



MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
NATIONAL TECHNICAL UNIVERSITY "KHARKIV POLYTECHNIC INSTITUTE"

CURRICULUM

educational and professional program

APPROVED BY

Rector NTU "KhPI"

for the training first (bachelor's) level
(level of higher education)

Cybersecurity

in the field of
knowledge

F Information technologies
(code and name of the field of knowledge)

Bachelor of Cybersecurity
and information
protection

Period of study 3 years 10 months

on the basis of complete secondary education

Yevgen SOKOL

by specialty

- F5 Cybersecurity and information protection

Qualification

"__" 2026 y.

Form of study full-time

I. Schedule of education process

Course	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	
I	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	3	C	C	C	K	K	K	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	3	C	C	C	K	K	K	K	K	K	K	K	K	K
II	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	3	C	C	C	K	K	K	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	3	C	C	C	K	K	K	K	K	K	K	K	K	K
III	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	3	C	C	C	K	K	K	T	T	T	T	T	T	T	T	T	T	T	T	Π	Π	Π	Π	3	C	C	C	K	K	K	K	K	K	K	K	K	K
IV	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	3	C	C	C	K	K	K	T	T	T	T	T	T	T	T	T	T	T	Π	Π	Π	Π	C	C	A	A											

Notation:

	Theoretical training
3	Score week
C	Examination session

	Theoretical and practical training
Π	Practice

A	Protection of the control work
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K	Vacations
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II. Consolidated budget time (in weeks)

Course	Theoretical study	Exam Session	Practice	Attestation	Preparation of qualification work	Vacation	Total
I	32	8				12	52
II	32	8				12	52
III	28	8	4			12	52
IV	28	6	4	2		3	43
Total	120	30	8	2		39	199

III. Practice

Type of practice	Duration (in weeks)	Semester
Practice		
Industrial	4	6
Technological	4	8

IV. Attestation

Certification form	Semester
Defense of qualification work	
Preparation for the Unified State Examination	8
Unified state qualification exam	8

