

## **On approval of state compulsory educational standards for all levels of education**

*Unofficial translation*

Order of the Minister of Education and Science of the Republic of Kazakhstan dated October 31, 2018 № 604. Registered with the Ministry of Justice of the Republic of Kazakhstan on November 1, 2018 № 17669

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### **On approval of state compulsory educational standards for all levels of education**

In accordance with subparagraph 5-1) of Article 5 of the Law of the Republic of Kazakhstan dated July 27, 2007 "On Education" **I HEREBY ORDER:**

1. To approve:

1) The state compulsory standard for preschool education and training in accordance with Appendix 1 to this order;

2) The state compulsory standard for primary education in accordance with Appendix 2 to this order;

3) The state compulsory standard for basic secondary education in accordance with Appendix 3 to this order;

4) The state compulsory standard for general secondary education in accordance with Appendix 4 to this order;

5) The state compulsory standard for technical and vocational education in accordance with Appendix 5 to this order;

6) The state compulsory standard for post-secondary education in accordance with Appendix 6 to this order;

7) The state compulsory standard for higher education in accordance with Appendix 7 to this order;

8) The state compulsory standard for postgraduate education in accordance with Appendix 8 to this order.

2. The Department of Technical and Vocational Education of the Ministry of Education and Science of the Republic of Kazakhstan, in accordance with the procedure established by law, shall ensure:

1) the state registration of this order with the Ministry of Justice of the Republic of Kazakhstan;

2) within ten calendar days from the date of state registration of this order, sending its hardcopy and its electronic form in both Kazakh and Russian languages to the Republican State Enterprise on the Right of Economic Management "Republican Center for Legal Information" for official publication and inclusion into the Reference Control Standard Bank of Regulatory Legal Acts of the Republic of Kazakhstan;

3) the placement of this order on the Internet resource of the Ministry of Education and Science of the Republic of Kazakhstan;

4) within ten working days after the state registration of this order with the Ministry of Justice of the Republic of Kazakhstan, representation of the information to the Department of Legal Service of the Ministry of Education and Science of the Republic of Kazakhstan on the implementation of measures provided for in subparagraphs 1), 2) and 3) of this paragraph.

3. Control over the execution of this order shall be entrusted to Aimagambetov A. K., Vice-Minister of Education and Science of the Republic of Kazakhstan.

4. This order shall enter into force upon the expiry of ten calendar days after the day of its first official publication, with the exception of:

1) sub-paragraph 6) of paragraph 10 of the State Compulsory Standard for Pre-school Education and Training and row line number 9, of the section "Communicative - Linguistic Skills" of Appendix 2 to the State Compulsory Standard of Pre-school Education and Training, which shall be effective as of September 1, 2020;

2) Paragraphs 20 and 22 of the State Compulsory Standard for Pre-school Education and Training, which shall be effective as of September 1, 2019;

3) paragraph 1 of chapter 2, paragraph 1 of chapter 3 and paragraph 1 of chapter 4 of the State Compulsory Standard for Primary Education, which shall come into force on September 1, 2019 for 4th grades;

4) paragraph 1 of chapter 2, paragraph 1 of chapter 3 and paragraph 1 of chapter 4 of the State Compulsory Standard for Basic Secondary Education, which shall be enacted as of September 1, 2019 for 9th grades;

5) paragraph 1 of chapter 2, paragraph 1 of chapter 3 and paragraph 1 of chapter 4 of the State Compulsory Standard for General Secondary Education, which shall be enacted as of September 1, 2019 for 10th grades and as of September 2020 for 11th grades.

In addition, paragraphs 19 and 21 of the State Compulsory Standard for Pre-school Education and Training, paragraph 2 of chapter 2, paragraph 2 of chapter 3 and paragraph 2 of chapter 4 of the State Compulsory Standard for Primary Education, paragraph 2 of chapter 2, paragraph 2 of chapter 3 and paragraph 2 of chapter 4 of the State Compulsory Standard for Basic Secondary Education shall be valid until September 1, 2019; paragraph 2 of chapter 2; paragraph 2 of chapter 3; and paragraph 2 of chapter 4 of the State Compulsory Standard for General Secondary Education shall be valid until September 1 November 2020.

*Minister of Education and Science  
of the Republic of Kazakhstan*

*E. Sagadiyev*

Appendix 1  
to order No. 604 of the Minister of  
Education and Science of the  
Republic of Kazakhstan

of October 31, 2018,

**State Compulsory Standard for Preschool Education and Training Chapter 1. General Provisions**

1. This State Compulsory Standard for Pre-School Education and Training (hereinafter - the standard) is developed in accordance with sub-paragraph 5-1) of Article 5, Article 56 of the Law of the Republic of Kazakhstan dated July 27, 2007 "On Education" and determines the requirements for:

1) the content of pre-school education and training with a learning result-based approach;

2) the maximum volume of student workload;

3) the level of training of pupils;

4) the term of training.

2. The following terms and their definitions shall be used in this standard:

1) parenting skills - the skills necessary to meet the physical, intellectual and emotional needs of the child, ensure his/her social development, the formation of appropriate behavior;

2) socialization - the process of entering a child into a social environment through the mastery of knowledge, skills and abilities, norms, rules necessary for a full life in society;

3) social skills - methods and techniques of social interaction, which the child masters in the preschool years;

4) integration - the process of establishing communication between the structural components of the content;

5) early learning - the implementation of a set of measures aimed at the physical, intellectual and emotional development of the child since birth to three years;

6) object-spatial developing environment - a system of conditions that ensures the personal, intellectual, social and emotional development of a child at preschool age;

7) inclusive education is a process that provides equal access to the education and training of all pupils, taking into account special educational needs and individual opportunities;

8) day regimen - a rational distribution of time and the correct mutual sequence of various types of children's activities and rest during the day, contributing to the normal development of the child and strengthening his/her health;

9) care - organization of care, food, sanitary and hygienic, health procedures for children of the tender age;

10) the result of learning is an indicator of the level of development of the child;

11) self-study skills - the skills accumulated by the child independently and under the guidance of adults in order to understand the environment and successfully prepare for school;

12) standard academic program - a program that determines the content and scope of knowledge, skills, abilities and competencies to be mastered for each organized educational activity;

13) standard curriculum - a document regulating the list, volume, duration of organized educational activities per week by age groups;

14) organized learning activities - a joint activity of a teacher and pupils, aimed at learning and acquiring skills.

3. In pre-school organizations and pre-school grades of organizations of secondary education, education and training of children with special educational needs of up to three people for each age shall be provided. If there are children in the group with special educational needs, the recruitment of the group shall be carried out in the ratio of three pupils per child with special educational needs.

#### **Chapter 2. The requirements for the content of pre-school education and training with a focus on learning outcomes**

4. Pre-school organizations and pre-school grades of organizations of secondary education of the Republic of Kazakhstan shall carry out educational activities in accordance with:

1) standard curricula for preschool education and training approved by order of the Minister of Education and Science of the Republic of Kazakhstan № 557 of December 20, 2012 "On Approval of Standard Curricula for Preschool Education and Training of the Republic of Kazakhstan" (registered with the Register of State Registration of Regulatory Legal Acts under No. 8275) (hereinafter referred to as the standard curricula);

2) a standard academic program for preschool education and training, approved by order No. 499 of the Acting Minister of Education and Science of the Republic of Kazakhstan dated August 12, 2016 "On Approval of a Standard Academic Program for Preschool Education and Training" (registered with the Register of State Registration of Regulatory Legal Acts under № 14235 ) (hereinafter referred to as the standard academic program).

5. The content of the standard academic program shall be aimed at:

1) the achievement of goals and objectives presented in the form of expected learning outcomes;

2) ensuring the principles of continuity and regularity, taking into account educational, developmental and educational tasks between pre-school education and training and primary education;

3) the creation of equal starting opportunities for the training of pupils of preschool age in the organization of primary education;

4) the formation of motor, communicative, cognitive, creative, social knowledge, skills and abilities, self-learning skills, including in children of the tender age;

5) the creation of psychological and pedagogical conditions for education and training;

6) preparation for training activities taking into account the individual and age characteristics of the pupils;

7) the formation of spiritual, moral and socio-cultural skills based on national traditions and human values.

6. When teaching children with special educational needs in an inclusive education environment, an individual curriculum and an individual program shall be developed taking into account the characteristics of the child.

7. Learning outcomes, as indicators, shall provide monitoring of a child's development and shall be the basis for planning their individual development.

8. The content of pre-school education and training shall be based on the educational areas: Health, Communication, Cognition, Creativity, Social Environment, and shall be implemented through their integration via the organization of various activities.

9. Educational area "Health".

The purpose of the educational area "Health" shall be to educate a healthy, physically developed child, to form a conscious attitude towards their health among the pupils.

The health education area shall include assistance to parents in acquiring skills for the care and development of children from an early age; the development of students' cultural and hygienic skills, motor experience through the development of basic movements; development of physical qualities and the need for physical activity; conducting various outdoor games; doing sports exercises; familiarity with the elements of sports games.

The content of the educational field "Health" shall be aimed at protecting and promoting the health of the child; the formation of skills of safe behavior in everyday life, on the street, in natural conditions, emergency situations; the enrichment of motor experience of pupils through the improvement of basic movements using creative, cognitive and speech abilities.

Organized educational activities of the educational field "Health" shall include:

1) physical culture (adaptive physical culture for pupils with special educational needs);

2) the basics of safe behavior.

10. Educational area "Communication".

The purpose of the educational field "Communication" shall be the formation of oral speech, the mastery of communication skills in various life situations, the formation of prerequisites for reading and writing.

The educational field "Communication" shall include the development of oral and coherent speech of pupils in various types of children's activities through acquaintance with children's literature, expressive reading and retelling, raising a sound culture of speech, enriching the active vocabulary, mastering the norms of speech, developing state, Russian and one of foreign languages.

The content of the educational field "Communication" shall be aimed at the development of communicative skills and abilities, the development of oral speech in various types of children's activities, enrichment of vocabulary, interest in children's literature.

Organized training activities in the educational field "Communication" shall include:

- 1) speech development;
- 2) fiction;
- 3) basic literacy;
- 4) Kazakh language (in groups with the Russian language of instruction), Russian language (in groups with the Kazakh language of instruction) and one of the foreign languages;
- 5) drama;
- 6) School-primer/ABC-book.

#### 11. Educational area Cognition”.

The purpose of the educational field "Cognition" shall be the development of the personality of a preschooler in order to master the elementary skills of cognitive activity necessary for interaction with the outside world.

The educational field "Cognition" shall include the formation of skills of quantitative counting, ideas about geometric shapes and shapes, orientation in space and time; construction of building, natural, waste materials and parts of the designer; expanding knowledge about objects and phenomena of animate and inanimate nature.

Organized educational activities of the educational field "Cognition " shall include:

- 1) sensorics (in groups of toddlers from 1 year to 3 years), the foundations of mathematics;
- 2) design;
- 3) natural science.

#### 12. Educational area "Creativity".

The purpose of the educational field "Creativity" shall be the formation of a creative personality, the development of creative abilities, emotional and sensual sphere, imagination, thinking, artistic taste.

The educational field "Creativity" shall include drawing, modeling, application, the formation of skills and abilities of perception and understanding of works of art, aesthetic attitude to the surrounding world; ideas about the types of art, the implementation of independent creative activity of pupils.

Organized educational activities of the educational field "Creativity" shall include:

- 1) drawing;
- 2) modeling;
- 3) application;
- 4) music.

13. Educational area "Social Environment".

The aim of the educational field "Community" shall be the positive socialization of pupils of early and preschool age, their familiarization with sociocultural norms, traditions of the family, society and the state.

The educational field "Community" shall include the acquisition of social skills and self-study skills; the assimilation of moral norms of behavior in society, as well as universal human values; the ability of the child to communicate with peers and adults; self-education; the formation of respect for others, a sense of belonging to their family, emotional responsiveness, empathy; knowledge and respect for the history and culture of the Kazakh people, as well as other peoples, the expansion of ideas about their native land; formation of interest in various types of work and people of different professions.

Formation of social and self-study skills in the family and pre-school organizations among young pupils shall be aimed at protecting life and health strengthening, developing social and socio-communicative skills: cultural and hygienic skills, rules of behavior, familiarizing them with the discipline and the regime of the day, the development of cognitive functions (the ability to see the difficulties encountered in front of him; to notice changes in mood, emotional state); fostering ethical norms, which are the basis for building interpersonal relationships, creating an atmosphere of kindness, attention, care and mutual assistance in the family and preschool organizations, comfortable socialization of the individual, accumulating experience of emotional and moral relations, ensuring the continuity of traditions in upbringing in various types of children's activities.

Organized educational activities of the "Social Development " educational field shall include:

- 1) self-knowledge/cognition;
- 2) familiarization with the outside world;
- 3) the basics of ecology.

### **Chapter 3. Requirements for the maximum educational load of pupils**

14. The maximum amount of study load of pupils shall be established in standard curricula.

15. The total amount of organized educational activities per week by age group shall be as follows:

- 1) a group of early age (children 1-2 years old) - 7 hours with a duration of 7-15 minutes;
- 2) 1st younger group (children of 2-3 years old) - 9 hours with a duration of 7-15 minutes;
- 3) 2nd younger group (children of 3-4 years old) - 11 hours with duration of 7-15 minutes;
- 4) the middle group (children 4-5 years old) - 12 hours with a duration of 15-20 minutes;
- 5) the older group (children 5-6 years) - 17 hours with a duration of 25-30 minutes;
- 6) the class of pre-school education in the organization of secondary education (children 6-7 years old) - 20 hours with a duration of 25-30 minutes.

### **Chapter 4. Requirements for the level of training of pupils**

16. A pupil of a pre-school organization shall master the amount of knowledge, skills, abilities and competencies to be mastered by age groups for each educational area and for each organized educational activity, defined in the standard academic program:

17. Requirements for the level of training of pupils shall be determined in the standard academic program in the form of expected results based on the monitoring of the pupil's achievements in accordance with his age:

- 1) first level - the child reproduces certain actions and knowledge;
- 2) the second level - the child is aware of his/her actions and has a certain stock of knowledge;
- 3) the third level - the child applies what he/she knows and can , independently and creatively uses knowledge, skills and abilities.

18. A graduate of a pre-school organization and a pre-school class organization of secondary education shall have the following qualities:

- 1) physically developed;
- 2) inquisitive;
- 3) confident and active;
- 4) emotionally responsive;



5) owning social skills and ways of interacting with peers and adults, self-learning skills;

6) having primary ideas about himself/herself, his/her family, society (the nearest society), the state (country), the world and nature;

7) possessing the necessary skills and abilities for training in the organization of secondary education.

19. The list of skills of pupils from 1 year to 6 (7) years shall be given in Appendix 1 to this standard.

20. The list of pupils' skills and abilities from 1 year to 6 years shall be given in Appendix 2 to this standard.

#### **Chapter 5. Requirements for the duration of training**

21. Age periodization and age groups shall be as follows:

nursery age - from birth to 3 years:

infancy - from birth to 1 year;

early age - from 1 year to 2 years (group of early age);

younger age - from 2 to 3 years old (first junior group);

preschool age - from 3 to 6 (7) years:

the younger preschool age - from 3 to 4 years (the second youngest group);

average preschool age - from 4 to 5 years (middle group);

senior pre-school age - from 5 to 6 (7) years (from 5 to 6 years old - the eldest group in a pre-school organization,

from 6 to 7 years old - a pre-school preparation class in the organization of secondary education).

The term of mastering the content of the standard academic program by students from 1 year to 6 (7) years shall be 5 (6) years.

22. Age periodization and age groups shall be as follows:

a nursery age - from birth to 3 years:

infancy - from birth to 1 year;

early age - from 1 year to 2 years (group of early age);

younger age - from 2 to 3 years (younger group);

preschool age - from 3 to 6 years:

the average preschool age is from 3 to 4 years (middle group);

senior preschool age - from 4 to 5 years (the oldest group in a pre-school organization),

from 5 to 6 years old - (a group (in a pre-school organization), class (in the organization of secondary education) pre-school preparation).

The term of mastering the standard curriculum of updated content by pupils from 1 year to 6 years shall be 5 years.

