V. EDUCATION PROCESS PLAN

Code in accordance with the EPP	Name of academic discipline	Exams	Tests	Individual tasks	Number of ECTS credits	Total amount	Total	Lectures	Laboratory works	Practical studies	Independent work	I course Sem 1 Classroom hours	Sem 1 ECTS credits	Sem 2 Classroom hours	Sem 2 ECTS credits	II course Sem 3 Classroom hours	Sem 3 ECTS credits	Sem 4 Classroom hours	Sem 4 ECTS credits	III course Sem 5 Classroom hours	Sem 5 ECTS credits	Sem 6 Classroom hours	Sem 6 ECTS credits	IV course Sem 7 Classroom hours	Sem 7 ECTS credits	Sem 8 Classroom hours	Sem 8 ECTS credits	Department
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
1	**Obligatory educational components**				180,0	5400,0	2416,0	978,0	612,0	826,0	2984,0	29,0	30,0	30,0	30,0	17,0	17,0	17,0	15,0	13,0	16,0	19,0	24,0	16,0	18,0	16,0	30,0	
1.1	**General training**				52,0	1560,0	892,0	218,0	16,0	658,0	668,0	19,0	21,0	14,0	11,0	2,0	2,0	2,0	2,0	2,0	2,0	6,0	4,0	7,0	5,0	6,0	5,0	
GT 1	**History and culture of Ukraine**	1		R	3,0	90,0	32,0	16,0		16,0	58,0	2,0	3,0															310
GT 2	**Ukrainian language (professional orientation)**	1			3,0	90,0	32,0			32,0	58,0	2,0	3,0															273
GT 3	**English for Specific Purposes**	8	1-2, 6-7		12,0	360,0	296,0			296,0	64,0	4,0	3,0	4,0	3,0							4,0	2,0	4,0	2,0	4,0	2,0	275
GT 4	**Philosophy**	8		R	3,0	90,0	20,0	10,0		10,0	70,0															2,0	3,0	307
GT 5	**Higher Mathematics (Part 1)**	1			6,0	180,0	80,0	48,0		32,0	100,0	5,0	6,0															324
GT 5	**Higher Mathematics (Part 2)**	2		C	6,0	180,0	128,0	64,0		64,0	52,0			8,0	6,0													324
GT 6	**Physics**	1		CG	4,0	120,0	64,0	48,0		16,0	56,0	4,0	4,0															168
GT 7	**Green computing**	7		C	3,0	90,0	48,0	32,0	16,0		42,0													3,0	3,0			321
GT 8	**Physical education**		1 - 6		12,0	360,0	192,0			192,0	168,0	2,0	2,0	2,0	2,0	2,0	2,0	2,0	2,0	2,0	2,0	2,0	2,0					302
1.2	**Professional training**				128,0	3840,0	1524,0	760,0	596,0	168,0	2316,0	10,0	9,0	16,0	19,0	15,0	15,0	15,0	13,0	11,0	14,0	13,0	20,0	9,0	13,0	10,0	25,0	
PT 1	**Programming Basics (Part 1)**	1			5,0	150,0	96,0	48,0	48,0		54,0	6,0	5,0															321
PT 1	**Programming Basics (Part 2)**	2		CW	5,0	150,0	64,0	32,0	32,0		86,0			4,0	5,0													321
PT 2	**Fundamentals of Software Engineering**		1		4,0	120,0	64,0	32,0	32,0		56,0	4,0	4,0															321
PT 3	**Probability theory and mathematical statistics**	2		C	6,0	180,0	64,0	48,0	16,0		116,0			4,0	6,0													321
PT 4	**Computer architecture fundamentals and operating systems**		2	C	4,0	120,0	64,0	32,0	32,0		56,0			4,0	4,0													321
PT 5	**Fundamentals of the Theory of Algorithms**		2	C	4,0	120,0	64,0	32,0	32,0		56,0			4,0	4,0													321
PT 6	**Computer Mathematics (Part 1)**		3	C	5,0	150,0	64,0	48,0		16,0	86,0					4,0	5,0											321
PT 6	**Computer Mathematics (Part 2)**	4		C	4,0	120,0	64,0	32,0		32,0	56,0							4,0	4,0									321
PT 6	**Computer Mathematics (Part 3)**	5		CW	6,0	180,0	64,0	32,0		32,0	116,0									4,0	6,0							321
PT 7	**Data models and structures**	3			3,0	90,0	48,0	16,0	32,0		42,0					3,0	3,0											321
PT 8	**Object-oriented programming. Introductory practice**	3		CW	4,0	120,0	64,0	32,0	32,0		56,0					4,0	4,0											321
PT 9	**Fundamentals of computer networks**		3		3,0	90,0	64,0	32,0	32,0		26,0					4,0	3,0											321
PT 10	**Fundamentals of web development**	4			3,0	90,0	64,0	32,0	32,0		26,0							4,0	3,0									321
PT 11	**Design and development of databases**	4		CW	3,0	90,0	64,0	32,0	32,0		26,0							4,0	3,0									321

