

2. CONTENT OF THE EDUCATIONAL PROGRAM

№	Code and name of modules	Total number of credits	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 Module of socio-political knowledge (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 106/1 Fundamentals of Legal Literacy and Anti-Corruption culture / 2. GES 106/2 Fundamentals of Ecology and Safe life / 3. GES 106/3 Fundamentals of Economics and Entrepreneurship / 4. GES 106/4 Fundamentals of Leadership and receptivity to innovation/ 5. GES 106/5 Emotional Intellect 6. GES 106/6 Fundamentals of mathematical statistics	5	GC/ OC
2	GLC -2 Language communication modul	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	5	CC/ UC
3	GER – 3	22	1	GER 201 Inclusive education	6	CC/ UC
			2	GER 402/1 Fundamentals of pedagogical research	6	CC/ UC

4	Global Ethics and Research module	21		GER 402/1 Fundamentals of pedagogical research	4	
			3	GER 303 Professional ethics and identity	6	MC/ UC
	GPS – 4		1	GPS 201 Pedagogical psychology	6	CC/ UC
	General pedagogical subjects module		2	GPS 202 Pedagogy and didactics	6	CC/ UC
			3	GPS 303 The technology of criterion assessment	5	CC/ UC
			4	CT(I)P 104 Continuous training (introductory) practice	1	CC/ UC
				CT(I)P 105 Continuous training (programming) practice	1	
			5	C(PP)P 206 Continuous (psychological and pedagogical) practice	1	CC/ UC
				C(PP)P 207 Continuous (programming) practice	1	
	5		FT-5	10	1	FT 101 Higher Mathematics
	Fundamental training		2	FT 202/1 Computer architecture and operating systems	6	CC/ OC
				FT 202/2 Computer hardware		
6	TP-6	22	1	TP 101 Module fundamentals of algorithmization and programming (Theoretical foundations of Computer Science, Programming)	3	CC/ UC
	Programming technologies		2	TP 102 Module fundamentals of algorithmization and programming (Theoretical foundations of Computer Science, Programming) 7	4	CC/ UC
			3	TP 203 Object-oriented programming	5	CC/ UC

			4	TP 204 Computer game programming	5	CC/ UC
			5	TP 305/1 Programming of mobile devices	5	CC/ OC
				TP 305/2 Mobile programming technology and augmented reality		
7	NTDP-7	20	1	NTDP 201/1 Computer networks	5	CC/ OC
	Network technologies and data processing			NTDP 201/2 Cloud technologies		
			2	NTDP 202/1 Working with databases in Python	5	
				NTDP 202/2 BigData		CC/ OC
			3	NTDP 303/1 Web programming	5	
				NTDP 303/2 IoT Technology		CC/ OC
			4	NTDP 404/1 Cybersecurity	5	MC/ OC
				NTDP 404/2 Program and data security		
8	SE – 8	23	1	SE 301/1 Robotics in Education	6	MC/ UC
	STEM education			SE 302/1 Computer graphics	6	CC/ OC
				SE 302/2 Methods of creating an interactive interface		
			3	SE 303/1 Immersive technologies	6	MC/ OC
				SE 303/2 Digital technologies in education		
			4	SE 304/1 Introduction to Artificial Intelligence	5	CC/ OC
				SE 304/2 Fundamentals of intelligent systems		
9	SQSCSC - 9 Selected questions of the	46	1	SQSCSC 301 Methods of teaching computer science	10	MC/UC

	school computer science course		2	SQSCSC 402/1 Programming Olympiad tasks	4	MC/OC
				SQSCSC 402/2 Scientific foundations of the school computer science course		MC/OC
			3	PP 303 Pedagogical practice	6	CC/UC
			4	P(P)P 404 Production (pedagogical) practice	16	MC / OC
			5	P(P)P 405 Pre-graduate (pedagogical) practice	2	MC/ UC
10	SMM specialist (Minor)	15	1	M(SS) 401 Web Programming	5	CC/ OC
			2	M(SS) 402 Social Media Marketing	5	CC/ OC
			3	M(SS) 403 Fundamentals of Computer Design	5	CC/ OC
11	Final certification		1	WDDP(P)PCE 406 Writing and defending a diploma paper (project) or passing a comprehensive exam.	8	FA
TOTAL:		240			240	