



National Research University Higher School of Economics (HSE)

Curriculum

Field of study 09.03.04 Software Engineering

Educational Programme "Software Engineering"

Implementing unit: Faculty of Computer Science, HSE - Moscow

4 th, 2024/2025 academic year

APPROVED

03.05.2024

Vice Rector

ROSHCHIN S.Y.

Signed with EDS

Length of Programme: 4 years

Years of Study: 2021/2022 - 2024/2025

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	296	104	118	68	6	
	Major			27,00	1 026	224	78	82	64		
	Core Professional Block (Major)			4,00	152	56	28	28			
	Subject Areas			4,00	152	56	28	28			
	Software Project Management			4,00	152	56	28	28			
	Core Courses			4,00	152	56	28	28			
1	Software Project Management	C	Department of Software Engineering	4,00	152	56	28	28A			Online Course
	Elective Professional Block (Major)			23,00	874	168	50	54	64		
	4th Year Elective Courses			20,00	760	120	36	40	44		
	Computer Science Electives			10,00	380	60	18	20	22		
1	Agile in Enterprise Environment	E	Department of Software Engineering	10,00	380	60	18A	20	22A		
2	Web3 Vulnerability Analysis	E	Department of Software Engineering	10,00	380	60	18	20A	22A		
3	Computer Games Product Development	E	Department of Software Engineering	10,00	380	60	18	20A	22A		
4	Soft Skills Development	E	Department of Psychology	10,00	380	60	18A	20	22A		
5	Development of Operating Systems	E	Joint System Programming Department with Institute for System Programming of the Russian Academy of Sciences	10,00	380	60	18A	20	22A		
6	Software Systems Engineering	E	базовая кафедра фирмы 1С	10,00	380	60	18A	20	22A		
7	Informatization Management	E	Department of Software Engineering	10,00	380	60	18A	20	22A		
8	Systems Reliability Engineering	E	базовая кафедра Тинькофф	10,00	380	96	28	28A	40A		
	Math Electives			10,00	380	60	18	20	22		
1	Operations Research	E	Department of Software Engineering	10,00	380	60	18A	20	22A		

2	Mathematical Methods of Text Processing	E	Joint System Programming Department with Institute for System Programming of the Russian Academy of Sciences	10,00	380	60	18A	20	22A		
3	Mathematical Methods for Distributed Ledger Systems	E	Department of Software Engineering	10,00	380	60	18A	20	22A		Foreign language
4	Mathematical Modeling and Simulation	E	Department of Software Engineering	10,00	380	60	18A	20	22A		Foreign language
5	Data Analysis Methods for Computer Games Applications	E	Department of Software Engineering	10,00	380	60	18	20A	22A		
6	Queuing Theory	E	Department of Software Engineering	10,00	380	60	18A	20	22A		
7	Computational Complexity Theory	E	Department of Big Data and Information Retrieval	10,00	380	60	18	20A	22A		Foreign language
8	Business Application Quality Management	E	базовая кафедра фирмы 1С	10,00	380	60	18A	20	22A		
Research seminar				3,00	114	48	14	14	20		
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1	Research Seminar "Swarm Intelligence Algorithms"	E	Department of Software Engineering	3,00	114	48	14	14	20A		
2	Research Seminar "Data Analysis in Finance"	E	Department of Big Data and Information Retrieval	3,00	114	48	14	14	20A		Foreign language
3	Research Seminar "DWH. Enterprise Architecture And Data Modeling"	E	Department of Software Engineering	3,00	114	48	14	14	20A		
4	Research Seminar "Data Engineering"	E	Department of Software Engineering	3,00	114	48	14	14	20A		
5	Research Seminar "Process Analysis for Software Engineering"	E	Department of Software Engineering	3,00	114	48	14	14	20A		
6	Research Seminar "Industrial Software Engineering"	E	базовая кафедра фирмы 1С	3,00	114	48	14	14	20A		
7	Research Seminar "System Programming 2"	E	Joint System Programming Department with Institute for System Programming of the Russian Academy of Sciences	3,00	114	48	14	14	20A		
8	Research Seminar "Special Topics of Computer Games Strategic Analytics"	E	Department of Software Engineering	3,00	114	48	14	14	20A		
9	Research Seminar "Computer Vision Technologies"	E	Department of Software Engineering	3,00	114	48	14	14	20A		
English				1,00	38	2			2		
Optional Courses											
1	Academic Writing	O		2,00	76				2A		Foreign language, Credits only to the cumulative rating
Examinations				1,00	38	2			2		
1	Project Proposal	C	School of Foreign Languages	1,00	38	2			2A		Foreign language
Final State Certification (FSC)				4,00	152	2				2	
Thesis Work				4,00	152	2				2	

1	Presenting of Graduation Thesis	C		4,00	152	2				2A	
General Courses				8,00	304	60	24	36			
Optional General Courses				8,00	304	60	24	36			
1	Legal Literacy	C	департамент теории права и сравнительного правоведения	4,00	152	30	10	20A			Online Course
2	Philosophy	C	Школа философии и культурологии	4,00	152	30	14	16A			Online Course
Internship				20,00	760	8	2		2	4	
Research Internship				14,00	532	4				4	
1	Preparation of Graduation Thesis	C		8,00	304	2				2	
2	Graduation Internship	C		6,00	228	2				2A	
Project Internship				6,00	228	2			2		
1	Командный проект по программной инженерии	C	Department of Software Engineering	6,00	228	2			2A		
Professional Internship						2	2				
1	Work Experience Internship	C				2	2A				

Curriculum agreed:

Academic Supervisor	Pavlochev N.A.	19.03.2024
Dean	ARZHANTSEV I.V.	19.03.2024
Head of Centre for Educational Model Design	LEPESHKIN I.A.	03.05.2024

* Subject type:

Compulsory course
Elective course
Optional course

C
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