



National Research University Higher School of Economics (HSE)

Curriculum

Field of study 01.03.02 Applied Mathematics and Information Science

Educational Programme "Computing and Data Science"

Specializations: "Machine Learning and Applications", "Software Engineering"

Implementing unit: Faculty of Computer Science, HSE - Moscow
4 th, 2024/2025 academic year

APPROVED

27.05.2024

Vice Rector

ROSHCHIN S.Y.

Signed with EDS

Length of Programme: 4 years

Years of Study: 2021/2022 - 2024/2025

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	2 280	42	2		3	9	
Major				32,00	1 216		200	224	320		
Elective Professional Block (Major)				32,00	1 216						
Elective Courses				18,00	684						
Блок 3				10,00	380						
1	Computer Systems Security	C	Department of Big Data and Information Retrieval	5,00	190	56	28	28A			
2	Deep Learning for Graph Data Analysis	C	Department of Big Data and Information Retrieval	5,00	190	56	28	28A			
3	Deep Learning for Natural Language Processing	C	Department of Big Data and Information Retrieval	5,00	190	56	28	28A			
Блок 4				8,00	304						
1	Reinforcement Learning	C	Department of Big Data and Information Retrieval	4,00	152	40			40A		
2	Industrial Programming in Haskell	C	Department of Big Data and Information Retrieval	4,00	152	40			40A		
3	Theory and Practice of Online Experiments	C	Department of Big Data and Information Retrieval	4,00	152	40			40A		
Научный-исследовательский семинар				5,00	190						
1	Research Seminar "Machine Learning and Applications 2"	E	Department of Big Data and Information Retrieval	5,00	190	48	14	14	20A		
2	Research Seminar "Industrial Programming 2"	E	Department of Big Data and Information Retrieval	5,00	190	48	14	14	20A		
Specialization				9,00	342						
Специализация "Машинное обучение и приложения"				9,00	342	84	16	28	40		

1	Deep Learning 1	C	Department of Big Data and Information Retrieval	5,00	190	44	16	28A		
2	Large-Scale Machine Learning	C	Department of Big Data and Information Retrieval	4,00	152	40			40A	Online Course
Специализация "Промышленное программирование"				9,00	342	96	28	28	40	
1	Systems Reliability Engineering	C	базовая кафедра Тинькофф	5,00	190	56	28	28A		
2	Systems Reliability Engineering 2	C	базовая кафедра Тинькофф	4,00	152	40			40A	
English				1,00	38				2	
Optional Courses										
1	Academic English Writing	O		2,00	76	48		28	20A	Foreign language, Credits only to the cumulative rating
Examinations				1,00	38				2	
1	Project Proposal	C	School of Foreign Languages	1,00	38	2			2A	Foreign language
Final State Certification (FSC)				6,00	228	6				6
Thesis Work				6,00	228	6				6
1	Presenting of Graduation Thesis	C		6,00	228	6				6A
General Courses				4,00	152	30	14	16		
Optional General Courses				4,00	152	30	14	16		
1	Philosophy	C	Школа философии и культурологии	4,00	152	30	14	16A		Online Course
Internship				17,00	646	6	2		1	3
Research Internship				11,00	418	2			1	1
1	Preparation of Graduation Thesis	C		11,00	418	2			1	1
Professional Internship				6,00	228	4	2			2
1	Graduation Internship	C		6,00	228	2				2A
2	Work Experience Internship	C				2	2A			

Curriculum agreed:

Academic Supervisor	PROMYSLOV V.V.	07.05.2024
Dean	ARZHANTSEV I.V.	07.05.2024
Head of Centre for Educational Model Design	LEPESHKIN I.A.	22.05.2024

* Subject type:

Compulsory course

C

Elective course

E

Optional course

O