

2. CONTENT OF THE EDUCATIONAL PROGRAM

№	Code and name of modules	Total credits by module	№	Name of subject and code	Credits by subjects	Cycle/component
1	GES -1 General educational subjects module	36	1	GES 101 History of Kazakhstan	5	GC/ CC
			2	GES 102 Philosophy	5	GC/ CC
			3	GES 103 Social and Political Knowledge Module (Sociology, Cultural Studies, Political Science, Psychology)	8	GC/ CC
			4	GES 1(2)04 Physical Culture	8	GC/ CC
			5	GES 205 Information and Communication Technologies	5	GC/ CC
			6	1. GES 106 Fundamentals of Legal Literacy and Anti-Corruption culture / 2. GES 106 Ecology and Sustainable Development 3. GES 106 Fundamentals of Economics and Entrepreneurship / 4. GES 106 Fundamentals of Leadership and receptivity to innovation / 5. GES 106 Emotional Intellect 6. GES 106 Fundamentals of mathematical statistics 7 GES 106 Financial Literacy	5	GC/ OC
2	GLC -2 Language communication module	25	1	GLC 101 Kazakh (Russian) Language	10	GC/ CC
			2	GLC 102 Foreign Language	10	GC/ CC
			3	GLC 203 English for Academic Purposes GLS 203/2 Academic writing	5	CC/ UC
3	GER – 3 Global Ethics and Research module	21	1	GER 201 Inclusive Education	6	CC/ UC
			2	GER 402/1 Fundamentals of Educational research	10	CC/ UC
			3	GER 303/2 Professional ethics and identity	5	MC/ UC
			4	GER 303/2 Basics of Artificial Intelligence		
4	GPS – 4 General pedagogical subjects module	21	1	GPS 201 Educational psychology	6	CC/ UC
			2	GPS 202 Pedagogy and didactic	6	CC/ UC
			3	GPS 303 Criteria Assessment Technology	5	CC/ UC
			4	T(IP 104 Continuous training (introductory) practice	1	CC/ UC
			5	TLP 104 Training, laboratory	1	CC/ UC

			6	(PP)P 205 Psychological and pedagogical practice	2	CC/ UC
5	FGCh – 5 Fundamentals of General Chemistry	42	1	FGCh 101 Inorganic chemistry 1	5	CC/ UC
			2	FGCh 102 Inorganic chemistry 2	6	CC/ UC
			3	FGCh 203/1 Chemistry of elements	5	CC/ OC
				FGCh 203/2 Chemistry of metals and nonmetals		
			4	FGCh 204/1 Qualitative analysis	6	CC/ OC
				FGCh 204/2 Chromatographic methods of analysis		
			5	FGCh 205/1 Quantitative analysis	5	CC/ OC
				FGCh 205/2 Theoretical foundations and calculations of analytical chemistry		
			6	FGCh 306 Organic Chemistry 1	5	CC/ UC
			7	FGCh 307 Organic Chemistry 2	5	CC/ UC
			8	FChE 308 Physical chemistry	5	CC/ UC
6	SBCh - 6 Selected branches of chemistry	14	1	SBCh 201/1 Methods of solving tasks in chemistry	5	CC/ OC
				SBCh 201/2 Methods of solving Olympiad tasks in chemistry		
			2	SBCh 402/1 Chemistry of natural compounds	5	CC/ OC
				SBCh 402/2 Chemistry of medicinal compounds		
			3	SBCh 403/1 <i>STEM technology in teaching chemistry</i>	4	MC/ OC
				SBCh 403/2 Digital resources in teaching chemistry		
7	FChE-7 Fundamentals of Chemical education	58	1	FChE 301 Methodology of teaching chemistry	6	MC/ UC
			2	FChE 302/1 Chemical technology	6	MC/ OC
				FChE 302/2 Chemical technology of inorganic substances		
			3	FChE 303 Methodology of conducting chemical experiments at school	5	MC/ UC
			4	FChE304/1 Chemistry of high-molecular compounds	6	MC/ OC
				FChE 304/2 Polymer Chemistry		
			5	FGCh 308/1 Physico-chemical methods of research	5	MC/ OC
				FGCh 308/2 Multicomponent systems		
			6	FChE 306/1 Didactic materials on chemistry	6	MC/ UC

			7	PP 306 Pedagogical Practice	6	CC/ UC
			8	P(P)P 407 Production (pedagogical) practice	16	MC/ UC
			9	P(P)P 408 Pre -diploma (pedagogical) practice	2	MC/ UC
8	Minor Chemist- perfumer	15	1	M(ChP) 401 Technology of pharmaceutical and cosmetic production (by industry)	5	CC/ OC
			2	M(ChP) 402 Technology of products from vegetable raw materials and perfumery and cosmetic products (by industry)	5	CC/ OC
			3	M(ChP) 403 Technology of essential oils and oils of the perfumery and cosmetic industry	5	CC/ OC
8	Minor Chemical Engineer	15		(M) ChE 401/1 Petroleum and Gas Chemistry	5	CC/ OC
				(M) ChE 402/1 Electrochemistry	5	CC/ OC
				(M) ChP 403/1 Fundamentals of metrology and standardization	5	CC/ OC
9	Final attestation	8	1	WDDP(P)PCE 401 Writing and defending a diploma paper (project) or passing a comprehensive exam	8	FA
TOTAL:		240			240	