

specialty F3 - Computer Science

Mode of study Full-time

I. SCHEDULE OF THE EDUCATIONAL PROCESS for 2026-2030

Year	September				October				November					December				January				February				March					April				May					June				July				August				
	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	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	S	S	S	V	V	V	V	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	S	S	S	S	V	V	V	V	V	V	V	V	V
2	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	S	S	S	V	V	V	V	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	S	S	S	S	V	V	V	V	V	V	V	V	V
3	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	S	S	S	V	V	V	V	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	S	S	S	S	V	V	V	V	V	V	V	V	V
4	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	S	S	S	V	V	V	V	T	T	T	T	T	T	T	T	T/P	T/P	T/P	T/P	T/P	T/P	T/P	S	S	D	D									

II. SUMMARY DATA FROM TIME BUDGET, weeks

Year	Theoretical training	Exams and tests	Practices	Certification	Thesis design	Academic vacation	Total
1	32	8				12	**52**
2	32	8				12	**52**
3	32	8				12	**52**
4	32	5	6		2	3	**42**
5							
6							
Total	**128**	**29**	**6**	**0**	**2**	**39**	**198**

SYMBOLS:

T - theoretical training
S - examination session
P - practice
V - academic vacation
D - thesis design and defense

PRACTICES

Practice name	Semester	Weeks
Research and production practice (without interruption from classes)	8	6/5 credits

CERTIFICATION

Certification exam	Qualification work	Semester
	Bachelor's thesis	8

III. EDUCATIONAL PROCESS PLAN

Code	Components of the educational program	Distribution by semesters						Amount of ECTS credits	Amount of hours							Distribution of class hours per week by courses and semesters											
		Four-level scale(exam)	Two-level scale (test)	Tests	Individual tasks				The total amount	Classes					Self-study	1 year		2 year		3 year		4 year		5 year		6 year	
					abstracts, translations	calculation and graphic works	courseworks			Total	including:						Semesters											
											Lectures	Laboratory work	Practical classes	Workshop			1	2	3	4	5	6	7	8	9	10	11	12
																	Amount of weeks per semester											
																	16	16	16	16	16	16	16	16				
I. REQUIRED COMPONENTS																											
EC 01	History of Ukraine:civilization dimension	1		1				3	90	48	32			16	42	3											
EC 02	Philosophy	4		1				3	90	48	32			16	42				3								
EC 03	Foreign language	2,4,6		1/1c,3c,5c				12	360	224			224		136	3	2	3	2	2	2						
EC 05	Mathematical analysis	1,2,3		2/1c,2c		2/3c		16	480	256	160		96		224	5	6	5									
EC 06	Elements of algebra and number theory		1	2				3	90	48	32		16		42	3											
EC 08	Analytical geometry		1	1		1		3	90	48	32		16		42	3											
EC 09	Linear algebra	2		2				5	150	80	32		48		70		5										
EC 10	Discrete mathematics	1,2		3/1c; 2/2c		3/1c, 2c		8	240	128	64		64		112	4	4										
EC 12	Probability theory and its application	5,6		2/5c,6c				9	270	160	96		64		110					5	5						
EC 04	Data analysis	7		1		1		4	120	64	32		32		56							4					
EC 14	Programming	1,2		1/c		3/c		12	360	192	64		128		168	6	6										
EC 15	Object-oriented Programming	4		1		3		6	180	96	48		48		84				6								
EC 17	Algorithms and data structures	3		1		3		5	150	80	48		32		70			5									
EC 07	Theoretical informatics	3						4	120	64	32		32		56			4									
EC 11	Numerical methods	4				2		6	180	96	32		64		84				6								
EC 18	Computer system architecture		2	1				4	120	48	16		32		72		3										
EC 19	Operating systems		3	1				4	120	64	32		32		56			4									
EC 20	Mathematical logic and logic programming		4	1		1		5	150	64	32		32		86				4								
EC 21	Information networks		4	1		3		4	120	64	32		32		56				4								
EC 22	Optimization and research methods for operations	5,6		1/c		1/c		8	240	128	64		64		112					4	4						
EC 23	Introduction to SQL Databases	5		1		3		6	180	96	48		48		84					6							
EC 24	Web programming technologies		5			3		5	150	64	32		32		86					4							
EC 25	Declarative Programming (functional languages)		6			2		4	120	64	32		32		56						4						
EC 26	Theory and methods of relational database design	6		1		3		4	120	64	32		32		56						4						
EC 27	Introduction to Parallel Process Programming	7				2		5	150	64	32		32		86							4					
EC 13	Design of software systems	7		1		3		4	120	64	32		32		56							4					
EC 29	Introduction to Artificial Intelligence	7		1				4	120	64	32		32		56							4					
EC 16	Machine learning	8		1				4	120	64	32		32		56								4				

