



National Research University Higher School of Economics (HSE)

Curriculum

Field of study 01.03.02 Applied Mathematics and Information Science

Educational Programme "Applied Mathematics and Information Science"

Specializations: "Choice and Decision Theory", "Data Analysis and Intelligent Systems", "Distributed Systems", "Industrial Software Engineering", "Machine Learning and Applications", "Mathematical and Computational Engineering in Science and Business", "Theoretical Computer Science"

Implementing unit: Faculty of Computer Science, HSE - Moscow  
1 st, 2023/2024 academic year

APPROVED

29.05.2023

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

Block Code	Course	Subject type	Department	Credits	Total Academic Hours	Contact Hours	Allocation of Contact Hours				Additional Information
							1	2	3	4	
<b>Degree Programme</b>				<b>60,00</b>	<b>2 480</b>	<b>1 068</b>	<b>308</b>	<b>264</b>	<b>406</b>	<b>374</b>	
<b>Data Culture</b>											
1	Independent Digital Literacy Test	C	отдел развития цифровых компетенций			2				2A	Online Course
<b>Major</b>				<b>49,00</b>	<b>1 862</b>	<b>778</b>	<b>200</b>	<b>228</b>	<b>334</b>	<b>300</b>	
<b>Core Professional Block (Major)</b>				<b>49,00</b>	<b>1 862</b>	<b>778</b>	<b>200</b>	<b>228</b>	<b>334</b>	<b>300</b>	
<b>Алгебра</b>				<b>3,00</b>	<b>114</b>	<b>60</b>				<b>60</b>	
1	Algebra	E	Department of Big Data and Information Retrieval	3,00	114	60				60A	
2	Algebra	E	Department of Big Data and Information Retrieval	3,00	114	60				60A	
<b>Дискретная математика</b>				<b>6,00</b>	<b>228</b>	<b>96</b>	<b>28</b>	<b>28</b>	<b>40</b>		
1	Discrete Mathematics	E	Department of Big Data and Information Retrieval	6,00	228	96	28	28A	40A		
2	Discrete Mathematics	E	Department of Big Data and Information Retrieval	6,00	228	96	28	28A	40A		
<b>Линейная алгебра и геометрия</b>				<b>10,00</b>	<b>380</b>	<b>136</b>	<b>28</b>	<b>28</b>	<b>40</b>	<b>40</b>	
1	Linear Algebra and Geometry	E	Department of Big Data and Information Retrieval	10,00	380	136	28	28A	40	40A	
2	Linear Algebra and Geometry	E	Department of Big Data and Information Retrieval	10,00	380	136	28	28A	40	40A	
<b>Математический анализ</b>				<b>10,00</b>	<b>380</b>	<b>164</b>	<b>40</b>	<b>44</b>	<b>40</b>	<b>40</b>	

1	Calculus	E	Department of Big Data and Information Retrieval	10,00	380	164	40	44A	40	40A	
2	Calculus	E	Department of Big Data and Information Retrieval	10,00	380	164	40	44A	40	40A	
<b>Programming</b>				<b>17,00</b>	<b>646</b>	<b>282</b>	<b>104</b>	<b>128</b>	<b>174</b>	<b>160</b>	
-				<b>17,00</b>	<b>646</b>	<b>272</b>	<b>56</b>	<b>56</b>	<b>80</b>	<b>80</b>	
1	Algorithms and Data Structures	E	Joint Department with Yandex	9,00	342	136		56A		80A	
2	C++ Programming Language	E	Joint Department with Yandex	4,00	152	80			80A		
3	Python Programming Language	E	Joint Department with Yandex	4,00	152	56	56A				Online Course
-				<b>17,00</b>	<b>646</b>	<b>272</b>	<b>56</b>	<b>56</b>	<b>80</b>	<b>80</b>	
1	Algorithms and Data Structures	E	Joint Department with Yandex	13,00	494	216		56A	80A	80A	
2	C++ Programming Language	E	Joint Department with Yandex	4,00	152	56	56A				
-				<b>3,00</b>	<b>114</b>	<b>40</b>			<b>40</b>		
1	Number Theory	E	Department of Big Data and Information Retrieval	3,00	114	40			40A		
2	Number Theory (advanced course)	E	Department of Big Data and Information Retrieval	3,00	114	40			40A		
<b>English</b>							<b>2</b>			<b>2</b>	
<b>Optional Courses</b>											
1	English	O		8,00	304	128	20	28A	40	40A	Foreign language, Credits only to the cumulative rating
<b>Examinations</b>							<b>2</b>			<b>2</b>	
1	English Language Integrative Exam	C	School of Foreign Languages				2			2A	Foreign language
<b>General Courses</b>				<b>7,00</b>	<b>466</b>	<b>288</b>	<b>108</b>	<b>36</b>	<b>72</b>	<b>72</b>	
<b>Optional General Courses</b>				<b>6,00</b>	<b>228</b>	<b>126</b>	<b>54</b>		<b>36</b>	<b>36</b>	
1	Russian History	C	School of History	4,00	152	72			36	36A	Online Course
2	Foundations of Russian Statehood	C	School of History	2,00	76	54	54A				
<b>Core General Courses</b>				<b>1,00</b>	<b>238</b>	<b>162</b>	<b>54</b>	<b>36</b>	<b>36</b>	<b>36</b>	
1	Safe Living Basics	C	центр поддержки студенческих инициатив	1,00	38	18	18A				Online Course
2	Physical Training	C	Department of Physical Training		200	144	36	36	36	36A	
<b>Internship</b>				<b>4,00</b>	<b>152</b>						
<b>Professional Internship</b>				<b>4,00</b>	<b>152</b>						
1	Educational Internship	C		4,00	152						

**Curriculum agreed:**

Academic Supervisor	SOKOLOV E.A.	24.05.2023
Dean	ARZHANTSEV I.V.	24.05.2023
Head of Centre for Educational Model Design	LEPESHKIN I.A.	26.05.2023

\* Subject type:

Compulsory course

Elective course

Optional course

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