CURRICULUM CONTENT
training of the first (bachelor's) level: by specialty

F5 Cybersecurity and information protection

№ s/n	Name of the educational component	Total number				Department code
		ECTS credits	Hours	Semesters		
1	2	3	4	exam. 5	offset 6	7
1	Mandatory educational components	159,0	4770,0			66,25%
1.1	General training	53,0	1590,0			22,08%
GT 1	History and culture of Ukraine	4,0	120,0	1		310
GT 2	Foreign Language	4,0	120,0	8	7	275
GT 3	Ukrainian as a foreign language	12,0	360,0	8	3 - 7	273
GT 4	Physics	4,0	120,0	1		168
GT 5	Fundamentals of humanitarian and philosophical knowledge in professional activity	4,0	120,0	3		307
GT 6	Higher mathematics	6,0	180,0		1	324
GT 7	Fundamentals of Higher Algebra	5,0	150,0	2		324
GT 8	Language of professional training	10,0	300,0	2	1	275
GT	Physical education	4,0	120,0		1 - 2	302
1.2	Special (professional) training	106,0	3180,0			44,17%
ST 1	Introduction to the specialty. Introductory practice	3,0	90,0		1	328
ST 2	Basics of programming	4,0	120,0	1		328
ST 3	Information and coding theory	3,0	90,0	1		328
ST 4	Legal Regulation of Information Security	4,0	120,0		2	328
ST 5	Algorithms and data structures	5,0	150,0	2		328
ST 6	Physical bases of technical intelligence means	5,0	150,0		2	328
ST 7	Information security of the state	3,0	90,0		2	328
ST 8	Social Engineering Methods in Cybersecurity	4,0	120,0		3	328
ST 9	Mathematical foundations of cryptology	4,0	120,0	3		328
ST 10	Programming technologies	5,0	150,0	3		328
ST 11	Computer networks	4,0	120,0	3		328
ST 12	Security of Modern Operating Systems	6,0	180,0	4		328
ST 13	Cybersecurity Software Development	6,0	180,0	4		328
ST 14	Basics of cryptographic protection	6,0	180,0		4	328
ST 15	Fundamentals of Microprocessor System Security	4,0	120,0	5		328
ST 16	Mathematical Modeling of Security Systems	4,0	120,0	5		328
ST 17	Basics of steganographic information protection	5,0	150,0	5		328
ST 18	DevOps Security	4,0	120,0		5	328
ST 19	Web application development	6,0	180,0	6		328
ST 20	Integrated information security systems	5,0	150,0	7		328
ST 21	Web security	5,0	150,0	7		328
ST 22	Comprehensive training	4,0	120,0		8	328
ST 23	Neural Networks	4,0	120,0		8	328
ST 24	Open Source Intelligence (OSINT)	3,0	90,0		8	328
2	Practical training	12,0	360,0			5,00%
PT 1	Industrial practice*	6,0	180,0		6	328
PT 2	Technological practice*	6,0	180,0		8	328
3	Attestation*	3,0	90,0			1,25%
4	Optional educational components	66,0	1980,0			27,50%
4.1	Specialized training	23,0	690,0			9,58%
4.1.1	Profiled package of educational components 01 "Artificial Intelligence in Security Systems"	23,0	690,0			
EC 1.1	Ethical hacking	3,0	90,0	4		328
EC 1.2	Date of mining	3,0	90,0	4		328
EC 1.3	Mathematical foundations of artificial intelligence	3,0	90,0	5		328
EC 1.4	Python for artificial intelligence and machine learning	4,0	120,0	6		328
EC 1.5	Genetic algorithms	4,0	120,0	7		328
EC 1.6	Python for internet things	3,0	90,0	8		328
EC 1.7	Systems engineering	3,0	90,0	8		328
4.1.2	Profiled package of educational components 02 "Blockchain technology and security of banking systems"	23,0	690,0			
EC 2.1	Decentralised systems	3,0	90,0	4		328
EC 2.2	Risk management	3,0	90,0	4		328
EC 2.3	Blockchain: basics and application examples	3,0	90,0	5		328
EC 2.4	Security of banking systems	4,0	120,0	6		328
EC 2.5	Protecting critical infrastructure facilities	4,0	120,0	7		328
EC 2.6	Organising document management with restricted access	3,0	90,0	8		328
EC 2.7	Security in social networks	3,0	90,0	8		328
4.1.3	Profiled package of educational components 03 "Innovation Campus"	23,0	690,0			
EC 3.1	Basics of cybersecurity	3,0	90,0	4		328
EC 3.2	Development of corporate information systems (part 1)	3,0	90,0	4		328
EC 3.3	Development of corporate information systems (part 2)	3,0	90,0	5		328
EC 3.4	Databases for corporate information systems	4,0	120,0	6		328
EC 3.5	Architecture of corporate information systems	4,0	120,0	7		328
EC 3.6	Security and audit of wireless and mobile networks	3,0	90,0	8		328
EC 3.7	Protecting critical infrastructure facilities	3,0	90,0	8		328
4.2	Educational components of free choice of professional training of the general institute catalog	28,0	840,0			42,42%
ECPT 1	EC FC PT 1	4,0	120,0		3	777
ECPT 2	EC FC PT 2	4,0	120,0		4	777
ECPT 3	EC FC PT 3	4,0	120,0		5	777
ECPT 4	EC FC PT 4	4,0	120,0		6	777
ECPT 5	EC FC PT 5	4,0	120,0		6	777
ECPT 6	EC FC PT 6	4,0	120,0		7	777
ECPT 7	EC FC PT 7	4,0	120,0		7	777
4.3	Educational components of free choice of general training	12,0	360,0			18,18%
ECGT 1	EC FC GT 1	4,0	120,0		5	777
ECGT 2	EC FC GT 2	4,0	120,0		6	777
ECGT 3	EC FC GT 3	4,0	120,0		7	777
4.4	Educational components of special university choice	3,0	90,0			4,55%
ECSUC	ECSUC	3,0	90,0		3	777
	Total for education period	240,0	7200,0			

CURRICULUM №	KH-1126i
Form of study and more	i
Institute code	320
Short name of the institute	KH
Number of the educational program	11
Name of the educational program	Cybersecurity
Code of the field of knowledge	F
Industry name	Information technologies
Specialty code	F5
Name of the specialty	Cybersecurity and information protection
Level of higher education:	first (bachelor's) level
Qualifications:	Bachelor of Cybersecurity and information protection
Year (last 2 digits)	26
Responsible for information, phone number	Serhii YEVSEIEV, 095-360-66-13

