

Master's Educational Program "Chemistry"
CURRICULUM

№	Components	Course Code	Prerequisite Code	Number of Credits	Number of Hours	Including								Credit distribution within semesters							
						Lecture	Group work	Practical	Laboratorial	Internship	Midterm Exam	Final Exam	Individual Work	I semester	II semester	III semester	IV semester	V semester	VI semester	VII semester	VIII semester
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Stud Courses																					
1	Selected Chapters of Inorganic Chemistry	M1140803001	-	5	125	5			22		1	2	95	5							
2	Selected Chapters of Bioorganic Chemistry	M1140803002	-	5	125	5			22		1	2	95	5							
3	Selected Chapters of Physical Chemistry	M1140803003	B1140803006 (Physical Chemistry)	5	125	15	12				1	2	95	5							
4	Instrumental Methods of Research I	M1140803004		5	125	5			22		1	2	95	5							
5	English B2/C1	M1140102069 M1140102110		10	250		57				1	2	190	10							
Elective Modules																					
Bioorganic Chemistry																					
1	Mechanisms of Bioorganic Reactions	M1140803006		10	250	15	42				1	2	190		10						
2	Chemistry and Biochemistry of Secondary Metabolites	M1140803007		10	250	15			42		1	2	190		10						
3	Chromatographic Methods of Natural Compounds Analysis	M1140803008		5	125	5			22		1	2	95			5					
4	Chemistry of Biocoordinating Compounds	M1140803009		5	125	14			13		1	2	95			5					
5	Food Product Analysis	M1140803010		10	250	10			47		1	2	190			10					
6	Chemistry and Biochemistry of Low-	M1140803011		10	250	15			42		1	2	190			10					

	molecular Bio-regulators																			
	Free Components																			
7	Instrumental Methods of Research 2	M1140803012		10	250	10			47		1	2	190		10					
8	Basics of Biotechnology	M1140803013		10	250	14			43		1	2	190		10					
	Inorganic and Coordinate Compounds Chemistry																			
1	Chemistry of Metals	M1140803014		10	250	12			45		1	2	190		10					
2	Complex Compounds Chemistry	M1140803015	M1140803001	10	250	14			43		1	2	190		10					
3	Methods of Inorganic and Coordinate Compounds Synthesis	M1140803016	M1140803015	10	250	12			45		1	2	190			10				
4	Quantitative Analysis	M1140803017	M1140803001	10	250	15			42		1	2	190			10				
5	Biocoordinate Compounds Chemistry	M1140803009		5	125	14			13		1	2	95			5				
6	Stereo- and Spectrochemistry of Inorganic and Coordinate Compounds	M1140803018	M1140803015	5	125	12	15				1	2	95			5				
	Free Components																			
6	Instrumental Methods of Research 2	M1140803012		10	250	10			47		1	2	190		10					
7	Organic Ligands Chemistry	M1140803019	M1140803001 M1140803002	10	250	28			29		1	2	190		10					
	Physical Chemistry of Membrane Processes																			
1	Physical Chemistry of Dispersive Systems	M1140803020	M1140803003	5	125	13			14		1	2	95		5					
2	Theoretical Basics of Membrane Processes	M1140803021	M1140803003	10	250	28	29				1	2	190		10					
3	Electrochemistry	M1140803022	M1140803003	10	250	15	12		30		1	2	190			10				
4	Physical Chemistry of Baromembrane Processes	M1140803023	M1140803024 M1140803021 M1140803020	10	250	15	12		30		1	2	190			10				
5	Machines and Equipment of Membrane Processes	M1140803024	M1140803003	5	125	15	12				1	2	95		5					
6	Electro Membrane Processes	M1140803025	M1140803021 M1140803022	10	250	15	12		30		1	2	190			10				
	Free Components																			
7	Membrane Technology in	M1140803026		10	250	20			37		1	2	190		10					

	Food Industry																			
8	Membrane Processes of Natural and Waste Water Purification	M1140803027		10	250	20			37		1	2	190		10					
Chemical Expertise																				
1	Classical and Modern methods of Analytical Chemistry	M1140803028	M1140803001	10	250	15			42		1	2	190		10					
2	Chemical Analysis and Expertise if Drinking Water	M1140803029	M1140803001	10	250	15			42		1	2	190		10					
3	Physical and Chemical Analysis of Food Products	M1140803030	M1140803001	10	250	15			42		1	2	190			10				
4	General Metrology, Basics of Standardization and Certification	M1140803031	M1140803028	10	250	27	30				1	2	190			10				
5	Quality Management Systems	M1140803032	M1140803031	10	250	27	30				1	2	190			10				
Free Components																				
6	Mineral Water Expertise	M1140803033	M1140803001	10	250	15			42		1	2	190		10					
7	Soft and Alcoholic Drinks Expertise	M1140803034	M1140803001	10	250	15			42		1	2	190		10					
	Master's Thesis			30													30			
	Total													30	30	30	30			