



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
3 rd, 2023/2024 academic year

APPROVED

03.05.2023

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	
Degree Programme				60,00	2 280	655	154	144	181	162	
Data Culture				6,00	228	50		48	2		
1	Machine Learning	C	Informatics Department	5,00	190	48		48A			
2	Independent Data Science Test. Advanced Level	C	отдел развития цифровых компетенций	1,00	38	2			2A		Online Course
Major				38,00	1 444	478	126	64	144	130	
Core Professional Block (Major)				15,00	570	244	84	24	80	56	
Subject Areas				15,00	570	244	84	24	80	56	
Programming				10,00	380	192	56		80	56	
1	Parallel programming	C	Informatics Department	4,00	152	68			40	28A	
2	Software Development	C	Informatics Department	6,00	228	124	56A		40	28A	
Probability Theory and Mathematical Statistics				5,00	190	52	28	24			
1	Probability Theory and Mathematical Statistics	C	Informatics Department	5,00	190	52	28	24A			Online Course
Elective Professional Block (Major)				23,00	874	234	42	40	64	74	
Elective Courses				20,00	760	216	42	40	64	56	
1	Algorithms in Bioinformatics	E	Informatics Department	5,00	190	60			32	28A	
2	Alternative Languages for the JVM	E	Informatics Department	5,00	190	30	14	16A			
3	Databases	E	Informatics Department	5,00	190	52	28	24A			
4	Deep Learning	E	Informatics Department	5,00	190	60			32	28A	
5	Graphical Interfaces	E	Informatics Department	5,00	190	44	20	24A			
6	Compilers	E	Informatics Department	5,00	190	52	28	24A			
7	Optimization Methods	E	Informatics Department	5,00	190	60			32	28A	
8	Mobile Development	E	Informatics Department	5,00	190	38			18	20A	
9	Molecular Biology	E	Informatics Department	5,00	190	52	28	24A			Foreign language

10	Programming Languages Semantics	E	Informatics Department	5,00	190	68			40	28A	
11	Information Theory	E	Informatics Department	5,00	190	48			32	16A	
12	Computer Systems Technology	E	Informatics Department	5,00	190	68			40	28A	
13	Types and Programming Languages	E	Informatics Department	5,00	190	38			18	20A	
14	Numerical Methods	E	Informatics Department	5,00	190	45	20	24A			
Research seminar				2,00	76	10				10	
1	Research Seminar	C	Informatics Department	2,00	76	10				10A	
Проектный семинар				1,00	38	8				8	
1	Project Seminar	C	Informatics Department	1,00	38	8				8A	
Minor				10,00	380	120	28	32	32	28	
1	Minor	E		10,00	380	120	28	32A	32	28A	
English						3			3		
Examinations						3			3		
1	Independent English Exam	C	School of Foreign Languages			3			3A		Foreign language
Internship				6,00	228	4				4	
Project Internship				3,00	114	2				2	
1	Project	C		3,00	114	2				2A	
Professional Internship				3,00	114	2				2	
1	Work Experience Internship	C		3,00	114	2				2A	

Curriculum agreed:

Academic Supervisor	OMELCHENKO A.V.	27.04.2023
Dean		27.04.2023
Deputy Director	KUZMIN P.V.	27.04.2023
Head of Centre for Educational Model Design	LEPESHKIN I.A.	03.05.2023

* Subject type:

Compulsory course
Elective course
Optional course

C
E
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