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
1 st, 2024/2025 academic year

Length of Programme: 4 years
Years of Study: 2024/2025 - 2027/2028
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 Progamme			**60,00**	**2 480**	**742**	**177**	**155**	**206**	**204**	
	Data Culture					**2**			**2**		
1	Independent Digital Literacy Test	C	отдел развития цифровых компетенций			2			2A		Online Course
	Major			**50,00**	**1 900**	**444**	**102**	**102**	**120**	**120**	
	Core Professional Block (Major)			**41,00**	**1 558**	**444**	**102**	**102**	**120**	**120**	
	Core Disciplines 1 year			**31,00**	**1 178**	**444**	**102**	**102**	**120**	**120**	
1	Algebra	C	Department of Big Data and Information Retrieval	9,00	342	136	28	28A	40	40A	
2	Introduction into Software Engineering	C	Department of Software Engineering	4,00	152	36	18	18A			
3	Discrete Mathematics	C	Department of Big Data and Information Retrieval	9,00	342	136	28	28A	40	40A	
4	Calculus	C	базовая кафедра фирмы 1С	9,00	342	136	28	28A	40	40A	
	Core Disciplines for Cohorts 1 and 2			**10,00**	**380**						
	Core Disciplines fo C#			**10,00**	**380**	**272**	**56**	**56**	**80**	**80**	
1	C++ Programming Basics	E	Department of Software Engineering	3,00	114	80				80A	
2	C# Programming	E	Department of Software Engineering	7,00	266	192	56A	56A	80A		
	Core Disciplines for C			**10,00**	**380**	**272**	**56**	**56**	**80**	**80**	
1	Algorithms and Algorithmic Languages	E	Joint System Programming Department with Institute for System Programming of the Russian Academy of Sciences	7,00	266	192	56	56A	80A		
2	Computer Architecture and Assembly Language	E	Joint System Programming Department with Institute for System Programming of the Russian Academy of Sciences	3,00	114	80				80A	

№	Course		Department								
	Elective Professional Block (Major)			**9,00**	**342**						
	Computer-based Workshop on Algebra			**3,00**	**114**						
1	Computer-based Workshop on Algebra in Matlab	E	Department of Software Engineering	3,00	114	34			14	20A	
2	Computer Practicum on Algebra in Python	E	Department of Software Engineering	3,00	114	34			14	20A	
	Computer-based Workshop on Mathematical Analysis			**3,00**	**114**						
1	Computer-based Workshop on Mathematical Analysis in Matlab	E	Department of Software Engineering	3,00	114	34			14	20A	
2	Computer Practicum on Mathematical Analysis in Python	E	Department of Software Engineering	3,00	114	34			14	20A	
	Научно-исследовательский семинар, 1 курс			**3,00**	**114**						
1	Research Seminar "Automata and Process Models"	E	Department of Software Engineering	3,00	114	44	10		14	20A	
2	Research Seminar "Introduction to cloud technology"	E	Department of Software Engineering	3,00	114	44	10		14	20A	
3	Research Seminar "Introduction to System Programming"	E	Joint System Programming Department with Institute for System Programming of the Russian Academy of Sciences	3,00	114	44	10		14	20A	
4	Research Seminar "Geographic Information Systems"	E	Department of Software Engineering	3,00	114	44	10		14	20A	
5	Research Seminar "Linux software distribution"	E	Department of Software Engineering	3,00	114	44	10		14	20A	
6	Research Seminar "Neuroinformatics"	E	Department of Software Engineering	3,00	114	44	10		14	20A	
7	Research seminar "Neural Network Technologies"	E	Department of Software Engineering	3,00	114	44	10		14	20A	
8	Research Seminar "Basics of Game Development"	E	Department of Software Engineering	3,00	114	44	10		14	20A	
9	Research Seminar "Python: Popular Libraries And Practical Problem Solving"	E	Department of Software Engineering	3,00	114	48	14		14	20A	
10	Research Seminar "Development of Cyber-Physical Systems"	E	Department of Software Engineering	3,00	114	44	10		14	20A	
11	Research Seminar "Software Development Methodologies"	E	базовая кафедра фирмы 1С	3,00	114	44	10		14	20A	
	English					2			2		
	Optional Courses										
1	English Language	O		8,00	304	128	20	28A	40	40A	Foreign language, Credits only to the cumulative rating
	Examinations					2			2		
1	English Language Integrative Exam	C	School of Foreign Languages			2				2A	Foreign language
	General Courses			**10,00**	**580**	**294**	**75**	**53**	**84**	**82**	
	Optional General Courses			**9,00**	**342**	**132**	**38**	**16**	**40**	**38**	
1	Russian History	C	School of History	4,00	152	76	12	16A	24	24A	Online Course
2	Foundations of Russian Statehood	C	School of History	2,00	76	26	26A				Online Course
3	Economics	C	Department of Theoretical Economics	3,00	114	30			16	14A	Online Course

					1,00	238	162	37	37	44	44	
	Core General Courses				1,00	238	162	37	37	44	44	
1	Safe Living Basics	C	центр поддержки студенческих инициатив		1,00	38	18	9	9A			Online Course
2	Physical Training	C	Department of Physical Training			200	144	28	28	44	44A	

Curriculum agreed:

Academic Supervisor   Pavlochev N.A.   27.04.2024

Dean   ARZHANTSEV I.V.   29.04.2024

Head of Centre for
 Educational Model Design   LEPESHKIN I.A.   03.05.2024

* Subject type:

Compulsory course   C
Elective course   E
Optional course   O