Appendix 1  
to the State Compulsory  
Standard of Preschool  
Education and Training

**The list of skills of pupils from 1 year to 6 (7) years**

Item number	List of skills	Nursery age (from birth to 3 years)			Preschool age (from 3 to 6 (7) years)			
		Infancy (from birth to 1 year)	Early age (from 1 year to 2 years)	Younger age (from 2 to 3 years)	The younger preschool age (from 3 to 4 years)	The average preschool age (from 4 to 5 years)	Senior preschool age (from 5 to 6 years)	Senior preschool age (from 6 to 7 years)
1	2	3	4	5	6	7	8	9
Health-saving skills								
1	Cultural and hygienic skills	Execute movement in the form of objects of feeding. Helps to hold the bottle, grabs the bowl.	He/she eats with a spoon on his/her own, dresses with the help of an adult, asks for a pot, knows his place and reports on the need.	Has initial personal hygiene skills.	Knows and respects rules of personal hygiene.	Knows the sequence of hygiene procedures.	Independently performs hygienic procedures.	Has the skills of self-service and mutual assistance in carrying out hygienic procedures, knows and performs all methods of hardening.
2	Physical culture	Able to grasp the fingers of adults. Reaching for objects and grabbing with both hands, passes the object from hand to hand.	Able to walk and run in a given direction. Likes to climb and climb down the stairs.	Has the initial skills of running, climbing, jumping.	Has elementary skills to perform basic types of movements.	Able to perform vital movements.	Shows a creative approach when performing basic movements.	Able to perform basic types of movements, achieving qualitative and quantitative indicators, corresponding to age.
3	Self Movement	Rises with support on the subject, moves in space. Pulls items from the container, splashing in the water.	Able to play alongside, independently find bright, eye-catching objects in space.	Able to play in a small subgroup.	Able to observe the elementary rules in joint games.	Able to independently play various games and follow all the rules of the game.	Has the skills of organizing outdoor games with a group of children.	Able to arbitrarily control their movements and consciously follow the rules of the game. Formed elementary self-control

								of motor activity.
4	Healthy lifestyle	Demonstrates an increasing ability of complacency and falling asleep.	Performs regime moments.	Shows positive emotions when conducting tempering procedures and takes care in dangerous situations.	Knows the elementary rules of a healthy lifestyle, performs hardening techniques for showing an adult.	Knows and respects the element of the healthy rules for a healthy lifestyle. Able to handle plants, animals and insects.	Consciously complies with safety rules. Understands the importance and necessity of tempering procedures.	Knows how to temper the body and maintain proper posture. Observes the daily regimen.
Communicative language skills								
1	Communication culture	Reacts to the sound and its source, lisps and imitates sounds.	Mimics new words; uses the lightweight names of familiar objects and actions and the first full words.	Able to make contact with peers and loved ones.	Understands the speech of an adult, can listen to questions and answers them.	Able to come into contact with adults, children and fulfill their requests.	Knows the rules of behavior in public places and complies with them.	Knows the rules of communication, non-verbal means of communication, speech etiquette.
2	The grammatical structure of speech	-----	Knows how to use simple words and elementarily designate objects and actions.	Able to express their thoughts to be understood.	Able to apply the necessary words and phrases.	Able to coordinate the compound and complex sentences with questions from an adult.	Able to be critical to speech and strive to speak grammatically correctly.	Able to grammatically correct the construction of phrases and sentences. Uses in speech the difficult forms of familiar words.
3	Speech culture	Reacts with gestures or voice when his/her name is called.	Able to clearly pronounce vowels and articulatory consonant sounds available.	Able to properly articulate vowels and consonants.	Able to clearly pronounce the words, listening to their sound.	Able to correctly pronounce all the sounds of the native language.	Able to actively play with words, differentiating sounds, using various ways of intonational expressiveness.	Able to: speak cleanly, correctly, expressively; classify sounds, make syllables and words using conventional sound

								symbols.
4	Lexicon	Simulates the actions, gestures and sounds of others.	Reproduces correctly the words and phrases pronounced by adults. Imitates the sounds of the animal.	Able to answer questions about himself/herself, family members, favorite toys.	Names all actions, objects, phenomena, their signs and qualities.	Uses words without reliance on a clearly represented situation, activates verbs in speech.	Understands the polysemy of a word, using antonyms, synonyms in speech.	Has the skills of word formation. Able to explain the meanings of words and uses signs, properties of objects in speech.
5	Connected speech	-----	Able to express a request in words and short phrases, listens carefully to the task and carries it out correctly.	Able to use words to express desires, feelings, thoughts.	Able to correctly answer questions when viewing paintings, objects, observe the object of animate and inanimate nature.	Has the main form of communication, dialogical speech. Able to use statements from 2-3 sentences.	Makes a monologue, using different parts of speech, epithets and comparisons.	Able to coherently, consistently make up the story on the picture, given the subject, speaking in simple common sentences.
6	Creative speech activity	Expresses facial expressions, gestures when he/she is pressed, hugged, caressed when he/she is tired or upset.	Understands the simple plot of small performances with toys and can imitate their actions.	Able to tell by heart rhymes for finger games.	Able to apply the simplest methods of intonational expressiveness of speech to characterize the heroes.	Able to tell familiar fairy tales, to compose small stories on toys.	Knows how to write stories, understands and uses words in a figurative and allegorical sense.	Knows how to tell different stories, composes fairy tales, shows interest in playing with rhyme and word.
7	Perception of works	Listens and reacts emotionally to the pods and speech exercises.	Understands short stories, poems by using appropriate pictures.	Able to respond emotionally to the works of oral folk art.	Able to convey his/her attitude to the character, various events.	Able to name several works that he/she likes, uses literary images in the game.	Shows interest in books, can expressively recite poems.	Able to retell the text of familiar works on visual support.
8	Basics of literacy	-----	-----	-----	-----	-----	Can analyze in three-word words. Able to hear and highlight the stressed syllable.	Applies knowledge when analyzing the pronunciation and sound of

								sounds. Conducts sound analysis of 4 sound words, characterizes sounds.
Cognitive skills								
1	Orientation in the properties of objects	Able to memorize and search for a subject.	Able to group homogeneous objects by one of the following signs (size, shape). Tells the difference between four primary colors.	Distinguishes between primary colors, shape, size, texture of objects.	Knows and names the characteristic differences of objects by the method of comparison (overlay, application).	Able to name signs and characteristic differences of objects based on tactile, auditory and olfactory perception.	Able to consider the properties and signs of objects as a category of cognitive activity.	Has the knowledge of the properties and varieties of various materials used for the manufacture of objects, depending on their purpose and application in human life.
2	Knowledge of the world	Studies subjects in different ways (i.e., throwing, tossing, observing the actions of others).	Has the knowledge about himself/herself, his/her family. Recognizes animals, plants, objects of the nearest environment.	Shows curiosity, a special interest in people and their actions.	Owns the ability to notice and name the simplest changes in nature, weather. Understands and names the meaning of traffic lights.	Understands the simplest causal relationships in living, inanimate nature and social life.	Able to systematize, group and solve cognitive tasks in a visual-effective and visual-figurative way. Has the ability to find similarities and differences.	Able to summarize ideas about the objects of the surrounding reality, based on the selection of characteristic and essential features.
3	Constructive skills	Tries different ways to do things.	Able to make elementary designs with the help of an adult.	Reproduces simple constructions by showing an adult (can impose, attach, apply).	Able to use building material, varying in various ways. Knows and names their main details.	Shows independence when choosing a material for the structure, tends to carry out construction.	Has several simple generalized design methods and uses the same methods to obtain different results.	Has practical modeling of real and abstract objects from geometric shapes in the form of applications or drawings.
4	Fundamental	Emotionally	Able to	Able to be	Able to	Has some norms	Understands	Able to:

	als of Ecological Culture	reacts to the natural world; notices plants, animals in the environment .	distinguish between living things, plants, shows interest to them.	friendly and caring attitude to animals.	perform elementary work assignments in conjunction with adults for the care of plants.	of behavior in nature.	the diversity of the world. Knows the signs and properties of plants, the habitat of animals.	distinguish and name animals and plants by small distinctive features, care for the inhabitants of a living corner, observe cautiously, being in new life situations.
5	Elementary Mathematical Representations	Plays with different in size and shape toys or objects.	Understands the instructions of an adult and can find an object in the surrounding space.	Has the initial skills of orientation in space.	Able to demonstrate elementary ideas about time, space.	Has an idea about the time (part of the day: morning, day, night; days: today, yesterday, tomorrow); such concepts as: quickly, slowly.	Knows the structural characteristics of geometric shapes, quantitative relations in the direct and reverse order.	Able to: classify objects according to different signs, establish spatial-temporal relations with the help of words, has mastered the techniques of logical thinking.
6	Search and experimental activities	Shows interest in the study of objects, manipulates or studies new objects. . Compares the subject on its size, although not always for right reason.	Has the ability to push into various recesses (holes) of an object in accordance with their shape.	Performs actions with various objects (disconnect, connect, construct).	Able to experiment independently with familiar materials.	Able to experiment purposefully, model with new materials and highlight the most common features between objects.	Knows how to experiment consistently and effectively, to establish the simplest causal relationships.	Able to set a goal in experimental activities, to achieve results.
7	Work with information	Observes and reacts to its reflection in the mirror.	Receives information through feelings (through	Shows interest in various sources of information.	Identifies interesting information.	Understands the need for new information.	Understands and is able to provide new information to whom it	Has the ability to analyze the information received and

			touch, smell, touch).				will be interesting.	use it consciously.
Creative skills								
1	Musical activity	Enjoys fun games with an adult, hits the surface, after seeing an adult beating the drum. . Performs actions with musical objects.	Able to convey the cheerful nature of the dance melody with uncomplicated movements.	Knows musical instruments, distinguishes between high and low sound of a musical phrase, shows a desire to sing together with adults.	Distinguishes the tempo of a piece of music, distinguishes sounds by its pitch, reacts to the beginning and end of a melody.	Distinguishes voices timbres, sings protractedly, clearly pronounces words, performs dancing, musical and rhythmic movements.	Has the simplest skills to play children's musical instruments, distinguishes the basic properties of musical sound, duration, timbre. He has the ability to sing improvisation.	Able to: distinguish between the melody and accompanying musical instrument, the sounds of the register, perceives and reproduces the minor and major sound when playing children's instruments, singing and dancing.
2	Productive activity	Emotionally reacts to bright objects: pictures, flowers (takes them to his/her mouth, nods, knocks, hits, throws objects).	Fills a sheet of paper with bright spots, strokes (paint, markers, crayons, pencils); sculpt flat, round shapes.	Has the skills of modeling (making recesses, decorates objects). Able to hold on a sheet of paper straight vertical, wavy horizontal lines.	Has the basic technical skills and abilities required for the visual activity.	Has an idea about the types of art (painting, sculpture, folk art).	Independently chooses technical methods and means of image in accordance with the character of the image.	Able to independently apply various technical means, complement and decorate the work with new details.
3	Aesthetic perception of the world	-----	Peers at the bright colors of paints, shows admiration, joy.	Shows joy, emotional response when viewing folk toys.	Shows interest in various types of fine art, uses materials carefully.	Rhythmically disposes geometric shapes and plant elements. Emotionally perceives the dance character of music, notices the beauty of the world around.	Shows interest in decorative art, design, selects and justifies work methods, uses materials rationally for the work, emotionally	Has an idea about the value of the color saturation (texture) of the subject in question. Has the skills of the primary

							responds to the beauty of nature, clothing and interior decoration.	analysis of works of art in the context of other forms of art.
Social skills								
1	Behavior culture	Responds to a greeting, farewell.	Able to fulfill the request expressed by a simple sentence.	Understands the norms and rules of behavior, uses the words of greeting, farewell, thanks.	Has knowledge of human relationships, understands the emotional state.	Shows elementary care about relatives and surrounding people.	Able to ask for help in necessary situations, respects the wishes of other people.	Knows about moral norms of behavior, etiquette, rules of behavior in nature.
2	Interaction with adults and peers	Recognizes immediate family members. Smiles, waves his/her hands or laughs, reacting to a positive relationship with adults. Shows likes and dislikes to actions, interaction.	Interacts with adults in various games - entertainment. Able to listen carefully to an adult and performs simple tasks.	Shows responsiveness, goodwill, sympathy for close people, peers.	Able to enter into sustainable gaming associations with peers and communicate with adults on educational topics.	Performs collaborative work with adults. Aware of his/her position among peers and his/her own "I".	Able to cooperate with adults and peers, set a common goal and discuss their results.	Able to join together in collaboration with adults, strive to be useful and receive satisfaction.
3	The idea of moral standards	Expresses primary emotions. Uses body movement and sound when it needs help.	Knows how to use the words necessary to express desires and build relationships with others.	Knows and understands what is "good" and what is "bad."	Able to evaluate your act and fabulous characters.	Observes moral norms and rules of behavior in society.	Observes moral standards of behavior, feels joy, satisfaction from good deeds, experience in violation of moral norms.	Knows the ethical norms and values of his/her and other nations, shows empathy, tolerance. Owns the ability of interconnection in the social world, communicative skills in observance



								of the rules of public order.
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Appendix 2  
to the State Compulsory  
Standard of Preschool  
Education and Training

**The list of skills of pupils from 1 year to 6 years**

Item number	List of skills	Babyhood (from birth to 3 years)			Preschool age (from 3 to 6 years)		
		Infancy (from birth to 1 year)	Early age (from 1 year to 2 years)	Younger age (from 2 to 3 years)	The average preschool age (from 3 to 4 years)	Senior preschool age (from 4 to 5 years)	Senior preschool age (from 5 to 6 years)
1	2	3	4	5	6	7	8
Health-saving skills							
1	Cultural and hygienic skills	Performs movement when seeing the objects of feeding. Helps to hold the bottle, grabs the bowl.	Eats with a spoon on his/her own, dresses with the help of an adult, asks for a pot, knows his/her place and timely reports on the need.	Has initial personal hygiene skills.	Knows and respects the rules of personal hygiene.	Knows the sequence of hygiene procedures.	Independently performs hygienic, tempering procedures.
2	Physical Training	Able to grab the fingers of adults. Reaching for objects and grabbing with both hands, passes the object from hand to hand.	Able to walk and run in a given direction. Likes to climb and climb down the stairs.	Has the initial skills of running, climbing, jumping.	Has elementary skills to perform basic types of movements.	Able to perform independently vital movements.	Performs basic types of movements, showing a creative approach.
3	Self Movement	Rises with support on the subject, moves in space. Pulls items from the container, splashing in the water.	Able to play alongside, independently find bright, eye-catching objects in space.	Able to play in a small subgroup.	Able to observe the elementary rules in joint games.	Able to independently play various games and follow all the rules of the game.	Has the skills of organizing outdoor games with a group of children. Formed elementary self-control of motor activity.
4	Healthy lifestyle	Demonstrates an increasing ability of complacency and falling asleep.	Performs regime moments.	Shows positive emotions when conducting tempering procedures	Knows the elementary rules of a healthy lifestyle, performs	Knows and respects the elemental rules of a healthy lifestyle. Able to handle	Consciously complies with safety rules. Understands the importance and necessity of

				and takes care in dangerous situations.	hardening techniques for showing an adult.	plants, animals and insects.	tempering procedures. Observes the daily regimen.
Communicative language skills							
1	Communication culture	Reacts to the sound and its source. Lisps and imitates sounds.	Imitates new words; uses the lightweight names of familiar objects and actions and the first full words.	Able to make contact with peers and loved ones.	Understands the speech of an adult, can listen to questions and answer them.	Able to come into contact with adults, children and fulfill their requests.	Knows the rules of behavior in public places and abides them. Knows elementary rules of communication, speech etiquette.
2	Grammatical structure of speech	-----	Knows how to use simple words and elementarily designate objects and actions.	Able to express their thoughts to be understood.	Able to apply the necessary words and phrases.	Able to coherently compose complex sentences and complex sentences with questions from an adult.	Know how to construct sentences. Strives to speak grammatically correctly.
3	Speech culture	Reacts with gestures or voice when his/her name is called.	Able to clearly pronounce vowels and articulatory consonant sounds available.	Able to properly articulate vowels and consonants.	Able to clearly pronounce the words, listening to their sound.	Able to correctly pronounce all the sounds of the native language.	Able to speak correctly, expressively. Uses various ways of intonation expressiveness.
4	Lexicon	Simulates the actions, gestures and sounds of others.	Reproduces correctly the words and phrases pronounced by adults. Mimics the sounds of the animal.	Able to answer questions about yourself, family members, favorite toys.	Calls all actions, objects, phenomena, their signs and qualities.	Uses words without reliance on a clearly represented situation, activates verbs in speech.	Understands the polysemy of a word, using antonyms, synonyms in speech.
5	Connected speech	-----	Able to express a request in words and short phrases, listen carefully to the task and carry it out correctly.	Able to use words to express desires, feelings, thoughts.	Able to correctly answer questions when viewing pictures, subject in, observe the object of animate and inanimate nature.	Has the main form of communication, dialogical speech. Able to use statements from 2-3 sentences.	Makes a monologue, using different parts of speech, epithets and comparisons.

6	Creative speech activity	Expresses facial expressions, gestures when he is pressed, hugged, caressed when he is tired or upset.	Understands the simple plot of small performances with toys and can imitate their actions.	Able to tell by heart rhymes for finger games.	Able to apply the simplest methods of intonational expressiveness of speech to characterize the characters.	Able to tell familiar fairy tales, to compose small stories on toys.	Knows how to write stories, understands and uses words in a figurative and allegorical sense. Shows interest in the game with rhyme and word.
7	Perception of works	Listens and reacts emotionally to the pods and speech exercises.	Understands short stories, poems by using appropriate pictures.	Able to respond emotionally to the works of oral folk art.	Able to convey his attitude to the character, various events.	Able to name several works that he likes, use literary images in the game.	Shows interest in books, can expressively recite poems.
8	Basics of writing	-----	-----	-----	-----	-----	Able to conduct analysis in three-words. Able to hear and highlight the stressed syllable.
9	Reading and writing	-	-	-	-	-	Oral speech and phonemic hearing are developed. Determines the number of syllables in a word, words in a simple sentence. Able to conduct sound and sound letter word analysis. Knows the letters of the alphabet. Owns elementary writing skills: can hold a pencil, pen, draw, trace letters, writes elements of letters. Able to orient/navigate on the sheet of notebook.
Cognitive skills							
1	Orientation	Able to	Able to group	Distinguishes	Knows and	Able to call signs	Able to consider

	in the properties of objects	memorize and search for the subject.	homogeneous objects by one of the following signs (size, shape). Defines four primary colors.	between primary colors, shape, size, texture of objects.	names the characteristic differences of objects by the method of comparison (overlay, application)	and characteristic differences of objects based on tactile, auditory and olfactory perception.	objects, to determine their properties and characteristics.
2	Knowledge of the world	Studies objects in different ways (i.e., throwing, observing the actions of others).	Has the knowledge about himself, his family. Recognizes animals, objects of the nearest environment.	Shows curiosity, a special interest in people and their actions.	Has the ability to notice and call the simplest changes in nature, weather. Understands and names the meaning of traffic lights.	Understands the simplest causal relationships in living, inanimate nature and social life.	Able to systematize, group and solve cognitive tasks in a visual-effective and figurative way. Has the ability to find similarities and differences.
3	Constructive skills	Tries different ways to do things.	Able to make elementary designs with the help of an adult.	Reproduces simple constructions by showing an adult (can't impose, attach, apply).	Able to use building material, varying in various ways. Knows and names their main details.	Shows independence when choosing a material for the structure, tends to carry out construction.	Knows several simple generalized design methods and uses the same methods to obtain different results.
4	Fundamentals of Ecological Culture	Emotionally reacts to the natural world; notices plants, animals in the environment.	Able to distinguish between living things, plants, shows interest to them.	Able to be friendly and caring attitude to animals.	Able to perform elementary work assignments in conjunction with adults for the care of plants.	Has some norms of behavior in nature.	Understands the diversity of the world. Knows the signs and properties of plants, habitat. Able to care for the inhabitants of the corner of nature.
5	Elementary Mathematical Representations	Plays with toys or objects different in size and shape.	Understands the instructions of an adult and can find an object in the surrounding space.	Owens the initial skills of orientation in space.	Able to demonstrate elementary ideas about time, space.	Has an idea about the time (part of the day: morning, day, night; days: today, yesterday, tomorrow)	Knows the structural characteristics of geometric shapes, quantitative relations in the direct and reverse

