



National Research University Higher School of Economics (HSE)

Curriculum

Field of study 01.03.02 Applied Mathematics and Information Science

Educational Programme "Applied Data Analysis and Artificial Intelligence"

Specializations: "Applied Data Analysis", "Data Analysis in Finance", "Machine Learning Architecture"

Implementing unit: St. Petersburg School of Mathematics, Physics and Computer Science, HSE, HSE - Saint Petersburg

2 nd, 2024/2025 academic year

APPROVED

27.05.2024

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

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	2 442	1 122	238	230	352	302	
Data Culture						6		2		4	
1	External Examinations on Digital Skills. Entry-level	C	отдел развития цифровых компетенций			2		2A			
2	External Examinations on Digital Skills. Intermediate Level	C	отдел развития цифровых компетенций			2				2A	
3	Independent Programming Test. Advanced Level	C	отдел развития цифровых компетенций			2				2A	Online Course
Major				41,00	1 558	780	168	156	248	208	
Core Professional Block (Major)				34,00	1 292	620	140	132	188	160	
1	Computer Architecture	C	Joint Department with Yandex	5,00	190	70	34	36A			
2	Discrete Mathematics	C	Informatics Department	4,00	152	124	28A	24A	40	32A	
3	Differential Equations	C	Informatics Department	3,00	114	52	28	24A			
4	Calculus 2	C	Informatics Department	5,00	190	98	50	48A			
5	Operating Systems	C	Joint Department with Yandex	6,00	228	80			40	40A	
6	Probability Theory and Mathematical Statistics	C	Informatics Department	8,00	304	144			80	64A	
7	Numerical and Optimization Methods	C	Informatics Department	3,00	114	52			28	24A	
Elective Professional Block (Major)				7,00	266	160	28	24	60	48	
Compulsory Courses				7,00	266	160	28	24	60	48	
1	Databases	C	Informatics Department	3,00	114	52	28	24A			
2	Foundations of Machine Learning	C	Informatics Department	4,00	152	108			60A	48A	
Minor				10,00	380	120	28	32	32	28	
1	Minor	E		10,00	380	120	28	32A	32	28A	

English											
Optional Courses											
1	English	O		6,00	228	104	28	32	44A		Foreign language, Credits only to the cumulative rating
General Courses				4,00	314	214	42	40	72	60	
Optional General Courses				3,00	114	30			20	10	
1	Legal Literacy	C	департамент теории права и сравнительного правоведения	3,00	114	30			20	10A	Online Course
Core General Courses				1,00	200	184	42	40	52	50	
1	Physical Training	C	Department of Physical Training	1,00	200	184	42	40A	52	50A	Online Course
Internship				5,00	190	2				2	
Project Internship				2,00	76						
1	Project	C		2,00	76						
Professional Internship				3,00	114	2				2	
1	Educational Internship	C		3,00	114	2				2A	

Curriculum agreed:

Academic Supervisor	MUKHIN M.S.	15.05.2024
Dean		15.05.2024
Deputy Director	KUZMIN P.V.	15.05.2024
Head of Centre for Educational Model Design	LEPESHKIN I.A.	23.05.2024

* Subject type:

Compulsory course

C

Elective course

E

Optional course

O