

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"

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

Faculty of Computer Science, HSE - Moscow

1 st, 2021/2022 academic year

APPROVED by

Vice Rector

ROSHCHIN Y.S.

12.04.2021

Length of Programme: 4 years

Years of Study: 2021/2022 - 2024/2025

Mode of Study: Full Time

Degree: Bachelor's degree

Number of Students: 360

Number of Groups: 12

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	4 408	1 785	348	404	532	501	
	Data Culture					3				3	
1	Independent Digital Competence Assessment. Digital Literacy	C	центр поддержки и мониторинга образовательных программ			3				3A	
	Major			48	3 648	1 414	256	320	438	400	
	Core Professional Block (Major)				3 648	1 414	256	320	438	400	
	Subject Areas			48	3 648	1 414	256	320	438	400	
	Algorithms and Data Structures				874	374		128	86	160	
	Алгоритмы и структуры данных				874	374		128	86	160	
1	Algorithms and Data Structures	C	Joint Department with Yandex	9	342	144		64A		80A	
2	Algorithms and Data Structures	C	Joint Department with Yandex	14	532	230		64A	86A	80A	
	Discrete Mathematics				532	208	56	64	88		
	Дискретная математика				532	208	56	64	88		
1	Discrete Mathematics	C	Department of Big Data and Information Retrieval	7	266	104	28	32A	44A		
2	Discrete Mathematics (Advanced Course)	C	Department of Big Data and Information Retrieval	7	266	104	28	32A	44A		
	Linear Algebra and Geometry				988	360	48	64	88	160	
	Алгебра				228	80				80	
1	Algebra	C	Department of Big Data and Information Retrieval	3	114	40				40A	

2	Algebra (Advanced Course)	C	Department of Big Data and Information Retrieval	3	114	40				40A	
Линейная алгебра и геометрия					760	280	48	64	88	80	
1	Linear Algebra and Geometry	C	Department of Big Data and Information Retrieval	10	380	140	24	32A	44	40A	
2	Linear Algebra and Geometry (Advanced Course)	C	Department of Big Data and Information Retrieval	10	380	140	24	32A	44	40A	
Mathematical Analysis					760	280	48	64	88	80	
Математический анализ					760	280	48	64	88	80	
1	Calculus	C	Department of Big Data and Information Retrieval	10	380	140	24	32A	44	40A	
2	Calculus (Advanced Course)	C	Department of Big Data and Information Retrieval	10	380	140	24	32A	44	40A	
Programming					494	192	104		88		
Основы и методология программирования					494	192	104		88		
1	Introduction to Programming	C	Joint Department with Yandex	9	342	140	52A		88A		Online Course
2	Introduction to Programming	C	Joint Department with Yandex	4	152	52	52A				
English					304	146	24	32	44	46	
Optional Courses					304	144	24	32	44	44	
1	English	O		8	304	144	24	32A	44	44A	Foreign language, Credits only to the cumulative rating
Examinations						2				2	
1	English Language Integrative Exam	C	School of Foreign Languages			2				2A	Foreign language
General Courses				9	342	222	68	52	50	52	
Optional General Courses					304	60	14	16	14	16	
1	Legal Literacy		департамент теории права и межотраслевых юридических дисциплин	4	152	30			14	16A	Online Course
2	Economics		Department of Theoretical Economics	4	152	30	14	16A			Online Course
Core General Courses				1	38	162	54	36	36	36	
1	Safe Living Basics	C	центр поддержки студенческих инициатив	1	38	18	18A				Online Course
2	Physical Training	C	Department of Physical Training			144	36	36	36	36A	
Internship				3	114						
Professional Internship				3	114						
1	Educational Internship	C		3	114						

Academic Supervisor

SOKOLOV E.A.

05.04.2021

Dean

ARZHANTSEV I.V.

05.04.2021

Head of Degree Programmes
Development Office

MAMONOVA M.A.

12.04.2021

* Subject type:

Compulsory course

Elective course

Optional course

C
E
O