						concepts: quickly, slowly.	order.
6	Search and experimental activities	Shows interest in the study of objects, manipulates or studies new subjects. Corresponds to the subject size, although not always to the destination.	Owns the ability to push objects into various recesses (holes) in accordance with their shape.	Performs actions with various objects (disconnect, connect, design).	Able to experiment independently with familiar materials.	He knows how to experiment, model with new materials and highlight the most common features between objects.	He knows how to experiment consistently and effectively, to establish the simplest causal relationships.
7	Work with information	Observes and responds to its reflection in the mirror	Receives information through feelings (through touch, smell, touch).	Shows interest in various sources of information.	Identifies interesting information.	Understands the need for new information.	Understands and is able to provide new information to whom it will be interesting.
Creative skills							
1	Musical activity	Enjoys fun games with an adult, strikes the surface, after seeing a knock on the drum. Performs actions with musical objects.	Able to convey the cheerful nature of the dance melody with uncomplicated movements.	Knows musical instruments, distinguishes between high and low sound of a musical phrase, shows a desire to sing together with adults.	Distinguishes the tempo of a piece of music, distinguishes sounds by its pitch, reacts to the beginning and end of a melody.	Distinguishes voices timbres, sings protractedly, clearly pronounces words; performs dance, musical and rhythmic movements.	Has the simplest skills to play children's musical instruments, distinguishes the basic properties of musical sound, duration, timbre. Ability to sing in improvisation manner
2	Productive activity	Emotionally reacts to bright objects: pictures, flowers (takes them to his/her mouth, nods, knocks, hits, throws objects).	Fills a sheet of paper with bright spots, strokes (paint, markers, crayons, pencils); sculpts flat, round shapes.	Has the skills of modeling (making recesses, decorates objects). Able to hold on a sheet of paper straight vertical, wavy horizontal lines.	Has the basic technical skills and abilities required for the visual activity.	Has an idea about the types of art (painting, sculpture, folk art).	Independently chooses technical methods and means of image in accordance with the character of the image.
3	Aesthetic perception of the world	- ----	Peers into the bright colors of paints, shows admiration, joy.	Shows joy, emotionally responds when viewing folk	Shows interest in various types of fine art,	Rhythmically disposes geometric shapes and plant elements. Emotio	Shows interest in decorative art, design, selects and justifies work methods, uses

				toys.	uses materials carefully.	nally perceives the dance character of music, notices the beauty of the world around.	rationality materials for work, emotionally responds to the beauty of nature, clothing and interior decoration.
Social skills							
1	Behavior culture	Responds to a greeting, farewell.	Able to fulfill the request expressed by a simple sentence.	Understands the norms and rules of behavior, uses the words of greeting, farewell, thanks.	Has knowledge of human relationship, understands the emotional state.	Shows elementary care about relatives and surrounding people.	Able to ask for help if necessary, respects the wishes of other people. Knows the norms of behavior.
2	Interaction with adults and peers	Recognizes immediate family members. Smiles, waves his/her hands or laughs, reacting to a positive relationship with adults. Shows likes and dislikes to actions, interaction.	Interacts with adults in various games - entertainment. Able to listen carefully to an adult and performs simple tasks.	Shows responsiveness, goodwill, sympathy for close people, peers.	Able to enter into sustainable gaming associations with peers and communicate with adults on educational topics.	Performs joint labor activities with adults. Aware of his/her position among peers and his/her "I".	Able to cooperate with adults and peers, set a common goal and discuss their results, engage in joint activities with adults.
3	The idea of moral standards	Expresses primary emotions. Uses body movement and sound when it needs help.	Knows how to use the words necessary for expressing desires and establishing mutual relations with others.	Knows and understands what is "good" and what is "bad."	Able to evaluate your act and fabulous characters.	Observes moral norms and rules of behavior in society.	Observes the moral norms of behavior, experiences joy, satisfaction from good deeds in, experience in violation of moral norms.

#### Appendix 2

to order № 604 of the Minister of  
Education and Science of the  
Republic of Kazakhstan  
dated October 31, 2018

### State compulsory standard of primary education Chapter 1. General Provisions

1. This state compulsory standard of primary education (hereinafter - the Standard) is developed in accordance with subparagraph 5-1) of Article 5 and Article 56 of the Law of the Republic of Kazakhstan dated July 27, 2007 "On Education" (hereinafter -

the Law) and determines the requirements for the content the volume of academic load, the level of training of students and the duration of training.

2. In the Standard, terms and definitions shall be applied in accordance with the Law. In addition to them, the following terms and definitions shall be included:

1) the basic content of primary education - the composition, structure and volume of the content of primary education, subject to compulsory study in educational institutions, regardless of their type, type and form of ownership, as well as the language of instruction;

2) assessment - the process of matching the achieved learning outcomes with the expected results based on the developed criteria;

3) assessment criteria - specific measures, on the basis of which the evaluation of students' educational achievements is carried out;

4) monitoring of the educational process - systematic observation, diagnosis, analysis, assessment and forecast of the state/condition, the dynamics of changes in the results and conditions for the implementation of the educational process in educational organizations;

5) education values - benchmarks in building a system of learning objectives, which serve as the basis for determining the content of education, are the leading factor in shaping the student's personality;

6) educational activity - the process of purposeful, pedagogically grounded, consistent interaction of the subjects of education, during which the tasks of teaching, developing and educating a person are solved, including taking into account the special educational needs and individual abilities of students;

7) educational field - an integral part of the basic content of primary education, including a set of related academic subjects;

8) summative assessment - a type of assessment that is carried out at the end of a certain study period (a quarter), as well as the study of sections / cross-cutting themes in accordance with the academic program;

9) inclusive education - creation of conditions for equal access to education for all students, taking into account special educational needs and individual opportunities;

10) the invariant component of the study load is an integral component of the standard curriculum, which defines the subjects required for study by all students in educational institutions, regardless of their type, type and form of ownership, as well as the language of instruction;

11) the variable component of the study load is an integral component of the standard curriculum, which is determined by the organization of education according to the educational needs of students;

12) expected learning outcomes - a set of competencies expressing what a student will know, understand, demonstrate upon completion of the learning process, including taking into account the special educational needs and individual abilities of students;

13) extracurricular activities - an integral part of the whole educational process in the organization of education, one of the forms of organization of free time for students, implemented over and above the academic load, determined by the standard curriculum;

14) standard curriculum - a document regulating the list of academic disciplines (subjects) and defining the volume of the invariant and variable components of the academic load of the corresponding level of education;

15) formative assessment - a type of assessment, which is carried out in the course of everyday work in the classroom, is a current indicator of student performance, provides an operational relationship between the student and the teacher during the training, feedback between the student and the teacher and allows to improve the educational process;

16) elective course - a course of choice of students, an integral part of the variable component of the curriculum, aimed at expanding the educational training of students.

### 3. The application of the Standard shall be aimed at:

1) improving the quality of training and education through the achievement of a system of primary education goals, presented in the form of expected learning outcomes;

2) the creation of conditions for learning Kazakh, Russian and foreign languages;

) a combination of academic and practical orientation of primary education, providing for students to master the basics of theoretical knowledge and the development of skills to apply this knowledge to solve problems of an applied nature;

4) gradual build-up of subject knowledge and skills, ensuring the depth and complexity of the content of academic subjects, taking into account the age possibilities of students;

5) the implementation of the principle of unity of upbringing and education, based on the interrelations and interdependence of the values of education and the system of expected learning outcomes, which determine the content basis of the daily educational process;

6) ensuring the protection of children's health, as well as the creation of favorable conditions for meeting the special educational needs of students and their needs for additional educational services;



7) ensuring the equivalence of primary education in a variety of types and types of secondary education organizations;

8) support and development of innovative practices in educational institutions;

9) the organization of an objective assessment of the activities of educational organizations to ensure the quality of education.

4. The volume of knowledge and the content of academic subjects of the invariant component in educational institutions for students with mild mental retardation and moderate mental retardation shall be carried out in accordance with the standard curricula(hereinafter referred to as SC ), approved by Order № 500 of the Minister of Education and Science of the Republic of Kazakhstan dated November 8, 2012 "On Approval of the standard curricula for primary, basic secondary and general secondary education of the Republic of Kazakhstan" (registered with the Register of State Registration of Regulatory Legal Acts under № 8170 ) and programs approved by order № 115 of the Minister of Education and Science of the Republic of Kazakhstan dated April 3, 2013 "On Approval of the Standard Curricula in General Subjects, Elective Courses and Options for Educational Institutions "(registered with the Register of State Registration of Regulatory Legal Acts under the number 8424).

**Chapter 2. Requirements for the content of education with a focus on learning outcomes Paragraph 1. Requirements for the updated content of primary education with a focus on learning outcomes**

5. The following values shall be defined as basic values in the content of primary education:

- 1) Kazakhstan patriotism and civil responsibility;
- 2) respect;
- 3) cooperation;
- 4) work and creativity;
- 5) openness;
- 6) lifelong education.

6. The purpose of primary education shall be to create an educational environment attractive for the harmonious formation and development of the student's personality, possessing the basics of the following skills of a wide range:

- 1) functional and creative application of knowledge;
- 2) critical thinking;
- 3) research;
- 4) use of information and communication technologies;
- 5) the use of various methods of communication, including language skills;
- 6) the ability to work in a group and individually.

7. The content of primary education shall be focused on learning outcomes and shall be determined taking into account the following aspects:

- 1) compliance with the dynamic needs of modern society;
- 2) the need to develop critical, creative and positive thinking;
- 3) the desirability of strengthening the integration of the content of school subjects;
- 4) ensuring the unity of training, education and development.

8. The content of primary education shall be implemented in the framework of the policy of trilingual education. The goal of trilingual education shall be to form a multilingual personality - a citizen of Kazakhstan who speaks at least three languages, knows how to conduct a dialogue in various fields, appreciates the culture of his/her people, understands and respects the culture of other nations.

9. Trilingual education shall be practically implemented by:

- 1) ensuring the level of mastery of Kazakh, Russian and foreign languages in accordance with international standards;
- 2) the organization of extracurricular activities in Kazakh, Russian and foreign languages.

10. The content of the educational field "Language and Literature" shall be implemented in academic subjects:

1) "Literacy", "Kazakh language" in grades with the Kazakh language of instruction, "Russian language" in grades with the Russian language of instruction, "Kazakh language" in grades with non-Kazakh language of instruction, "Russian language" in grades with non-Russian language of instruction, "Literary reading", "Foreign language";

2) in educational institutions with the language of instruction of ethnic groups compactly residing in the territory of Kazakhstan, the educational subject "Native Language" of this ethnic group shall be additionally included in the educational field "Language and Literature". The subject "Mother Tongue" for educational organizations with the Uigur / Uzbek / Tajik language of instruction shall be included in the invariant component of the standard curriculum.

11. The content of the educational field "Language and Literature" shall provide for the use of a communicative approach aimed at developing skills in four types of speech activity. The content of language subjects shall be aimed at developing students' interest and a positive attitude towards learning languages through gaming and cognitive activity, as well as forming initial communication skills for exchanging information, developing the ability to work with text as speech material, use phrases and expressions from text in specific situations.

12. The study of the Kazakh language / Russian language / mother Tongue as a language of instruction shall be based on the use of literary texts for the development

of students' speech skills, the ability to work independently with different types and types of texts.

13. Teaching the second (Kazakh / Russian - depending on the language of instruction) and the third language (foreign) shall be focused on the organization of the level learning of the language.

14. The content of the educational field "Mathematics and Informatics" shall be implemented in the following subjects: "Mathematics", "Information and communication technologies".

15. The content of the educational field "Mathematics and Informatics" shall be aimed at developing in students the initial mathematical knowledge to describe various objects and phenomena of the surrounding reality;

on the assimilation of oral and written computational algorithms;

on the development of general methods of solving problems, skills to build logical judgments based on measurement and computational skills;

the formation of skills to use elementary tools of information and communication technologies, the ability to search, select, transfer information, design objects and processes, apply the simplest methods of working with tables, charts, graphs and diagrams for analyzing, interpreting and presenting data.

16. The content of the educational field "Natural Science" shall be implemented in the academic subject "Natural Science".

17. The content of the subject "Natural Science" shall provide an elementary level of scientific knowledge within the framework of the "Man-Nature" system. This academic subject shall be aimed at the development of students' natural curiosity, research skills, the formation of scientific understanding and vision of the surrounding world. The content of the subject shall be structured according to the principle "from simple to complex, from familiar to unfamiliar." Understanding the causes and understanding of the relationship of phenomena and processes of animate and inanimate nature, awareness of the diversity and complexity of the surrounding world will expand the horizons of students.

The subject "Natural History" shall be a propaedeutic course for the study of independent subjects "Biology", "Physics", "Geography", "Chemistry" at subsequent levels of education, and also shall lay the foundation for research skills important to any branch of knowledge.

18. The content of the educational area "Man and Society" shall be implemented in the educational subjects "Knowledge of the World", "Self-Knowledge".

19. The content of the subjects of the educational area "Man and Society" shall be focused on providing propaedeutic knowledge within the framework of the "Man -

Society" system. The content of subjects shall be aimed at studying the social phenomena of the past and present and their interrelations, the relationship of people in the family and society; to create a sense of pride in their homeland, an awareness of their place in the family, local, regional, national and global community; understanding of the values of Kazakhstan society and universal values; for each student to disclose his/her natural abilities and creative potential; to develop a respectful attitude towards the culture of one's own and other peoples, personal responsibility for one's actions, development of empathy in relation to the feelings of other people; on the education of humane attitudes towards man and the environment.

20. The content of the educational field "Technology and Art" shall be represented by the educational subjects "Music", "Artistic work".

21. The content of the subjects of the educational field "Technology and Art" shall be aimed at the formation of a holistic perception of the surrounding world, its cognition by means of visual art and music; development of initial ideas about the role of fine art, applied art and music in human life, respectful attitude to the Kazakh national decorative and applied art, musical traditions and customs, art of other nations of the world; education of moral and aesthetic attitude to various types of art as a reflection of human life, shall be aimed at the artistic and musical-creative development of primary school students.

22. The content of the educational field "Physical Training" shall be implemented in the academic subject "Physical Training".

23. The content of the subject "Physical Training" shall be aimed at the development of physical qualities, interest in the independent implementation of general developmental exercises; to adhere to a healthy lifestyle culture; on the formation of ideas about the role of physical culture in human life, the ability to independently find information about sports, national sports and the use it for health promotion; on the formation of a culture of communication with peers in terms of training, gaming and competitive activities.

24. The compulsory study of the course "Basics of Life Safety" shall be provided in grades 1-4. The content of the training course shall be implemented within the framework of the subject "Learning the World": in 1-3 grades with an annual academic load of 6 hours, in grade 4 - 10 hours by primary school teachers.

25. The content of the course "Road Traffic Rules" shall be implemented in grades 1-4 - 6 hours in each grade by teachers at the expense of class hours and outside school hours with an indication of the theme and date in the annual work plan of the supervising teacher.

26. The organization of education shall carry out educational activities in accordance with the license obtained and throughout the entire period of its validity, shall comply with the qualification requirements for educational activities and the list of documents confirming compliance with them, approved by order № 391 of the Minister of Education and Science of the Republic of Kazakhstan of June 17, 2015 (registered with the Register of Regulatory Legal Acts under № 11716).

**Paragraph 2. Requirements for the content of education with a focus on learning outcomes**

27. Standard educational programs of primary education shall be aimed at shaping the child's personality, developing his or her individual abilities, positive motivation and skills in learning activities: strong reading, writing, counting skills, linguistic communication experience, creative self-realization, behavioral culture for further development of basic school educational programs.

28. Primary education shall ensure the formation of the moral qualities of a child's personality, his / her emotional value attitude to the world around him/her, positive motivation for the learning process, the development of his/her individual abilities and skills in cognitive activity.

29. In order to preserve the fundamental nature of secondary education and comply with the state requirements for the basic content of secondary education, the invariant component shall be determined not less than 90% at the level of primary education of the total hours.

30. The educational field "Language and Literature" shall include the following subjects: "Kazakh Language" in the grades with the Kazakh language of instruction, "Russian Language" in the grades with the Russian language of instruction, "Literary Reading", "Kazakh Language" in the grades with a non-Kazakh language of instruction, "Russian Language" in grades with non-Russian language of instruction, "Foreign Language".

31. In general education organizations with the language of instruction of an ethnic group compactly residing in Kazakhstan, the "Language and Literature" educational area shall additionally include the "Native language" of this ethnic group. The subject "Mother Tongue" ("Uighur Language", "Uzbek Language", "Tajik Language") shall be included in the invariant component of the standard curriculum.

32. The educational subject "Mathematics" shall include the educational subject "Mathematics".

33. The educational subject "Natural Science" shall be included in the educational field "Natural History".

34. The educational subject "Man and Society" shall include the educational subject "Self-Knowledge".

35. The educational field "Art" shall include the following subjects: "Music", "Visual Arts".

36. The educational subject "Technology" shall include the academic subject "Labor Training".

37. The educational subject "Physical Training" shall be included in the educational field "Physical Training".

38. The compulsory study of the course "Fundamentals of life safety" shall be provided. The content of the training course shall be implemented in the amount of 10 hours in the framework of the educational subject "Learning the World" by primary school teachers.

39. The content of the course "The Road Traffic Rules" shall be implemented in the amount of 6 hours by supervising teachers at the expense of class hours and after hours, indicating the topic and date in the annual work plan of the class teacher.

**Chapter 3. Requirements for the maximum amount of study load of students Paragraph 1.**  
**Requirements for the maximum amount of study load of students on the updated content of primary education**

40. The maximum amount of weekly study load of students in elementary school shall not be more than 29 hours.

41. The total volume of the academic load of students, including the invariant and variable components, as well as the weekly and annual academic load by grades shall be established by the standard curriculum.

42. Class division into two groups shall be allowed in urban educational institutions when filling grades in 24 or more students, in rural - in 20 and more students:

- 1) in the Kazakh language in non-Kazakh grades;
- 2) in Russian in grades with non-Russian language of instruction;
- 3) in a foreign language;
- 4) on information and communication technologies;
- 5) by self-knowledge.

43. Within the framework of inclusive education, the division of a class into groups according to paragraph 42 of this Standard shall be carried out while reducing the occupancy rate of the class of the total number of students by three per each child with special educational needs.

**Paragraph 2. Requirements for the maximum amount of study load of students**

44. The maximum weekly study load for students, including all types of classroom and extracurricular (individual and group grades of developing character) of educational work, shall not exceed 29 hours in grade 4.

