



National Research University Higher School of Economics (HSE)

Curriculum

Field of study 01.04.01 Mathematics

Educational Programme "Mathematics"

Trajectories: "Algebra, Logic and Number Theory", "Analysis, Dynamical Systems and Probability Theory", "Mathematical Physics", "Topology, Combinatorics and Representation Theory"

Implementing unit: Faculty of Mathematics, HSE - Moscow

1 st, 2023/2024 academic year

APPROVED

29.05.2023

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				57,00	2 166	180	40	41	55	52	
Algebra, Logic and Number Theory (Research track)				51,00	1 938	182	72	63	55	32	
Major				30,00	1 140	72	48	42	22	20	
Major							32	28			
-				6,00	228	60	32	28			
1	Introduction to Differential Geometry	E	Faculty of Mathematics	6,00	228	60	32	28A			Foreign language
2	Applied Analysis	E	Faculty of Mathematics	6,00	228	60	32	28A			
Elective Courses				30,00	1 140	72	16	14	22	20	
1	-	E		30,00	1 140	72	16A	14A	22A	20A	
Key Seminars				9,00	342	108	24	21	33	10	
Модуль "Ключевые семинары"				3,00	114	36	8	7	11	10	
1	Academic Mentor's Seminar "Algebra, Logic and Number Theory"	C	Faculty of Mathematics	3,00	114	36	8	7	11	10A	Foreign language
-				6,00	228	72	16	14	22		
1	Research Seminar "Geometric Structures on Manifolds 1"	E	Laboratory of Algebraic Geometry and its Applications	3,00	114	30	16	14A			
2	Research Seminar "Geometric Structures on Manifolds 2"	E	Laboratory of Algebraic Geometry and its Applications	3,00	114	36			22	14A	
3	Research Seminar "Modern Problems of Mathematical Logic 1"	E	Faculty of Mathematics	3,00	114	30	16	14A			
4	Research Seminar "Modern Problems of Mathematical Logic 2"	E	Faculty of Mathematics	3,00	114	36			22	14A	

5	Research Seminar "Representation Theory 1"	E	Faculty of Mathematics	3,00	114	30	16	14A			
6	Research Seminar "Representation Theory 2"	E	Faculty of Mathematics	3,00	114	36			22	14A	
7	-	E		6,00	228	72	16	14A	22	20A	
	Magolego			6,00	228						
1	All-university Pool MAGOLEGO Courses	E		6,00	228						
	Internship			6,00	228	2				2	
	Research Internship			6,00	228	2				2	
1	Term Paper	C		6,00	228	2				2A	
	Analysis, Dynamical Systems and Probability Theory (Research track)			51,00	1 938	182	72	63	55	52	
	Major			30,00	1 140	72	48	42	22	20	
	Major						32	28			
	-			6,00	228	60	32	28			
1	Introduction to Differential Geometry	E	Faculty of Mathematics	6,00	228	60	32	28A			Foreign language
2	Applied Analysis	E	Faculty of Mathematics	6,00	228	60	32	28A			
	Elective Courses			30,00	1 140	72	16	14	22	20	
1	-	E		30,00	1 140	72	16A	14A	22A	20A	
	Key Seminars			9,00	342	108	24	21	33	30	
	Модуль "Ключевые семинары"			3,00	114	36	8	7	11	10	
1	Academic Mentor's Seminar "Analysis, Dynamical Systems and Probability Theory"	C	Faculty of Mathematics	3,00	114	36	8	7	11	10A	Foreign language
	-			6,00	228	72	16	14	22	20	
1	Research Seminar "Dynamical Systems 1"	E	Faculty of Mathematics	3,00	114	30	16	14A			
2	Research Seminar "Dynamical Systems 2"	E	Faculty of Mathematics	3,00	114	36			22	14A	
3	Research Seminar "Representations and Probability 1"	E	Faculty of Mathematics	3,00	114	30	16	14A			Foreign language
4	Research Seminar "Representations and Probability 2"	E	Faculty of Mathematics	3,00	114	36			22	14A	Foreign language
5	Research Seminar "Stochastic Analysis and its Applications in Economics 1"	E	Faculty of Mathematics	3,00	114	30	16	14A			Foreign language
6	Research Seminar "Stochastic Analysis and its Applications in Economics 2"	E	Faculty of Mathematics	3,00	114	36			22	14A	Foreign language
7	Research Seminar "Functional Analysis and Noncommutative Geometry 1"	E	Faculty of Mathematics	3,00	114	30	16	14A			
8	Research Seminar "Functional Analysis and Noncommutative Geometry 2"	E	Faculty of Mathematics	3,00	114	36			22	14A	
9	-	E		6,00	228	72	16A	14A	22A	20A	

