

Module Content.

No	Modules	Module Descriptions	Learning Outcomes	Course Credits	Module Hours	Competence Code	Forms of Final Assessment
General Education Courses							
1	GEC 1. Kazakh Language	Orthoepic, orthographic, lexical, and grammatical norms of literary Kazakh; rules of speech etiquette in oral and written communication; methods of analysis, synthesis, evaluation, and interpretation of information; types of reading based on communicative tasks; monological speech; genres of public speaking; rules of discussion and debate; stylistics in text creation across various genres.	<p>LO 1.1. Recognizing the role of language in human life through studying the works of the Alash movement figures on enlightenment and education.</p> <p>LO 1.2. Forming a general understanding of phonetics based on insights into the language, art, culture, and civilization of nomads that reflect the national identity of the Kazakh people.</p> <p>LO 1.3. Applying knowledge about the intellectuals who founded the Kazakh pedagogical school to select key information from reading materials.</p> <p>LO 1.4. Extracting core information by mastering various note-taking methods based on reading and listening materials.</p> <p>LO 1.5. Synthesizing the genre features, structure, and formatting of a review in a purely academic style within the framework of youth intellectual programs.</p> <p>LO 1.6. Proposing recommendations to improve the ecology of Kazakhstan based on materials about Kazakhstan's nature, the Semipalatinsk test site, and the Aral Sea.</p> <p>LO 1.7. Providing written evaluations on labor market trends, the digitalization of Kazakhstan, and the status of educators at the sentence and text levels, utilizing punctuation marks such as semicolons, parentheses, and quotation marks.</p>	4	96	C 1	E
2	GEC 2. Kazakh Literature	Literary terms and literary movements, genres, themes, ideas, and underlying problems of a literary work; the author's perspective within a work; the figurative and imaginative nature of fiction; explicit and implicit meanings of works; linguistic features of a literary work, key episodes, and the conduct and actions of characters; unique characteristics of a writer's style; types of text outlines; evaluation of a work from the perspective of compositional and stylistic unity, language formatting, and effectiveness in achieving communicative goals; interpretation of a literary text adapted through other art forms; ideological, artistic, socio-historical, and spiritual-aesthetic aspects of works across various genres.	<p>LO 2.1. Determining the connection between the author's idea in a literary work and real-life reality (the truth of life).</p> <p>LO 2.2. Understanding the ideological content of a literary work through plot and compositional analysis.</p> <p>LO 2.3. Applying excerpts, idioms, and quotes from literary works in creative writing.</p> <p>LO 2.4. Analyzing the genre features of a literary work in comparison with other genres.</p> <p>LO 2.5. Producing a creative work based on one's own perspective (personal stance) on the problems raised in a literary work.</p> <p>LO 2.6. Comparatively evaluating how an era is reflected in a literary work versus modern-day realities.</p>	4	96	C 1	P
3	GEC 3. Russian Language and Literature	Listening, speaking, reading, and writing skills necessary for communication in socio-cultural, socio-economic, scientific-technical,	<p>LO 3.1. Identifying the main idea of a text on a given topic.</p> <p>LO 3.2. Understanding and analyzing the content of a literary work, as well as</p>	4	96	C 1	E

		educational, and professional spheres; units of the language system in accordance with the norms and rules of the Russian language; syntactic structures; theoretical and literary concepts; the genre and form of a literary work; the role of figurative and expressive devices; the theme, idea, and underlying problems of a work; the ability to express a personal stance toward the text and identify the author's perspective; norms of literary Russian; skills in searching, processing, and recording information; various types of reading based on communicative tasks; specialized professional vocabulary; information, communication, and computer technologies; a tolerant attitude toward the languages and cultures of various ethnicities living in Kazakhstan and abroad.	<p>the problems raised within it.</p> <p>LO 3.3. Formulating practical questions based on the read text.</p> <p>LO 3.4. Using complex syntactic structures in terms of their functional and stylistic properties, while adhering to speech norms.</p> <p>LO 3.5. Summarizing information obtained from various sources.</p> <p>LO 3.6. Creating mixed-type texts and producing creative writing works.</p>				