45. The study time allocated in the standard curricula for the study of the subject shall be taken into account when developing the structure and content of the corresponding standard and variable curricula.

46. The total volume of the study load of students in academic subjects that make up the invariant and variable components, shall be established in accordance with the standard curriculum.

47. The maximum study load of students, taking into account their needs, shall be established by the working curriculum of the organization of education.

48. If there are children in a class with special educational needs for development, the class shall be divided on the basis of reducing the total number of students by three for each such child.

49. In order to improve the health of students and increase their physical activity, local executive bodies shall provide for the organization of sports sectional activities in the form of out-of-class work.

50. Students who, due to their state of health for a long time, do not attend the organization of education, shall be provided with individual free-of-charge training at home or in medical organizations.

51. Local executive bodies and general educational organizations shall create conditions for the safety of life and the health of students by:

1) promoting healthy lifestyles;

2) strengthening the social and psychological services;

3) security of the building;

4) the organization of close ties with the local population and the parent community;

5) studying the informal environment of students;

6) conducting preventive measures (sociological survey, psychological support, holding meetings with employees of law enforcement agencies and medical institutions);

7) timely organization of preventive medical examination;

8) compliance with safety regulations, fire safety regulations;

9) compliance with the light and air-thermal regime of the premises;

10) compliance with the mode of work with computer equipment;

11) propaganda of observance of traffic safety rules;

12) compliance with safety measures when transporting children.

52. The educational process in educational organizations shall be carried out within the framework of a working curriculum, which is developed on the basis of

standard curriculum, shall be approved by the educational organization independently and shall be coordinated with local education authorities.

53. The educational process in the republican specialized educational organizations shall be carried out within the framework of the working curriculum, which is developed on the basis of standard curriculum.

**Chapter 4. Training Requirements for Students Paragraph 1. Requirements for the level of training of students on the updated content of primary education**

54. The level of training of students shall be determined through the expected learning outcomes, which are designed taking into account the specifics of each educational area, combining several related subjects: Language and Literature, Mathematics and Computer Science, Natural Science, Man and Society, Technology and Art", "Physical Training".

55. Expected results after completion of primary education in the field of "Language and Literature".

Kazakh language / Russian language / Mother Tongue, Literary Reading:

1) listening and speaking: the student understands and conveys the main content of the conversation, the text read or heard; determines how the speaker's point of view is presented, draws conclusions; understands the topic of discussion and participates in its discussion, observing the speech norms; consciously uses in speech synonyms, antonyms, homonyms, words with direct and figurative meaning; uses various techniques of retelling the content of narrative and descriptive texts using emotionally-colored means of expressiveness; applies various techniques of retelling the content of artistic works; talks about what is read and heard, shares his/her thoughts and emotions; argues his/her point of view, following a logical sequence; independently compiles coherent, logical, reasoned statements in accordance with the proposed topic and the communicatively given installation; participates in dialogue using various methods of speech communication; analyzes the ideas of spiritual and moral values based on the read, heard information;

2) reading: the student reads the works of oral folk art and children's literature, analyzes the character of the characters and assesses their actions; distinguishes artistic texts from non-artistic; determines the main idea and composition of works of art; determines the genre of the work, justifies his/her answer / choice; determines the figurative and expressive means used by the author to create an image; draws conclusions about the attitude of the writer to his/her heroes; reads texts using specific types and strategies of reading; predicts the course of events in the works; determines the types of text (description, narration and reasoning); reads stories / poems expressively; expressively recites poems by heart; determines universal values in works of fiction;



3) writing: the student writes his/her own texts of various types, genres and styles, selecting the appropriate words; writes in accordance with the studied grammatical, spelling and punctuation norms; writes texts using various forms of presentation (figures, charts, graphs, tables); observes hygienic and calligraphic writing skills; synthesizes small texts on topics related to the culture and customs of the people of Kazakhstan, expressing their moral position.

Kazakh language (in grades with non-Kazakh language of instruction) / Russian language (in grades with non-Russian language of instruction):

1) listening: the student understands the meaning of audiovisual material that is relevant to the social, social and cultural areas of communication; understands the topic, main idea, main and secondary information of the text with sufficient completeness, depth and accuracy; understands how the style of speech changes depending on the situation of communication, the place of communication and participants of communication (communication), predicts the content of the story / novel, taking into account different opinions;

2) speaking: the student transmits the content of the stories and stories, including using preliminary notes and a plan; formulates questions and expresses his/her point of view about the read, heard text; independently makes coherent, logical statements in accordance with the proposed topic and the communicatively specified installation; participates in the dialogue, expressing his/her communicative intention in different speech situations of the social, social and cultural spheres of communication;

3) reading: the student reads texts using different types and strategies of reading; understands the key information, conclusions and assessments of the author in a text containing unfamiliar words; distinguishes between artistic and non-fiction texts; Finds the right information in various sources; demonstrates an understanding of the ideas, events and motives of the actions of the heroes; finds out the meaning of unfamiliar words and phrases using dictionaries and reference books; defines universal values in works of art of Kazakh and world literature;

4) writing: the student makes short records of the text he/she has listened to, the information he/she has read, and the event he/she has seen (titles, particular facts, opinions); uses the appropriate lexical units to create narrative / non-narrative texts, taking into account grammatical, spelling and punctuation norms.

Foreign language:

1) listening: the student understands the main content of a short conversation on familiar topics, recognizes the sound of familiar words and phrases; understands short questions about color and numbers; uses contextual clues to predict the content and

meaning of a short conversation on familiar topics; understands the general meaning of short stories that sound slow and clear;

2) speaking: the student formulates basic statements and statements about himself/herself, formulates questions; answers the questions; pronounces with the correct intonation and stress the main words and phrases when describing objects and events; expresses that he/she likes and dislikes;

3) reading: the learner uses an illustrated dictionary; reads and understands small belle letter style and non-belle letter style texts on social and everyday topics; determines the basic meaning of small texts; determines specific information and details in small texts;

4) writing: the learner correctly writes frequently used words, demonstrating knowledge of the differences between their spelling and pronunciation; writes short sentences under dictation; puts punctuation marks at the end of sentences correctly.

56. Expected learning outcomes in the educational field "Mathematics and Computer Science": At the end of primary education, the student:

1) knows the meaning of the concepts: "figure", "number", "coordinate ray", "fraction of number", "ordinary fraction", "mixed number, numeric expression, alphabetic expression, equation, inequality, degree measure of angle, percentage, many/much, "symmetry", "information", "object", "file", "folder", "label", "model", "computer network", "Internet"; the value of the discharge units in the decimal number system; flat and spatial geometric shapes and their elements; formulas for calculating the perimeter, square, and rectangle; rules of addition and subtraction of fractions with the same denominators; assignment of operating system objects; types of representation and units of information; main parts of the computer; input and output devices; the appointment of application, service programs and operating systems, safety regulations when working at the computer;

2) understands the meaning and order of arithmetic operations on natural numbers, quantities and relations between them; simple dependencies between quantities; the meaning of the operations "intersection" and "union" of sets; conversion of percentages into fractions, fractions into percentages; the difference between constants and variables; the appointment of the main parts of the computer, input and output devices, operating system interface elements; the impact of computer technology on human health; the importance of protecting information and devices from viruses/malware; the need to accompany information with links to authors;

3) apply mathematical symbols, arithmetic actions and their properties for writing expressions, converting numerical expressions, solving problems; verbal and written methods of calculating over natural numbers; standard and non-standard units of

measurement of quantities (length, area, volume, mass, time); measurement tools; mathematical language and graphic models for recording task conditions; algorithms for solving equations and inequalities; formulas for calculating the perimeter and area (square, rectangle, right triangle); Euler-Venn diagrams for representing relationships between sets of elements; the ability to find part of the number and the number of its parts; information and communication technology tools for collecting, storing, processing and transmitting information; application programs for working with various types of information, to create models; the Internet services for solving tasks; rules of work at the computer;

4) analyzes rational methods of oral and written account; features of geometric shapes; the results of comparing the values of numerical expressions and expressions with variables; dependencies between different quantities (quantity, cost, speed, time, distance, duration of work, amount of work); patterns with finding the missing elements of the sequence; simple combinatorial and logical tasks; recording the conditions of tasks in the form of a diagram, drawing, table; data and results associated with the account, measurement; application capabilities; the consequences of violating ethical and legal standards on the network; information from various sources, selected in accordance with the stated requirements;

5) synthesizes, classifies objects according to their characteristics and spatial arrangement; mathematical model of dependence between quantities; the simplest models of real objects and processes of the real world in the form of images and drawings; the task and the inverse to it by the proposed data or a mathematical model; sequence according to a given pattern; object and situation models for solving practical problems using information and communication technologies; knowledge of the capabilities of application programs and network services for solving various problems;

6) evaluates the measurement result; the truth or falsity of simple statements about numbers, quantities, geometric figures; data presented in the form of a graph, table, chart; model compliance with specified criteria; the possibility of using applications and network services to solve problems.

57. Expected learning outcomes in the field of natural sciences. Upon completion of primary education, the student shall:

1) know the planets of the solar system and their features; basic natural science concepts of the Earth and its nature, the Universe; methods of scientific knowledge: observation, experiment, experience; safety fundamentals in planning and conducting research; rules of conduct for natural disasters; the life cycle of humans, plants, animals and fungi; features of the structure and location of the main organs of man,

plants, animals and fungi and their functions; classification of plants, animals and fungi; basics of the process of photosynthesis; individual properties of light; some physical forces and their causes; certain types of energy; composition and properties of the most common substances on Earth; properties of various bodies and some areas of their application; main types of minerals and their value, the main mineral deposits in the Republic of Kazakhstan;

2) understand the importance of respecting the environment and preserving biodiversity on Earth; the need for personal hygiene; protective functions of the body; the importance of the components of nature for living organisms; features of organisms as a means of adaptation to the environment; simple differences in vertebrates and invertebrates; the need for a rational use of natural resources;

3) use separate research methods to study natural objects, processes and phenomena; standard and non-standard units of measurement of natural objects, phenomena and processes; simple instruments for measuring some characteristics of natural objects, processes and phenomena; relevant scientific terminology to explain the study; knowledge of the simple traits of plant and animal species in one's locality to compile their classification;

4) analyze the causal relationships between the components of nature; properties of materials to determine their applicability; animal and plant world of a certain territory; similar and distinctive features of different habitats; own research data and materials from various sources;

5) synthesize acquired knowledge and skills for planning and conducting research on objects and phenomena of animate and inanimate nature; information materials in the form of drawings, diagrams, graphs, diagrams, tables; ideas on environmental issues; imitation and graphical models of objects, phenomena and processes of the micro- and macrocosm;

6) assess the factors of development and the state of natural objects, phenomena and processes; human activities and the impact of scientific and technological progress on the environment; the impact of scientific and technological progress on human life; the correspondence of the obtained results of own research to the forecast made.

58. The expected results of training in the educational area "Man and Society". Upon completion of primary education, the student shall:

1) know the structure, composition and functions of the family, the school community, where the student's daily life takes place; basic social functions of a person; initial information about the relationship "man - society"; concepts of "safety", "health" and their leading signs; the characteristics of the individual, family,

community and society as a whole, their significance and role in human life; main types of household items, their composition, properties and sources; general information about the geography and history of Kazakhstan; main traditions and folklore of the people of Kazakhstan; the role and place of Kazakhstan in the world; state symbols of Kazakhstan; human values; the rules of positive and friendly communication, the rules of etiquette, the rights and obligations of the student, the rules of a healthy lifestyle;

2) understand their civic identity in the form of self-awareness as a young citizen of Kazakhstan and their belonging to a particular ethnic group; the value of the family, small homeland and homeland; values of a multinational Kazakhstan society; the significance of the state symbols of Kazakhstan; norms of moral behavior in society; their involvement in the life of the school, village, city, country; the importance of serving the community; functional and structural features of different types of settlements; the importance of matching thoughts, words and actions, responsibility for them; the value of national traditions and customs; the role of travel in people's lives and the development of society; the importance of self-knowledge and human self-development; the content of the concepts "work", "mutual understanding", "cheerfulness", "optimism", "goodwill", "generosity", "open-heartedness", "patriotism", "creativity" and their significance; the need for a healthy lifestyle; the importance of nature as a source of life; the importance of respect for nature;

3) apply cognitive methods to study social processes and phenomena, fulfill educational tasks and works of a creative, cognitive, research, design nature; personal experience and knowledge in the field of travel, simple financial relations; knowledge of a healthy lifestyle, personal hygiene, nutrition, and daily regimen; basic knowledge in the provision of first aid; own and public experience in adapting to the surrounding world; rules of etiquette; rules of communication to maintain positive, friendly relationships in the family and team;

4) analyzes the position of Kazakhstan in the world; the role and importance of the studied social phenomena and processes in people's lives; similarities and differences in the cultural and ritual traditions of the people of Kazakhstan; factors of personal development, family, school community; the importance of basic resources in human life; health and safety factors; manifestations of human feelings and actions of people, their causes and effects; own emotional state;

5) synthesize knowledge and skills for systematization and classification of social phenomena and processes; knowledge and skills to identify specific topical issues of society; own solutions for orientation in space (place), time (chronology), social environment (society); communication models in family, interpersonal and public

spheres; own projects for life safety, travel organization; decisions on their own spiritual and moral development;

6) evaluate their own behavior and the actions of other people from the position of moral norms; the importance of family, society, country in the life of every person; the role of tradition and folklore in modern life; the significance of consumer goods by degree of significance and value; degree of satisfaction with their work at the lesson; the level of their progress in interpersonal, social and financial-economic relations; own emotional and physical condition; behavior of people from the position of generally accepted moral standards.

59. The expected results of training in the educational field "Technology and Art". Upon completion of primary education, the student shall:

1) know the main types and genres of art; main types of lines and shapes; primary and secondary colors; basic materials and tools for drawing and decorative art work; basic techniques and methods of work in various types of art; the best examples of works of world and domestic artists; expressive means and methods for conveying creative ideas; basics of music literacy; rules for playing songs and listening to music; main types, genres and styles of Kazakh traditional music; names and classification of musical instruments of the national and symphonic orchestra; types of choirs and orchestras; the best samples and famous performers of Kazakh traditional and classical music, music by composers of Kazakhstan and music of the peoples of the world; basic computer music programs;

2) understand the connection between art and life; the interrelation of the technique of execution with the appropriate look, style, and genre of art; features and significance of national traditions and customs in the decorative and applied arts of Kazakhstan; the value of works of art in the culture of the Kazakh people and other nations of the world; the role of music in a person's life; the relationship of music with other arts; traditional music as a reflection of the culture of the Kazakh people and other nations of the world; the fundamental role of folk music in composer music;

3) apply the rules of composition in the image of objects; expressive means of art; various sources of information and information and communication technologies for the development of ideas; various art materials, tools and techniques for creating creative works; knowledge of the types, styles and genres of art in the creation of creative works; safety rules; knowledge of the basics of musical literacy for the transfer of feelings, mood when singing, playing musical instruments individually and in an ensemble, choir / orchestra, to create simple compositions, improvisations, creative projects, including using computer music programs; knowledge of the types,

styles and genres of music in explaining musical phenomena, phenomena of the surrounding reality through the language of sounds;

4) analyze information from various sources to plan its activities; styles and genres of art of the Kazakh people and other nations of the world; materials and techniques used to create works of art; properties and qualities of art materials and tools during experimental, research work; the process and results of their own creative activity; the role and importance of music in people's lives; similarities and differences, as well as the content of traditional Kazakh music and the music of the peoples of the world; features of musical instruments of folk and symphonic orchestras; various sounds and sound effects for composing and improvisation of their own musical and creative works;

5) synthesize methods and techniques, properties and capabilities of materials for creating creative works; information from various sources, including the use of information and communication technologies for the development of ideas; knowledge, skills, information for creative projects and ideas, including the use of musical computer programs; elements of different types of art to create creative work; 6) evaluate the main purpose, images and ideas in art and music works; expressive means and properties of materials for creating creative work; independently / collectively performed works on artistic work; the moral and aesthetic side of the studied music, the results of creative activity, the role of music and artistic creativity in life.

60. Expected results in the educational field "Physical Training". Upon completion of primary education, the student shall:

1) know the basic physical exercises that contribute to the development of the body, the rules and techniques for their implementation; safety regulations when performing physical exercises; rules for doing warm up and hitch; ways to control physical changes in the body during exercise; methods of developing parts of the body and muscles to improve physical fitness;

2) understand the importance of physical culture for health promotion; the role of physical culture and sports in the development of the country and the formation of pride for it; levels of difficulty of the exercises; the need to achieve the required intensity various physical activities; the importance of supporting physical, mental and emotional health; risks arising from various physical exercises;

3) apply the skills to perform self-employment / teamwork to achieve agreed goals; knowledge of the rules and compositional techniques during the execution of a set of physical exercises; the correct sequence of physical exercises, demonstrating an understanding of time, space and motor coordination skills; special exercises to

eliminate physical developmental deficiencies and possible health risks; basic principles of healthy nutrition and motor/movement regime;

4) analyze his/her own achievements and experience in performing physical exercises to manage future training and behavior in a group; improvement of individual abilities and degree of confidence in various types of physical activity; situations of cooperation and fair competition in achieving common goals;

5) synthesize certain combinations of movements from types of movements, as well as strategies, using various sports tactics; knowledge and skills to adapt to different situations of physical activity;

6) assess the difficulties and risks arising during the performance of various physical activities; own and others' physical abilities; their ability to participate in sports activities inside and outside the school.

61. Homework assignments shall be given to students, taking into account the possibility of performing them (in astronomical hours) in grade 2 - no more than 50 minutes, in grade 3-4 - no more than 1 hour and 10 minutes.

62. Evaluation of the educational achievements of students shall be carried out through the use of criteria for assessing the knowledge of students. Evaluation criteria shall be used to measure the level of learning achievement of students, including taking into account the special educational needs and individual abilities of students.

63. Evaluation shall be carried out in accordance with the system of learning objectives presented in the curriculum for each academic subject, based on tracking students' learning achievements in a specific section / cross-cutting topic.

64. The assessment of the educational achievements of students shall be carried out in the form of formative, summative assessment.

65. Evaluation at the primary education level shall be carried out from the second half of the 1st grade using formative and summative assessment.

