

Документ подписан простой электронной подписью
Информация о владельце:
ФИО: Ливанов Дмитрий Викторович
Должность: Ректор
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A. A. Voronov

Ministry of Science and Higher Education of the Russian Federation
The Federal State Autonomous Educational Institution of Higher Education
"Moscow Institute of Physics and Technology (National Research University)"

ACADEMIC PLAN

Qualification Master

Year of enrollment 2024

Statutory duration of a study course 2 years

Domain of study: 03.04.01 - Applied Mathematics and Physics

Orientation (specialty): Applied Bioinformatics/Прикладная биоинформатика

Phystech School of Biological and Medical Physics

Center for educational programs in bioinformatics

AGREED

Head of the Phystech School of Biological and Medical
Physics D. V. Kuzmin

№ in order	Name of disciplines, practices, State Final Examination	Form of final control by semesters							Hours							Coursework and test papers	h o u r s i n w e e k												TOTAL HOURS	Credit points							
		Examination				Graded test ("-" - simple)			State Examination	Laboratory classes	of them						Hours for preparation and examinations	Distribution by courses and semesters												Total	Basic	Elective					
											Total classroom sessions	Lectons	Laboratory classes	Practical lessons, seminars, exercises, etc.	Practice			Independent study	1 course						2 course												
		1 sem. 15 weeks			2 sem. 15 weeks			3 sem. 15 weeks											4 sem. 15 weeks																		
		1	2	3	4	1	2	3											4	6	7	8	9	10	11	12	13	14					15	16	17	18	19
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22																
M.1	Courses (Modules)/Дисциплины (модули)								1 425	660	360		300		765	240	8														1 665	37	15	22			
M.1.1	Foreign Languages/Иностранные языки								180	120			120		60		4															180	4	4			
						-1			90	60			60		30		2		4													90	2	2			
						2			90	60			60		30		2			4												90	2	2			
	Humanitarian and Social Cycle/Гуманитарный и социальный цикл								165	60	60					105	60	4														225	5	5			
M.1.2	(Never the Same Phystech: History and Culture of MIPT from Ancient Times to the Present Day)/(Не тот Физтех: история и культура МФТИ с незапамятных времен до Digital Transformation: Social and Economic Challenges/Цифровая трансформация: социальные и экономические вызовы	1							60	30	30				30	30	2	2														90	2	2			
M.1.3	Core science/Профильные дисциплины		2						105	30	30				75	30	2		2														135	3	3		
M.1.4	Basic Biostatistics/Базовая биостатистика	1							105	60	30		30		45	30		2	2														135	3	3		
M.1.5	Introduction to Molecular Biology and Genetics/Введение в молекулярную биологию и генетику	1							105	30	30				75	30		2															135	3	3		
M.1.B.1	Data Visualization/Визуализация данных		2						105	45	30		15		60	30				2		1											135	3		3	
M.1.B.2	Microbiology and Metagenomics/Микробиология и метагеномика					2			90	30	30				60					2													90	2		2	
M.1.B.3	Machine Learning in Biology/Машинное обучение в					1			90	30	15		15		60			1	1														90	2		2	
M.1.B.4	NGS Data Analysis/Анализ данных NGS		2						60	30	15		15		30	30				1		1											90	2		2	
M.1.B.5	Transcriptomics, Epigenomics and OMICS Data Analysis/Транскриптомика, эпигеномика и анализ ОМИКСных данных					2			90	30	30				60					2													90	2		2	
M.1.B.6	Algorithms of Bioinformatics/Алгоритмы биоинформатики					1			90	45	30		15		45			2	1														90	2		2	
M.1.B.7	Data Structures and Algorithms/Структуры данных и алгоритмы					1			135	60	60				75			4															135	3		3	
M.1.B.8	Analysis of OMICS Data/Анализ омиксных данных		2						60	30			30		30	30																	90	2		2	
M.1.B.9	Deep Learning in Biology/Глубокое обучение в биологии		2						105	60	30		30		45	30				2		2											135	3		3	
	Elective Set of Courses 1/Блок дисциплин по выбору 1								45	30			30		15																		45	1		1	
M.1.B.10	Genetic and Genomic Engineering/Генная и геномная инженерия					2			45	30			30		15					2													45	1		1	
M.1.B.11	Cancer and Molecular Cell Biology/Рак и молекулярно-клеточная биология					2			45	30					15																		45	1		1	
M.2	Practice/Практика								3 375					3 375																			3 375	75	75		
M.2.1	Industrial Practice/Производственная практика								3 375					3 375																			3 375	75	75		
M.2.1.1	Personal Research Project/Научно-исследовательская работа								3 375					3 375																			3 375	75	75		
						1			540				540																					540	12	12	

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Acting Head of Academic Management Office T.F. Artemenko