



National Research University Higher School of Economics (HSE)

Curriculum

Field of study 01.04.02 Applied Mathematics and Informatics

Educational Programme "Data Science"

Trajectories: "Artificial Intelligence and Data Analysis"

Implementing unit: Faculty of Computer Science, HSE - Moscow

1 st, 2023/2024 academic year

APPROVED

15.05.2023

Vice Rector

ROSHCHIN S.Y.

Signed with EDS

Length of Programme: 2 years

Years of Study: 2023/2024 - 2024/2025

Mode of Study: Full Time

Degree: Master's degree / MBA

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	460	118	116	120	106	
Artificial Intelligence and Data Analysis (General track)				60,00	2 280	460	118	116	120	106	
Major				42,00	1 596	382	108	106	92	76	
Elective Courses 1st year				24,00	912	216	52	56	56	52	
1	Network Science	E	Department of Data Analysis and Artificial Intelligence	6,00	228	78			40	38A	Foreign language
2	Basics of Data Analysis	E	Department of Data Analysis and Artificial Intelligence	6,00	228	54	28	26A			Foreign language
3	Discrete Mathematics for Application and Algorithm Development	E	Department of Data Analysis and Artificial Intelligence	3,00	114	28	28A				Foreign language
4	Games and Decisions in Data Analysis and Modelling	E	Department of Mathematics	6,00	228	64			32	32A	Online Course, Foreign language
5	Computational Linguistics and Text Analysis	E	Department of Data Analysis and Artificial Intelligence	6,00	228	62			32	30A	
6	Machine Learning	E	Department of Data Analysis and Artificial Intelligence	12,00	456	120	28	28A	32	32A	
7	Geospatial Data Science	E	Department of Software Engineering	6,00	228	44	24	20A			Foreign language
8	Decision Making and Data Analysis under Uncertainty and Ambiguity	E	Department of Mathematics	6,00	228	56	28	28A			
9	Natural Language Processing on Python	E	Department of Data Analysis and Artificial Intelligence	6,00	228	52			32	20A	
10	Applied Quantitative Logistics	E	Department of Data Analysis and Artificial Intelligence	6,00	228	56			32	24A	Foreign language
11	Robust Methods in Statistics	E	Department of Data Analysis and Artificial Intelligence	6,00	228	52	24	28A			

12	Modern Methods of Data Analysis	E	Department of Data Analysis and Artificial Intelligence	6,00	228	56			28	28A	Foreign language
13	Probability Theory and Mathematical Statistics	E	Department of Data Analysis and Artificial Intelligence	3,00	114	28	28A				Foreign language
Compulsory Disciplines 1 Academic Year				18,00	684	166	56	50	36	24	
1	Linear Algebra for Data Science	C	Department of Mathematics	6,00	228	54	28	26A			Foreign language
2	Modern Methods of Decision Making	C	Department of Data Analysis and Artificial Intelligence	6,00	228	60			36	24A	Foreign language
3	Ordered Sets in Data Analysis	C	Department of Data Analysis and Artificial Intelligence	6,00	228	52	28A	24A			Foreign language
Key Seminars				9,00	342	76	10	10	28	28	
1	Research Seminar "Number Theoretic and Algebraic Methods in Data Analysis"	C	Department of Data Analysis and Artificial Intelligence	6,00	228	36			18	18A	Foreign language
2	Mentor's Seminar	C	Department of Data Analysis and Artificial Intelligence	3,00	114	40	10	10	10	10A	Foreign language
Magolego				6,00	228						
1	All-university Pool MAGOLEGO Courses	E		6,00	228						
Internship				3,00	114	2				2	
Project Internship				3,00	114	2				2	
1	Term Paper	C		3,00	114	2				2A	

Curriculum agreed:

Academic Supervisor	KUZNETSOV S.O.	05.05.2023
Dean	ARZHANTSEV I.V.	05.05.2023
Head of Centre for Educational Model Design	LEPESHKIN I.A.	14.05.2023

* Subject type:

Compulsory course

C

Elective course

E