66. The order of the criteria-based evaluation of the educational achievements of students in educational institutions that implement primary education curricula shall be determined by the authorized body in the field of education.

67. For students with special educational needs, conditions shall be created for their education, correction of developmental disorders and social adaptation.

**Paragraph 2. Requirements for the level of training of students**

68. The content of primary education shall include seven educational areas: "Language and Literature", "Mathematics", "Natural Science", "Man and Society", "Art", "Technology", and "Physical Training".

69. The forms of control may be: oral, written and creative works, open and closed forms of test tasks, tests, oral questionnaires and interviews.

70. The level of training of students shall be assessed to cover three aspects:



- 1) personal results;
- 2) system-activity results;
- 3) subject results.

71. Subject results shall be reflected in students' knowledge and activity training in mastering the basic content of primary education and shall be established at the basic level.

72. The basic level of mastering academic subjects shall include a mandatory minimum of students' knowledge and skills.

#### **Chapter 5. Requirements for the duration of training**

73. The term of mastering the general education curriculum of primary education shall be four years.

74. The duration of the school year in grade 1 - 33 school weeks, in grades 2-4 - 34 school weeks.

75. The duration of the vacation time in the school year shall be at least 30 days.

76. Vacations shall be provided three times per school year - in the autumn, winter and spring. For students of the 1st grade in the third quarter, the vacation time of one week shall be provided additionally.

Appendix 3  
to order No. 604 of the Minister of  
Education and Science of the  
Republic of Kazakhstan  
of October 31, 2018,

#### **State compulsory standard for basic secondary education Chapter 1. General Provisions**

1. This state compulsory standard for basic secondary education (hereinafter - the Standard) is developed in accordance with subparagraph 5-1) of Article 5 and Article 56 of the Law of the Republic of Kazakhstan dated July 27, 2007 "On Education" (hereinafter - the Law) and determines the requirements for the content, the maximum amount of study load, the level of training of students and the duration of training.

2. In the Standard, terms and definitions shall be applied in accordance with the Law. In addition to them, the following terms and their definitions shall be included:

1) assessment - the process of correlating the learning outcomes achieved by the students with the expected results based on the developed criteria;

2) assessment criteria - specific measures, on the basis of which the evaluation of students' educational achievements is carried out;

3) educational field - an integral part of the basic content of basic secondary education, including a set of related academic subjects;

4) values of education - benchmarks in building a system of learning objectives, based on universal values, which are the leading factor in shaping the personality of the student;

5) the level of preparation of the student - the degree of mastering the content of secondary education by the student, expressed in personal, system-activity and substantive results;

6) the basic level of mastering the content of education - the level of mastering by students of the mandatory minimum amount of knowledge and skills;

7) advanced level of mastering the content of education - the level of students mastering an expanded and in-depth amount of knowledge and skills.

8) special educational needs - the needs of children experiencing permanent or temporary difficulties in obtaining education due to health, in need of special, general educational curricula and educational programs of additional education;

9) summative assessment - a type of assessment that is carried out at the end of a certain study period (quarter), as well as studying sections in accordance with the curriculum;

10) working curriculum - a document developed by a general educational organization on the basis of a standard curriculum taking into account the educational needs of students.

11) inclusive education - creating conditions for equal access to education for all students, taking into account special educational needs and individual capabilities;

12) the basic content of basic secondary education - the composition, structure and volume of the content of basic secondary education, subject to compulsory study in educational institutions, regardless of their type, type and form of ownership, as well as the language of instruction;

13) the invariant component of the study load is an integral component of the standard curriculum, which defines the subjects required for study by all students in educational institutions, regardless of their type, type and form of ownership, as well as the language of instruction;

14) the variable component of the study load is an integral component of the standard curriculum, which is determined by the organization of education in accordance with the educational needs of students;

15) the maximum amount of study load is the amount of study time required for mastering the content of study subjects of the invariant and variable (school and student) components of the standard curriculum and established according to the levels of basic secondary education and school years.

16) expected learning outcomes - a set of competencies expressing what a student will know, understand, demonstrate upon completion of the learning process, including taking into account the special educational needs and individual abilities of students;

17) extracurricular activities - an integral part of the whole educational process, a form of organization of free time for students;

18) standard curriculum - a document regulating the list of academic disciplines (subjects) and defining the volume of the invariant and variable components of the academic load of the corresponding level of education;

19) formative assessment - a type of assessment, which is carried out in the course of everyday work in the classroom, is a current indicator of students' academic performance, provides an operational relationship between the student and the teacher during the training, feedback between the student and the teacher and allows to improve the educational process;

20) Elective course - a course of choice of students, an integral part of the variable component of the curriculum, aimed at expanding the educational training of students.

3. Application of the Standard shall be aimed at:

1) improving the quality of training and education through the achievement of a system of goals for basic secondary education, presented in the form of expected learning outcomes;

2) the creation of conditions for the study of Kazakh, Russian and foreign languages;

3) a combination of academic and practical orientation of basic secondary education, providing for students to master the basics of theoretical knowledge and develop the ability to apply this knowledge to solve problems of an applied nature;

4) ensuring the gradual deepening of subject knowledge and skills, taking into account the age possibilities of students;

5) the implementation of the principle of unity of education and upbringing, based on the interconnectedness and interdependence of the values of education and the system of expected learning outcomes that define the content basis of the educational process;

6) ensuring the protection of children's health, as well as the creation of favorable conditions for meeting the special educational needs of students and the need for additional educational services;

7) ensuring the equivalence of basic secondary education in a variety of types and types of organizations of secondary education;

8) support and development of innovative practices in educational institutions;

9) the organization of an objective assessment of the activities of educational organizations to ensure the quality of education.

4. Educational organizations shall provide a health-saving environment through the use of various pedagogical technologies of training, education and development.

5. The volume of knowledge and content of school subjects of the invariant component in educational institutions for students with mild mental retardation and moderate mental retardation shall be carried out in accordance with the standard curriculum (hereinafter - SC), approved by order № 500 of the Minister of Education and Science of the Republic of Kazakhstan of November 8, 2012 "On Approval of the Standard Curricula for Primary, Basic Secondary, General Secondary Education of the Republic of Kazakhstan" (registered with the Register of State Registration of Regulatory Legal Acts under № 8170) and Standard Curricula Approved by Order № 115 of the Minister of Education and Science of the Republic of Kazakhstan dated April 3, 2013 "On Approval of the Standard Curricula in General Subjects, Elective Courses and Electives for General Education Organizations" (registered with the Register of State Registration of Regulatory Legal Acts under the number 8424).

6. Special educational programs shall be developed on the basis of general educational curricula and shall be aimed at the training and development of individuals (children) with special educational needs, taking into account the psychophysical features and cognitive abilities of students and pupils, determined taking into account the recommendations of psychological, medical and pedagogical consultations.

**Chapter 2. Requirements for the content of education with a focus on learning outcomes Paragraph 1. Requirements for the updated content of basic secondary education with a focus on learning outcomes**

7. As the basic values in the content of basic secondary education the following shall be defined:

- 1) Kazakhstan patriotism and civil liability;
- 2) respect;
- 3) cooperation;
- 4) work and creativity;
- 5) openness;
- 6) lifelong education.

8. On the basis of inculcating the values of education, the following shall be developed in students:

- 1) readiness to serve to the interests of Kazakhstan;
- 2) respect for the norms of the Constitution and laws of the Republic of Kazakhstan and their observance;
- 3) social responsibility and ability to make decisions;
- 4) the motivation to master the state language;
- 5) respect in relation to the culture and traditions of the people of Kazakhstan, the cultural diversity of the world;
- 6) adherence to the ideas of spiritual harmony and tolerance;

- 7) a positive attitude towards the world and the preservation of ecological balance;
- 8) creative and critical thinking;

9) communication and the ability to effectively use information and communication tools and technologies;

- 10) motivation for learning and self-improvement throughout life.

9. The purpose of basic secondary education shall be the formation of a general culture of the individual, the adaptation of the individual to life in society, the creation of a basis for the informed choice and mastering of a profession, specialty, including taking into account the special educational needs and individual abilities of students.

10. The main objectives of basic secondary education shall be the formation and development of students:

- 1) spiritual and moral qualities;
- 2) basic knowledge of the basics of science;
- 3) self-study skills and personal self-development;
- 4) skills in the implementation of educational, project, research activities;
- 5) skills of critical and creative thinking;
- 6) skills of self-realization and interaction in society.

11. The content of basic secondary education shall focus on learning outcomes and shall be determined by academic programs for academic subjects, which are developed based on the requirements of the Standard.

12. The content of basic secondary education shall be established on the basis of the integration of academic training, the development of students' autonomy and spiritual and moral education, which is implemented through a combination of educational, design and research activities with purposefully organized educational work.

13. The content of basic secondary education shall be determined taking into account the following guidelines:

- 1) compliance with the dynamic needs of modern society;
- 2) the need to develop critical, creative and positive thinking;
- 3) the expediency of strengthening the integration of the content of educational subjects;
- 4) ensuring compliance with the principle of continuity and continuity of the content of education between the levels of primary education and basic secondary education;
- 5) maintaining a balance between academic and practical orientation of the content of education;
- 6) ensuring the unity of training, education and development.

14. The organization of the educational process at the level of basic secondary education shall be focused on the implementation of the principle of unity of training and education, including taking into account the special educational needs and individual abilities of students. When organizing training, a priority role shall be given to teaching as the leading activity of students.

15. In the process of learning, education issues shall be resolved through each subject. All types of educational work shall be aimed at addressing the issues of cognition and mastering of subjectively new knowledge by students, on the study of national traditions, culture and inculcation of universal human values.

16. The organization of various forms of extracurricular activities shall provide in the aggregate for the realization of spiritual and moral, civic-patriotic, artistic and aesthetic, labor and Physical Training of students.

17. The organization of the educational process shall involve the use of interactive teaching methods that are based on the organization of learning by the students themselves, by showing activity in discussing issues, in arguing a point of view, in initiating a search and making a constructive decision.

18. Along with teaching compulsory school subjects, elective courses, extracurricular classes, and students' participation in research projects shall be provided.

19. Ensuring consistency in the development of skills of project and research activities of students shall be one of the basic principles of the organization of the educational process in educational institutions.

20. The basic content of basic secondary education shall be implemented in the framework of the policy of trilingual education. The objective of trilingual education shall be to form a multilingual personality - a citizen of Kazakhstan who speaks at least three languages, who is able to successfully conduct a dialogue in various fields of activity, appreciates the culture of his people, understands and respects the culture of other nations.

21. Trilingual education shall be practically implemented through:

- 1) level learning of Kazakh, Russian and foreign languages;
- 2) the organization of the study of individual subjects in the Kazakh, Russian, foreign language, regardless of the language of instruction;
- 3) the organization of extracurricular activities and elective courses in Kazakh, Russian and foreign languages.

22. The basic content of each educational area of basic secondary education shall be determined taking into account the need not only to teach the basics of science, but

also to ensure the further development of spirituality, social and cultural experience, which will contribute to effective socialization.

23. The content of the educational field "Language and Literature" shall be implemented in school subjects:

1) "Kazakh Language", "Kazakh Literature" for grades with the Kazakh language of instruction, "Russian Language", "Russian Literature" for grades with the Russian language of instruction;

2) "Kazakh Language and Literature" for grades with non-Kazakh language of instruction, "Russian Language and Literature" for grades with non-Russian language of instruction;

3) "Foreign Language";

4) in educational institutions with the language of instruction of ethnic groups compactly residing in the territory of Kazakhstan, the language and literature educational area additionally includes the native language and literature of this ethnic group. The subjects "Mother Tongue" for grades with the Uighur / Uzbek / Tajik language of instruction, "Literature" ("Uighur Literature", "Uzbek Literature", "Tajik Literature") shall be included in the invariant component of the standard curriculum.

24. The content of the educational field "Language and Literature" shall ensure the use of interdisciplinary connections with other linguistic and non-linguistic academic disciplines; successful socialization of students; development of language skills of students in accordance with their age characteristics, needs and interests; understanding of the importance of learning languages in the modern world; development of spiritual and moral values; understanding the holistic picture of the multilingual and multicultural world; establishing interpersonal and intercultural contacts in the process of communication; fostering respect for different points of view through familiarization with the cultures of other countries; the ability to work independently with various information sources in the language being studied, including with Internet resources; development and use of creative and critical thinking.

25. The content of the educational field "Mathematics and Computer Science" shall be implemented in the training subjects "Mathematics", "Algebra", "Geometry", "Computer Science".

26. The content of the educational field "Mathematics and Computer Science" shall provide the formation of the ability to define and understand the role of mathematics and computer science in the world; ideas about mathematics as a universal language of science, means of modeling phenomena and processes; to ensure the continuity of secondary education levels, interdisciplinary and intra-subject

communication in the study of mathematics and computer science; mastering basic mathematical knowledge and skills necessary for continuing education at the level of general secondary education and studying related disciplines, their application in everyday life; mastering the system of basic knowledge on the theoretical foundations of programming technology and modern information and communication technologies, formation of skills to apply and transform models of real objects and processes using information and telecommunication technologies in the study of computer science and other subjects; development of functional literacy, logical, algorithmic and operational thinking, spatial imagination, ability to use various languages of mathematics and computer science (verbal, symbolic, analytical, graphic), to perceive and critically analyzes information presented in various forms.

27. The content of the educational field "Natural History" shall be implemented in the subjects of "Natural Science", "Physics", "Chemistry", "Biology", "Geography".

28. The content of the educational field "Natural Science" shall ensure the formation of functional knowledge and skills, planning skills, analysis and processing, interpretation, systematization, work on the algorithm, improvement of research, experimental and experimental skills, evaluation and formulation of conclusions; deepening understanding of the fundamental concepts, laws, theories and principles underlying the modern natural science picture of the world, methods of scientific knowledge of nature, global and local problems of mankind based on a comprehensive study of nature, the economy and society; development of ecological culture, scientific, project and spatial thinking; fostering patriotic feelings, responsible and caring attitude to the environment; implementation of vocational guidance of students in natural sciences.

29. The content of educational subjects of the educational area "Man and Society" shall be implemented in the educational subjects "History of Kazakhstan", "World History", "Fundamentals of Law", "Self-knowledge".

30. The content of the educational area "Man and Society" shall be focused on the formation in students of the basics of knowledge of the social and humanitarian sciences in the framework of the "Man - Society" system. The content of school subjects shall be focused on developing students' skills of historical thinking, understanding and comprehension of the past and present and their interconnection, the ability to study, analyze and make sound conclusions on the materials of historical, legal, economic, political, sociological sources of information and build independent judgments on their basis; make your own informed decisions; to foster patriotism, the formation of legal literacy, an understanding of the ideals and values of a democratic legal society, active citizenship for the implementation of effective interaction and



choice of communication tools in the conditions of social and cultural communication; to develop the ability to determine personal attitudes to the system of universal, ethno-cultural values, to the socio-economic and political situation, to observe and evaluate social phenomena and events necessary for the implementation of moral choices.

31. The content of the educational field "Technology and Art" shall be implemented in the training subjects "Music", "Artistic work".

32. The content of the educational field "Technology and Art" shall be aimed at the formation of a holistic perception of the picture of the surrounding world, the general culture of the younger generations, the development of the aesthetic, spiritual, moral and emotional sphere of students based on national and world artistic values of society, the development of basic ideas about the role of art and technology in human life, understanding and respect for the traditions, customs, culture and various types of art of the Kazakh people and other nations of the world; the further development of knowledge, skills and abilities of artistic, musical and project activities in various types of art; basic technological knowledge, skills and abilities, including the use of computer digital technologies; the development of vocal and instrumental skills, including various digital music technologies; the independent development of various ways of knowing the world through artistic and musical means of expression and modern technology.

33. The content of the educational field "Physical Training" shall be implemented in the academic subject "Physical Training".

34. The content of the educational field "Physical Education" shall be focused on the promotion of health, the development of basic physical qualities and the enhancement of the functional capabilities of the organism; the formation of a culture of movements, the enrichment of motor experience with physical exercises with a general developmental and corrective tendency; teaching skills and abilities in Physical Training and sports and fitness activities, self-organization of physical exercises; mastering technical actions and techniques of basic and national sports; fostering patriotism, love for one's Motherland, and fostering moral and volitional qualities.

35. The course "Traffic Road Rules" in grades 5–8 shall be conducted for 10 hours in each grade at the expense of classroom hours and after hours, with an indication of the topic and date of classes on a separate page of the class journal.

36. The organization of education shall carry out educational activities in accordance with the license received and throughout the entire period of its validity it shall comply with the qualification requirements for educational activities and the list of documents confirming compliance with them, approved by order № 391 of the

Minister of Education and Science of the Republic of Kazakhstan dated June 17, 2015 (registered with the Register of Regulatory Legal Acts under № 11716).

**Paragraph 2. Requirements for the content of education with a focus on learning outcomes**

37. The standard curricula of basic secondary education shall be aimed at mastering the basic foundations of the system of sciences by students, forming a high culture of interpersonal and inter-ethnic communication, personal self-determination, and vocational guidance.

8. Primary secondary education shall ensure that students master the basic foundations of science, instill in them a high spiritual and moral culture and culture of interpersonal and inter-ethnic communication, self-determination and self-realization of a person, the formation of functional literacy, the implementation of pre-profile training.

39. The content of basic secondary education shall include seven educational areas: "Language and Literature", "Mathematics and Computer Science", "Natural Science", "Man and Society", "Art", "Technology ", "Physical Training ".

40. Each of the educational areas shall include related academic subjects.

41. The educational field "Language and Literature" shall include the following subjects: "Kazakh Language", "Kazakh Literature" (for general educational organizations with the Kazakh language of instruction, for general educational organizations with non-Kazakh language of instruction), "Russian Language", "Russian Literature" (for general educational organizations with the Russian language of instruction), "Russian Language", "Russian Literature" (for general educational organizations with Kazakh and other non-Russian languages of instruction), "Foreign Language".

42. In educational institutions with the language of instruction of an ethnic group living compactly on the territory of Kazakhstan, the "Language and Literature" educational area shall additionally include the "Mother Tongue and Literature" of this ethnic group. The solution to the issue of studying the language of a specific ethnic group as a native in the places of its compact residence shall be within the competence of the local executive bodies of education. The subjects "Mother Tongue" ("Uighur Language", "Uzbek Language", "Tajik Language") and "Literature" ("Uygur Literature", "Uzbek Literature", "Tajik Literature") shall be included in the invariant component of the standard curriculum.

