



National Research University Higher School of Economics (HSE)

Basic Curriculum

Field of study 01.04.02 Applied Mathematics and Informatics

Educational Programme "Big Data Analytics"

Trajectories: "Big Data Analytics"

Implementing unit: Faculty of Computer Science, HSE - Moscow

Years of Study: 2025/2026 - 2026/2027

Length of Programme: 2 years

Mode of Study: Full Time

Degree: Master's degree / MBA

APPROVED

25.03.2025

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	
	Big Data Analytics (Applied track)		120,00	60,00	60,00	
	Key Seminars		15,00	9,00	6,00	
1	Mentor's Seminar	C	15,00	9,00	6,00	GPC-1.AMI, GPC-2.AMI, GPC-3.AMI, GPC-4.AMI, PC-1, PC-2, PC-3, PC-4, PC-5, PC-6, PC-7, PC-8, UC-1, UC-2, UC-3, UC-4, UC-5, UC-6
	Internship		24,00	9,00	15,00	
	Free					
	Preparation of the Graduate Thesis		15,00		15,00	
1	Preparation of the Final Qualifying Work	C	15,00		15,00	GPC-1.AMI, GPC-2.AMI, GPC-3.AMI, GPC-4.AMI, PC-1, PC-2, PC-3, PC-4, PC-5, PC-6, PC-7, PC-8, UC-1, UC-2, UC-3, UC-4, UC-5, UC-6
	Fixed		9,00	9,00		
1	Course Project	C	9,00	9,00		GPC-1.AMI, GPC-2.AMI, GPC-3.AMI, GPC-4.AMI, PC-1, PC-2, PC-3, PC-4, PC-5, PC-6, PC-7, PC-8, UC-1, UC-2, UC-3, UC-4, UC-6
	Major		63,00	39,00	24,00	
1	Theory and Practice of Online Experiments	C	3,00		3,00	GPC-3.AMI, GPC-4.AMI, PC-2, PC-3, PC-4, PC-6, UC-1
2	Machine Learning and Deep Learning Basics	C	6,00		6,00	GPC-1.AMI, GPC-2.AMI, PC-1, PC-2, PC-6, PC-7, UC-1

3	MLOps	C	3,00		3,00	GPC-1.AMI, GPC-2.AMI, PC-1, PC-6, PC-7, UC-1
4	Product Metrics	C	3,00		3,00	GPC-1.AMI, GPC-2.AMI, GPC-3.AMI, PC-1, PC-3, PC-5, PC-6, UC-1
5	Data Engineering Basics	C	3,00		3,00	GPC-1.AMI, GPC-2.AMI, GPC-3.AMI, PC-1, PC-2, PC-4, UC-1
6	Data Warehouse and Big Data Processing	C	3,00		3,00	GPC-1.AMI, GPC-2.AMI, GPC-3.AMI, GPC-4.AMI, PC-1, PC-2, PC-3, PC-5, PC-6, UC-1
7	Machine Learning for Solving Analytics Problems	C	3,00		3,00	GPC-1.AMI, GPC-2.AMI, GPC-3.AMI, GPC-4.AMI, PC-1, PC-2, PC-3, PC-7, UC-1
8	SQL	C	3,00	3,00		GPC-2.AMI, GPC-3.AMI, GPC-4.AMI, PC-1, PC-2, PC-3, UC-1, UC-2
9	A/B testing: basics	C	3,00	3,00		GPC-2.AMI, GPC-3.AMI, GPC-4.AMI, PC-1, PC-2, PC-3, UC-1, UC-2
10	Introduction to Machine Learning	C	3,00	3,00		GPC-1.AMI, GPC-2.AMI, GPC-3.AMI, PC-1, PC-2, PC-3, PC-4, UC-1, UC-2
11	Data Visualization	C	3,00	3,00		GPC-2.AMI, GPC-3.AMI, GPC-4.AMI, PC-1, PC-2, PC-3, PC-4, PC-5, UC-1, UC-2
12	Modern Software Engineering Practices	C	3,00	3,00		GPC-2.AMI, GPC-3.AMI, GPC-4.AMI, PC-1, PC-2, PC-3, PC-4, PC-5, UC-1, UC-2
13	Mathematics for Data Analysis	C	12,00	12,00		GPC-1.AMI, GPC-2.AMI, GPC-3.AMI, PC-1, PC-2, PC-4, UC-1
14	Python Programming	C	6,00	6,00		GPC-1.AMI, GPC-2.AMI, GPC-3.AMI, GPC-4.AMI, PC-1, PC-2, PC-3, PC-5, PC-6, UC-1, UC-2, UC-3
15	Product development and product analytics	C	3,00	3,00		GPC-2.AMI, GPC-3.AMI, PC-2, PC-3, PC-5, UC-1, UC-2, UC-3
16	A/B Testing: Advanced Course	C	3,00	3,00		GPC-1.AMI, GPC-2.AMI, PC-1, PC-2, PC-3, UC-1
	Magolego		15,00	3,00	12,00	
1	All-university Pool MAGOLEGO Courses	C	15,00	3,00	12,00	GPC-1.AMI, UC-1
	Final State Certification (FSC)		3,00		3,00	
1	Final Qualification Paper	C	3,00		3,00	GPC-1.AMI, GPC-2.AMI, GPC-3.AMI, GPC-4.AMI, UC-1, UC-2, UC-3, UC-4, UC-5, UC-6

Curriculum agreed:

Academic Supervisor	Паточенко Е.А.	04.03.2025
Dean	ARZHANTSEV I.V.	04.03.2025
Head of Centre for Educational Model Design	LEPESHKIN I.A.	04.03.2025

* Subject type:
Compulsory course C