



National Research University Higher School of Economics (HSE)

Basic Curriculum

Field of study 10.03.01 Information Security
Educational Programme "Information Security"

Implementing unit: Tikhonov Moscow Institute of Electronics and Mathematics, HSE - Moscow

Years of Study: 2020/2021 - 2023/2024

Length of Programme: 4 years

Mode of Study: Full Time

Degree: Bachelor's degree

APPROVED
29.03.2021
Vice Rector
ROSHCHIN S.Y.
Signed with EDS

Block Code	Course	Subject type	Credits	Credits by Years				Planned Educational Programme Development Results
				1	2	3	4	
	Degree Programme		240,00	60,00	60,00	60,00	60,00	
	Major		149,00	50,00	39,00	29,00	31,00	
	Core Professional Block (Major)		82,00	44,00	32,00		6,00	
	Subject Areas		82,00	44,00	32,00		6,00	
	Mathematical Analysis		16,00	12,00	4,00			
1	Calculus	C	16,00	12,00	4,00			GPC-1, GPC-2
	Algebra and Geometry		5,00	5,00				
1	Algebra and Geometry	C	5,00	5,00				GPC-2
	Discrete Mathematics		7,00	4,00	3,00			
1	Mathematical Logic	C	3,00		3,00			GPC-2
2	Discrete Mathematics	C	4,00	4,00				GPC-2, GPC-6
	Probability Theory and Mathematical Statistics		5,00		5,00			
1	Probability Theory and Mathematical Statistics	C	5,00		5,00			GPC-2
	Computer Science		4,00	4,00				
1	Computer Science	C	4,00	4,00				GPC-4, GPC-6
	Algorithmisation and Programming		12,00	12,00				
1	Курсовая работа по дисциплине "Алгоритмизация и программирование"	C						GPC-2, UC-1, UC-2
2	Algorithmization and Programming	C	12,00	12,00				GPC-1, GPC-2, UC-1, UC-2
	Modeling		21,00	7,00	14,00			
1	Electronics and Electric Engineering	C	6,00		6,00			GPC-1, GPC-3
2	Modelling of Systems and Processes	C	4,00		4,00			GPC-2
3	Physics	C	11,00	7,00	4,00			GPC-1, PC-3
	Fundamentals of Information Security		6,00		6,00			
1	Mathematical Methods of Information Security	C	6,00		6,00			GPC-2

