



National Research University Higher School of Economics (HSE)

Basic Curriculum

Field of study 01.04.02 Applied Mathematics and Informatics

Educational Programme "Master of Data Science"

Trajectories: "Master of Data Science"

Implementing unit: Faculty of Computer Science, HSE - Moscow

Years of Study: 2024/2025 - 2025/2026

Length of Programme: 2 years

Mode of Study: Full Time

Degree: Master's degree / MBA

APPROVED

27.05.2024

Vice Rector

ROSHCHIN S.Y.

Signed with EDS

Block Code	Course	Subject type	Credits	Credits by Years		Planned Educational Programme Development Results
				1	2	
	Degree Programme		120,00	60,00	60,00	
	Master of Data Science (Applied track)		120,00	60,00	60,00	
	Key Seminars		25,00	18,00	7,00	
1	Research Seminar "Introduction to Specialty" (offered in a foreign language)	C	12,00	12,00		UC-1, UC-2, UC-3
2	Research Seminar "Deep Learning" (offered in a foreign language)	C	3,00		3,00	GPC-1.AMI, PC-4
3	Mentor's Seminar (offered in a foreign language)	C	10,00	6,00	4,00	GPC-1.AMI, GPC-2.AMI, PC-2, PC-3, PC-4, PC-7, UC-3, UC-4
	Internship		26,00	12,00	14,00	
	Project Internship		12,00	12,00		
1	Data Scraping (offered in a foreign language)	C	12,00	12,00		GPC-2.AMI, GPC-3.AMI, PC-9
	Professional Internship					
	Research Internship		14,00		14,00	
1	Final Qualification Paper Preparation (offered in a foreign language)	C	14,00		14,00	GPC-1.AMI, GPC-2.AMI, GPC-3.AMI, GPC-4.AMI, PC-1, PC-10, PC-11, PC-2, PC-3, PC-4, PC-5, PC-6, PC-7, PC-8, PC-9, UC-1, UC-2, UC-3, UC-4, UC-5, UC-6
	Major		42,00	30,00	12,00	
1	Introduction to Deep Learning (offered in a foreign language)	C	3,00		3,00	GPC-3.AMI, PC-10, PC-11
2	Applied Statistics (offered in a foreign language)	C	3,00		3,00	GPC-1.AMI, GPC-2.AMI, PC-10, PC-11

3	Modern Data Analysis: Machine Learning (offered in a foreign language)	C	3,00		3,00	GPC-4.AMI, PC-9, UC-1
4	Modern Decision Making: Applied Machine Learning (offered in a foreign language)	C	3,00		3,00	GPC-2.AMI, PC-4, UC-2
5	Algorithms and Data Structures (offered in a foreign language)	C	6,00	6,00		GPC-3.AMI, PC-9
6	Python Basic (offered in a foreign language)	C	3,00	3,00		PC-10, PC-7
7	Python Advanced (offered in a foreign language)	C	3,00	3,00		PC-10, PC-7
8	SQL (offered in a foreign language)	C	3,00	3,00		PC-10, PC-4
9	Discrete Mathematics (offered in a foreign language)	C	3,00	3,00		PC-11
10	Linear Algebra (offered in a foreign language)	C	3,00	3,00		GPC-1.AMI
11	Calculus (offered in a foreign language)	C	3,00	3,00		PC-11
12	Basic Statistics (offered in a foreign language)	C	3,00	3,00		GPC-2.AMI
13	Probability Theory (offered in a foreign language)	C	3,00	3,00		GPC-1.AMI
Magolego			24,00		24,00	
1	All-university Pool MAGOLEGO Courses (offered in a foreign language)	E	24,00		24,00	PC-10
Final State Certification (FSC)			3,00		3,00	
1	Final Qualification Paper (offered in a foreign language)	C	3,00		3,00	GPC-1.AMI, GPC-2.AMI, GPC-3.AMI, GPC-4.AMI, PC-1, PC-10, PC-11, PC-2, PC-3, PC-4, PC-5, PC-6, PC-7, PC-8, PC-9, UC-1, UC-2, UC-3, UC-4, UC-5, UC-6

Curriculum agreed:

Academic Supervisor	Burova M.B.	21.05.2024
Dean	ARZHANTSEV I.V.	22.05.2024
Head of Centre for Educational Model Design	LEPESHKIN I.A.	22.05.2024

* Subject type:

Compulsory course	C
Elective course	E