



National Research University Higher School of Economics (HSE)

Curriculum

Field of study 11.03.02 Infocommunication Technologies and Systems

Educational Programme "Infocommunication Technologies and Systems"

Specializations: "Electronics of Infocommunication Technologies and Communication Systems", "Info Telecommunication Technologies", "Infocommunication Technologies and Cyber-physical Systems", "Quantum Infocommunication Technologies"

Implementing unit: Tikhonov Moscow Institute of Electronics and Mathematics, HSE - Moscow
3 rd, 2024/2025 academic year

APPROVED

17.04.2024

Vice Rector

ROSHCHIN S.Y.

Signed with EDS

Length of Programme: 4 years

Years of Study: 2022/2023 - 2025/2026

Mode of Study: Full Time

Degree: Bachelor's degree

Block Code	Course	Subject type	Department	Credits	Total Academic Hours	Contact Hours	Allocation of Contact Hours				Additional Information
							1	2	3	4	
Degree Programme				60,00	2 280	740	158	184	214	184	
Data Culture				1,00	38	6		2	2	2	
1	External Examinations on Digital Skills. Final Level	C	отдел развития цифровых компетенций			2		2A			
2	Data Science, AI and Generative Models Independent Test. Intermediate	C	отдел развития цифровых компетенций	1,00	38	2				2A	Online Course
3	Independent Programming Test. Intermediate	C	отдел развития цифровых компетенций			2			2A		Online Course
Major				37,00	1 406	546	120	144	150	132	
Elective Professional Block (Major)				37,00	1 406	546	120	144	150	132	
Elective Courses				10,00	380	136	28	28	40	40	
Infocommunication Technologies and Cyber-physical Systems				10,00	380	136	28	28	40	40	
1	IoT hardware design fundamentals	C	School of Electronic Engineering	5,00	190	80			40A	40A	
2	Information and Coding Theories	C	кафедра информационной безопасности киберфизических систем	5,00	190	56	28	28A			
Info Telecommunication Technologies				10,00	380	136	28	28	40	40	
1	Principles of standardization of telecommunication systems	C	School of Electronic Engineering	5,00	190	80			40	40A	

2	Information and Coding Theories	C	кафедра информационной безопасности киберфизических систем	5,00	190	56	28	28A			
Quantum Infocommunication Technologies				10,00	380	124	24	24	38	38	
1	Mathematical methods of physics	C	School of Electronic Engineering	5,00	190	48	24	24A			
2	Physical foundations of quantum phenomena and devices	C	School of Electronic Engineering	5,00	190	76			38	38A	
Electronics of Infocommunication Technologies and Communication Systems				10,00	380	188	34	34	64	56	
1	Information Technologies of Telecommunications Devices and Systems Development	C	School of Electronic Engineering	3,00	114	64			64A		
2	Communication Technologies and Systems Modeling Basics	C	School of Electronic Engineering	4,00	152	68	34	34A			
3	Basics of Television and Radiocommunications	C	School of Electronic Engineering	3,00	114	56				56A	
Дисциплины по выбору ОП				22,00	836	328	72	96	88	72	
1	Machine Learning	C	School of Electronic Engineering	3,00	114	48		24	24A		
2	Foundations of Computational Methods	C	School of Electronic Engineering	3,00	114	32	16	16A			Foreign language
3	Circuit Engineering of Telecommunication Devices	C	School of Electronic Engineering	4,00	152	56	28	28A			
4	Electronic Devices and Communication Means Physics	C	School of Electronic Engineering	4,00	152	64			28	36A	
5	Digital Signal Processing	C	School of Electronic Engineering	4,00	152	72			36	36A	
6	Electromagnetic Fields and Waves in Contemporary Telecommunications	C	School of Electronic Engineering	4,00	152	56	28A	28A			
Научно-исследовательские и проектные семинары				5,00	190	82	20	20	22	20	
1	Project Workshop "Tools in Project Activities"	C	School of Electronic Engineering	5,00	190	82	20	20	22	20A	
Minor				10,00	380	152	38	38	38	38	
1	Minor	E		10,00	380	152	38	38A	38	38A	
English Examinations						2			2		
English Examinations						2			2		
1	Independent English Exam	C	School of Foreign Languages			2			2A		Foreign language
General Courses				4,00	152	30			20	10	
Optional General Courses				4,00	152	30			20	10	
1	Legal Literacy	C	департамент теории права и сравнительного правоведения	4,00	152	30			20	10A	Online Course
Internship				8,00	304	4			2	2	
Project Internship				5,00	190	2				2	
1	Research or Applied Project	C		5,00	190	2				2A	
Professional Internship				3,00	114	2			2		
1	Work Experience Internship	C		3,00	114	2			2A		

Curriculum agreed:

Academic Supervisor	ELIZAROV A.A.	26.02.2024
Dean	KROUK E.A.	26.02.2024
Head of Centre for Educational Model Design	LEPESHKIN I.A.	17.04.2024

* Subject type:

Compulsory course
Elective course
Optional course

C
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