4	GEC 4. Foreign Language	Core methodological and pedagogical technologies in foreign language teaching; a high level of language skills; diverse tasks that promote the development of evaluative and creative thinking; the necessary balance (correspondence) of synonyms and antonyms within a topic; formal and informal language registers; fundamentals of CLIL (Content and Language Integrated Learning), the skimming reading method, and English intonation and syllabification; rules of the passive voice; a variety of complex and simple nouns, as well as quantifiers for countable and uncountable nouns; skills in grammatically correct speech.	<p>LO 4.1. Developing a clear understanding of the importance of applying educational and methodical complexes (EMC) in foreign language teaching.</p> <p>LO 4.2. Using texts with active vocabulary to express thoughts, ideas, experiences, and feelings.</p> <p>LO 4.3. Extracting specific information and main ideas from stories and conversations.</p> <p>LO 4.4. Engaging in all types of dialogue across various formal and informal communication settings, while adhering to the norms of speech etiquette.</p>	4	96	C 1	P
5	GEC 5. History of Kazakhstan	Major events and processes of national history; historical knowledge and skills; civilization: features of development; ethnic and social processes; from the history of statehood, wars, and revolutions; cultural development; civilization: features of economic development; political and legal processes; development of socio-political thought; development of education and science.	<p>LO 5.1. Identifying the contribution of the peoples of Central Asia to human development by analyzing the achievements of their material culture.</p> <p>LO 5.2. Describing the spiritual and moral values of the Kazakh people.</p> <p>LO 5.3. Demonstrating that the traditional worldview of the Kazakhs is a continuation of the Great Steppe civilization.</p> <p>LO 5.4. Analyzing the role of the Silk Road in the development of urban culture in Kazakhstan.</p> <p>LO 5.5. Presenting the Kazakhstan model of interethnic and interfaith accord.</p> <p>LO 5.6. Evaluating the contribution of historical figures to the development of socio-political thought in Kazakhstan.</p> <p>LO 5.7. Evaluating the historical role of the national intellectuals and the "Alash" autonomy.</p>	4	96	C 2	P
6	GEC 6.	Major events and processes of	LO 6.1. Identifying the	3	72	C 2	P

	World History	world history; civic and patriotic qualities; national and universal human values; historical knowledge and skills; civilization: features of development; ethnic and social processes; from the history of statehood, wars, and revolutions; cultural development; civilization: features of development; political and legal processes; development of socio-political thought; development of education and science.	<p>characteristics and distinctive features of ancient civilizations through comparative analysis.</p> <p>LO 6.2. Describing the development stages and unique features of world religions.</p> <p>LO 6.3. Determining historical types of economic systems, the impact of natural and geographical factors, and explaining the modern economic classification of global countries.</p> <p>LO 6.4. Using the terms "state," "power," and "governance institution" to explain historical events and processes.</p> <p>LO 6.5. Comparing the causes and consequences of classical empires, the Arab conquests, the Crusades, and the Mongol invasion.</p> <p>LO 6.6. Examining the history of the emergence of higher education institutions (HEIs) and summarizing general trends in their development.</p> <p>LO 6.7. Evaluating the importance of an individual's active civic stance in the struggle for civil rights, as well as the role of personality in socio-political life.</p>				
7	GEC 7. Mathematics	Types, properties, and graphs of functions; trigonometric functions, their properties, and graphs; solving trigonometric equations and inequalities; powers and roots; properties and graphs of power, exponential, and logarithmic functions; methods for solving irrational equations and inequalities; exponential and logarithmic equations and inequalities; limits and continuity of a function; the physical and geometric meaning of the derivative and its applications; properties and applications of the antiderivative and integrals; elements of mathematical statistics and probability theory; axioms of solid geometry and their corollaries; the relative position of lines and planes in space; the rectangular coordinate system; calculating vector coordinates in space; the concept and application of polyhedra; solids of revolution and their elements; volumes of solids.	