43. The educational field "Mathematics and Computer Science" shall include subjects: "Algebra", "Algebra and Elements of Analysis ", "Geometry", "Computer Science".

44. The educational field of "Natural Science" shall include subjects: "Geography", "Biology", "Physics", "Chemistry".

45. The educational field "Man and Society" shall include subjects: "History of Kazakhstan", "World History", "Man. Society. Law", "Self-knowledge".

46. The educational area "Technology" shall include subjects: "Drawing", "Technology".

47. The educational field "Physical Training" shall consist of the following subjects: "Physical Training", "Basic Military Training".

48. The content of the training course "Fundamentals of Life Safety" shall be implemented within the framework of the training course "Physical Training" with an annual workload of 15 hours for Physical Training teachers. Classes on the basics of life safety shall be mandatory and shall be held during school hours.

49. The invariant component of the content of secondary education shall be implemented in the standard curricula, the variable component in the working curricula.

50. In order to preserve the fundamental nature of secondary education and comply with state requirements for the basic content of basic secondary education, the invariant component shall be determined to be not less than 85.

51. Compulsory curricula shall implement the basic content of secondary education and shall determine the training requirements for students at appropriate levels of secondary education. Variative academic plans shall implement the content of academic subjects and courses that are included in the variable component.

52. Training subjects of the invariant component in all Standard Curricula shall remain unchanged, which provides uniform requirements for the basic content of basic secondary education for all types and types of educational institutions.

53. The continuity of the content of basic secondary education and technical and vocational education shall be implemented through in-depth study of individual and related subjects, including technological subjects, as part of pre-profile education.

**Chapter 3. Requirements for the maximum amount of study load of students Paragraph 1.**  
**Requirements for the maximum volume of academic load of students on the updated content of basic secondary education**

54. The maximum amount of weekly study load of students at the level of basic secondary education shall be no more: 32 hours in grade 5, 33 hours in grade 6, 34 hours in grade 7, 36 hours in grade 8.

55. The total volume of the study load of students, constituting the invariant and variable components, as well as the weekly and annual study load by classes shall be set by the standard curricula.

56. The weekly study load shall include all types of study work defined by a standard curriculum (invariant and variable components). The curricula of special (correctional) educational organizations shall provide for a mandatory correction

component, taking into account the type of developmental disorder. The invariant, correctional and variable components in the curricula of special (correctional) educational organizations shall be established taking into account the special educational needs of students. Variative and gymnasium components allocated to the study of a foreign language shall be subject to evaluation.

57. The division of a class into two groups shall be permissible in urban educational organizations when filling a class in 24 or more students, in rural groups - in 20 and more students as follows:

- 1) Kazakh Language and Literature - in classes with non-Kazakh language of instruction;
- 2) Russian Language and Literature - in classes with non-Russian language of instruction;
- 3) a foreign language;
- 4) artistic work (groups of boys and girls, regardless of the size of the class);
- 5) computer science;
- 6) Physical Training.

58. Within the framework of inclusive education, the division of a class into groups in the above subjects shall be carried out while reducing the total number of students by three per each child with special educational needs.

**Paragraph 2. Requirements for the maximum amount of study load of students**

59. The maximum weekly study load for students, including all types of classroom and extra-curricular (elective, individual and circle classes) study work, shall not exceed 38 hours.

60. The study time allocated in the standard and working curricula for the study of the subject shall be taken into account when developing the structure and content of the respective compulsory and optional curricula.

61. The total volume of the study load of students in the subjects constituting the invariant and variable components shall be set according to the Standard Curricula approved by order No. 500.

62. The maximum study load of students according to their needs shall be determined by the working curriculum of the organization of education.

63. The division of a class into two groups shall be permissible in urban educational organizations when filling a class in 24 or more students, in rural groups - in 20 or more students as follows:

- 1) the Kazakh Language and Literature - in non-Kazakh language classes of instruction;
- 2) Russian Language and Literature - in classes with non-Russian language of instruction;

- 3) a foreign language;
- 4) artistic work (groups of boys and girls, regardless of the size of the class);
- 5) computer science;
- 6) Physical Training.

64. In the framework of inclusive education, the division of a class into groups in the listed subjects in paragraph 63 of this Standard shall be carried out while reducing the occupancy rate of the class of the total number of students into three per each child with special educational needs.

**Chapter 4. Training Requirements for Students Paragraph 1. Requirements for the level of training of students on the updated content of basic secondary education**

65. General educational academic programs of basic secondary education shall be aimed at mastering students, including students with special educational needs, the basic foundations of the system of sciences, the formation of their high culture of interpersonal and inter-ethnic communication, self-determination of personality and vocational guidance, as well as pre-profile training of students.

66. The level of training of students shall be determined through the expected learning outcomes, which are designed taking into account the specifics of each educational field, combining several related subjects: Language and Literature, Mathematics and Computer Science, Natural Science, Man and Society, Technology and art ", " Physical Training ".

67. The expected learning outcomes in educational areas (and academic subjects) shall serve as the basis for determining the basic content of basic secondary education.

68. In the curricula of basic secondary education, the expected learning outcomes in educational areas (and academic subjects) shall be specified for the purpose of instruction in sections of each academic subject.

69. The system of expected learning outcomes shall create an opportunity to build individual trajectories for the development of students, including students with special educational needs, and to gradually move them towards the achievement of long-term educational goals.

70. Expected results at the end of basic secondary education in the field of language and literature.

Kazakh Language (for classes with Kazakh language of instruction) / Russian Language (for classes with Russian language of instruction) /, Native Language (for classes with Uyghur / Uzbek / Tajik language of instruction):

- 1) listening and speaking:

the student understands the texts of social, cultural, educational and professional areas of communication; recognizes openly and hidden forms of speech behavior, assessment; carries out oral speech communication in various life situations;

acts as an initiator and supports the dialogue, using a variety of language means for the realization of various goals and tactics of verbal communication; builds a monologue, synthesizing problematic information; defends and argues his/her own opinions; evaluates the attitude of the speaker to the subject of speech, expressing his/her own opinion; predicts the content of the text by its title / beginning / final; complies with grammatical, stylistic norms when making their own statements;

2) reading:

the student understands and interprets the main and detailed information (text, numeric, graphic) texts of various types, genres and styles; recognizes the hidden meaning of the text; uses reading strategies, including exploratory, commented, selective reading with notes, reading to extract specific information, analytical reading, reading with a specific purpose; extracts necessary information from various sources, analyzing and synthesizing it; compares the structural, linguistic and stylistic features of texts of the social, social, cultural, educational and cognitive areas of communication; evaluates the text in terms of relevance and value of information, distinguishing between fact and opinion;

3) writing:

The student creates texts of different types, genres and styles,

synthesizing heard and read information; creates texts (including printed), using various forms of information representation; writes his/her own text of a problematic nature (article, essay, writing, etc.), demonstrating the ability to analyze and evaluate the proposed information; compares structural-compositional, language features of texts of different types, genres and styles; corrects and edits texts using reference material; makes a simple, complex and detailed plan for a specific topic; observes grammatical, spelling, punctuation and stylistic norms.

Kazakh Language and Literature (for classes with non-Kazakh language of instruction) / Russian language and literature (for classes with non-Russian language of instruction):

1) listening:

the student understands the main content of the text, as well as functionally significant semantic information reflecting the speaker's intentions; extracts special information from the text; understands the meaning of terms and key text units in the social, cultural, and educational fields; evaluates the content of the text, distinguishing between fact and opinion; identifies the main problems in the texts of different styles and genres; analyzes the text, revealing the connections and relationships between facts and phenomena, the events referred to in the text; predicts the content of statements pursuant to illustrations/keywords/title / beginning;

2) speaking:

the student maintains a dialogue within the framework of the topics studied, reasoning, expressing his/her own opinion and evaluating events, opinions and problems; builds a monologue, using the techniques of attracting attention and considering the target audience; analyzes and synthesizes information on the proposed topic; evaluates statements on a specific topic; uses lexical and grammatical means of language, observing speech norms;

3) reading:

the student understands the content of continuous and non-continuous texts of a certain complexity within the framework of the studied topics; identifies features of texts of different types, styles and genres; recognizes the explicit and hidden meaning of words, the meaning of means of artistic representation; extracts the necessary information from various sources, determining its relevance, reliability, usefulness and value; analyzes and synthesizes the content of the text, formulating reasonable conclusions and critical assessment of the read; compares texts, determining the theme, idea, problematics of a work of art, the position of the author; uses certain reading strategies;

4) writing:

the student writes texts of different types, genres and styles of speech based on what is heard and read, using a variety of language tools; writes problematic texts, extracting information from various sources; creates graphs, tables, diagrams based on solid texts; makes a simple, complex and detailed plan for a specific topic; compares, analyzes and evaluates the content of texts of different types and styles; observes grammatical, spelling and punctuation norms; uses trails and artistic and visual language tools.

Kazakh Literature / Russian Literature / Uygur Literature / Uzbek Literature / Tajik Literature.

Upon completion of basic secondary education, a student shall:

1) know the main stages of the development of literature; the content of works of different genres, features of the reflection of the life, traditions of the people in folklore; literary terms and literary trends, genera and genres, the imaginative nature of works of art, learn by heart poetic texts and fragments of prose texts (optional), quotations from the studied works;

2) understand the significance of the national artistic heritage in world culture; the role of literature as one of the most important achievements of culture, the value of fiction in human life; literary terms and literary trends, genus and genres, topic, idea,

the subject matter of the work, the position of the author in the work, the imaginative nature of works of art; openly expressed and hidden meanings of works;

3) apply acquired knowledge and skills in the preparation of a message, report, essay, literary interview; the dialogue of literary heroes (based on what they read) to create a written story - the characteristics of one of the heroes or a group of heroes (group characteristics), two heroes (comparative characteristics), when preparing a short written review of a self-read book; when creating your own analytical text, in the process of creating your own interpretation of the studied text with the involvement of information and communication technologies; to determine the actual range of reading and evaluation of works of art, participation in debates or public speaking; to find the necessary information; special terms and concepts for the analysis of the studied works; gained knowledge when discussing current issues; acquired skills, ways of creative activity for self-expression, participation in cultural events;

4) analyzes works of a different genre nature, articulating their attitude to what they read; the theme, idea and features of the composition, plot of the work, language features of the work, key episodes, actions and actions of the characters; features of the style of the writer; compares them with works of world literature and works of other types of art;

5) synthesize the knowledge and skills obtained to select a path for analyzing a work that is adequate to the genre-generic nature of the artistic text; to compare facts, details with historical facts; creating different types of plan; to create written texts using various resources; correlate the value component of the works with the values of the Kazakh and other peoples;

6) evaluate the works under study from the point of view of compositional, stylistic unity, linguistic design and the effectiveness of achieving the stated communicative tasks; interpretation of a literary text created by other art forms.

Foreign Language:

listening:

the student understands the main content of the texts in the framework of the studied topics; determines the main facts, omitting minor; understands detailed information within the framework of the studied topics; draws up complex questions based on what he/she heard in order to obtain additional information; extracts the meaning of what is heard, based on the context help; distinguishes specific information within the studied topics; recognizes inconsistencies in the arguments given in the framework of the studied topics;

2) speaking:



the student transmits the main content of the text in the framework of the studied topics, building a logical course of events; uses formal and informal styles; presents information within the framework of the studied topics; predicts the possible content of the text by title, illustration, key words, excerpts from the text within the studied topics; asks simple and complex questions for specific information; interacts with peers (as a couple, group) to perform training tasks; compares and contrasts texts within the studied themes; gives an opinion, justifying his point of view;

3) reading:

the student determines the main content of texts of different styles and genres within the framework of the studied topics; distinguishes detailed information in the text of different styles and genres within the framework of the studied topics; uses various information resources (reference materials, dictionaries, the Internet, etc.); recognizes specific information in the text and different styles, genres of texts within the framework of the topics studied; predicts the text content by title, text fragment, illustrations, keywords; determines the attitude or opinion of the author; evaluates information from various texts;

4) writing:

the student fills the tables, charts, diagrams, questionnaires, forms; makes a plan, writes, edits and corrects the text within the framework of the studied topics; makes extracts from the text in accordance with communicative tasks; describes real and / or fictional events from the past, present, and future, based on knowledge from previously studied topics; connects and harmonizes sentences and paragraphs among themselves in the text within the framework of the topics studied; correctly and properly puts punctuation marks in the text within the framework of the topics studied; creates texts of various styles and genres, following the relevant rules and format.

71. The expected results of training in the educational field "Mathematics and Computer Science".

Upon completion of basic secondary education, a student shall:

1) know the basic concepts of elementary mathematics, statistics and probability theory; classification of numbers; calculation operations for real numbers; basic formulas of elementary mathematics; the concept of a function, its properties and a graph; methods for solving algebraic equations, inequalities and their systems; polygon classifications; properties and signs of the main types of flat figures; rules of combinatorics; classical, statistical and geometric definitions of the probability of an event; methods of collecting and processing statistical data;

an algorithm for using a mathematical model to solve an applied problem; bases of scientific ideas about information, information processes, technologies and models;

the role of information technology in modern society and the life of every person; basics of building computer systems and networks, as well as their interaction with software; methods of solving problems through modeling, algorithmization and programming; rules for proper and safe operation with various digital devices;

2) understands the academic language of mathematics; way to write numbers in standard form; the relationship between the roots and the coefficients of the square trinomial the importance of using mathematical models to solve various applied problems; the meaning of such mathematical categories as the axiom and theorem; principles of geometric constructions and measurements on the plane; the meaning of the numerical characteristics of the sample and the general population; the role of graphical representation of statistical data in the conduct of quantitative and qualitative analysis; the interaction of the main devices of the computer; the need for software to work with the system; computer use of binary code to represent all data and instructions; the relationship between units of measurement information; economic, legal and ethical aspects of the use of information and information and communication technology tools;

3) applies mathematical knowledge to solve practical problems; algorithms for solving mathematical problems; mathematical terminology in appropriate contexts; computational operations on real numbers; accurate and approximate calculations in oral and written form; properties of flat figures in solving geometric problems; mathematical models for solving various applied problems; computing equipment and software for solving mathematical problems;

modern software of information and communication technologies for the collection, presentation, processing, storage and transmission of the necessary information; computer models of objects and processes (physical, biological, economic and informational) for their visualization and research; the basic rules for writing algorithms and the possibilities of programming languages for solving practical problems; local and global network capabilities to collaborate on creating, viewing and editing documents;

4) analyzes patterns and compiles mathematical models based on them; statistical data using various forms of their presentation; transformations performed on rational and irrational expressions; solutions of equations, inequalities and their systems; mutual arrangement of geometric shapes; properties of functions; conditions of text problems for the compilation of mathematical models; data presented in the form of graphs, charts and various charts; computer models for the study of real and imaginary objects and processes; various ways to solve the problem on a computer to determine

the most rational; programming code in the programming language to identify existing errors and their subsequent correction;

5) synthesizes algorithms for solving mathematical problems; conclusions on the results of processing and analyzing statistical data; evidence based arguments with the help of axioms and theorems; methods for solving construction problems using geometric transformations; information in the form of texts, tables, databases, graphics and multimedia for the presentation and implementation of their ideas; models of objects and processes (physical, biological, economic) in spreadsheets, 3D-editors, as well as programming environments;

6) evaluate the results of calculations in the context of the task; location of the graph of the function depending on the values of the specified parameters; approximate values of quantities and their recording in a standard form; the absolute and relative frequency of the event with an increase in the number of experiments performed; the quality, importance, usefulness and effectiveness of the information; selection of computer configuration and software, depending on the needs of the user; computer model for compliance with real objects; algorithm efficiency and results of its execution; negative impact of information and communication technology on human health.

