



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: "Machine Learning and Applications", "Software Engineering"

Implementing unit: Faculty of Computer Science, HSE - Moscow
1 st, 2021/2022 academic year

APPROVED

25.06.2021

Vice Rector

ROSHCHIN Y.S.

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	2 746	1 035	208	212	253	254	
	Data Culture					3			3		
1	Independent Digital Literacy Test	C	Center for Support and Monitoring of Degree Programs			3			3A		
	Major			47	1 786	680	140	160	200	200	
	Core Professional Block (Major)			47	1 786	680	140	160	200	200	
	Subject Areas			47	1 786	680	140	160	200	200	
	Algorithms and Data Structures			9	342	144		64		80	
1	Algorithms and Data Structures	C	Department of Big Data and Information Retrieval	9	342	144		64A		80A	
	Discrete Mathematics			4	152	60	28	32			
1	Discrete Mathematics	C	Department of Big Data and Information Retrieval	4	152	60	28	32A			
	Linear Algebra and Geometry			9	342	140	28	32	40	40	
1	Linear Algebra	C	Department of Big Data and Information Retrieval	9	342	140	28	32A	40	40A	
	Mathematical Analysis			9	342	140	28	32	40	40	
1	Calculus	C	Department of Big Data and Information Retrieval	9	342	140	28	32A	40	40A	
	Programming			16	608	196	56		120	40	
1	Python as a Tool for Data Collection and Analysis	C	Department of Big Data and Information Retrieval	3	114	40			40A		
2	Modern Software Engineering Practices	C	Department of Big Data and Information Retrieval	3	114	20				20A	

3	Python Programming	C	Department of Big Data and Information Retrieval	4	152	56	56A					Online Course
4	C++ Programming	C	Department of Big Data and Information Retrieval	6	228	80			80A			
English					304	130						
Optional Courses					304	128						
1	English	O		8	304	128	20	28A	40	40A		Foreign language, Credits only to the cumulative rating
Examinations						2						
1	English Language Integrative Exam	C	School of Foreign Languages			2				2A		
General Courses				10	542	222	68	52	50	52		
Optional General Courses				8	304	60	14	16	14	16		
1	Legal Literacy	C	департамент теории права и межатраслевых юридических дисциплин	4	152	30			14	16A		Online Course
2	Economics	C	Department of Theoretical Economics	4	152	30	14	16A				Online Course
Core General Courses				2	238	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	1	200	144	36	36	36	36A		
Internship				3	114							
Professional Internship				3	114							
1	Educational Internship	C		3	114							

Curriculum agreed:

Academic Supervisor	TRUSHIN D.V.	25.06.2021
Dean	ARZHANTSEV I.V.	25.06.2021
Head of Degree Programmes Development Office	MAMONOVA M.A.	25.06.2021

* Subject type:

Compulsory course
 Elective course
 Optional course

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