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
PT 12	Software Requirements Engineering		4		3,0	90,0	48,0	32,0	16,0		42,0							3,0	3,0									321
PT 13	CI / CD Cloud Computing		5		3,0	90,0	48,0	16,0	32,0		42,0									3,0	3,0							321
PT 14	Architecture and Design of Software (Part 1)	5			5,0	150,0	64,0	32,0	32,0		86,0									4,0	5,0							321
PT 14	Architecture and Design of Software (Part 2)	6		CP	3,0	90,0	64,0	32,0	32,0		26,0											4,0	3,0					321
PT 15	Practical seminar on mathematical methods in software engineering		6	C	5,0	150,0	32,0			32,0	118,0											2,0	5,0					321
PT 16	Software quality, testing and support	6			3,0	90,0	64,0	32,0	32,0		26,0											4,0	3,0					321
PT 17	Fundamentals of cybersecurity	6			3,0	90,0	48,0	16,0	32,0		42,0											3,0	3,0					321
PT 18	Decision making theory	7			4,0	120,0	64,0	48,0	16,0		56,0													4,0	4,0			321
PT 19	Scientific and practical seminar Software Engineering (part 1)		7	CW	4,0	120,0	16,0			16,0	104,0													1,0	4,0			321
PT 19	Scientific and practical seminar Software Engineering (part 2)		8	CP	3,0	90,0	20,0			20,0	70,0															2,0	3,0	321
PT 20	Software modeling and analysis	7			5,0	150,0	64,0	32,0	32,0		86,0													4,0	5,0			321
PT 21	Mathematical models and systems analysis		8		4,0	120,0	20,0			20,0	100,0															2,0	4,0	321
PT 22	Artificial intelligence systems		8		3,0	90,0	30,0	20,0	10,0		60,0															3,0	3,0	321
PT 23	Fundamentals of software project management	8			3,0	90,0	30,0	20,0	10,0		60,0															3,0	3,0	321
PT 24	Project (Practice)		6		6,0	180,0					180,0													6,0				321
PT 25	Pre-graduation Practice		8		6,0	180,0					180,0																6,0	
	Attestation*				6,0	180,0					180,0																6,0	
2	Optional educational components				60,0	1800,0	800,0	160,0	128,0		1000,0					12,0	13,0	12,0	15,0	13,0	14,0	6,0	6,0	7,0	12,0			
2.1	Profile training				25,0	750,0	288,0	160,0	128,0		462,0					4,0	4,0	4,0	6,0	3,0	4,0	3,0	3,0	4,0	8,0			
2.1.1	Profiled discipline package 01 "Research and Development"				25,0	750,0	288,0	160,0	128,0		462,0					4,0	4,0	4,0	6,0	3,0	4,0	3,0	3,0	4,0	8,0			
OP1.1	Probabilistic models		3		4,0	120,0	64,0	32,0	32,0		56,0					4,0	4,0											321
OP1.2	Knowledge representation models		4		6,0	180,0	64,0	32,0	32,0		116,0							4,0	6,0									321
OP1.3	Fuzzy logic and fuzzy systems		5		4,0	120,0	48,0	32,0	16,0		72,0									3,0	4,0							321
OP1.4	Machine Learning		6		3,0	90,0	48,0	32,0	16,0		42,0											3,0	3,0					321
OP1.5	Experiment planning		7		4,0	120,0	32,0	16,0	16,0		88,0													2,0	4,0			321
OP1.6	Intelligent systems modeling technologies		7		4,0	120,0	32,0	16,0	16,0		88,0													2,0	4,0			321
2.1.2	Profiled discipline package 02 "Software Development and Startup"				25,0	750,0	288,0	160,0	112,0	16,0	462,0					4,0	4,0	4,0	6,0	3,0	4,0	3,0	3,0	4,0	8,0			
OP2.1	Internet marketing		3		4,0	120,0	64,0	32,0	32,0		56,0					4,0	4,0											321
OP2.2	Startup business models		4		6,0	180,0	64,0	32,0	32,0		116,0							4,0	6,0									321
OP2.3	Startup business analytics		5		4,0	120,0	48,0	32,0	16,0		72,0									3,0	4,0							321
OP2.4	Fundamentals of business planning		6		3,0	90,0	48,0	32,0	16,0		42,0											3,0	3,0					321
OP2.5	Fundamentals of prototyping		7		4,0	120,0	32,0	16,0	16,0		88,0													2,0	4,0			321
OP2.6	Fundamentals of entrepreneurship		7		4,0	120,0	32,0	16,0		16,0	88,0													2,0	4,0			321
2.1.3	Profiled discipline package 03 "Innovation Campus"				25,0	750,0	288,0	160,0	128,0		462,0					4,0	4,0	4,0	6,0	3,0	4,0	3,0	3,0	4,0	8,0			
OP3.1	Development of corporate information systems (part 1)		3		4,0	120,0	64,0	32,0	32,0		56,0					4,0	4,0											321
OP3.2	Development of corporate information systems (part 2)		4		6,0	180,0	64,0	32,0	32,0		116,0							4,0	6,0									321

