



National Research University Higher School of Economics (HSE)

Curriculum

Field of study 01.03.02 Applied Mathematics and Information Science

Educational Programme "Computing and Data Science"

Specializations: "Industrial Programming", "Machine Learning and Applications"

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

APPROVED

12.07.2023

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>1 012</b>	<b>204</b>	<b>270</b>	<b>274</b>	<b>264</b>	
<b>Data Culture</b>				<b>3,00</b>	<b>114</b>	<b>42</b>			<b>42</b>		
1	Python as a Tool for Data Collection and Analysis	C	Department of Big Data and Information Retrieval	3,00	114	40			40A		
2	Independent Digital Literacy Test	C	отдел развития цифровых компетенций			2			2A		Online Course
<b>Major</b>				<b>44,00</b>	<b>1 672</b>	<b>650</b>	<b>140</b>	<b>160</b>	<b>160</b>	<b>190</b>	
<b>Core Professional Block (Major)</b>				<b>44,00</b>	<b>1 672</b>	<b>650</b>	<b>140</b>	<b>160</b>	<b>160</b>	<b>190</b>	
1	Algorithms and Data Structures	C	Department of Big Data and Information Retrieval	9,00	342	144		64A		80A	
2	Discrete Mathematics	C	Department of Big Data and Information Retrieval	4,00	152	60	28	32A			
3	Modern Software Engineering Practices	C	Department of Big Data and Information Retrieval	3,00	114	30				30A	
4	Linear Algebra	C	Department of Big Data and Information Retrieval	9,00	342	140	28	32A	40	40A	
5	Calculus	C	Department of Big Data and Information Retrieval	9,00	342	140	28	32A	40	40A	
6	Python Programming	C	Department of Big Data and Information Retrieval	4,00	152	56	56A				Online Course
7	C++ Programming	C	Department of Big Data and Information Retrieval	6,00	228	80			80A		
<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>10,00</b>	<b>580</b>	<b>318</b>	<b>64</b>	<b>110</b>	<b>72</b>	<b>72</b>	
<b>Optional General Courses</b>				<b>9,00</b>	<b>342</b>	<b>156</b>	<b>10</b>	<b>74</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			
3	Legal Literacy	C	департамент права цифровых технологий и биоправа	3,00	114	30	10	20A			Online Course
<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>3,00</b>	<b>114</b>						
<b>Professional Internship</b>				<b>3,00</b>	<b>114</b>						
1	Educational Internship	C		3,00	114						

**Curriculum agreed:**

Academic Supervisor	PROMYSLOV V.V.	10.07.2023
Dean	ARZHANTSEV I.V.	11.07.2023
Head of Centre for Educational Model Design	LEPESHKIN I.A.	11.07.2023

\* Subject type:

Compulsory course  
Elective course  
Optional course

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