

National Research University Higher School of Economics (HSE)

Curriculum

Field of study 11.04.04 Electronics and Nanoelectronics
Educational Programme "Applied Electronics and Photonics"
Trajectories: "Engineering in Electronics, Micro- and
Nanoelectronics", "Quantum Nanoelectronics and Materials",
"Technological Foundations of Quantum Computing and

Quantum Communications"

Implementing unit: Tikhonov Moscow Institute of Electronics and

Mathematics, HSE - Moscow 2 nd, 2023/2024 academic year

APPROVED 17.03.2023 Vice Rector

ROSHCHIN S.Y.

Signed with EDS

Length of Programme: 2 years Years of Study: 2022/2023 - 2023/2024

Mode of Study: Full Time

Degree: Master's degree / MBA

						A	location of C	ontact Hour			
Block Code	Course	Subject type	Department	Credits	Total Academic Hours	Contact Hours	1	2	3	4	Additional Information
	Degree Programme			60,00	2 280	160	68	70	24	4	
	Engineering in Electronics, Micro- and Nanoelectronics (Applied track)				2 280	166	68	70	24	4	
	Major			12,00	456	96	48	48			
	Specialization Disciplines				456	96	48	48			
1	Measurement and Control of Parameters of Electronic Components and Means	С	School of Electronic Engineering	6,00	228	48	24	24A			
2	CAD Systems for Micro- and Nanoelectronics Devices	С	School of Electronic Engineering	6,00	228	48	24	24A			
	Final State Certification (FSC)				228	2				2	
1	Final Qualification Paper	С		6,00	228	2				2A	
	Key Seminars			9,00	342	64	20	22	22		
1	Engineering in Electronics, Micro- and Nanoelectronics (mentor's workshop)	С	School of Electronic Engineering	6,00	228	36	12	14	10A		
2	Research and Design Seminar	С	School of Electronic Engineering	3,00	114	28	8	8	12A		
	Magolego			6,00	228						
1	All-university Pool MAGOLEGO Courses	E		6,00 27,00	228						
	Internship				1 026	4			2	2	
	Research Internship	18,00	684	2				2			
1	Graduation Thesis	С		18,00	684	2				2	
	Professional Internship	9,00	342	2			2				

1	Graduation Internship	С		9,00	342	2			2A		
	Quantum Nanoelectronics and Materia	als (Appl	ied track)	60,00	2 280	166	68	70	24	4	
	Major			12,00	456	96	48	48			
	Specialization Disciplines	12,00	456	96	48	48					
	Special Workshop on the	С	School of Electronic	6,00	228	48	24	24A			
	Technological Foundations of		Engineering								
1	Creating Nanostructures										
	Technological Foundations of	С	School of Electronic	6,00	228	48	24	24A			
	Quantum Computing and Quantum Communications		Engineering								
2	Final State Certification (FSC)	6.00	228	2				2			
1	` ,	С		6,00	228	2				2A	
'	Key Seminars	<u> </u>		9,00	342	64	20	22	22	ZA	
		С	School of Electronic	6,00	228	36	12	14	10A		
1	materials (mentor workshop)	C	Engineering	6,00	220	30	12	14	IUA		
	Research and Design Seminar	С	School of Electronic	3,00	114	28	8	8	12A		
2	Research and Design Germinal		Engineering	0,00	''-	20		U	12/\		
	Magolego		1 3 3	6,00	228						
		E		6,00	228						
1	Courses										
	Internship			27,00	1 026	4			2	2	
	Research Internship			18,00	684	2				2	
1	Graduation Thesis	С		18,00	684	2				2	
	Professional Internship				342	2			2		
1	Graduation Internship	С		9,00	342	2			2A		
	Technological Foundations of Quantu	60,00	2 280	166	68	70	24	4			
	Communications (Applied track)										
	Major	12,00	456	96	48	48					
	Specialization Disciplines	12,00	456	96	48	48					
	Special Workshop on the	С	School of Electronic	6,00	228	48	24	24A			
	Technological Foundations of		Engineering								
1	Creating Nanostructures	0	Cabaal of Elastracia	0.00	200	40	0.4	044			
	Technological Foundations of Quantum Computing and	С	School of Electronic Engineering	6,00	228	48	24	24A			
2	Quantum Computing and Quantum Communications		Lingineering								
	Final State Certification (FSC)	6,00	228	2				2			
1	` '	С		6,00	228	2				2A	
•	Key Seminars			9,00	342	64	20	22	22	<u></u>	
	-	С	School of Electronic	3,00	114	28	8	8	12A		
1			Engineering						,		
		С	School of Electronic	6,00	228	36	12	14	10A		
	Quantum Computing and Quantum		Engineering								
	Communications (mentor's										
2	workshop)										
	Magolego	I =		6,00	228						
1	All-university Pool MAGOLEGO Courses	E		6,00	228						
ı	Internship			27,00	1 026	4			2	2	
	internanip			21,00	1 020	4			2	2	

	Research Internship				684	2			2	
1	Graduation Thesis	С		18,00	684	2			2	
	Professional Internship			9,00	342	2		2		
1	Graduation Internship	С		9,00	342	2		2A		

Curriculum agreed:

Academic Supervisor ARUTYUNOV K.Y. 20.02.2023

Dean KROUK E.A. 20.02.2023

Head of Centre for

Educational Model Design LEPESHKIN I.A. 02.03.2023

* Subject type:

Compulsory course C Elective course E