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V. EDUCATION PROCESS PLAN

Code in accordance with the EPP	Name of academic discipline	Semester distribution			Number of ECTS credits	Number of hours						Distribution of classroom hours per a week and ECTS credits per a semester																Department																				
		Exams	Tests	Individual tasks		Total amount	Classroom					Independent work	I course				II course				III course				IV course																							
							Total	including			Semesters																																					
								Lectures	Laboratory works	Practical studies	1								2				3				4				5				6				7				8					
											Number of weeks in the semester																																					
											16		16		16		16		16		12		16		12																							
											Classroom hours		ECTS credits	Classroom hours	ECTS credits	Classroom hours	ECTS credits	Classroom hours	ECTS credits	Classroom hours	ECTS credits	Classroom hours	ECTS credits	Classroom hours	ECTS credits	Classroom hours	ECTS credits		Classroom hours	ECTS credits	Classroom hours	ECTS credits	Classroom hours	ECTS credits	Classroom hours	ECTS credits	Classroom hours	ECTS credits										
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	Mandatory educational components				159,0	4770,0	2052,0	736,0	684,0	632,0	2718,0	24,0	30,0	25,0	30,0	18,0	23,0	17,0	20,0	15,0	19,0	8,0	8,0	12,0	14,0	15,0	15,0																					
1.1	General training				53,0	1590,0	744,0	144,0		600,0	846,0	17,0	20,0	12,0	13,0	5,0	6,0	2,0	2,0	2,0	2,0	2,0	2,0	2,0	2,0	4,0	4,0	4,0	4,0																			
GT 1	History and culture of Ukraine	1		A	4,0	120,0	48,0	16,0		32,0	72,0	3	4																		310																	
GT 2	Foreign Language	8	7		4,0	120,0	56,0			56,0	64,0														2	2	2	2	2	2	275																	
GT 3	Ukrainian as a foreign language	8	3 - 7	A	12,0	360,0	176,0			176,0	184,0					2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	273																	
GT 4	Physics	1		C	4,0	120,0	48,0	32,0		16,0	72,0	3	4																		168																	
GT 5	Fundamentals of humanitarian and philosophical knowledge in professional activity	3		A	4,0	120,0	48,0	16,0		32,0	72,0					3	4														307																	
GT 6	Higher mathematics		1	C	6,0	180,0	80,0	32,0		48	100,0	5	6																		324																	
GT 7	Fundamentals of Higher Algebra	2		A	5,0	150,0	80,0	48,0		32,0	70,0				5	5															324																	
GT 8	Language of professional training	2	1	A	10,0	300,0	144,0			144,0	156,0	4	4		5	6															275																	
GT	Physical education		1 - 2		4,0	120,0	64,0			64,0	56,0	2,0	2,0		2,0	2,0															302																	
1.2	Special (professional) training				106,0	3180,0	1308,0	592,0	684,0	32,0	1872,0	7,0	10,0	13,0	17,0	13,0	17,0	15,0	18,0	13,0	17,0	6,0	6,0	8,0	10,0	11,0	11,0																					
ST 1	Introduction to the specialty. Introductory practice		1		3,0	90,0	32,0	16		16	58,0	2	3																		328																	
ST 2	Basics of programming	1			4,0	120,0	48,0	16	32		72,0	3	4																		328																	
ST 3	Information and coding theory	1			3,0	90,0	32,0	16	16		58,0	2	3																		328																	
ST 4	Legal Regulation of Information Security		2		4,0	120,0	48,0	32		16	72,0				3	4															328																	
ST 5	Algorithms and data structures	2			5,0	150,0	64,0	32	32		86,0				4	5															328																	
ST 6	Physical bases of technical intelligence means		2		5,0	150,0	64,0	32	32		86,0				4	5															328																	
ST 7	Information security of the state		2		3,0	90,0	32,0	16	16		58,0				2	3															328																	
ST 8	Social Engineering Methods in Cybersecurity		3		4,0	120,0	48,0	16	32		72,0						3	4													328																	
ST 9	Mathematical foundations of cryptology	3			4,0	120,0	48,0	16	32		72,0						3	4													328																	
ST 10	Programming technologies	3			5,0	150,0	64,0	32	32		86,0						4	5													328																	
ST 11	Computer networks	3		CP	4,0	120,0	48,0	16	32		72,0						3	4													328																	
ST 12	Security of Modern Operating Systems	4			6,0	180,0	80,0	32	48		100,0							5	6												328																	
ST 13	Cybersecurity Software Development	4			6,0	180,0	80,0	32	48		100,0							5	6												328																	
ST 14	Basics of cryptographic protection		4		6,0	180,0	80,0	32	48		100,0							5	6												328																	
ST 15	Fundamentals of Microprocessor System Security	5			4,0	120,0	48,0	16	32		72,0									3	4										328																	
ST 16	Mathematical Modeling of Security Systems	5			4,0	120,0	48,0	16	32		72,0									3	4										328																	
ST 17	Basics of steganographic information protection	5			5,0	150,0	64,0	32	32		86,0									4	5										328																	
ST 18	DevOps Security		5		4,0	120,0	48,0	32	16		72,0									3	4										328																	

