



National Research University Higher School of Economics (HSE)

Basic Curriculum

Field of study 04.04.01 Chemistry

Educational Programme "Chemistry of Molecular Systems and Materials"

Trajectories: "Chemistry of Molecular Systems and Materials"

Implementing unit: Faculty of Chemistry, HSE - Moscow

APPROVED

29.05.2023

Vice Rector

ROSHCHIN S.Y.

Signed with EDS

Years of Study: 2023/2024 - 2024/2025

Length of Programme: 2 years

Mode of Study: Full Time

Degree: Master's degree / MBA

Block Code	Course	Subject type	Credits	Credits by Years		Planned Educational Programme Development Results
				1	2	
	Degree Programme		120,00	60,00	60,00	
	Chemistry of Molecular Systems and Materials (Research track)		120,00	60,00	60,00	
	Key Seminars		21,00	12,00	9,00	
	Elective Research Seminars		6,00	3,00	3,00	
1	Research Seminar "Organic and Organoelement Chemistry"	E	6,00	3,00	3,00	GPC-2, UC-1, UC-6
2	Research Seminar "Chemical Engineering"	E	6,00	3,00	3,00	GPC-2, UC-1, UC-6
3	Research Seminar "Inorganic Chemistry and Materials Science"	E	6,00	3,00	3,00	GPC-2, UC-1, UC-6
	Compulsory Research Seminars		15,00	9,00	6,00	
1	Research Seminar "Modern World Trends in Chemistry and Chemical Technology"	C	6,00	6,00		GPC-2, PC-5, UC-1, UC-6
2	Mentor's Seminar	C	3,00	3,00		PC-1, PC-3, UC-1, UC-5, UC-6
3	Research Seminar "Modern World Trends in Chemistry and Chemical Technology" (part 2)	C	3,00		3,00	GPC-2, PC-5, UC-1, UC-6
4	Mentor's Seminar (Part 2)	C	3,00		3,00	PC-1, PC-3, UC-1, UC-5, UC-6
	Internship		54,00	27,00	27,00	
	Project Internship					
	Professional Internship					
	Research Internship		54,00	27,00	27,00	
1	Research Project	C	6,00	3,00	3,00	GPC-1, GPC-2, GPC-4, PC-1, PC-2, PC-4, PC-5, PC-6, UC-1, UC-2, UC-3

2	Preparation of the Graduate Thesis	C	6,00		6,00	GPC-1, GPC-2, GPC-3, GPC-4, PC-1, PC-4, PC-5, PC-6, UC-2
3	Writing a Scientific Article	C	18,00	9,00	9,00	GPC-4, PC-3, PC-4, UC-2, UC-4, UC-6
4	Work Experience Internship (Research)	C	24,00	15,00	9,00	GPC-1, GPC-2, GPC-4, PC-1, PC-2, PC-4, PC-5, PC-6, UC-1, UC-2, UC-3
Major			33,00	15,00	18,00	
1	Probability Theory, Statistics and Exploratory Data Analysis (offered in a foreign language)	C	3,00	3,00		GPC-2, PC-1
2	Physico-chemical Methods for the Study of Molecular Systems and Materials	C	6,00	6,00		GPC-2, PC-1, PC-2, PC-4
3	Bioinorganic Chemistry	E	3,00	3,00		GPC-1, GPC-2, PC-2, PC-6, UC-2, UC-4
4	Chemistry of Platinum Group Metals	E	3,00	3,00		GPC-1, GPC-2, PC-2, PC-6, UC-2, UC-4
5	Modern Organometallic Chemistry of Transition Metals	E	3,00	3,00		GPC-1, GPC-2, PC-2, PC-6, UC-2, UC-4
6	Catalysis	E	3,00	3,00		GPC-1, GPC-2, PC-2, PC-6, UC-2, UC-4
7	Solid State Chemistry	E	3,00	3,00		GPC-1, GPC-2, PC-2, PC-6, UC-2, UC-4
8	Medicinal Inorganic Chemistry	E	3,00	3,00		GPC-1, GPC-2, PC-2, PC-6, UC-2, UC-4
9	Materials for Microelectronics: Technologies and Diagnostics (offered in a foreign language)	C	6,00		6,00	GPC-2, PC-1
10	Faculty Pool Disciplines	E	6,00		6,00	GPC-1, GPC-2, PC-2, PC-6, UC-2, UC-4
11	Magnetochemical, Diffraction and Luminescence Analytical Methods	C	6,00		6,00	GPC-2, PC-1, PC-2, PC-4
Magolego			9,00	6,00	3,00	
1	University Pool Courses (MAGO-LEGO)	E	9,00	6,00	3,00	GPC-2, GPC-3, PC-1, UC-2, UC-4
Final State Certification (FSC)			3,00		3,00	
1	Final Qualification Paper	C	3,00		3,00	GPC-1, GPC-2, GPC-4, PC-1, PC-4, PC-6, UC-1, UC-2, UC-4

Curriculum agreed:

Academic Supervisor	ROYTERSHEYN D.M.	25.05.2023
Dean	KOTOV V.I.	25.05.2023
Head of Centre for Educational Model Design	LEPESHKIN I.A.	26.05.2023

* Subject type:

Compulsory course

C

Elective course

E