<p>LO 7.1. Mastering the basic concepts of functions and their properties, and the ability to describe functions.</p> <p>LO 7.2. Mastering the methods for solving rational, irrational, exponential, power, and trigonometric equations, inequalities, and their systems.</p> <p>LO 7.3. Calculating the derivatives of functions and mastering the geometric and physical meaning of the derivative.</p> <p>LO 7.4. Solving combinatorics problems through the systematic permutation of possible options and the application of the multiplication rule.</p> <p>LO 7.5. Mastering the definition of a vector and operations with vectors in space.</p> <p>LO 7.6. Solving stereometric problems to find the elements of a cone and a truncated cone.</p>	6	144	C 2	E
8	GEC 8. Informatika	The role of information processes in society; opportunities and prospects for the use of information technology in future teaching; health and safety; hardware and software; data representation; information processes and systems; creation	<p>LO 8.1. Explaining the meaning of the terms "information security", "confidentiality", and "integrity".</p> <p>LO 8.2. Describing the functions of the ALU (Arithmetic Logic Unit) and memory registers as separate components of the processor.</p>	3	72	C 5	P

		and transformation of information objects; application development; computer networks	<p>LO 8.3. Comparing Unicode and ASCII character encoding tables used in computer logic circuits.</p> <p>LO 8.4. Presenting prospects for the application of artificial intelligence and blockchain technology in education.</p> <p>LO 8.5. Differentiating cloud technologies depending on the tasks being solved.</p> <p>LO 8.6. Creating a 3D panorama — a virtual tour with a human presence effect (first-person view).</p>				
9	GEC 9. Physics	Fundamentals of the scientific worldview; natural science worldview; vital practical tasks; natural phenomena; ability to analyze and write; mechanics; molecular physics; electricity and magnetism; vibrations; waves; optics; quantum physics; nanotechnology and nanomaterials; cosmology	<p>LO 9.1. Knowing the laws of mechanical motion, and the ability to describe and explain mechanical motion in nature and technology.</p> <p>LO 9.2. Applying the molecular-kinetic theory to explain the basic properties of gases.</p> <p>LO 9.3. Applying the nature of electric current and magnetism, as well as their basic laws and characteristics, in practice.</p> <p>LO 9.4. Comparing the generation conditions, properties, and physical meaning of oscillations and electromagnetic waves.</p> <p>LO 9.5. Experimentally investigating the nature and laws of optical phenomena.</p> <p>LO 9.6. Generalizing the nature of electromagnetic and radioactive radiation, as well as the main achievements of nanotechnology.</p> <p>LO 9.7. Analyzing the properties and evolution of the Universe as a whole.</p>	3	72	C 2	P
10	GEC 10. Chemistry	Substances and their transformations; on laws and theories explaining the dependence of the properties of substances on their composition and structure; chemical processes that are safe for life and their patterns; skills of critical assessment of information and decision-making; particles of matter; patterns of chemical reaction; energy of chemical reactions; patterns of chemical reactions; chemistry and the environment; Chemistry and life	<p>LO 10.1. Determining the nature of radioactivity and the causes of radioactive isotope decay.</p> <p>LO 10.2. Explaining the concepts of patterns in changing elements' properties within periods and groups, as well as patterns in changing acid-base and redox properties of compounds within periods and groups.</p> <p>LO 10.3. Explaining the patterns of changes in halogen properties within the group.</p> <p>LO 10.4. Practical execution of a qualitative reaction for carbon dioxide.</p> <p>LO 10.5. Conducting an experiment on using chlorine for water disinfection and evaluating the advantages and disadvantages of this process.</p> <p>LO 10.6. Drawing up a scheme of the carbonate cycle in nature and specifying their areas of application.</p> <p>LO 10.7. Comparing the properties of dilute and concentrated sulfuric acid.</p>	3	72	C 2	P