72. Expected learning outcomes in the field of natural sciences.

Upon completion of basic secondary education, a student shall:

1) know the initial geographical, biological, physical and chemical concepts; the role of the natural sciences in modern life; the essence of the basic biological, physical, chemical laws and theories; the contribution of outstanding scientists to the formation and development of the natural sciences; energy sources, its types and common areas of their application, safety regulations during experimental and practical work; units of measurement of physical and chemical quantities; concepts, formulas, laws and physical constants of the following sections: mechanics (kinematics, dynamics, statics, conservation laws), thermal physics (molecular physics and thermodynamics), electricity and magnetism (electrostatics, direct and alternating electric current, magnetic field, electromagnetic induction ), optics (geometric and wave), elements of quantum physics, atomic physics, astronomy; atomic-molecular teaching, the structure of the atom and the properties of elements; chemical symbolism; classification of substances; biological, chemical, and physical phenomena; types of chemical bonds and the structure of the substance; types, signs and patterns of chemical reactions; the most important classes of inorganic and organic compounds and their properties; theory of electrolytic dissociation; periodic law and the structure of the periodic table of chemical elements; the most important

branches of the chemical and metallurgical industry of Kazakhstan; fundamentals of microbiology, molecular, cellular biology; components of the internal environment and the system of organs of the plant and animal organism; main groups of plants and animals; the value of living organisms for humans and the natural complex; basics and laws of evolutionary development; breeding methods; structure of biogeocenoses and agroocenoses; the influence of environmental factors on living organisms, the impact of human activity on the environment; geographic research methods; territorial complexes; essence, classification, features of distribution and distribution of geographical objects, processes and phenomena; features of the functioning and scope of modern geographic information systems; composition, properties, structure, patterns, the main stages of development of the geographical shell and geographic environment, geospheres; types, classification and map elements; features of the nature of continents and oceans, individual territories, countries and the Republic of Kazakhstan; the territorial and sectoral structure, conditions and factors of development of the modern world economy, individual regions, countries and the Republic of Kazakhstan; goals, forms of international economic relations; types, structure, functions, factors of location and dynamics of development of human settlements; global and regional demographic problems, features of demographic policy in certain regions, countries and the Republic of Kazakhstan; economic and political-geographical situation, the administrative-territorial division of the Republic of Kazakhstan; natural resource potential of the regions of Kazakhstan; country typology; models of economic systems; types of international relations; conservation and sustainable development measures; features of demographic policy in certain regions, countries and the Republic of Kazakhstan; economic and political-geographical situation, the administrative-territorial division of the Republic of Kazakhstan; natural resource potential of the regions of Kazakhstan; country typology; models of economic systems; types of international relations; conservation and sustainable development measures; features of demographic policy in certain regions, countries and the Republic of Kazakhstan; economic and political-geographical situation, the administrative-territorial division of the Republic of Kazakhstan; natural resource potential of the regions of Kazakhstan; country typology; models of economic systems; types of international relations; conservation and sustainable development measures;

2) understand the physical meaning of the quantities, basic terms and laws of mechanics, electricity and magnetism, optics, atomic physics, astronomy; the importance of biological, physical and chemical phenomena, processes in human life; conditions for chemical reactions; oxidation and reduction processes; distinction

between classes of organic and inorganic substances; international nomenclature; IUPAC International Union of Pure and Applied Chemistry; technologies and scientific principles of the production of substances and their derivatives; the importance of microbiology in medicine, agriculture and industry; processes occurring in the cells at the level of molecules and organoids; the structure of the internal environment and the functions of the systems of organs of the plant and animal organism, the principles of classification of the main groups of plants and animals; metabolic processes; global and local environmental problems; the role of the Red Book in the conservation of biodiversity on Earth; the essence of natural and socio-economic patterns, processes and phenomena; features of the modern geographical space, territorial complexes; the relationship of geographical objects, processes and phenomena; causes, stages, consequences, significance of processes in a geographical envelope and geographic environment; geopolitical processes, the role and spheres of influence, the nature of the interaction of subjects of geopolitics; the regional and international importance of the Baikonur spaceship site; the relationship of geographical objects, processes and phenomena; causes, stages, consequences, significance of processes in a geographical envelope and geographic environment; geopolitical processes, the role and spheres of influence, the nature of the interaction of subjects of geopolitics; the regional and international importance of the Baikonur spaceship site; the relationship of geographical objects, processes and phenomena; causes, stages, consequences, significance of processes in a geographical envelope and geographic environment; geopolitical processes, the role and spheres of influence, the nature of the interaction of subjects of geopolitics; the regional and international importance of the Baikonur spaceship site;

3) apply basic physical, chemical, biological, geographical concepts and terms to describe objects, processes and phenomena in animate and inanimate nature; safe methods of conducting experimental and research work; laws and formulas of physics, chemistry, biology, geography in solving educational and applied problems, performing practical and laboratory work; graphic methods for presenting results; International System of Units; knowledge gained to explain the conditions of physical and chemical phenomena and processes; binary nomenclature when describing various groups of organisms; methods for determining the quantitative and qualitative characteristics of the components of the geographical envelope and geographic environment; cartometry (map measuring) techniques, orientation and navigation skills;

4) analyzes data obtained as a result of a natural science experiment; information presented in graphical and tabular form; dependence of the properties of a substance

on its qualitative and quantitative composition and structure; causal relationships between properties and fields of use of substances; the value of microelements and macronutrients for the proper functioning of the human body; laws of biological processes and phenomena; structure and functions of organ systems of living organisms; problems associated with the use of transgenic technologies; processes of circulation of substances in the biogeocenosis; causal relationships between processes and phenomena occurring in the geographical envelope and geographical environment; advances in science and the use of scientific discoveries; geographic location factors; natural science, socio-economic foundations of social production; geographical and geopolitical position, features and factors of political, economic and social development of Kazakhstan, its role and place in the world;

5) synthesize collected and processed data, information for presentation in the form of a table, graph, message, report, presentation; scientific models and evidence for hypotheses, arguments, and explanations; plan for the experiment and research; knowledge of the processes occurring in animate and inanimate nature, for the systematization, classification and identification of empirical rules, principles and laws;

6) evaluate the results of the experiment; laboratory risks; the impact of various physical and chemical processes on human life and the environment; the state of natural biogeocenoses and agrocenoses; the impact of technological principles of production on the preservation of balance between components of nature; the importance of proper use of minerals and natural resources; the degree of suitability and use of geographical features, processes and phenomena for various purposes and activities.

73. The expected results of training in the educational area "Man and Society".

Upon completion of basic secondary education, a student shall:

1) know the periodization of national and world history; main events, phenomena, processes of the history of Kazakhstan and the world from antiquity to the present day; historical figures who played an important role in national and world history; the most important achievements of national and world culture in the course of historical development; basic concepts of historical science; types of historical sources; concept and subject of law; modern legal systems; fundamental legal and social values: human rights, democracy, civil society and the rule of law, law and order; basic concepts and content of the basic branches of Kazakhstan law; sources of law; the value of values and norms based on humanism, honesty, duty to the fatherland and tolerance; basics of moral behavior, socially significant orientations, condition the attitude of man to

himself/herself, to the world around him/her, to humanity as a whole; shall have an idea of positive and negative qualities, emotions and feelings of a person;

2) understand the essence of the main events, phenomena and processes that characterize the integrity and continuity of development of national and world history throughout all periods of history; characteristic features of the socio-political, economic and socio-cultural development of Kazakhstan and various countries of the world; historical conditionality of modern social processes, cultural diversity of mankind; features of the historical path of Kazakhstan, its role and place in world history; the role and place of prominent personalities in national and world history; his/her own civil and national identity in the form of self-awareness as a citizen of the Republic of Kazakhstan; the need to respect the domestic and world history, the culture, traditions, rights and freedoms of people, democratic principles of public life; the origin of the state and law, their relationship; the content of the basic concepts and categories of the basic branches of Kazakhstan law; the content of the rights, duties and responsibilities of a citizen as a participant in specific legal relations; the need for legal regulation of social relations in key areas of social life; the need to respect the rights of the individual; the need for constant self-knowledge and self-development of man; the interrelationship of universal, ethnocultural and national values; responsibility for their own words and actions; its role in the family, community and society; the importance of conscious choice of future profession; the importance of mutual assistance in life; the value of life and health, the importance of the practical use of knowledge about healthy lifestyles; the content of the basic concepts and categories of the basic branches of Kazakhstan law; the content of the rights, duties and responsibilities of a citizen as a participant in specific legal relations; the need for legal regulation of social relations in key areas of social life; the need to respect the rights of the individual; the need for constant self-knowledge and self-development of man; the interrelationship of universal, ethno-cultural and national values; responsibility for their own words and actions; its role in the family, community and society; the importance of conscious choice of future profession; the importance of mutual assistance in life; the value of life and health, the importance of the practical use of knowledge about healthy lifestyles; the content of the basic concepts and categories of the basic branches of Kazakhstan law; the content of the rights, duties and responsibilities of a citizen as a participant in specific legal relations; the need for legal regulation of social relations in key areas of social life; the need to respect the rights of the individual; the need for constant self-knowledge and self-development of man; the interrelationship of universal, ethnocultural and national values; responsibility for their own words and actions; its role in the family, community and

society; the importance of conscious choice of future profession; the importance of mutual assistance in life; the value of life and health, the importance of the practical use of knowledge about healthy lifestyles; the need for legal regulation of social relations in key areas of social life; the need to respect the rights of the individual; the need for constant self-knowledge and self-development of man; the interrelationship of universal, ethnocultural and national values; responsibility for their own words and actions; its role in the family, community and society; the importance of conscious choice of future profession; the importance of mutual assistance in life; the value of life and health, the importance of the practical use of knowledge about healthy lifestyles; the need for legal regulation of social relations in key areas of social life; the need to respect the rights of the individual; the need for constant self-knowledge and self-development of man; the interrelationship of universal, ethnocultural and national values; responsibility for their own words and actions; its role in the family, community and society; the importance of conscious choice of future profession; the importance of mutual assistance in life; the value of life and health, the importance of the practical use of knowledge about healthy lifestyles; collective and community; the importance of conscious choice of future profession; the importance of mutual assistance in life; the value of life and health, the importance of the practical use of knowledge about healthy lifestyles; collective and community; the importance of conscious choice of future profession; the importance of mutual assistance in life; the value of life and health, the importance of the practical use of knowledge about healthy lifestyles;

3) apply the skills of historical thinking: to solve life problems and problems; in determining the location of various objects, identifying changes on the historical map; when comparing historical personalities, events, phenomena, processes; in characterizing the political, socio-economic and cultural development of Kazakhstan and other countries of the world; in determining their own position in relation to the phenomena of modern life, based on their historical conditionality; when working with historical materials; legal information in practice and daily life; when choosing forms of behavior and actions that correspond to the law in typical life situations regulated by law; in determining the ways of implementing rights and freedoms, as well as the protection of violated rights; when contacting the relevant authorities and organizations for qualified legal assistance; when participating in discussions on current social and legal issues; creative approach to solving problems aimed at serving the community; for the constructive decision of various questions according to moral standards; while building friendly relations with other people and the outside world;



4) analyzes historical events, phenomena, processes in order to determine cause-effect relationships; historical development of Kazakhstan and other countries, identifying common features and peculiarities; motives and results of historical personalities; social, economic, political and cultural processes, development trends of Kazakhstan and individual states of the world through historical parallels; various types of historical sources to answer problematic questions; different points of view on the same historical events, phenomena and processes; information presented in different sign systems (text, map, table, scheme, audiovisual series); norms and mechanisms governing legal relations in society; basic rights and obligations of subjects of legal relations; simple practical situations related to legal relations in society; features of the legal status and legal responsibility of minors; legal information obtained from various sources; forms and methods of formation in people of the ability to personal self-determination, self-realization, self-control; the needs of the material and non-material plan and their commensurability with the desires and possibilities;

5) synthesize information from various sources for the classification, systematization, generalization and differentiation of the studied phenomena, objects and processes, the determination of the characteristic features of historical phenomena, processes with the identification of general laws; historical information for orientation in modern political, socio-economic and cultural processes taking place in society; model of behavior in various practical situations, taking into account legal and moral norms for social adaptation in society;

6) evaluate historical events, processes, phenomena, personalities in the context of their influence on national and world history, their various interpretations; the authenticity of various types of historical sources; prospects of modern civilization, its problems and development difficulties, the role of modern Kazakhstan society in the world economy, politics and culture; the activities of state and legal institutions of society, their own possible contribution to their development; positive and negative phenomena in society; the significance of the rule of law and legality; their ability to be creative in addressing specific issues; their ability to cooperate in a team for a constructive solution of the tasks set in accordance with moral standards.

74. Expected learning outcomes in the educational field "Technology and Art".

Upon completion of basic secondary education, a student shall:

1) know the classification and characteristics of various styles, trends and genres of arts; visual and expressive means of art and music; history of the origin of styles and genres of arts; traditions and customs in decorative and applied arts of the Kazakh people and other nations of the world; masterpieces of world and national art and

music; classification of folk and classical musical instruments; main types and properties of natural, artificial, artistic materials; basic technologies of manual, mechanical, artistic processing of individual materials; basic cooking technologies; general characteristics of the main types of electrical work; classification of electrical materials; classification of technological machines, instruments, devices and tools; operational and functional characteristics of technological machines and equipment; basics of designing, modeling and processing textiles; modern information technology and software used in the field of art; safety regulations when working with equipment and tools;

2) understand the significance and role of various types of art and technology in the life of man and society, in the protection and preservation of the environment; the value of works of musical and visual arts of the Kazakh people and other nations of the world; the relationship of styles and styles of art with a historical era; features of the transfer of creative intent by various means of art; the influence of the properties of natural and artificial materials on the functional and aesthetic quality of products; the importance of collective and group work for decision-making, the development of ideas and the creation of creative products;

3) apply the techniques and methods of creating creative projects in various forms of art, when conducting simple electrical installation work; artistic methods and techniques for transferring the features of images, objects and phenomena of the surrounding world, including using computer programs and applications; knowledge of various properties of artistic, constructive materials in the creation and manufacture of products, as well as the works of art; basic materials processing technologies for creating prototypes of new products, including the use of information and communication technologies; various ways to promote creative products to implement their ideas in the commercial field; ways of planning and organizing your work; ways of transmitting environmental problems of the world through art;

4) analyzes creative ideas and ideas in the works of various types of art; methods, techniques and materials used in the works of artists and their own works; created prototypes of products for the purpose of their qualitative improvement; consumer potential results of creative work; the impact of socio-historical, regional, scientific, technical, cultural factors on works of art; the impact of art, technology and production on the environment and human activity;

5) synthesize creative projects for various types of art, including the use of information and communication technologies; methods and techniques of work in various techniques with the use of various materials and tools; various ideas for composing improvisations and arrangements in various styles and genres; knowledge

and skills in the humanities and natural sciences to create creative works; design and design solutions for the creation of products taking into account the technological and operational properties of materials;

6) evaluate the main idea, images and ideas in the works of various types of art; artistic and aesthetic value of works of national and world art; independently / collectively executed artistic, technical works; product capabilities for functionality, ergonomics and efficiency; consumer qualities of the product of labor and service capabilities of technological operations.

75. Expected results in the educational field "Physical Training".

Upon completion of basic secondary education, a student shall:

1) know the rules and safety techniques when practicing Physical Training; rules and techniques for performing motor actions, complexes of physical exercises of various directions; methods and techniques for monitoring the current state of health during classes (according to external and internal features) and physical exercise regimes (according to heart rate);

2) understand the need to preserve and promote health in order to increase the level of efficiency; the role of exercise in the mode of the day; the influence of Physical Training on the functional state of the body systems; the need for a healthy lifestyle; levels of complexity of the performed motor actions; the need to achieve the required intensity of various physical loads at different stages of physical fitness;

3) apply motor skills in a wide range of activities to achieve physical improvement; forecasting individual and joint Physical Training classes, taking into account their own and team interests; knowledge and skills to enrich your own physical exercise experience and the experience of others; tactics and strategies in sports games and cyclic sports specified in the curriculum; knowledge of the rules in the exercise of judging school competitions in program sports;

4) analyzes achievements and experience in physical exercises for managing future training and behavior in a team; readiness and ability to self-development and self-education based on optimization of activities; various methods of managing physical changes in the body during short-term and long-term exercises;

5) synthesize types of movements and their sequence into improved combinations of movements; knowledge and skills to maintain a healthy and safe lifestyle; knowledge and tools of critical thinking for research and problem solving within the framework of Physical Training; assimilation of the rules of individual and collective safe behavior in emergency situations that threaten the life and health of people;

6) assess their own physical abilities and the abilities of others; difficulties and risks arising from the performance of various physical exercises; the effect of exercise

on various aspects of health; its potential to participate in vigorous creative activity in the selection and formation of a healthy lifestyle and participation in sports activities inside and outside the school.

The content of the course "Fundamentals of Life Safety" in grades 5-9 shall be implemented within the framework of the course "Physical Training" with an annual workload of 15 hours by teachers of Physical Training. Classes on the basics of life safety shall be mandatory and shall be held during school hours.

76. Evaluation of the educational achievements of students shall be carried out through the use of criteria for assessing students' knowledge. Evaluation criteria shall be used to measure the level of learning achievement of students.

77. Evaluation criteria shall be developed in accordance with the objectives of training for each curriculum, including taking into account the special educational needs and individual abilities of students.

78. The evaluation of the educational achievements of students shall be carried out in the form of formative and summative assessment.

79. Criteria for assessing students' knowledge shall be developed and approved by the authorized body in the field of education.

80. For students with special educational needs, conditions shall be created for their education, correction of developmental disorders and social adaptation.

**Paragraph 2. Requirements for the level of training of students**

81. The level of training of students shall be assessed in terms of three aspects:

- 1) personal results;
- 2) system-activity results;
- 3) subject results.

Personal results shall be reflected in:

- 1) the manifestation of respect for the Constitution of the Republic of Kazakhstan, for law and order;
- 2) manifestation of active citizenship, high patriotic feelings, readiness to serve their homeland and protect its interests;
- 3) knowledge of the state and native languages, respect for the history, culture, traditions and other values of the Kazakh people and other ethnic groups living in Kazakhstan;
- 4) the desire to preserve and enhance the nature of his/her native land, his/her country, the manifestation of an active position in environmental protection;
- 5) maintaining a healthy lifestyle, skills to maintain their own safety and the people around them;
- 6) the manifestation of a high culture of human communication, compliance with ethical standards;

7) the ability to self-education and self-realization and creative work;

8) respect for the older generation and care for the younger, the manifestation of kindness and sensitivity to others;

9) the ability to adequately assess the characteristics of the social environment, to resist antisocial phenomena, the destructive influences of an ideological, illegal and religious nature.

82. Personal results shall be monitored in the form of psychological and pedagogical monitoring of the level of education, socialization and spiritual and moral, creative and physical development of the student.

83. Systemic activity results shall be reflected in:

1) possession of a system of knowledge on the fundamentals of science and fields of application of scientific achievements for the progress of human society;

2) the ability to analyze, process, synthesize and use scientific information;

3) possession of methods of knowledge, design, construction and research, creative application;

4) possession of modern information and communication technologies;

5) possession of advanced communication skills, multilingual culture.

84. Systemic activity results shall be determined by the student's achievements in subject Olympiads, courses on the selection, implementation of creative educational projects, as well as other types of research activities.

85. Subject results shall be reflected in students' knowledge and activity training in mastering the basic content of secondary education.

86. Subject results shall be established at the basic level and at the advanced pre-profile (for mastering the variants of the standard curricula chosen by the general educational organization with the deepening of subjects).

87. The basic level of mastering academic subjects shall include a mandatory minimum of students' knowledge and skills.

88. Advanced (possible and pre-profile / core) levels of learning subjects shall include an expanded and in-depth amount of students' knowledge, their skills and abilities.

The possible level of mastering academic subjects shall be realized at the choice of the general educational organization on the basis of variable curricula for the 9th grade. Pre-profile levels of learning subjects shall be implemented on the basis of standard curricula for in-depth study.

89. The development of the content of basic secondary education (advanced, expanded) offered by an organization shall be controlled by the local executive bodies of education.

90. The substantive results of mastering the content of secondary education shall be evaluated by a five-point system.

91. The forms of control shall be : oral, written and creative exams, open and closed forms of test tasks, tests, oral questionnaires or interviews.

92. In order to improve the health of students and increase their physical activity, local executive bodies shall organize the organization of sports sectional activities in the form of out-of-class work.

93. Students who, due to their state of health for a long time, cannot attend the organization of education, shall be provided with individual free education at home or in medical organizations.

94. For students with special educational developmental needs, conditions shall be created for their education, correction of developmental disorders and social adaptation.

95. Within the framework of inclusive education, the division of a class into groups for the above subjects shall be carried out with a decrease in the occupancy rate of the class of the total number of students by three per each child with special educational needs.