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
OP3.3	Databases for corporate information systems		5		4,0	120,0	48,0	32,0	16,0		72,0									3,0	4,0							321
OP3.4	Architecture of corporate information systems		6		3,0	90,0	48,0	32,0	16,0		42,0											3,0	3,0					321
OP3.5	Project workshop		7		4,0	120,0	32,0	16,0	16,0		88,0													2,0	4,0			321
OP3.6	Formation and Development of IT Project Teams		7		4,0	120,0	32,0	16,0	16,0		88,0													2,0	4,0			321
2.2	Optional student disciplines of the profile preparation according to the list	3-5			24,0	720,0	368,0				352,0					8,0	9,0	8,0	9,0	7,0	6,0							
2.3	Optional student disciplines from the general university catalog of disciplines				11,0	330,0	144,0				186,0									3,0	4,0	3,0	3,0	3,0	4,0			
OD1	Discipline 1		5		4,0	120,0	48,0				72,0									3,0	4,0							
OD2	Discipline 2		6		3,0	90,0	48,0				42,0											3,0	3,0					
OD3	Discipline 3		7		4,0	120,0	48,0				72,0													3,0	4,0			
	Total for education period				240,0	7200,0	3216,0				3984,0	29,0	30,0	30,0	30,0	29,0	30,0	29,0	30,0	26,0	30,0	25,0	30,0	23,0	30,0	16,0	30,0	
	Hours per week											29,0		30,0		29,0		29,0		26,0		25,0		23,0		16,0		
	Number of exams																											
	Number of tests																											
	Number of course projects (works)																											
	Numbers of disciplines per semester											8		7		6		6		6		8		8		6		

	Individual tasks	
C	Calculated task	
CG	Calculated and graphic task	
R	Report	
CP	Course project	
CW	Course work	

Approved by the Academic Council of NTU "KhPI"
PROTOCOL №_____ from _____202__

Vice-rector of Scientific-and-Pedagogical Work   _____**Oleksandr TRUSH**
                                                              Signature   Full name

Head of the educational program Software Engineering   _____Yulia LITVINOVA
                                                              Signature   Full name

Head of Faculty of computer sciences and software engineering
          name of the Institute   _____**Maksim Malko**
                                          Signature   Full name

Head of the Department of Software Engineering and Management Information Technologies
          name of department   _____Mykhailo GODLEVSKYI
                                        Signature   Full name

* Practices and attestations are carried out by graduating