11	GEC 11. Biology	Modern biological knowledge and skills; diversity, structure and functions of living organisms; reproduction, heredity, variability, evolutionary development; organisms and the environment; applied integrated sciences	<p>LO 11.1. Determining the significance and function of inorganic and organic substances for vital activity.</p> <p>LO 11.2. Explaining the structural features and functions of cell organelles visible under an electron microscope.</p> <p>LO 11.3. Applying an electrocardiogram to explain the mechanism of heart function.</p> <p>LO 11.4. Analyzing the scheme of human</p>	3	72	C 2	E

			<p>gametogenesis.</p> <p>LO 11.5. Comparing ATP synthesis during aerobic and anaerobic respiration.</p> <p>LO 11.6. Compiling problems using the cytological basis of dihybrid crossing, sex-linked inheritance of traits, and multiple allelism.</p> <p>LO 11.7. Evaluating the role and significance of biotechnology in human life.</p>				
12	GEC 12. Geography	<p>Pedagogical and geographical knowledge, skills and abilities aimed at solving geoeological, geo-economic, social, geopolitical and global problems that arise at all levels of society and geographical space; methods of geographical research; cartography and geoinformatics; environmental management and geocology; geoeconomics; geopolitics; regional studies; global problems of mankind</p>	<p>LO 12.1. Mastering general geographical and contemporary geographical research methods.</p> <p>LO 12.2. Applying modern cartographic methods and Geographic Information System (GIS) technologies.</p> <p>LO 12.3. Understanding the concept of environmental management and analyzing the impact of anthropogenic factors of industrial production on the environment.</p> <p>LO 12.4. Describing territorial factors, geo-economic position, and the potential of Kazakhstan's regions.</p> <p>LO 12.5. Analyzing the geopolitical position and security of Kazakhstan.</p> <p>LO 12.6. Comparing countries of the world based on geographical, demographic, social, and competitiveness indicators.</p> <p>LO 12.7. Describing global problems of mankind and their manifestations within the territory of Kazakhstan.</p>	3	72	C 2	P
13	GEC 13. Graphics and design	<p>Projection methods; patterns of graphic modeling and fundamentals of image theory; influence on the development of design and creative activities; graphic culture; skills in using modern and traditional graphic tools; graphic methods and information visualization tools; basic types of images and their implementation; image transformation; shaping and structuring; shape transformation; elements of technical, architectural and construction and information graphics; project graphics; creative assignments</p>	<p>LO 13.1. Understanding the significance of imagery in visualizing and presenting information across various spheres of human life and activity.</p> <p>LO 13.2. Applying the rules of object representation on technical drawings during graphical work.</p> <p>LO 13.3. Modeling (designing) the shapes of geometric solids and other objects using core imaging principles and techniques such as "scaling up" (enlargement), "removal" (omission), and "alternation".</p> <p>LO 13.4. Visually presenting research data and findings through infographics, including charts, diagrams, and schematics.</p> <p>LO 13.5. Evaluating the types and components of technical documentation, including their specific characteristics and differences.</p>	3	72	C 2	P
14	GEC 14. Initial military and technological training	<p>Fundamentals of state protection; types and features of the Armed Forces of the Republic of Kazakhstan; the importance of military service; the sacred duty and obligation of every citizen of the Republic of Kazakhstan; The Armed Forces of the Republic of Kazakhstan are the guarantor of the military security of the state; general military regulations of the Armed Forces, other troops and military formations of the Republic of Kazakhstan; tactical training; fire training; drill; military topography; fundamentals</p>	<p>LO 14.1. Understanding the fundamentals of state defense, as well as the purpose, character, and specific features of the Armed Forces of the Republic of Kazakhstan.</p> <p>LO 14.2. Mastering the general provisions and legal frameworks of the regulations and statutes of the Armed Forces of the Republic of Kazakhstan.</p> <p>LO 14.3. Applying basic skills in small arms handling, drill training, robotics, IT technologies, and wheeled vehicle driving.</p> <p>LO 14.4. Mastering safety regulations in emergency situations and the fundamentals</p>	4	96	C 3	P

		of military robotics; fundamentals of life safety and information technology; legal foundations of military service; technological training; fundamentals of life safety and field training camps	of life safety. LO 14.5. Analyzing factors that pose a threat to national security.				