	Magolego			6,00	228							
1	All-university Pool MAGOLEGO Courses	E		6,00	228							
	Internship			6,00	228	2					2	
	Research Internship			6,00	228	2					2	
1	Term Paper	C		6,00	228	2					2A	
	Mathematical Physics (Research track)			57,00	2 166	246	72	63	55	52		
	Major			36,00	1 368	136	48	42	22	20		
	Major			6,00	228	64	32	28				
1	Applied Analysis	C	Faculty of Mathematics	6,00	228	60	32	28A				
	Дисциплины по выбору			30,00	1 140	72	16	14	22	20		
1	-	E		30,00	1 140	72	16A	14A	22A	20A		
	Key Seminars			9,00	342	108	24	21	33	30		
	Модуль "Ключевые семинары"						8	7	11	10		
1	Academic Mentor's Seminar "Mathematical Physics"	C	Faculty of Mathematics	3,00	114	36	8	7	11	10A	Foreign language	
	-			6,00	228	72	16	14	22	20		
1	Research Seminar "Mathematical Physics 1"	E	Faculty of Mathematics	3,00	114	30	16	14A				
2	Research Seminar "Mathematical Physics 2"	E	Faculty of Mathematics	3,00	114	42			22	20A		
3	-	E		6,00	228	72	16A	14A	22A	20A		
	Magolego			6,00	228							
1	All-university Pool MAGOLEGO Courses	E		6,00	228							
	Internship			6,00	228	2					2	
	Research Internship			6,00	228	2					2	
1	Term Paper	C		6,00	228	2					2A	
	Topology, Combinatorics and Representation Theory (Research track)			60,00	2 280	266	94	86	44	42		
	Major			36,00	1 368	132	48	42	22	20		
	Major			6,00	228	60	32	28				
	-			6,00	228	60	32	28				
1	Introduction to Differential Geometry	E	Faculty of Mathematics	6,00	228	60	32	28A			Foreign language	
2	Applied Analysis	E	Faculty of Mathematics	6,00	228	60	32	28A				
	Elective Courses			30,00	1 140	72	16	14	22	20		
1	-	E		30,00	1 140	72	16A	14A	22A	20A		
	Key Seminars			12,00	456	132	46	44	22	20		
	Модуль "Ключевые семинары"			6,00	228	60	30	30				
1	Academic Mentor's Seminar "Topology, Combinatorics and Representation Theory"	C	Faculty of Mathematics	3,00	114	36	8	7	11	10A	Foreign language	
	-			6,00	228	72	16	14	22	20		
1	Research Seminar "Combinatorics of Invariants 1"	E	Faculty of Mathematics	3,00	114	30	16	14A			Foreign language	
2	Research Seminar "Combinatorics of Invariants 2"	E	Faculty of Mathematics	3,00	114	36			22	14A	Foreign language	

3	Research Seminar "Representation Theory 1"	E	Faculty of Mathematics	3,00	114	30	16	14A			
4	Research Seminar "Representation Theory 2"	E	Faculty of Mathematics	3,00	114	36			22	14A	
5	-	E		6,00	228	72	16A	14A	22A	20A	
Magolego				6,00	228						
1	All-university Pool MAGOLEGO Courses	E		6,00	228						
Internship				6,00	228	2				2	
Research Internship				6,00	228	2				2	
1	Term Paper	C		6,00	228	2				2A	

Curriculum agreed:

Academic Supervisor	GORODENTSEV A.L.	11.04.2023
Dean	SKRIPCHENKO A.S.	28.04.2023
Head of Centre for Educational Model Design	LEPESHKIN I.A.	26.05.2023

* Subject type:

Compulsory course

C

Elective course

E