



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"

Implementing unit: St. Petersburg School of Mathematics, Physics and Computer Science, HSE, HSE - Saint Petersburg  
4 th, 2024/2025 academic year

APPROVED

27.05.2024

Vice Rector

ROSHCHIN S.Y.

Signed with EDS

Length of Programme: 4 years

Years of Study: 2021/2022 - 2024/2025

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>2 280</b>	<b>324</b>	<b>100</b>	<b>110</b>	<b>107</b>	<b>7</b>	
	<b>Major</b>			<b>34,00</b>	<b>1 292</b>	<b>282</b>	<b>90</b>	<b>90</b>	<b>102</b>		
	<b>Core Professional Block (Major)</b>			<b>5,00</b>	<b>190</b>	<b>52</b>	<b>26</b>	<b>26</b>			
	<b>Subject Areas</b>			<b>5,00</b>	<b>190</b>	<b>52</b>	<b>26</b>	<b>26</b>			
	<b>Programming</b>			<b>5,00</b>	<b>190</b>	<b>52</b>	<b>26</b>	<b>26</b>			
1	Web Searching and Ranging	C	Informatics Department	5,00	190	52	26A	26A			Foreign language
	<b>Elective Professional Block (Major)</b>			<b>29,00</b>	<b>1 102</b>	<b>230</b>	<b>64</b>	<b>64</b>	<b>102</b>		
	<b>Elective Courses</b>			<b>15,00</b>	<b>570</b>	<b>120</b>	<b>60</b>	<b>60</b>			
1	Computational Geometry	E	Informatics Department	5,00	190	40	20	20A			
2	Computer Graphics	E	Informatics Department	5,00	190	40	20	20A			
3	Large-Scale Machine Learning	E	Informatics Department	5,00	190	40	20	20A			
4	Meta Computing	E	Informatics Department	5,00	190	40	20	20A			
5	Programming with Dependent Types	E	Informatics Department	5,00	190	40	20	20A			
6	Distributed Systems	E	Department of Big Data and Information Retrieval	5,00	190	56	28	28A			
	<b>Elective Courses</b>			<b>9,00</b>	<b>342</b>	<b>96</b>			<b>96</b>		
1	Image Analysis	E	Informatics Department	3,00	114	32			32A		
2	Program Analysis	E	Informatics Department	3,00	114	32			32A		
3	Computer Vision	E	Informatics Department	3,00	114	32			32A		
4	Cryptographic Protocols	E	Informatics Department	3,00	114	32			32A		
5	Logical and Relationa Programming	E	Informatics Department	3,00	114	32			32A		
6	Natural Language Processing	E	Informatics Department	3,00	114	32			32A		
	<b>Research seminar</b>			<b>4,00</b>	<b>152</b>	<b>8</b>	<b>4</b>	<b>4</b>			

1	Research Seminar	C	Informatics Department	4,00	152	8	4	4A		
	<b>Проектный семинар</b>			<b>1,00</b>	<b>38</b>	<b>6</b>			<b>6</b>	
1	Project Seminar	C	Informatics Department	1,00	38	6			6A	
	<b>English</b>			<b>1,00</b>	<b>38</b>	<b>2</b>			<b>2</b>	
	<b>Optional Courses</b>									
1	Academic English Writing	O		2,00	76	54	16	18	20A	Foreign language, Credits only to the cumulative rating
	<b>Examinations</b>			<b>1,00</b>	<b>38</b>	<b>2</b>			<b>2</b>	
1	Project Proposal	C	Informatics Department	1,00	38	2			2A	Foreign language
	<b>Final State Certification (FSC)</b>			<b>3,00</b>	<b>114</b>	<b>2</b>			<b>1</b>	<b>1</b>
	<b>Thesis Work</b>			<b>3,00</b>	<b>114</b>	<b>2</b>			<b>1</b>	<b>1</b>
1	Presenting of Graduation Thesis	C		3,00	114	2			1	1A
	<b>General Courses</b>			<b>4,00</b>	<b>152</b>	<b>30</b>	<b>10</b>	<b>20</b>		
	<b>Optional General Courses</b>			<b>4,00</b>	<b>152</b>	<b>30</b>	<b>10</b>	<b>20</b>		
1	Legal Literacy	C	департамент теории права и сравнительного правоведения	4,00	152	30	10	20A		Online Course
	<b>Internship</b>			<b>18,00</b>	<b>684</b>	<b>8</b>			<b>2</b>	<b>6</b>
	<b>Research Internship</b>			<b>12,00</b>	<b>456</b>	<b>6</b>			<b>2</b>	<b>4</b>
1	Preparation of Graduation Thesis	C		9,00	342	4			2	2
2	Graduation Internship	C		3,00	114	2				2A
	<b>Project Internship</b>			<b>6,00</b>	<b>228</b>	<b>2</b>				<b>2</b>
1	Project	C		6,00	228	2				2A

**Curriculum agreed:**

Academic Supervisor	OMELCHENKO A.V.	13.05.2024
Dean		13.05.2024
Deputy Director	KUZMIN P.V.	13.05.2024
Head of Centre for Educational Model Design	LEPESHKIN I.A.	22.05.2024

\* Subject type:

Compulsory course  
Elective course  
Optional course

C  
E  
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