



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, 2022/2023 academic year

APPROVED

22.07.2022

Vice Rector  
ROSHCHIN S.Y.  
Signed with EDS

Length of Programme: 4 years

Years of Study: 2020/2021 - 2023/2024

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	
<b>Degree Programme</b>				<b>60,00</b>	<b>2 280</b>	<b>780</b>	<b>196</b>	<b>216</b>	<b>286</b>	<b>82</b>	
<b>Data Culture</b>				<b>8,00</b>	<b>304</b>	<b>120</b>	<b>28</b>	<b>32</b>	<b>44</b>	<b>16</b>	
1	Machine Learning 1	C	Department of Big Data and Information Retrieval	8,00	304	120	28	32A	44	16A	Foreign language
<b>Major</b>				<b>36,00</b>	<b>1 368</b>	<b>532</b>	<b>126</b>	<b>144</b>	<b>198</b>	<b>64</b>	
<b>Core Professional Block (Major)</b>				<b>5,00</b>	<b>190</b>	<b>60</b>	<b>28</b>	<b>32</b>			
<b>Subject Areas</b>				<b>5,00</b>	<b>190</b>	<b>60</b>	<b>28</b>	<b>32</b>			
<b>Optimization Methods</b>				<b>5,00</b>	<b>190</b>	<b>60</b>	<b>28</b>	<b>32</b>			
1	Optimization Methods	C	Department of Big Data and Information Retrieval	5,00	190	60	28	32A			Online Course, Foreign language
<b>Elective Professional Block (Major)</b>				<b>31,00</b>	<b>1 178</b>	<b>472</b>	<b>98</b>	<b>112</b>	<b>198</b>	<b>64</b>	
<b>3rd year courses</b>				<b>14,00</b>	<b>532</b>	<b>240</b>	<b>56</b>	<b>64</b>	<b>88</b>	<b>32</b>	
1	Business Analytics and Financial Engineering	C	Department of Big Data and Information Retrieval	7,00	266	120	28	32A	44	16A	Foreign language
2	Econometrics	C	Department of Big Data and Information Retrieval	7,00	266	120	28	32A	44	16A	Foreign language
<b>Major Courses</b>				<b>8,00</b>	<b>304</b>	<b>120</b>	<b>28</b>	<b>32</b>	<b>44</b>	<b>16</b>	
1	Time Series and Stochastic Processes	C	Department of Big Data and Information Retrieval	8,00	304	120	28A	32	44	16A	Online Course, Foreign language
<b>Elective Courses</b>				<b>5,00</b>	<b>190</b>	<b>52</b>			<b>44</b>	<b>8</b>	
1	Data Analysis in Business	E	Joint Department of Mathematical Methods in System Analysis with RAS Institute of System Analysis	5,00	190	52			44	8A	Foreign language
2	Data Engineering	E	Joint Department of Mathematical Methods in System Analysis with RAS Institute of System Analysis	5,00	190	44			44A		Foreign language

3	Operations Research and Game Theory	E	Department of Mathematics	5,00	190	80			40	40A	Foreign language
4	Investment Management for Business	E	Department of Big Data and Information Retrieval	5,00	190	60			44	16A	Foreign language
<b>Research Seminar</b>				<b>4,00</b>	<b>152</b>	<b>60</b>	<b>14</b>	<b>16</b>	<b>22</b>	<b>8</b>	
1	Research Seminar "Data Analysis in Finance 1"	E	Department of Big Data and Information Retrieval	4,00	152	60	14	16	22	8A	Foreign language
2	Research Seminar "Mathematical and Computational Engineering in Science and Business 1"	E	Department of Data Analysis and Artificial Intelligence	4,00	152	66	14	16	22	14A	Foreign language
<b>Minor</b>				<b>5,00</b>	<b>190</b>	<b>80</b>	<b>40</b>	<b>40</b>			
1	Databases	C	Department of Software Engineering	5,00	190	80	40	40A			Online Course, Foreign language
<b>General Courses</b>				<b>3,00</b>	<b>114</b>	<b>44</b>			<b>44</b>		
<b>Optional General Courses</b>				<b>3,00</b>	<b>114</b>	<b>44</b>			<b>44</b>		
1	History	C	Department of Big Data and Information Retrieval	3,00	114	44			44A		Foreign language
<b>Internship</b>				<b>8,00</b>	<b>304</b>	<b>4</b>	<b>2</b>			<b>2</b>	
<b>Project Internship</b>				<b>5,00</b>	<b>190</b>	<b>2</b>				<b>2</b>	
1	Term Project 2	E		5,00	190	2				2A	Foreign language
<b>Professional Internship</b>				<b>3,00</b>	<b>114</b>	<b>2</b>	<b>2</b>				
1	Work Experience Internship	C		3,00	114						Foreign language
2	Educational Internship	C				2	2A				Foreign language

**Curriculum agreed:**

Academic Supervisor SAMONENKO I.Y. 20.07.2022

Dean ARZHANTSEV I.V. 20.07.2022

Head of Degree Programmes Development Office LEPESHKIN I.A. 21.07.2022

\* Subject type:

Compulsory course

C

Elective course

E