



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
2 nd, 2023/2024 academic year

APPROVED
14.06.2023
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	2 442	198	88	88	94	78	
	Data Culture					6				2	
1	External Examinations on Digital Skills. Entry-level	C	отдел развития цифровых компетенций			2		2A			
2	External Examinations on Digital Skills. Intermediate Level	C	отдел развития цифровых компетенций			2				2A	
3	Independent Programming Test. Advanced Level	C	отдел развития цифровых компетенций			2				2A	Online Course
	Major			41,00	1 558	48	14	14	20		
	Core Professional Block (Major)			38,00	1 444						
	Core Disciplines 2 year			14,00	532	160	56	32	36	36	
1	Group Dynamics and Communication in Software Engineering Professional Practice	C	Department of Software Engineering	4,00	152	28	28A				
2	Mathematical Statistics	C	Department of Mathematics	5,00	190	72			36	36A	
3	Probability Theory	C	Department of Mathematics	5,00	190	60	28	32A			
	Core Disciplines for Cohorts 1 and 2			48,00	1 824	808	128	200	244	236	
1	Algorithms and Data Structures	E	Joint System Programming Department with Institute for System Programming of the Russian Academy of Sciences	4,00	152	56	28	28A			
2	Algorithms and Data Structures-1	E	Department of Software Engineering	4,00	152	56	28	28A			
3	Algorithms and Data Structures-2	E	Department of Software Engineering	4,00	152	80			40	40A	
4	Computer System Architecture	E	Department of Software Engineering	4,00	152	72	36	36A			

5	Databases (part 1)	E	Joint System Programming Department with Institute for System Programming of the Russian Academy of Sciences	4,00	152	80			40	40A	
6	Software Design	E	Department of Software Engineering	8,00	304	136		36	50A	50A	
7	Operating Systems	E	Department of Software Engineering	4,00	152	60			32	28A	
8	Foundations of Operating Systems	E	Joint System Programming Department with Institute for System Programming of the Russian Academy of Sciences	4,00	152	72	36	36A			
9	Java Programming	E	Joint System Programming Department with Institute for System Programming of the Russian Academy of Sciences	8,00	304	136		36	50A	50A	
10	Formal Languages and Automata	E	Joint System Programming Department with Institute for System Programming of the Russian Academy of Sciences	4,00	152	60			32	28A	
Elective Professional Block (Major)				3,00	114	48	14	14	20		
Научно-исследовательский семинар, 2 курс				3,00	114	48	14	14	20		
1	Research Seminar "Data analysis in Python"	E	Department of Software Engineering	3,00	114	48	14	14	20A		
2	Research Seminar "Information Security Methods and Algorithms"	E	Department of Big Data and Information Retrieval	3,00	114	48	14	14	20A		
3	Research Seminar "Neuroinformatics. Additional Chapters"	E	Department of Software Engineering	3,00	114	48	14	14	20A		
4	Research Seminar "Parallelism in Algorithms and Programming"	E	Department of Software Engineering	3,00	114	48	14	14	20A		
5	Research Seminar "Immersion in iOS App Development"	E	Department of Software Engineering	3,00	114	48	14	14	20A		
6	Research Seminar "Programmable Crypto Economics"	E	Department of Software Engineering	3,00	114	48	14	14	20A		
7	Research Seminar "Software Development Process: Activities And Approaches"	E	Department of Software Engineering	3,00	114	48	14	14	20A		
8	Research Seminar "PHP Web Application Development"	E	Department of Software Engineering	3,00	114	48	14	14	20A		
9	Research Seminar "Game Development with Unity"	E	Department of Software Engineering	3,00	114	48	14	14	20A		
10	Research Seminar "Cloud and Mobile Application Development for Google Android Platform"	E	Department of Software Engineering	3,00	114	48	14	14	20A		
Minor				10,00	380		38	38	38	38	
1	Minor	E		10,00	380	152	38	38A	38	38A	
English											
Optional Courses											

1	English Language	O		6,00	228	104	28	32	44A		Foreign language, Credits only to the cumulative rating
	General Courses			1,00	200	144	36	36	36	36	
	Core General Courses			1,00	200	144	36	36	36	36	
1	Physical Training	C	Department of Physical Training	1,00	200	144	36	36	36	36A	
	Internship			8,00	304					2	
	Project Internship			5,00	190					2	
1	Term Project 1	C		5,00	190	2				2A	
	Professional Internship			3,00	114						
1	Technological Internship	C		3,00	114						

Curriculum agreed:

Academic Supervisor	Pavlochev N.A.	01.06.2023
Dean	ARZHANTSEV I.V.	02.06.2023
Head of Centre for Educational Model Design	LEPESHKIN I.A.	08.06.2023

* Subject type:

Compulsory course
Elective course
Optional course

C
E
O