



National Research University Higher School of Economics (HSE)

Curriculum

Field of study 09.04.01 Information Science and Computation
Technology

Educational Programme "Computer Systems and Networks"

Trajectories: "Computer Networks", "Computing Systems and
Complexes", "Highload Systems and Code Optimization",
"Information - Analytical Systems"

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

1 st, 2022/2023 academic year

APPROVED

13.10.2022

Vice Rector

ROSHCHIN S.Y.

Signed with EDS

Length of Programme: 2 years

Years of Study: 2022/2023 - 2023/2024

Mode of Study: Full Time

Degree: Master's degree / MBA

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	538	522	294	522	282	
	Highload Systems and Code Optimization (Applied track)			60,00	2 280	422	92	88	144	98	
	Major			36,00	1 368	374	92	74	128	80	
	Обязательные дисциплины программы			36,00	1 368	374	92	74	128	80	
1	Web applications development	C	School of Computer Engineering	6,00	228	26		10	16A		
2	Distributed Databases and Network Computing	C	School of Computer Engineering	9,00	342	94	30	32A	32A		
3	System Analysis and Complex Systems Design	C	School of Computer Engineering	3,00	114	36	36A				
4	Software Engineering	C	School of Computer Engineering	3,00	114	26	26A				
5	Advanced C++	C	School of Computer Engineering	9,00	342	112		32A	40	40A	Online Course
6	Programming languages and compilers	C	School of Computer Engineering	6,00	228	80			40	40A	
	Key Seminars			3,00	114	42		12	14	16	
1	Highload systems and code optimization	C	School of Computer Engineering	3,00	114	42		12	14A	16A	
	Magolego			6,00	228						
1	All-university Pool MAGOLEGO Courses	E		6,00	228						
	Internship			15,00	570	6		2	2	2	
	Project Internship			6,00	228	6		2	2	2	

1	Project	E		6,00	228	6		2A	2A	2A	
	Professional Internship			9,00	342						
1	Work Experience Internship	C		9,00	342						
	Computing Systems and Complexes (General track)			60,00	2 280	540	174	98	174	94	
	Major			39,00	1 482	420	146	68	146	60	
	Components of the Field of Study			39,00	1 482	420	146	68	146	60	
1	Introduction to Data Analysis	C	School of Computer Engineering	3,00	114	28	28A				
2	Fundamentals of Information and Network Technologies	C	School of Computer Engineering	3,00	114	28	28A				
3	Distributed Databases and Network Computing	C	School of Computer Engineering	9,00	342	94	30	32A	32A		
4	System Analysis and Complex Systems Design	C	School of Computer Engineering	3,00	114	36	36A				
5	Circuit Simulation Systems	C	School of Computer Engineering	6,00	228	62			36	26A	
6	Modern Computer Systems	C	School of Computer Engineering	6,00	228	76		38	38A		Online Course
7	Optimizing Compilation Technologies	C	School of Computer Engineering	6,00	228	62			36	26A	
8	Software Engineering	C	School of Computer Engineering	3,00	114	26	26A				
	Key Seminars			9,00	342	118	28	30	28	32	
1	Research Seminar	C	School of Computer Engineering	3,00	114	60	14	16	14	16A	
2	Project Seminar	C	School of Computer Engineering	3,00	114	42	10	10	10	12A	
3	Mentor's Seminar "Computing Systems and Complexes"	C	School of Computer Engineering	3,00	114	16	4	4A	4	4A	
	Magolego			6,00	228						
1	All-university Pool MAGOLEGO Courses	C		6,00	228						
	Internship			6,00	228	2				2	
	Project Internship			6,00	228	2				2	
1	Project	E		6,00	228	2				2A	
	Information - Analytical Systems (General track)			60,00	2 280	540	174	98	174	94	
	Major			39,00	1 482	420	146	68	146	60	
	Components of the Field of Study			39,00	1 482	420	146	68	146	60	
1	Corporate Information-Analytical Systems	C	School of Computer Engineering	6,00	228	62			36	26A	
2	Methods, Models, Technologies and Technological Platforms for Trainable Expert Systems Development Based on Various Data Types	C	School of Computer Engineering	6,00	228	62			36	26A	
3	Introduction to Data Analysis	C	School of Computer Engineering	3,00	114	28	28A				
4	Fundamentals of Information and Network Technologies	C	School of Computer Engineering	3,00	114	28	28A				

5	Distributed Databases and Network Computing	C	School of Computer Engineering	9,00	342	94	30	32A	32A		
6	System Analysis and Complex Systems Design	C	School of Computer Engineering	3,00	114	36	36A				
7	Modern Computer Systems	C	School of Computer Engineering	6,00	228	76		38	38A		Online Course
8	Software Engineering	C	School of Computer Engineering	3,00	114	26	26A				
Key Seminars				9,00	342	118	28	30	28	32	
1	Research Seminar	C	School of Computer Engineering	3,00	114	60	14	16	14	16A	
2	Project Seminar	C	School of Computer Engineering	3,00	114	42	10	10	10	12A	
3	Mentor's seminar "Analytical Information Systems"	C	School of Computer Engineering	3,00	114	16	4	4A	4	4A	
Magolego				6,00	228						
1	All-university Pool MAGOLEGO Courses	C		6,00	228						
Internship				6,00	228	2				2	
Project Internship				6,00	228	2				2	
1	Project	E		6,00	228	2				2A	
Computer Networks (General track)				60,00	2 280	540	174	98	174	94	
Major				39,00	1 482	420	146	68	146	60	
Components of the Field of Study				39,00	1 482	420	146	68	146	60	
1	Computer Systems Architecture and Technology	C	School of Computer Engineering	6,00	228	62			36	26A	
2	Equipment of Computer Network and Telecommunication Systems	C	School of Computer Engineering	6,00	228	62			36	26A	
3	Introduction to Data Analysis	C	School of Computer Engineering	3,00	114	28	28A				
4	Fundamentals of Information and Network Technologies	C	School of Computer Engineering	3,00	114	28	28A				
5	Distributed Databases and Network Computing	C	School of Computer Engineering	9,00	342	94	30	32A	32A		
6	System Analysis and Complex Systems Design	C	School of Computer Engineering	3,00	114	36	36A				
7	Modern Computer Systems	C	School of Computer Engineering	6,00	228	76		38	38A		Online Course
8	Software Engineering	C	School of Computer Engineering	3,00	114	26	26A				
Key Seminars				9,00	342	118	28	30	28	32	
1	Research Seminar	C	School of Computer Engineering	3,00	114	60	14	16	14	16A	
2	Project Seminar	C	School of Computer Engineering	3,00	114	42	10	10	10	12A	
3	Mentor's Seminar "Computer Networks"	C	School of Computer Engineering	3,00	114	16	4	4A	4	4A	
Magolego				6,00	228						

1	All-university Pool MAGOLEGO Courses	C		6,00	228						
	Internship			6,00	228	2				2	
	Project Internship			6,00	228	2				2	
1	Project	E		6,00	228	2				2A	

Curriculum agreed:

Academic Supervisor	VISHNEKOV A.V.	10.10.2022
Dean	KROUK E.A.	11.10.2022
Head of Centre for Educational Model Design	LEPESHKIN I.A.	12.10.2022

* Subject type:

Compulsory course

C

Elective course

E