	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
ST 19	Web application development	6		CP	6,0	180,0	72,0	36	36		108,0											6	6					328
ST 20	Integrated information security systems	7			5,0	150,0	64,0	32	32		86,0													4	5			328
ST 21	Web security	7		CP	5,0	150,0	64,0	32	32		86,0													4	5			328
ST 22	Comprehensive training		8	A	4,0	120,0	48,0	24	24		72,0															4	4	328
ST 23	Neural Networks		8		4,0	120,0	48,0	24	24		72,0															4	4	328
ST 24	Open Source Intelligence (OSINT)		8		3,0	90,0	36,0	12	24		54,0															3	3	328
2	Practical training				12,0	360,0					360,0												6,0				6,0	
PT 1	Industrial practice*		6		6,0	180,0					180,0												6,0					328
PT 2	Technological practice*		8		6,0	180,0					180,0																6,0	328
3	Attestation*				3,0	90,0					90,0																3,0	328
4	Optional educational components				66,0	1980,0	772,0	156,0	240,0		1208,0					7,0	7,0	7,0	10,0	8,0	11,0	13,0	16,0	12,0	16,0	6,0	6,0	
4.1	Specialized training				23,0	690,0	264,0	112,0	152,0		426,0							4,0	6,0	2,0	3,0	4,0	4,0	3,0	4,0	6,0	6,0	
4.1.1	Profiled package of educational components 01 "Artificial Intelligence in Security Systems"				23,0	690,0	264,0	112,0	152,0		426,0							4,0	6,0	2,0	3,0	4,0	4,0	3,0	4,0	6,0	6,0	
EC 1.1	Ethical hacking	4			3,0	90,0	32,0	16	16		58,0							2	3									328
EC 1.2	Date of mining	4			3,0	90,0	32,0	16	16		58,0							2	3									328
EC 1.3	Mathematical foundations of artificial intelligence	5			3,0	90,0	32,0	16	16		58,0									2	3							328
EC 1.4	Python for artificial intelligence and machine learning	6			4,0	120,0	48,0	24	24		72,0											4	4					328
EC 1.5	Genetic algorithms	7			4,0	120,0	48,0	16	32		72,0													3	4			328
EC 1.6	Python for internet things	8			3,0	90,0	36,0	12	24		54,0															3	3	328
EC 1.7	Systems engineering	8			3,0	90,0	36,0	12	24		54,0															3	3	328
4.1.2	Profiled package of educational components 02 "Blockchain technology and security of banking systems"				23,0	690,0	264,0	112,0	152,0		426,0							4,0	6,0	2,0	3,0	4,0	4,0	3,0	4,0	6,0	6,0	
EC 2.1	Decentralised systems	4			3,0	90,0	32,0	16,0	16,0		58,0							2	3									328
EC 2.2	Risk management	4			3,0	90,0	32,0	16,0	16,0		58,0							2	3									328
EC 2.3	Blockchain: basics and application examples	5			3,0	90,0	32,0	16,0	16,0		58,0									2	3							328
EC 2.4	Security of banking systems	6			4,0	120,0	48,0	24,0	24,0		72,0											4	4					328
EC 2.5	Protecting critical infrastructure facilities	7			4,0	120,0	48,0	16,0	32,0		72,0													3	4			328
EC 2.6	Organising document management with restricted	8			3,0	90,0	36,0	12,0	24,0		54,0															3	3	328
EC 2.7	Security in social networks	8			3,0	90,0	36,0	12,0	24,0		54,0															3	3	328
4.1.3	Profiled package of educational components a 03 "Innovation Campus"				23,0	690,0	264,0	112,0	152,0		426,0							4,0	6,0	2,0	3,0	4,0	4,0	3,0	4,0	6,0	6,0	
EC 3.1	Basics of cybersecurity	4			3,0	90,0	32,0	16	16		58,0							2	3									328
EC 3.2	Development of corporate information systems (part 1)	4			3,0	90,0	32,0	16	16		58,0							2	3									328
EC 3.3	Development of corporate information systems (part 2)	5			3,0	90,0	32,0	16	16		58,0									2	3							328
EC 3.4	Databases for corporate information systems	6			4,0	120,0	48,0	24	24		72,0											4	4					328
EC 3.5	Architecture of corporate information systems	7			4,0	120,0	48,0	16	32		72,0													3	4			328
EC 3.6	Security and audit of wireless and mobile networks	8			3,0	90,0	36,0	12	24		54,0															3	3	328
EC 3.7	Protecting critical infrastructure facilities	8			3,0	90,0	36,0	12	24		54,0															3	3	328
4.2	Educational components of free choice of professional training of the general institute catalog				28,0	840,0	312,0				528,0					3,0	4,0	3,0	4,0	3,0	4,0	6,0	8,0	6,0	8,0			
ECPT 1	EC FC PT 1		3		4,0	120,0	48,0				72,0					3	4											777
ECPT 2	EC FC PT 2		4		4,0	120,0	48,0				72,0							3	4									777