EC 28	Parallel and distributed computing	8		1		3		4	120	64	32		32		56								4				
EC 30	Course research work		8				1	3	90	0					90												
EC 31	Research practice (without interruption from classes)		8					5	150	0					150												
EC 32	Preparation of the qualification work	8						3	90						90												
EC 33	Fundamentals of Civil Resilience		2					5	150	110	46		64		40	3	4										
Total amount of required components		**30**	**11**	**41**		**49**	**1**	**180**	**5400**	**2718**	**1262**		**1424**	**32**	**2682**	**30**	**30**	**21**	**25**	**21**	**19**	**16**	**8**				

2. SELECTED COMPONENTS

2.1. Selective university-wide educational components

SC 2.1.1	Inter-faculty selective discipline 1		3					3	90	30	30				60			2									
SC 2.1.2	Inter-faculty selective discipline 2		4					3	90	30	30				60				2								
SC 2.1.3	Inter-faculty selective discipline 3		5					3	90	30	30				60					2							
SC 2.1.4	Inter-faculty selective discipline 4		6					3	90	30	30				60						2						

2.2 Selective professional (special, subject) educational components

SC 2.2.1	Discipline P-1		3	1		1		3	90	48	32		16		42			3									
SC 2.2.2	Discipline P-2		3	1		1		3	90	48	32		16		42			3									
SC 2.2.3	Discipline P-3		4	1		1		3	90	48	32		16		42				3								
SC 2.2.4	Discipline P-4		5	1		1		3	90	48	32		16		42					3							
SC 2.2.5	Discipline P-5		5	1		1		3	90	48	32		16		42					3							
SC 2.2.6	Discipline P-6		6	1		1		3	90	48	32		16		42						3						
SC 2.2.7	Discipline P-7		6	1		1		6	180	80	32		48		100						5						
SC 2.2.8	Discipline P-8		7	1		1		6	180	80	32		48		100							5					
SC 2.2.9	Discipline P-9		7	1		1		6	180	80	32		48		100							5					
SC 2.2.10	Discipline P-10		8	1		1		6	180	80	32		48		100								5				
SC 2.2.11	Discipline P-11		8	1		1		6	180	80	32		48		100								5				
Total volume of selected components			**15**	**11**		**11**		**60**	**1800**	**808**	**472**		**336**		**992**			**8**	**5**	**8**	**10**	**10**	**10**				
Total amount		**30**	**26**	**52**		**60**	**1**	**240**	**7200**	**3526**	**1734**		**1760**	**32**	**3674**	**30**	**30**	**29**	**30**	**29**	**29**	**26**	**18**				
Amount of hours per week																**30**	**30**	**29**	**30**	**29**	**29**	**26**	**18**				
Amount of grades on a four-level scale																**4**	**5**	**3**	**4**	**3**	**4**	**4**	**3**				
Amount of grades on a two-level scale																**2**	**1**	**4**	**4**	**4**	**4**	**2**	**4**				
Amount of tests																**10**	**7**	**4**	**3**	**6**	**6**	**5**	**4**				
Amount of coursework																							**1**				

Protocol No. 11 from 30 June 2026

Vice-Dean of the Faculty _____ Victoriya KUZNIETCOVA

Guarantor of the educational and professional program _____ Ievgen MENIAILOV