15	GEC 15. Physical education	Knowledge about physical culture; athletics; sports; football; sports; volleyball; sports; basketball; table tennis; gymnastics; national sports; winter sports; skiing; speed skating; swimming; tourism	LO 15.1. Knowing safety regulations in physical education classes, the importance of maintaining a healthy lifestyle, and the fundamentals and principles of administering first aid. LO 15.2. Mastering safety regulations for track and field athletics in physical education classes. LO 15.3. Applying safety regulations for team sports while adhering to the specific rules of the game during physical education classes. LO 15.4. Performing basic drill, general developmental, applied, and acrobatic exercises in gymnastics. LO 15.5. Distinguishing techniques, knots, and crossings/cross-overs in tourism (outdoor pursuits).	5	120	C 3	P
16	GEC 16. Global competencies	Value orientations; communication skills; ethical norms; behavioral attitudes; global competence; financial literacy; solving problems of local and global importance; understanding different cultures and worldviews, participating in effective intercultural interaction; specialized component of the agricultural and technological direction	LO 16.1. Understanding global competencies and their significance for personal development. LO 16.2. Mastering the fundamentals of financial literacy. LO 16.3. Mastering conflict resolution skills. LO 16.4. Mastering intercultural communication skills. LO 16.5. Applying project management skills in professional activities.	1	24	C 4	P
Compulsory modules (general humanitarian and socio-economic disciplines)							
1	CM 1. Development and improvement of physical qualities	Socio-biological and psychophysiological foundations of physical culture; fundamentals of physical and athletic self-improvement; fundamentals of a healthy lifestyle	LO 1.1. Enhancing health and maintaining a healthy lifestyle. LO 1.2. Improving physical qualities and psychophysiological abilities.	10	240	C 3	E
2	CM 2. Application of information, communication and digital technologies	Modern technological foundations of information collection, processing, presentation and transmission; artificial intelligence capabilities, the main directions of development of modern information and computer technologies	LO 2.1. Mastering the fundamentals of information and communication technologies (ICT). LO 2.2. Understanding the fundamentals of artificial intelligence, its capabilities, and limitations. LO 2.3. Utilizing the services of information-reference and interactive web portals.	5	120	C 4	P
3	CM 3. Application of basic knowledge of economics and the basics of entrepreneurship	Patterns and mechanisms of functioning of the modern economic system; principles of market economy; goals, factors and conditions of entrepreneurship development; modern organizational and legal forms of entrepreneurial activity in Kazakhstan; organizational and	LO 3.1. Understanding global economic development trends and the core objectives of the state's transition to a "green" economy. LO 3.2. Analyzing and evaluating economic processes occurring within an enterprise. LO 3.3. Mastering the scientific and	3	72	C 5	P

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1	PM 1. Planning of the educational process	Psychological and physiological features of preschool children's development; forms of environmental education; requirements for ensuring sanitary and hygienic conditions for pupils; pedagogical approaches to creating a developing subject-spatial environment; theory and methodology of physical education for preschool children; means of physical education; age-related features of children's development from birth to 7 years; classification of outdoor games and games with elements of sports games; forms of organization of physical education in preschool organizations; mechanisms of familiarization of children of different ages with nature; characteristics of familiarization with plants and animals; organization of familiarization with nature and work on land; forms of formation of elementary mathematical concepts of size, number, geometric shapes, orientation in space and time among children of different age groups; principles of application of methods and tools in planning and conducting organized activities	<p>LO 1.1. Studying the fundamentals of early childhood education and care.</p> <p>LO 1.2. Organizing forms of physical education in preschool organizations.</p> <p>LO 1.3. Understanding natural phenomena and the environment, as well as studying environmental education.</p> <p>LO 1.4. Applying methods for developing cognitive and intellectual skills.</p> <p>LO 1.5. Ensuring personal care, as well as sanitary and hygienic conditions for young learners (children).</p> <p>LO 1.6. Mastering the theoretical frameworks of planning organized educational activities.</p> <p>LO 1.7. Applying methods and tools when conducting organized educational activities.</p>	26	624	C 9., C 10., C 11	E