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
ECPT 3	EC FC PT 3		5		4,0	120,0	48,0				72,0									3	4							777
ECPT 4	EC FC PT 4		6		4,0	120,0	36,0				84,0											3	4					777
ECPT 5	EC FC PT 5		6		4,0	120,0	36,0				84,0											3	4					777
ECPT 6	EC FC PT 6		7		4,0	120,0	48,0				72,0													3	4			777
ECPT 7	EC FC PT 7		7		4,0	120,0	48,0				72,0													3	4			777
4.3	Educational components of free choice of general training				12,0	360,0	132,0	44,0	88,0		228,0									3,0	4,0	3,0	4,0	3,0	4,0			
ECGT 1	EC FC GT 1		5		4,0	120,0	48,0	16	32		72,0									3	4							777
ECGT 2	EC FC GT 2		6		4,0	120,0	36,0	12	24		84,0											3	4					777
ECGT 3	EC FC GT 3		7		4,0	120,0	48,0	16	32		72,0													3	4			777
4.4	Educational components of special university choice				3,0	90,0	64,0				26,0					4,0	3,0											
ECSUC	ECSUC		3		3,0	90,0	64,0				26,0					4	3											777
	Total for education period				240,0	7200,0	2824,0	892,0	924,0	632,0	4376,0	24,0	30,0	25,0	30,0	25,0	30,0	24,0	30,0	23,0	30,0	21,0	30,0	24,0	30,0	21,0	30,0	
	Hours per week											24,0		25,0		25,0		24,0		23,0		21,0		24,0		21,0		
	Number of exams											4		3		4		4		4		2		3		4		
	Number of tests											4		4		4		3		4		5		5		4		
	Number of course projects (works)															1						1		1				
	Numbers of disciplines per semester											8		7		8		7		8		7		8		8		

Individual tasks	
P	Calculated task
PI	Calculated and graphic task
PE	Report
KП	Course project
KP	Course work

Approved by the Academic Council of NTU "KhPI"
Protocol №__ from ____ 2026

Vice-rector for scientific and pedagogical work

name of the institute

signature name

Guarantor of the academic program
"Cybersecurity"

program name

signature name

Director of the Institute of Computer Science
and Information Technology

name of the institute

signature name

Head of the Cybersecurity Department

department name

signature name

* Practices and certification are conducted by graduating departments

List 2 - Educational components of special university choice

Code in accordance with the EPP	Name of academic discipline	Semester distribution			Number of ECTS credits	Total amount	Number of hours					Distribution of classroom hours per a week and ECTS credits per a semester																Department				
		Exams	Tests	Individual tasks			Total	Classroom			Independent work	I course		II course		III course		IV course														
								including				S e m e s t e r s																				
								Lectures	Laboratory works	Practical studies		1	2	3	4	5	6	7	8													
												Number of weeks in the semester																				
												16		16		16		16		16		12		16		12						
												Classroom hours	ECTS creits	Classroom hours	ECTS creits	Classroom hours	ECTS creits	Classroom hours	ECTS creits	Classroom hours	ECTS creits	Classroom hours	ECTS creits	Classroom hours	ECTS creits							
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				
4.4	Educational components of special university choice																															
ECSUC 1	Physical education.		3		3,0	90,0	64,0	32,0		32,0	58,0						4,0	3,0													302	KH-1125i
ECSUC 2	Strength training: modern types		3		3,0	90,0	64,0	32,0		32,0	58,0						4,0	3,0													302	KH-1125i
ECSUC 3	Health and rehabilitation practices		3		3,0	90,0	64,0	32,0		32,0	58,0						4,0	3,0													302	KH-1125i
ECSUC 4	Physical training with elements of self-defense		3		3,0	90,0	64,0	32,0		32,0	58,0						4,0	3,0													302	KH-1125i
ECSUC 5	Health swimming		3		3,0	90,0	64,0	32,0		32,0	58,0						4,0	3,0													302	KH-1125i

