



National Research University Higher School of Economics (HSE)

Curriculum
Field of study 01.03.02 Applied Mathematics and Information
Science,
38.03.01 Economics
Educational Programme "Economics and Data Science"
Implementing unit: Faculty of Economic Sciences, HSE -
Moscow
2 nd, 2023/2024 academic year

APPROVED

17.05.2023

Vice Rector

ROSHCHIN S.Y.

Signed with EDS

Length of Programme: 4 years

Years of Study: 2022/2023 - 2025/2026

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				60,00	2 442	904	232	236	226	204	
Data Culture				3,00	114	68	28	32	2		
1	Algorithms and Data Structures 2	C	Department of Big Data and Information Retrieval	3,00	114	60	28A	32A			
2	External Examinations on Digital Skills. Entry-level	C	отдел развития цифровых компетенций			2		2A			
3	External Examinations on Digital Skills. Final Level	C	отдел развития цифровых компетенций			2				2A	
4	External Examinations on Digital Skills. Intermediate Level	C	отдел развития цифровых компетенций			2			2A		
5	Independent Programming Test. Advanced Level	C	отдел развития цифровых компетенций			2			2A		Online Course
Major				47,00	1 786	660	168	168	168	156	
Core Professional Block (Major)				32,00	1 216	520	98	98	168	156	
Макроэкономика-1				7,00	266	120			64	56	
1	Macroeconomics 1	C	Department of Theoretical Economics	7,00	266	120			64	56A	
2	Macroeconomics-1 (advanced course)	C	Department of Theoretical Economics	7,00	266	120			64	56A	
Микроэкономика-2				6,00	228	84	42	42			
1	Microeconomics-2	C	Department of Theoretical Economics	6,00	228	84	42	42A			Foreign language
2	Microeconomics-2 (advanced course)	C	Department of Theoretical Economics	6,00	228	84	42	42A			Foreign language
Compulsory Courses				19,00	722	316	56	56	104	100	

1	Computer Architecture and Operating Systems	C	Department of Big Data and Information Retrieval	6,00	228	120			60	60A	
2	Calculus 2	C	Department of Big Data and Information Retrieval	3,00	114	56	28	28A			Online Course
3	Probabilities Theory and Math Statistics 1 (Advanced course)	C	Department of Applied Economics	5,00	190	56	28	28A			
4	Probabilities and Math Statistics 2 (Advanced course)	C	Department of Applied Economics	5,00	190	84			44	40A	
Elective Professional Block (Major)				15,00	570	140	70	70			
Elective Courses				12,00	456	112	56	56			
1	Discrete Mathematics 2	E	Department of Big Data and Information Retrieval	6,00	228	80			40	40A	
2	Differential and Difference Equations	E	Department of Mathematics	6,00	228	56	28	28A			
3	Additional Chapters of Macroeconomics-1	E	Department of Theoretical Economics	3,00	114	40			20	20A	
4	Instrumental Methods for Digital Economics	E	Department of Mathematics	6,00	228	56	28	28A			
5	Complex Analysis	E	Department of Big Data and Information Retrieval	6,00	228	80			40	40A	
6	Fundamentals of Matrix Computations	E	Department of Big Data and Information Retrieval	6,00	228	80			40	40A	
7	Essentials of Programming and Database	E	Department of Software Engineering	3,00	114	40				40A	
8	Applied Market Design	E	Department of Theoretical Economics	3,00	114	36			36A		Foreign language
9	Modern Methods of Data Analysis	E	Department of Mathematics	3,00	114	44				44A	
10	Financial Markets	E	базовая кафедра инфраструктуры финансовых рынков	3,00	114	56			56A		
11	Functional Analysis	E	Department of Big Data and Information Retrieval	6,00	228	80			40	40A	
12	Digital Transformations in HR Management	E	Department of Applied Economics	3,00	114	40			40A		
13	Economic History	E	Department of Theoretical Economics	3,00	114	40			40A		
14	Economic thought of the XX-XXI centuries	E	Department of Theoretical Economics	3,00	114	30				30A	Online Course
15	Python Programming Language (advanced course)	E	Department of Big Data and Information Retrieval	6,00	228	56	28	28A			
Научно - исследовательские семинары				3,00	114	28	14	14			
1	Research Seminar "Methodology of Project Work"	C	Department of Big Data and Information Retrieval	3,00	114	28	14	14A			
English											
Optional Courses											
1	English Language	O		6,00	228	104	28	32	44A		Foreign language, Credits only to the cumulative rating
General Courses				5,00	352	174	36	36	56	46	
Optional General Courses				4,00	152	30			20	10	

1	Legal Literacy	C	департамент права цифровых технологий и биоправа	4,00	152	30			20	10A	Online Course
Core General Courses				1,00	200	144	36	36	36	36	
1	Physical Training	C	Department of Physical Training	1,00	200	144	36	36	36	36A	
Internship				5,00	190	2				2	
Project Internship				5,00	190	2				2	
1	Project	C		5,00	190	2				2A	

Curriculum agreed:

Academic Supervisor	SAMONENKO I.Y.	04.05.2023
Dean	PEKARSKIY S.E.	04.05.2023
Head of Centre for Educational Model Design	LEPESHKIN I.A.	16.05.2023

* Subject type:

Compulsory course

C

Elective course

E

Optional course

O