National Research University Higher School of Economics (HSE)

Curriculum
Speciality 10.05.01 Cyber Security
Educational Programme "Cyber Security"
Implementing unit: Tikhonov Moscow Institute of Electronics and Mathematics, HSE - Moscow
5 th, 2023/2024 academic year

APPROVED
26.01.2023
Vice Rector

ROSHCHIN S.Y.

Signed with EDS

Length of Programme: 6 years
Years of Study: 2019/2020 - 2024/2025
Mode of Study: Full Time
Degree: Specialist's degree

Block Code	Course	Subject type	Department	Credits	Total Academic Hours	Contact Hours	Allocation of Contact Hours				Additional Information
							1	2	3	4	
	Вся образовательная программа			**4,00**	**152**	**34**					
	Block 1. Courses (Modules)										
	Professional Programme Part (Major)										
	Basic Components			**28,00**	**1 064**	**300**					
1	Operating Systems Security	C	Department of Computer Security	3,00	114	44	20	24A			
2	Software and Data Security	C	Department of Computer Security	5,00	190	48			24	24A	
3	Computer Networks	C	School of Computer Engineering	6,00	228	44	20	24A			
4	Cryptographic Protocols	C	Department of Computer Security	5,00	190	52			28	24A	
5	Basics of Building Protected Computer Networks	C	Department of Computer Security	3,00	114	48	24	24A			
6	Technical Protection of Information	C	Department of Computer Security	6,00	228	64			36	28A	
	Вариативная профильная часть, включая дисциплины специализаций и дисциплины по выбору			**28,00**	**1 064**	**332**					
1	Academic English Writing	C	School of Foreign Languages	3,00	114	16				16A	Foreign language
	Блок дисциплин по выбору			**15,00**	**570**	**168**		**10**	**86**	**72**	
	Block 1			**15,00**	**570**	**152**					
1	Implementation Analysis of Information Security Algorithms	E	Department of Computer Security	4,00	152	24		10	14A		
2	Servers and Workstations Security	E	Department of Computer Security	4,00	152	40			20	20A	
3	Methods for Protecting and dePersonalizing Personal Data	E	Department of Computer Security	3,00	114	32			16	16A	Foreign language

#	Subject	Type	Department	Credits	Hours						Comment
4	Intrusion Detection Systems	E	Department of Computer Security	4,00	152	56			28	28A	
Block 2				**15,00**	**570**	**176**					
1	Public Key Infrastructure	E	Department of Computer Security	3,00	114	32			16A	16A	Foreign language
2	Quantum Computations	E	Department of Computer Security	4,00	152	60		28	32A		
3	Methods of Algebraic Geometry in Cryptography	E	Department of Computer Security	4,00	152	52	24	28A			
4	Methods of Synthesis and Analysis of Modern Cryptographic Algorithms	E	Department of Computer Security	4,00	152	32		12	20A		
5	Parallel Computing	C	Department of Computer Security	6,00	228	96	24	24A	24	24A	Online Course
6	Programming of Information Security Algorithms	C	Department of Computer Security	4,00	152	52	24A	28A			
Block 2. Practice(s), Project and(or) Research work				**4,00**	**152**	**34**					
Research Work				**4,00**	**152**	**32**					
1	Research Seminar	C	Department of Computer Security	4,00	152	32	8	8	8	8A	
Internships						**2**					
1	Work Experience Internship	C				2	2A				

Curriculum agreed:

Academic Supervisor	LOS A.B.	13.01.2023
Dean	KROUK E.A.	14.01.2023
Head of Centre for Educational Model Design	LEPESHKIN I.A.	25.01.2023

* Subject type:

Compulsory course	C
Elective course	E