



National Research University Higher School of Economics (HSE)

Curriculum

Field of study 03.03.02 Physics

Educational Programme "Physics"

Specializations: "Condensed Matter Physics", "Low Temperature Physics", "Nanoelectronics and Photonics", "Quantum Optics and Nanophotonics", "Quantum Technologies", "Space Physics", "The Teaching of Modern Physics", "Theoretical Physics"

Implementing unit: Faculty of Physics, HSE - Moscow

2 nd, 2024/2025 academic year

APPROVED

26.04.2024

Vice Rector

ROSHCHIN S.Y.

Signed with EDS

Length of Programme: 4 years

Years of Study: 2023/2024 - 2026/2027

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 Programme				60,00	2 442	1 216	244	286	326	360	
Data Culture				4,00	152	90		2	44	44	
1	External Examinations on Digital Skills. Entry-level	C	отдел развития цифровых компетенций			2		2A			
2	External Examinations on Digital Skills. Intermediate Level	C	отдел развития цифровых компетенций			2				2A	
3	Independent Programming Test. Intermediate	C	отдел развития цифровых компетенций			2				2A	Online Course
4	Processing and Data Analysis in Physics	C	Faculty of Physics	4,00	152	84			44	40A	Online Course
Major				30,00	1 140	712	172	164	190	186	
Core Professional Block (Major)				30,00	1 140	712	172	164	190	186	
1	Quantum Mechanics	C	Faculty of Physics	3,00	114	106			54	52A	
2	Mathematical Physics	C	Faculty of Physics	3,00	114	100			50	50A	
3	Calculus	C	Faculty of Mathematics	3,00	114	64	32	32A			
4	Optics	C	Faculty of Physics	4,00	152	106			54	52A	
5	Probability Theory	C	Faculty of Physics	3,00	114	64	32	32A			
6	Field Theory	C	Faculty of Physics	3,00	114	80	40	40A			
7	Theory of Complex Functions	C	Faculty of Physics	4,00	152	48	28A	20A			Online Course
8	Thermodynamics and Molecular Physics	C	Faculty of Physics	3,00	114	80	40	40A			
9	Chemistry for Physicists	C	Faculty of Physics	4,00	152	64			32A	32A	
Minor				10,00	380	80	20	20	20	20	
1	Minor	C		10,00	380	80	20	20A	20	20A	

English											
Optional Courses											
1	English Language	O		6,00	228	100	32	28	40A		Foreign language, Credits only to the cumulative rating
General Courses				4,00	314	174	36	36	56	46	
Optional General Courses				3,00	114	30			20	10	
1	Legal Literacy	C	департамент теории права и сравнительного правоведения	3,00	114	30			20	10A	Online Course
Core General Courses				1,00	200	144	36	36	36	36	
1	Physical Training	C	Department of Physical Training	1,00	200	144	28	28	44	44A	
Internship				12,00	456	160	16	64	16	64	
Research Internship				12,00	456	160	16	64	16	64	
1	Laboratory Work in Optics	C		5,00	190	64				64A	
2	Laboratory Work on Thermodynamics and Molecular Physics	C		5,00	190	64		64A			
3	Educational Internship	C		2,00	76	32	16		16A		

Curriculum agreed:

Academic Supervisor	Kuntsevich A.Y.	22.03.2024
Dean	TRUNIN M.R.	22.03.2024
Head of Centre for Educational Model Design	LEPESHKIN I.A.	26.04.2024

* Subject type:

Compulsory course

C

Elective course

E

Optional course

O