## 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, 2024/2025 academic year

APPROVED 03.05.2024 Vice Rector ROSHCHIN S.Y. Signed with EDS

Length of Programme: 4 years

Years of Study: 2023/2024 - 2026/2027

Mode of Study: Full Time Degree: Bachelor's degree

						А	llocation of (	Contact Hour			
Block Code	Course	Subject type	Department	Credits	Total Academic Hours	Contact Hours	1	2	3	4	Additional Information
	Degree Progamme			60,00	2 442	916	166	190	216	198	
	Data Culture					6		2		4	
1	External Examinations on Digital Skills. Entry-level	С	отдел развития цифровых компетенций			2		2A			
2	External Examinations on Digital Skills. Intermediate Level	С	отдел развития цифровых компетенций			2				2A	
3	Independent Programming Test. Advanced Level	С	отдел развития цифровых компетенций			2					Online Course
	Major	41,00	1 558	612	92	114	142	118			
	Core Professional Block (Major)	38,00	1 444	564	78	100	122	118			
	Core Disciplines 2 year				532	160	56	32	36	36	
1	Group Dynamics and Communication in Software Engineering Professional Practice	С	Department of Software Engineering	4,00	152	28	28A				
2	Mathematical Statistics	С	Department of Mathematics	5,00	190	72			36	36A	
3	Probability Theory	С	Department of Mathematics	5,00	190	60	28	32A			
	Core Disciplines fo C#				912	404	64	100	122	118	
1	Algorithms and Data Structures-1	E	Department of Software Engineering	4,00	152	56	28	28A			
2	Algorithms and Data Structures-2	E	Department of Software Engineering	4,00	152	80			40	40A	
3	Computer System Architecture	E	Department of Software Engineering	4,00	152	72	36	36A			
4	Software Design	E	Department of Software Engineering	8,00	304	136		36	50A	50A	
5	Operating Systems	E	Department of Software Engineering	4,00	152	60			32	28A	
	Core Disciplines for C					404	64	100	122	118	

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	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	
3	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			
4	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	
5	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 семи	нар, 2 ку	рс	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	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 "Immersion in iOS App Development"	E	Department of Software Engineering	3,00	114	48	14	14	20A		
5	Research Seminar "Programmable Crypto Economics"	E	Department of Software Engineering	3,00	114	48	14	14	20A		
6	Research Seminar "PHP Web Application Development"	E	Department of Software Engineering	3,00	114	48	14	14	20A		
7	Research Seminar "Game Development with Unity"	E	Department of Software Engineering	3,00	114	48	14	14	20A		
8	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	152	38	38		38	
1	Minor	E		10,00	380	152	38	38A	38	38A	
	English										
	Optional Courses	_									
1	English Language	0		6,00	228	100	32	28	40A		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	С	Department of Physical Training	1,00	200	144	28	28	44	44A	
	Internship				304	2				2	
	Project Internship			5,00	190	2				2	
1	Term Project 1	С		5,00	190	2				2A	
	Professional Internship				114						
1	Technological Internship	С		3,00	114						

## Curriculum agreed:

Academic Supervisor Pavlochev N.A. 13.03.2024

Dean ARZHANTSEV I.V. 14.03.2024

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

\* Subject type:

Compulsory course С Elective course Ε Optional course 0