



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: 2022/2023 - 2023/2024

Length of Programme: 2 years

Mode of Study: Full Time

Degree: Master's degree / MBA

APPROVED  
 20.05.2022  
 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	Research Seminar	C	6,00		6,00	GPC-1, GPC-2, PC-2, PC-4, UC-1, UC-2, UC-3, UC-4, UC-5, UC-6
2	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
3	Project seminar on information security	C	3,00	3,00		GPC-3, GPC-5, PC-1, PC-3, UC-2, UC-4, UC-6
	Internship		33,00	15,00	18,00	
	Project Internship		6,00	6,00		
1	Project	E	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		9,00	9,00		
1	Work Experience Internship	C	9,00	9,00		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		48,00	30,00	18,00	

	Components of the Field of Study		48,00	30,00	18,00	
1	Secure Information Infrastructure	E	6,00		6,00	GPC-1, GPC-3, GPC-5, UC-1, UC-3, UC-5
2	Pentesting technologies	E	6,00		6,00	GPC-2, GPC-4, GPC-5, PC-2, PC-4, UC-1, UC-3, UC-5
3	Computer attack protection technologies	E	6,00		6,00	GPC-2, GPC-4, PC-2, PC-4, UC-1, UC-3, UC-5
4	Cryptographic Protocols	C	6,00	6,00		GPC-2, GPC-3, GPC-4, PC-2, PC-3, PC-4, UC-1, UC-2, UC-5, UC-6
5	Development of protected software systems	E	12,00	12,00		GPC-2, GPC-3, GPC-4, PC-2, PC-3, PC-4, UC-2, UC-3, UC-4, UC-5
6	Protection of computer networks and systems	E	12,00	12,00		GPC-2, GPC-3, GPC-4, PC-2, PC-3, PC-4, UC-2, UC-3, UC-4, UC-5
7	Cryptographic Methods of 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
8	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
	<b>Magolego</b>		<b>15,00</b>	<b>9,00</b>	<b>6,00</b>	
1	All-university Pool MAGOLEGO Courses	E	15,00	9,00	6,00	GPC-1, GPC-2, GPC-3, GPC-4, GPC-5, UC-1, UC-2, UC-3, UC-4, UC-5, UC-6
	<b>Final State Certification (FSC)</b>		<b>6,00</b>		<b>6,00</b>	
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.	19.05.2022
Dean	KROUK E.A.	20.05.2022
Head of Centre for Educational Model Design	LEPESHKIN I.A.	20.05.2022

\* Subject type:

Compulsory course	C
Elective course	E