National Research University Higher School of Economics (HSE)

Curriculum
Field of study 01.04.02 Applied Mathematics and Informatics
Educational Programme "Data Science for Construction, Architecture and Engineering"
Trajectories: "Data Science for Construction, Architecture and Engineering"
Implementing unit: Faculty of Computer Science, HSE - Moscow
1 st, 2025/2026 academic year

Length of Programme: 2 years
Years of Study: 2025/2026 - 2026/2027
Mode of Study: Full Time
Degree: Master's degree / MBA

Block Code	Course	Subject type	Department	Period of execution	Credits	Total Academic Hours	Contact Hours	Allocation of Contact Hours				Additional Information
								1	2	3	4	
	Degree Programme				**60,00**	**2 280**	**594**	**128**	**128**	**200**	**138**	
	Data Science for Construction, Architecture and Engineering (General track)				**60,00**	**2 280**	**594**	**128**	**128**	**200**	**138**	
	Major				**45,00**	**1 710**	**496**	**112**	**112**	**160**	**112**	
	Basic Components				**36,00**	**1 368**	**400**	**84**	**84**	**120**	**112**	
1	Introduction to Urban Studies and Urban Planning	C	Department of Big Data and Information Retrieval		6,00	228	56	28	28A			
2	Deep Learning	C	Department of Big Data and Information Retrieval		6,00	228	80			40	40A	
3	Development Cycle and Real Estate Construction	C	Department of Big Data and Information Retrieval		6,00	228	80			40	40A	
4	Data Analysis Tools	C	Department of Big Data and Information Retrieval		6,00	228	56	28	28A			
5	Machine Learning	C	Department of Big Data and Information Retrieval		6,00	228	56	28	28A			
6	Distributed Data Processing Systems	C	Department of Big Data and Information Retrieval		3,00	114	32				32A	
7	Modern Database Architecture	C	Department of Big Data and Information Retrieval		3,00	114	40			40A		
	Elective Courses. 1 year				**9,00**	**342**	**96**	**28**	**28**	**40**		
1	Algorithms and Data Structures for Interviews	E	Department of Big Data and Information Retrieval		3,00	114	40			40A		
2	Mathematics for Data Analysis (Linear Algebra)	E	Department of Big Data and Information Retrieval		3,00	114	28	28A				
3	Mathematics for Data Analysis (Mathematical Statistics)	E	Department of Big Data and Information Retrieval		3,00	114	28		28A			
4	Mathematics for Data Analysis (Probability Theory)	E	Department of Big Data and Information Retrieval		3,00	114	40			40A		
5	Project Management	E	Department of Big Data and Information Retrieval		6,00	228	56	28	28A			

№	Subject	Type	Department	Period	Credits	Hours						
6	Legal Regulation in Urban Planning and Management	E	Department of Big Data and Information Retrieval		3,00	114	28		28A			
	Key Seminars				**6,00**	**228**	**96**	**16**	**16**	**40**	**24**	
1	Mentor's Seminar "Data Science for Construction, Architecture and Engineering"	C	Department of Big Data and Information Retrieval		6,00	228	96	16	16	40	24A	Online Course
	Magolego				**6,00**	**228**						
1	All-university Pool MAGOLEGO Courses	E			6,00	228						
	Internship				**3,00**	**114**	**2**				**2**	
	Fixed				**3,00**	**114**	**2**				**2**	
1	Course Project	C		F	3,00	114	2				2A	

Curriculum agreed:

Academic Supervisor	Горденко М.К.	22.03.2025
Dean	ARZHANTSEV I.V.	28.03.2025
Head of Centre for Educational Model Design	LEPESHKIN I.A.	07.04.2025

* Subject type:
Compulsory course   C
Elective course   E

Period of execution:

Fixed   F