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List 1 - Educational components of free choice of professional training

EPP code	Name of academic discipline	Distribution by semesters			Number of ECTS credits	Number of hours						Distribution of classroom hours per week and ECTS credits by semesters																Department
		Exams	Credit tests	Individual tasks		Total	Classroom			Individual work	I year				II year				III year				IV year					
							including				Semesters																	
											1		2		3		4		5		6		7		8			
							Number of weeks per semester																					
							16		16		16		16		12		16		12									
							Classroom m	ECTS credits	Classroom m		ECTS credits	Classroom m	ECTS credits	Classroom m	ECTS credits	Classroom m	ECTS credits	Classroom m	ECTS credits	Classroom m	ECTS credits	Classroom m	ECTS credits					
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
4.2	Educational components of free choice of professional training																											
ECPT 1	Legal regulation of information security		3		4,0	120,0	48,0	32,0		16,0	72,0						3,0	4,0										328
ECPT 2	Intellectual property of security systems		3		4,0	120,0	48,0	32,0		16,0	72,0						3,0	4,0										328
ECPT 3	Security in Information System Design		3		4,0	120,0	48,0	32,0	16,0		72,0					3,0	4,0											328
ECPT 4	Information Warfare Technologies		4		4,0	120,0	48,0	32,0	16,0		72,0								3,0	4,0								328
ECPT 5	Protecting e-commerce and multiservice systems		4		4,0	120,0	48,0	32,0	16,0		72,0								3,0	4,0								328
ECPT 6	Databases with SQL and Python		4		4,0	120,0	48,0	32,0	16,0		72,0							3,0	4,0									328
ECPT 7	Wireless System Security		5		4,0	120,0	48,0	32,0	16,0		72,0									3,0	4,0							328
ECPT 8	Fundamentals of planning and administration of information resource access services		5		4,0	120,0	48,0	32,0	16,0		72,0									3,0	4,0							328
ECPT 9	Risk theory in cybersecurity		5		4,0	120,0	48,0	32,0	16,0		72,0									3,0	4,0							328
ECPT 10	Cryptanalysis methods		6		4,0	120,0	36,0	24,0	12,0		84,0											3,0	4,0					328
ECPT 11	Internet science. Navigation in complex systems		6		4,0	120,0	36,0	24,0	12,0		84,0												3,0	4,0				328
ECPT 12	Development of server applications (Java Spring Boot)		6		4,0	120,0	36,0	24,0	12,0		84,0													3,0	4,0			328
ECPT 13	Technical support of information protection		6		4,0	120,0	36,0	24,0	12,0		84,0													3,0	4,0			328
ECPT 14	Cloud security		6		4,0	120,0	36,0	24,0	12,0		84,0													3,0	4,0			328
ECPT 15	Testing mobile applications		6		4,0	120,0	36,0	24,0	12,0		84,0													3,0	4,0			328
ECPT 16	Administering UNIX-like systems		7		4,0	120,0	48,0	32,0	16,0		72,0														3,0	4,0		328
ECPT 17	Organisational support for information security		7		4,0	120,0	48,0	32,0	16,0		72,0														3,0	4,0		328
ECPT 18	IT project management and security		7		4,0	120,0	48,0	32,0	16,0		72,0														3,0	4,0		328
ECPT 19	Smart Technology Security		7		4,0	120,0	48,0	32,0	16,0		72,0														3,0	4,0		328
ECPT 20	Business intelligence		7		4,0	120,0	48,0	32,0	16,0		72,0														3,0	4,0		328
ECPT 21	Evolutionary programming		7		4,0	120,0	48,0	32,0	16,0		72,0														3,0	4,0		328