National Research University Higher School of Economics (HSE)

Curriculum
Field of study 01.03.02 Applied Mathematics and Information Science
Educational Programme "Data Science and Business Analytics"
Implementing unit: Faculty of Computer Science, HSE - Moscow
3 rd, 2024/2025 academic year

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 Progamme			**60,00**	**2 280**	**836**	**200**	**204**	**264**	**168**	
	Data Culture			**5,00**	**190**	**60**	**28**	**30**		**2**	
1	Databases	C	Department of Software Engineering	4,00	152	56	28	28A			Online Course, Foreign language
2	External Examinations on Digital Skills. Final Level	C	отдел развития цифровых компетенций			2		2A			Foreign language
3	Data Science, AI and Generative Models Independent Test. Advanced Level	C	отдел развития цифровых компетенций	1,00	38	2				2A	Online Course, Foreign language
	Major			**31,00**	**1 178**	**528**	**130**	**130**	**160**	**108**	
	Core Professional Block (Major)			**4,00**	**152**	**56**	**28**	**28**			
1	Optimization Methods	C	Department of Big Data and Information Retrieval	4,00	152	56	28	28A			Online Course, Foreign language
	Elective Professional Block (Major)			**27,00**	**1 026**	**472**	**102**	**102**	**160**	**108**	
	Elective Professional Block (Major)			**15,00**	**570**	**288**	**56**	**56**	**100**	**76**	
1	Time Series Analysis	C	Department of Big Data and Information Retrieval	4,00	152	120			60	60A	Foreign language
2	Machine Learning 1	C	Department of Big Data and Information Retrieval	4,00	152	56	28	28A			Foreign language
3	Econometrics	C	Department of Big Data and Information Retrieval	7,00	266	112	28	28A	40	16A	Foreign language
	Elective Courses (Block 1)			**4,00**	**152**	**64**	**32**	**32**			
1	AI for Business	E	Department of Big Data and Information Retrieval	4,00	152	56	28	28A			Foreign language
2	Sociology of Financial Behavior	E	International College of Economics and Finance	4,00	152	64	32	32A			Foreign language
3	Financial Economics	E	International College of Economics and Finance	4,00	152	64	32	32A			Foreign language

№	Course	Type	Department	Credits	Hours						Notes
	Elective Courses (Block 2)			**4,00**	**152**	**56**				**40**	**16**	
1	Data Analysis in Business	E	Department of Big Data and Information Retrieval	4,00	152	68				40	28A	Foreign language
2	Investment Management for Business	E	Department of Big Data and Information Retrieval	4,00	152	56				40	16A	Foreign language
	-			**4,00**	**152**	**64**	**14**	**14**	**20**	**16**		
1	Research Seminar "Data Science in scientific"	E	Department of Data Analysis and Artificial Intelligence	4,00	152	64	14	14	20	16A	Foreign language
2	Research Seminar "Data Science in Financial Economics"	E	Department of Big Data and Information Retrieval	4,00	152	64	14	14	20	16A	Foreign language
3	Research Seminar "Risk-Management"	E	Department of Big Data and Information Retrieval	4,00	152	48	14	14	20A		Foreign language
	Minor			**12,00**	**456**	**168**	**28**	**28**	**80**	**32**	
1	Business analytics, applied modelling and prediction	C	Department of Big Data and Information Retrieval	4,00	152	56			40	16A	Foreign language
2	Deep Learning	C	Department of Big Data and Information Retrieval	4,00	152	56			40	16A	Foreign language
3	Stochastic processes and applications	C	Department of Big Data and Information Retrieval	4,00	152	56	28	28A			Foreign language
	General Courses			**4,00**	**152**	**76**	**12**	**16**	**24**	**24**	
	Optional General Courses			**4,00**	**152**	**76**	**12**	**16**	**24**	**24**	
1	Russian History	C	School of History	4,00	152	76	12	16A	24	24A	Online Course, Foreign language
	Internship			**8,00**	**304**	**4**	**2**			**2**	
	Project Internship			**5,00**	**190**	**2**				**2**	
1	Term project 2	C		5,00	190	2				2A	Foreign language
	Professional Internship			**3,00**	**114**	**2**	**2**				
1	Work Experience Internship	C		3,00	114						Foreign language
2	Educational Internship	C					2	2A			Foreign language

Curriculum agreed:

Academic Supervisor   VOZNESENSKAYA T.V.   23.04.2024

Dean   ARZHANTSEV I.V.   23.04.2024

Head of Centre for
 Educational Model Design   LEPESHKIN I.A.   19.06.2024

* Subject type:
Compulsory course   C
Elective course   E