National Research University Higher School of Economics (HSE)

Curriculum
Field of study 01.04.02 Applied Mathematics and Informatics
Educational Programme "Data Analysis for Biology and Medicine"
Trajectories: "Data Analysis in Biology and Medicine"
Implementing unit: Faculty of Computer Science, HSE - Moscow
1 st, 2022/2023 academic year

Length of Programme: 2 years
Years of Study: 2022/2023 - 2023/2024
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			**60,00**	**2 280**	**160**	**96**	**184**	**172**	**130**	
	Data Analysis in Biology and Medicine (General track)			**60,00**	**2 280**	**160**	**96**	**184**	**172**	**130**	
	Major			**39,00**	**1 482**		**72**	**128**	**148**	**72**	
	1 year 1 semester			**27,00**	**1 026**						
1	Molecular Biology	E	Department of Complex Systems Modelling Technologies	6,00	228	56	24	32A			
2	Computing Infrastructure in Bioinformatics Problems	E	Department of Big Data and Information Retrieval	3,00	114	32		32A			
3	Machine Learning in Bioinformatics	E	Department of Big Data and Information Retrieval	6,00	228	56	24	32A			Online Course, Foreign language
4	Molecular Modeling	E	Department of Complex Systems Modelling Technologies	6,00	228	64	32	32A			
5	Applied Bioinformatics	E	Department of Big Data and Information Retrieval	6,00	228	64	32	32A			
6	R Programming	E	Department of Complex Systems Modelling Technologies	6,00	228	56	24	32A			
	1 year 2 semester			**12,00**	**456**						
1	Algorithms in Bioinformatics	E	Department of Complex Systems Modelling Technologies	3,00	114	40			40A		
2	Molecular Evolution	E	Department of Complex Systems Modelling Technologies	3,00	114	32			32A		
3	Population models in genomics	E	Department of Applied Mathematics	3,00	114	28			28A		Foreign language

No.	Discipline	Type	Department	Credits	Total					
4	Applied Statistics	E	Department of Complex Systems Modelling Technologies	3,00	114	56			56A	
5	Comparative Genomics	E	Department of Complex Systems Modelling Technologies	3,00	114	32			32A	
	Key Seminars			**9,00**	**342**	**96**	**24**	**24**	**24**	**24**
1	Mentor's Seminar "Biomedical Data Analysis"	C	Department of Complex Systems Modelling Technologies	9,00	342	96	24	24	24	24A
	Magolego			**6,00**	**228**	**64**		**32**		**32**
1	Discipline of Other Plans	E		6,00	228	64		32A		32A
	Internship			**6,00**	**228**					**2**
	Research Internship			**6,00**	**228**					**2**
1	Term paper	C		6,00	228	2				2A

Curriculum agreed:

Academic Supervisor	POPTSOVA M.S.	11.05.2022
Dean	ARZHANTSEV I.V.	11.05.2022
Head of Degree Programmes Development Office	MAMONOVA M.A.	16.05.2022

* Subject type:

Compulsory course	C
Elective course	E