2	PM 2. Development of communication skills of preschool children	Fundamentals of the organization of the speech environment of preschool children; ways of educating the sound culture of speech; ways of developing vocabulary; types of grammar skills formation; fundamentals of teaching children coherent speech; functions of developing the horizons and consciousness of children/adolescents through artistic works; expressive reading skills through various genres, rules of speech technique; methods and techniques of speech development of preschool children means of socialization of preschool children through theatrical activities; types of theaters when reading fiction; new technological elements of familiarization with fiction in preschool organizations	<p>LO 2.1. Mastering the fundamentals of expressive reading.</p> <p>LO 2.2. Studying the characteristics of children's speech development.</p> <p>LO 2.3. Determining the types of theatrical activities used in retelling fiction (literary works).</p> <p>LO 2.3. Mastering the periods of children's literature.</p> <p>LO 2.4. Planning types of activities for introducing children to fiction (literary works).</p> <p>LO 2.5. Applying methods for introducing preschool children to fiction (literary works).</p>	22	528	C 10., C 12	E
3	PM 3. Developing creative skills of preschool children	Content, types of musical activities of children; peculiarities of music perception by preschool children; methods of musical education and training; ways of organizing festive events; history, types and genres of choreographic art; elements of national dances and dances of other peoples; principles of artistic labor teaching; methods and techniques of modeling and application in different age groups; tools for technical labor and work with	<p>LO 3.1. Developing the musical abilities of young learners (children).</p> <p>LO 3.2. Mastering types of rhythmic dance movement elements.</p> <p>LO 3.3. Applying methods and techniques of teaching arts and crafts.</p> <p>LO 3.4. Mastering ways to introduce preschool children to drawing.</p> <p>LO 3.5. Knowing the types of creative work organized with children during the summer period.</p>	19	456	C 10	E

		natural materials in preschool organizations; types of graphic art; non-traditional methods of drawing; features of teaching drawing in different age groups; laws of fire safety in the summer, traffic rules, labor protection, and safety regulations; norms for planning educational work performed in the summer; rules for organizing summer health-improving and tempering events	LO 3.6. Organizing and conducting summer wellness and recreational activities for preschool children.				
4	PM 4. Organization of educational and educational activities	Psychological and pedagogical foundations of the use of the game in different age groups; principles of performing their professional activities based on respect, responsibility, honesty and fairness; ways of organizing and conducting the game; ways of organizing the educational process in a playful way; principles of organizing experimental activities in kindergarten; mechanisms for drawing up a long-term plan, cyclograms in preschool organizations, filling out the child's individual development cards	LO 4.1. Applying research methods to study children's play activities. LO 4.2. Being able to use research and experimental work skills. LO 4.3. Planning pedagogical activity in preschool organizations. LO 4.4. Mastering the development of long-term plans, daily/weekly schedules (cyclograms), and filling out individual child development charts in preschool organizations.	12	288	C 12., C 11., C 10	E
5	PM 5. Monitoring the level of development of pupils	Rules for conducting initial, intermediate and final monitoring of children; patterns of work with children with speech disorders in different age groups; functions for determining the goals and objectives of monitoring the level of development of children in preschool organizations; principles of processing and systematic analysis of monitoring results; ways to develop recommendations for improving the results of education and training based on the results of monitoring and research	LO 5.1. Conducting monitoring of individual development characteristics in preschool children. LO 5.2. Mastering speech therapy (logopedic) methods used in working with children with speech impairments. LO 5.3. Utilizing digital resources to conduct development monitoring. LO 5.4. Processing and systematically analyzing monitoring results. LO 5.5. Studying children's first day in the preparatory group.	18	432	C 13	E
6	PM 6. Implementation of professional self-development and self-education	Goals and objectives of the pedagogical management process; stages of development of the theory and practice of management; basic principles of management in the implementation of methodological services; ways to build a trajectory of professional development; requirements for the authors of textbooks and teaching aids; planning their continuous professional pedagogical development; algorithms for participation in the generalization of advanced pedagogical experience; methods of generalization and dissemination of best practices; standards for the organization and conduct of educational work in preschool organizations	LO 6.1. Mastering pedagogical management skills in preschool organizations. LO 6.2. Studying advanced domestic and international practices (experience). LO 6.3. Developing authorial (proprietary) educational programs and methodological manuals. LO 6.4. Determining priorities for mentorship and professional development. LO 6.5. Knowing the algorithm for disseminating advanced pedagogical experience. LO 6.6. Applying core pedagogical approaches in preschool organizations.	28	672	C 12	E

Intermediate certification	9	216
Final certification	3	72
Independent work	60	1440
Optional classes	15	360
Consultations	12	288

