



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, 2024/2025 academic year

APPROVED
03.05.2024
Vice Rector
ROSHCHIN S.Y.
Signed with EDS

Length of Programme: 5 years 6 months
Years of Study: 2020/2021 - 2025/2026
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				60,00	2 280	558	126	128	150	154	
Block 1. Courses (Modules)				56,00	2 128	532	118	122	144	148	
Professional Programme Part (Major)				56,00	2 128	532	118	122	144	148	
Basic Components				26,00	988	328	64	68	104	92	
1	Operating Systems Security	C	Department of Computer Security	3,00	114	40	20	20A			
2	Software and Data Security	C	Department of Computer Security	4,00	152	40			20	20A	
3	Servers and Workstations Security	C	Department of Computer Security	3,00	114	40			20	20A	
4	Computer Networks	C	School of Computer Engineering	3,00	114	44	20	24A			
5	Cryptographic Protocols	C	Department of Applied Mathematics	4,00	152	52			28	24A	
6	Basics of Building Protected Computer Networks	C	Department of Computer Security	3,00	114	48	24	24A			
7	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				15,00	570	204	54	54	40	56	
1	Academic English Writing	C	School of Foreign Languages	3,00	114	16				16A	Foreign language
2	Parallel Computing	C	Department of Computer Security	4,00	152	64	16	16A	16	16A	Online Course
3	Programming of Information Security Algorithms	C	Department of Computer Security	4,00	152	52	26A	26A			
4	Intrusion Detection Systems	C	Department of Computer Security	4,00	152	72	12	12A	24	24A	
Elective Courses				15,00	570						

Elective Courses 1				15,00	570	150	34	54	46	16	
1	Implementation Analysis of Information Security Algorithms	E	Department of Computer Security	3,00	114	24		10	14A		
2	Methods for Protecting and dePersonalizing Personal Data	E	Department of Computer Security	3,00	114	32			16	16A	Foreign language
3	Fundamentals of Computer incident investigation	E	Department of Computer Security	3,00	114	32		16	16A		
4	Standard and Custom Interfaces	E	School of Computer Engineering	6,00	228	62	34	28A			
Elective Courses 2				15,00	570	160	24	68	68		
1	Public Key Infrastructure	E	Department of Computer Security	3,00	114	16			16A		Foreign language
2	Quantum Computations	E	Department of Applied Mathematics	4,00	152	60		28	32A		
3	Methods of Algebraic Geometry in Cryptography	E	Department of Applied Mathematics	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		
Block 2. Practice(s), Project and(or) Research work				4,00	152	26	8	6	6	6	6
Research Work				4,00	152	24	6	6	6	6	6
1	Research Seminar	C	Department of Computer Security	4,00	152	24	6	6	6	6A	
Internships						2	2				
1	Work Experience Internship	C				2	2A				

Curriculum agreed:

Academic Supervisor	LOS A.B.	17.04.2024
Dean	KROUK E.A.	18.04.2024
Head of Centre for Educational Model Design	LEPESHKIN I.A.	26.04.2024

* Subject type:

Compulsory course

C

Elective course

E