	Organizational and Legal Support for Information Security		6,00				6,00	
1	Organizational and Legal Support for Information Security	C	6,00				6,00	GPC-5, GPC-6, GPC-7, UC-1, UC-2
	Elective Professional Block (Major)		67,00	6,00	7,00	29,00	25,00	
	Научно-исследовательский/Проектный семинар		25,00	6,00	7,00	5,00	7,00	
1	Research Seminar	C	7,00				7,00	GPC-2, GPC-4, GPC-5, PC-3, PC-4, UC-1, UC-2
2	Project Seminar	C	12,00		7,00	5,00		PC-4, UC-5
3	Project seminar on information security	C	4,00	4,00				GPC-1, GPC-2, PC-1, PC-2, UC-1, UC-2
4	Project Seminar 1	C	2,00	2,00				GPC-1, GPC-2, PC-1, PC-2, UC-1, UC-2
	Дисциплины вариативной профессиональной части (по выбору ОП)		42,00			24,00	18,00	
1	Operation systems security	C	6,00				6,00	GPC-2, GPC-4, PC-2, PC-3, UC-1, UC-2
2	Information Security Risk Management	C	6,00				6,00	GPC-2, GPC-4, GPC-7, PC-3, UC-1, UC-2
3	Decision systems (offered in a foreign language)	C	6,00				6,00	GPC-4, GPC-5, PC-1, PC-2, UC-1, UC-2
4	Software and Hardware Information Protection	C	4,00			4,00		PC-3
5	Coding Theory Methods	C	5,00			5,00		GPC-2, PC-1, PC-2, UC-1
6	Digital Circuity and Computer Architecture	C	8,00			8,00		GPC-3, PC-2, UC-2
7	System Programming	C	7,00			7,00		PC-1, PC-2, UC-1
	Internship		46,00	5,00	10,00	8,00	23,00	
	Professional Internship		8,00	5,00		3,00		
1	Work Experience Internship	C	3,00			3,00		GPC-1, GPC-2, GPC-3, GPC-4, GPC-5, GPC-6, GPC-7, PC-1, PC-2, PC-3, PC-4, UC-1, UC-2, UC-3, UC-4, UC-5, UC-6, UC-7, UC-8
2	Computer workshop: administration of systems and networks	C	5,00	5,00				GPC-1, GPC-2, PC-1, PC-2, UC-1, UC-2
	Project Internship		10,00		5,00	5,00		
1	Проект студентов	E	10,00		5,00	5,00		GPC-1, GPC-2, GPC-3, GPC-4, GPC-5, GPC-6, GPC-7, PC-1, PC-2, PC-3, PC-4, UC-1, UC-2, UC-3, UC-4, UC-5, UC-6, UC-7, UC-8
	Research Internship		28,00		5,00		23,00	
1	Graduation Internship	C	10,00				10,00	GPC-1, GPC-2, GPC-4, PC-1, PC-4, UC-1, UC-2, UC-3, UC-4, UC-6, UC-8
2	Preparation of Graduation Thesis	C	13,00				13,00	GPC-1, GPC-2, GPC-3, GPC-4, GPC-5, GPC-6, GPC-7, PC-1, PC-2, PC-3, PC-4, UC-1, UC-2, UC-3, UC-4, UC-5, UC-6, UC-7, UC-8
3	Educational Science Research Internship	C	5,00		5,00			GPC-3, PC-2
	General Courses		14,00	5,00	1,00	8,00		
	Core General Courses		2,00	1,00	1,00			
1	Safe Living Basics	C	1,00	1,00				GPC-6, UC-1, UC-8

2	Physical Training	C	1,00		1,00			UC-7
	Optional General Courses		12,00	4,00		8,00		
1	History	C	4,00	4,00				UC-1, UC-5, UC-7
2	Legal Literacy	C	4,00			4,00		GPC-4, UC-10, UC-11, UC-7
3	Economics	C	4,00			4,00		UC-11, UC-4, UC-6, UC-9
	Minor		20,00		10,00	10,00		
1	Minor	C	20,00		10,00	10,00		GPC-1, GPC-2, PC-1, PC-2, UC-1, UC-2
	English		1,00				1,00	
	Examinations		1,00				1,00	
1	Project Proposal (offered in a foreign language)	C	1,00				1,00	UC-4
2	English Language Integrative Exam	C						UC-5
3	Independent English Exam (offered in a foreign language)	C						UC-4
	Optional Courses							
1	Academic English Writing (offered in a foreign language)	O	2,00				2,00	UC-2, UC-4
2	English	O	8,00	8,00				UC-4, UC-5
3	English	O	6,00		6,00			UC-4, UC-5
	Data Culture		5,00			5,00		
1	Machine Learning (offered in a foreign language)	C	5,00			5,00		GPC-2, GPC-4, UC-1
	Final State Certification (FSC)		5,00				5,00	
	Thesis Work		5,00				5,00	
1	Presenting of Graduation Thesis	C	5,00				5,00	GPC-1, GPC-2, GPC-3, GPC-4, GPC-5, GPC-6, GPC-7, PC-1, PC-2, PC-3, PC-4, UC-1, UC-10, UC-11, UC-2, UC-3, UC-4, UC-5, UC-6, UC-7, UC-8, UC-9

Curriculum agreed:

Academic Supervisor	IVANOV F.I.	09.03.2021
Dean	KROUK E.A.	11.03.2021
Head of Centre for Educational Model Design	LEPESHKIN I.A.	24.03.2021

* Subject type:

Compulsory course	C
Elective course	E
Optional course	O