



National Research University Higher School of Economics (HSE)

Basic Curriculum

Field of study 10.04.01 Information Security
 Educational Programme "Information Security of Cyber-physical Systems"
 Trajectories: "Information Security of Cyber-physical Systems"

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

Years of Study: 2023/2024 - 2024/2025

Length of Programme: 2 years

Mode of Study: Full Time

Degree: Master's degree / MBA

APPROVED
 16.05.2023
 Vice Rector
 ROSHCHIN S.Y.
 Signed with EDS

Block Code	Course	Subject type	Credits	Credits by Years		Planned Educational Programme Development Results
				1	2	
	Degree Programme		120,00	60,00	60,00	
	Information Security of Cyber-physical Systems (General track)		120,00	60,00	60,00	
	Key Seminars		18,00	6,00	12,00	
1	Mentor's Seminar	C	9,00	3,00	6,00	GPC-2, GPC-4, PC-1, PC-3, PC-5, UC-1, UC-2, UC-3, UC-4, UC-5, UC-6
2	Project Seminar	C	3,00	3,00		GPC-3, GPC-5, PC-1, PC-3, UC-2, UC-4, UC-6
3	Research Seminar	C	6,00		6,00	GPC-1, GPC-4, UC-1, UC-2, UC-3, UC-5, UC-6
	Internship		27,00	9,00	18,00	
	Project Internship		6,00	6,00		
1	Project	C	6,00	6,00		GPC-1, GPC-2, GPC-3, GPC-4, GPC-5, PC-1, PC-2, PC-3, PC-4, PC-5, UC-1, UC-2, UC-3, UC-4, UC-5, UC-6
	Professional Internship		3,00	3,00		
1	Work Experience Internship	C	3,00	3,00		GPC-1, GPC-2, GPC-3, GPC-4, GPC-5, PC-1, PC-2, PC-3, PC-4, PC-5, UC-1, UC-2, UC-3, UC-4, UC-5, UC-6
	Research Internship		18,00		18,00	
1	Graduation Thesis	C	18,00		18,00	GPC-1, GPC-2, GPC-3, GPC-4, GPC-5, PC-1, PC-2, PC-3, PC-4, PC-5, UC-1, UC-2, UC-3, UC-4, UC-5, UC-6
	Major		54,00	36,00	18,00	

Elective Courses			12,00	12,00		
1	Secure Operating Systems	E	6,00	6,00		GPC-2, GPC-3, GPC-4, PC-2, PC-3, PC-4, UC-2, UC-3, UC-4, UC-5
2	Cryptographic Protocols	E	6,00	6,00		GPC-2, GPC-3, GPC-4, PC-2, PC-3, PC-4, UC-1, UC-2, UC-5, UC-6
3	Regulatory support for information security	E	6,00	6,00		GPC-2, GPC-3, GPC-4, PC-2, PC-3, PC-4, UC-2, UC-3, UC-4, UC-5
Components of the Field of Study			42,00	24,00	18,00	
1	Protection of computer networks and systems	C	12,00	12,00		GPC-1, GPC-3, GPC-5, PC-2, PC-3, PC-4, UC-1, UC-3, UC-5
2	Development of protected software systems	C	12,00	12,00		GPC-2, GPC-3, GPC-4, PC-2, PC-3, PC-4, UC-2, UC-3, UC-4, UC-5
3	Secure Information Infrastructure	C	6,00		6,00	GPC-1, GPC-3, GPC-5, UC-1, UC-3, UC-5
4	Computer attack protection technologies	C	6,00		6,00	GPC-2, GPC-4, PC-2, PC-4, UC-1, UC-3, UC-5
5	Pentesting technologies	C	6,00		6,00	GPC-2, GPC-3, GPC-4, PC-2, PC-4, UC-1, UC-3
Magolego			15,00	9,00	6,00	
1	All-university Pool MAGOLEGO Courses	C	15,00	9,00	6,00	GPC-1, GPC-2, GPC-4, GPC-5, UC-1, UC-2, UC-3, UC-4, UC-5, UC-6
Final State Certification (FSC)			6,00		6,00	
1	Final Qualification Paper	C	6,00		6,00	GPC-1, GPC-2, GPC-3, GPC-4, GPC-5, PC-1, PC-2, PC-3, PC-4, PC-5, UC-1, UC-2, UC-3, UC-4, UC-5, UC-6

Curriculum agreed:

Academic Supervisor	EVSYUTIN O.O.	10.05.2023
Dean	KROUK E.A.	11.05.2023
Head of Centre for Educational Model Design	LEPESHKIN I.A.	16.05.2023

* Subject type:

Compulsory course	C
Elective course	E