#### **Chapter 5. Requirements for the duration of training**

96. The term of mastering the general education curriculum of basic secondary education shall be five years.

97. Duration of the school year - 34 school weeks.

98. Duration of vacation time in the school year shall not be less than 30 days. Vacations shall be available three times per school year - in autumn, winter and spring.

Appendix 4  
to order No. 604 of the Minister of  
Education and Science of the  
Republic of Kazakhstan  
dated October 31, 2018

#### **State compulsory standard for general secondary education Chapter 1. General Provisions**

1. This state compulsory standard for general secondary education (hereinafter - the Standard) is developed in accordance with subparagraph 5-1) of Article 5 and Article 56 of the Law of the Republic of Kazakhstan dated July 27, 2007 "On Education" (hereinafter - the Law) and determines the requirements for the content the maximum amount of study load, the level of training of students and the duration of training.

2. In the Standard, terms and definitions shall be applied in accordance with the Law. In addition to them, the following terms and their definitions shall be included:

1) assessment - the process of matching the learning outcomes achieved by the students with the expected results based on the developed criteria;

2) assessment criteria - specific measures, on the basis of which the evaluation of students' educational achievements is carried out;

3) final certification of students - a procedure carried out in order to determine the degree of their mastering the volume of academic disciplines stipulated by the state compulsory standard of the appropriate level of education;

4) values of education - benchmarks in building a system of learning objectives, based on universal values, which are the leading factor in shaping the student's personality;

5) special educational needs - the needs of children experiencing permanent or temporary difficulties in obtaining education due to health, in need of special, general educational curricula and educational programs of additional education;

6) the basic content of general secondary education - the composition, structure and volume of the content of general secondary education, subject to compulsory study in educational institutions, regardless of their type, type and form of ownership, as well as the language of instruction;

7) summative assessment - a type of assessment that is carried out at the end of a certain academic period (quarter, trimester, academic year), as well as the study of sections in accordance with the curriculum;

8) inclusive education - the creation of conditions for equal access to education for all students, taking into account special educational needs and individual capabilities;

9) the invariant component of the study load is an integral component of the standard curriculum, which defines the subjects required for study by all students in educational institutions, regardless of their type, type and form of ownership, as well as the language of instruction;

10) the variable component of the study load is an integral component of the standard curriculum, which is determined by the organization of education in accordance with the educational needs of students;

11) expected learning outcomes - a set of competencies that express what a student will know, understand, demonstrate upon completion of the learning process;

12) extracurricular activities - an integral part of the integral educational process, a form of organization of free time of students;

13) standard curriculum - a document regulating the list of academic disciplines (subjects) and determining the volume of the invariant and variable components of the academic load of the corresponding level of education;

14) formative assessment - a type of assessment, which is carried out in the course of everyday work in the classroom, is a current indicator of student performance, provides feedback between the student and the teacher and allows you to improve the educational process.

3. The application of the standard shall be aimed at:

1) improving the quality of training and education through the achievement of a system of goals for general secondary education, presented in the form of expected learning outcomes;

2) implementation of the policy of trilingual education by creating the necessary conditions for the organization of the educational process in Kazakh, Russian and foreign languages;

3) a combination of academic and practical orientation of general secondary education, involving the assimilation by students of theoretical knowledge and the development of skills to apply this knowledge to solve problems of an applied nature;

4) ensuring the gradual deepening of subject knowledge and skills, taking into account the age possibilities of students;

5) the implementation of the principle of unity of education and upbringing, based on the interconnectedness and interdependence of the values of education and the system of expected learning outcomes that define the content basis of the educational process;

6) ensuring the protection of children's health, creating favorable conditions for meeting the special educational needs of students and the need for additional educational services;

7) ensuring the equivalence of general secondary education in a variety of types and types of secondary education organizations;

8) support and development of innovative practices in educational institutions;

9) the organization of an objective assessment of the activities of educational organizations on the quality of education.

**Chapter 2. Requirements to the content of education with a focus on learning outcomes Paragraph 1. Requirements for the updated content of general secondary education with a focus on learning outcomes**

4. General secondary education shall be aimed at instilling learners of national and universal values that are common to all levels of education and shall be designed to become a stable personal orientation of the student, motivating his/her behavior and activities.

5. The following values shall be defined as basic values in the content of general secondary education:



- 1) Kazakhstan patriotism and civil responsibility;
- 2) respect;
- 3) cooperation;
- 4) work and creativity;
- 5) openness;
- 6) lifelong education.

6. On the basis of inculcating the values of education, the following shall be developed in students:

- 1) readiness to serve the interests of Kazakhstan;
- 2) respect for and compliance with the norms of the Constitution and the laws of the Republic of Kazakhstan;
- 3) social responsibility and decision making skills;
- 4) the motivation to master the state language;
- 5) respect for the culture and traditions of the people of Kazakhstan, the cultural diversity of the world;
- 6) adherence to the ideas of spiritual harmony and tolerance;
- 7) a positive attitude towards the world and the preservation of ecological balance;
- 8) creative and critical thinking;
- 9) communication and the ability to effectively use information and communication tools and technologies;
- 10) motivation for learning and self-improvement throughout life.

7. The purpose of general secondary education shall be:

the creation of an educational space conducive to the provision of academic preparation of students for continuing education in the university and professional self-determination based on the development of a wide range of skills:

- 1) functional and creative application of knowledge;
- 2) critical thinking;
- 3) research;
- 4) use of information and communication technologies;
- 5) the use of various methods of communication;
- 6) the ability to work in a group and individually;
- 7) problem solving and decision making.

8. Skills of a wide range as results at the level of general secondary education shall allow students to harmoniously combine national and universal values, to show functional literacy and competitiveness in any life situation, as well as to solve educational and applied tasks.

9. The main objectives of general secondary education shall be:

1) the implementation of profile training in natural-mathematical, social and humanitarian areas based on a combination of compulsory subjects and major subjects of choice;

2) provision of academic training of students for admission to higher educational institutions based on a combination of advanced and standard levels of study of academic subjects;

3) purposeful development of spiritual and moral qualities, communication, social, research skills and abilities to solve problems on the basis of universal human values, positively directed critical and creative thinking;

4) promoting the professional self-determination of graduates in accordance with their interests and abilities;

5) promoting the formation of graduates' positive motivations for continuing education throughout their lives, readiness to regulate the process of learning and career growth in life.

10. The content of general secondary education shall be established on the basis of the integration of academic training of students for admission to organizations of higher and (or) postgraduate education and the purposeful development of students' autonomy.

11. Academic training of students shall be ensured by strengthening the fundamental nature of education aimed at mastering the scientific methods of understanding the world.

12. The content of general secondary education shall be focused on learning outcomes and shall be determined taking into account the following aspects:

1) compliance with the dynamic demands of modern society and the level of science development;

2) development of critical, creative and positive thinking;

3) strengthening the integration of the content of academic subjects on the basis of interdisciplinary and interdisciplinary approaches;

4) adherence to the principle of continuity and continuity of the content of education between the levels of basic secondary education and general secondary education;

5) maintaining a balance between academic and practical orientation of the content of education;

6) ensuring the unity of training, education and development.

13. Along with teaching compulsory school subjects, students shall be given a choice of core subjects at the advanced and standard levels of education.

14. Profile training shall be carried out on the basis of taking into account individual interests and needs of students. In this regard, a flexible system for selecting subjects at two levels of study shall be proposed. The learner, at his/her discretion, shall choose meaningful educational subjects of in-depth and standard levels of study. A greater number of hours shall be devoted to profiling subjects at the in-depth level than at standard-level study subjects. Non-core academic subjects shall be studied at the standard level.

15. The organization of the educational process at the level of general secondary education shall be focused on the implementation of the principle of unity of education, upbringing and development. When organizing the educational process, the priority role shall be given to the teaching as the leading activity of students. The teaching shall involve the use of interactive teaching methods, which are based on the organization of learning by the students themselves by taking an initiative to search, being active in discussing issues, arguing a point of view, making a constructive decision.

16. In the process of learning, education issues shall be resolved through each subject. All types of educational work shall be aimed at addressing the issues of knowledge and development of subjectively new knowledge by students, the study of national traditions and culture, awareness of human values.

17. The organization of various forms of extracurricular activities in the aggregate shall provide for the realization of spiritual and moral, civic-patriotic, artistic and aesthetic, labor and Physical Training of students.

18. Ensuring consistency in the development of skills of project and research activities of students shall be one of the basic principles of the organization of the educational process in educational institutions.

19. The content of general secondary education shall be implemented within the framework of the policy of trilingual education. The goal of trilingual education shall be to form a multilingual personality - a citizen of Kazakhstan who speaks at least three languages, who is able to successfully conduct a dialogue in various fields of activity, appreciates the culture of his/her people, understands and respects the culture of other nations.

20. Trilingual education shall be practically realized through:

- 1) the level learning of Kazakh, Russian and foreign languages;
- 2) the organization of the study of individual subjects in the Kazakh, Russian and foreign languages, regardless of the language of instruction;
- 3) the organization of extracurricular activities of students and various extracurricular activities in the Kazakh, Russian and foreign languages.

21. The practical orientation of general secondary education shall be realized through the development of educational, communication, social, research skills during the educational process and educational activities.

22. The basic content of general secondary education shall be specified by the curriculum, which is developed according to the expected learning outcomes, established taking into account the characteristics of specialized education: compulsory academic subjects and major academic subjects in natural-mathematical and social-humanitarian fields.

23. Content on compulsory academic subjects for all areas of profile training.

1) Kazakh Language, Kazakh Literature (for classes with the Kazakh language of instruction) / Russian Language, Russian Literature (for classes with the Russian language of instruction) / Mother Tongue, Native Literature (for classes with the Uighur / Uzbek / Tajik language of instruction).

The content of the subjects shall be aimed at the development of communication skills that ensure fluency in the language in various fields and situations of communication; development of speech activity and critical thinking; development of the ability to carry out information retrieval, extract and transform the necessary information. In the process of learning a language, high-level thinking skills shall be formed, such as comparing, analyzing, synthesizing, evaluating information, and applying acquired knowledge in real life situations.

The content shall be focused on the development of figurative and analytical thinking, creative imagination, reading culture and understanding of the author's position; development of oral and written speech of students; mastering the texts of works of art in the unity of form and content, basic historical and literary information and theoretical and literary concepts. In the process of studying, there shall be a deepening analysis of works of art with the involvement of literary concepts and the necessary information on the history of literature.

The study of academic subjects shall involve expanding the range of knowledge about the structure and functioning of the language in various fields and situations of communication; stylistic resources, basic standards of the literary language and speech etiquette; enrichment of vocabulary and expansion of the range of grammatical means. The skills acquired in the process of learning a language by effectively using language units at various levels shall enable students to evaluate from the point of view of normativity, correspondence to the scope and situation of communication.

The important components of the content of subjects shall be the upbringing of a spiritually developed personality, the formation of a humanistic worldview, civic

consciousness, a sense of patriotism, love and respect for literature and the values of domestic and world culture;

2) Kazakh Language and Literature (for classes with non-Kazakh language of instruction) / Russian Language and Literature (for classes with non-Russian language of instruction).

The content of objects shall pursue the goals determined by the status of the Kazakh language as a state language and the status of the Russian language as a language officially used along with the Kazakh language. The study of these subjects shall promote the use of language in educational activities and everyday life, the introduction of students to the culture of the peoples of Kazakhstan, shall ensure their readiness for inter-ethnic communication.

The basis of the content of school subjects shall be the focus on mastering all types of speech activity and the basics of the culture of speech and writing, skills and abilities to use the language in various fields and situations of communication corresponding to the experience and interests.

In the process of studying language and literature, students shall master knowledge of the language as a sign system and social phenomenon, its structure and knowledge of the development of literature. The study of language and literature shall be aimed at further improving the knowledge of the norms of the literary language, enriching the vocabulary and grammatical structure of students' speech; further development of the ability to analyze and evaluate linguistic phenomena and facts and literary works;

3) Foreign Language.

The content of the subject "Foreign Language" shall be focused on the formation of a multilingual, multicultural personality; to improve communicative competence by enriching the vocabulary through the content of authentic texts of different styles, which allows for the sociocultural enrichment of the world perception and worldview in the development of foreign language communicative competence; on the development of research skills and creative approach to solving various educational problems.

The content of the subject "Foreign Language" shall provide for the development of skills to analyze, summarize, classify professionally relevant information, effectively use the language for communication in scientific and professional activities, as well as the skills of conducting personal, business correspondence, composing a resume, essay on a given topic, which together promote increased motivation to learn a foreign language. The students shall be given the opportunity to integrate the content of the subject "Foreign Language" with other academic subjects through interdisciplinary connections to develop the ability to establish a causal

relationship between the facts, work with information, extracting the main and fragmentary parts from foreign sources.

The development of spiritual and moral values, education of a patriotic attitude towards Motherland, people and tolerance towards people of another culture, as well as ethics of interpersonal relations in a family, school through the development of skills to use socio-cultural material in communication with peers, teacher, native speaker;

#### 4) Algebra and the Elements of Analysis, Geometry.

The content of the subjects "Algebra and Elements of Analysis" and "Geometry" shall be aimed at developing students' mathematical culture and the system of mathematical knowledge and skills necessary for successful learning at the next levels of education, as well as solving practical problems. The mathematics course shall contribute to the development of functional literacy, abstract and logical thinking, spatial imagination, as well as an understanding of the role of mathematics in shaping the general culture of a person. The content lines of the mathematics course shall be focused on the systematization and development of students' ideas about the mathematical laws of the world around them, their understanding that mathematical tools and methods shall be used to describe and study phenomena and processes in almost all fields of knowledge.

The content of academic subjects shall provide for the further development of educational, cognitive and general intellectual skills. Skills such as comparison, classification, synthesis, analysis, synthesis, abstraction, specification, shall be applied to formulate the problem, put forward and test a hypothesis in the course of understanding the mathematical laws. The content of school subjects shall be structured by the main sections of mathematics, covering topics of the school course of mathematics: "Numbers", "Algebra", "Statistics and Probability Theory", "Mathematical Modeling and Analysis", "Geometry";

#### 5) Computer Science.

The content of the course "Computer Science" shall be aimed at developing the skills to search, analyze, critically evaluate, select, organize, transmit and process information, model objects and processes; on mastering the methods and means of information technology, methods of solving problems. The academic program of this course shall provide for the development of skills for appliance , analyzing and transforming information models of real objects and processes; algorithmic and computational thinking; development of intellectual and creative abilities by means of computer models.

The content of the subject shall provide for the consideration of the implementation of information processes through computer technology, working with computer systems and models, the study of information protection methods, system approaches to modeling, formalization and visualization using interactive computer models. The course shall contain the following content lines: "Computer Systems", "Information and Information Processes", "Algorithmization and Programming" and "Health and Safety";

6) History of Kazakhstan. The content of the subject "History of Kazakhstan" shall be aimed at the formation of in-depth knowledge of the key issues of the ethnic, political, socio-economic and cultural history of Kazakhstan.

The subject of study shall expand and deepen the students' understanding of the essence and characteristics of the cultural and historical development of Kazakhstan in different historical periods. The subject "History of Kazakhstan" shall provide for the development of historical thinking skills necessary for the analysis, classification, systematization, synthesis and assessment of events, phenomena and processes in the history of Kazakhstan. The axiological function of this academic subject shall be to build patriotism, instilling respect for national and universal values;

7) Self-knowledge.

The content of the subject "Self-knowledge" shall be aimed at uncovering the spiritual and moral potential of a person, the development of the desire for self-knowledge and self-improvement on the basis of human values; awareness of their role in the family, team, society, the need to develop high moral qualities, skills of serving the community; understanding of the relationship of physical and spiritual health, their involvement in the life of the country, city, village, school, family and responsibility for thoughts, words and deeds.

The study of the subject "Self-Knowledge" shall provide for the expansion of knowledge about the spiritual culture of mankind, the relationship of physical and spiritual health; mastering the skills of reflection, self-understanding and self-actualization; development of the ability to analyze their actions, make moral choices and make decisions in various life situations, set their own goals and outline ways to achieve them in accordance with moral norms, build relationships in the family, team, and society on a spiritual and moral basis;

8) Physical Education.

The content of the subject "Physical Training" shall provide: the expansion of knowledge about the patterns of physical activity, sports training, the importance of physical training for future work, preparation for military service; increase the functional abilities of the body in accordance with the age and sex characteristics of

students; improvement of technical and tactical actions and techniques in basic sports; development of competence in individual and collective forms of Physical Training, health and sports activities, the development of creative skills in the organization of outdoor activities and sports competitions; the formation of an adequate self-esteem of the individual, moral self-awareness, worldview, collectivism, development of purposefulness, confidence, endurance, composure; creating conditions for the development and formation of the Olympic reserve in various sports.

The study of the subject "Physical Training" shall allow students to apply subject knowledge, skills and abilities in everyday life; assess the need for improved motor competence and physical development; develop moral qualities and recognize the need for fair play and continuous self-development; understand the need for personal hygiene; to assess the degree of influence of physical exercises on the physical and energetic system of a person, the levels of one's own physical development and motor fitness, the functional state of the body and physical performance;

#### 9) Initial military and technological training.

The content of the subject shall ensure the formation of a conception of the fundamentals of military affairs, robotics and IT technologies, the formation of students' ideas about service in the Armed Forces of the Republic of Kazakhstan and knowledge of the basics of military affairs, knowledge of the content of the military oath and the requirements of general military regulations; promoting the development of life skills and abilities of students; preparing students for service in the Armed Forces of the Republic of Kazakhstan on the basis of their solid mastery of theoretical knowledge and practical skills; the formation of a coherent system of logically interconnected concepts, a holistic view of service in the Armed Forces of the Republic of Kazakhstan; the formation of a worldview of citizenship among young people, a belief in the need to protect the sovereignty of the Republic of Kazakhstan, conscious readiness for a responsible attitude to military service; development of healthy interest in the Armed Forces of the Republic of Kazakhstan, their traditions, features of service in the types and types of troops, the military profession.

The subject shall hold an important place in the general system of military-patriotic and moral education of students, in the development of their self-awareness, cognitive interests, communication skills, volitional qualities, primary practical skills, military skills, theoretical fundamentals of robotics, automobile driving, the use of digital photos - and video equipment. The subject shall be focused on the development of a strong-willed, decisive, physically healthy, functionally militarily literate person by familiarizing himself/herself with the history of the development of the Kazakh army and studying its current state.



24. The content of education in the academic subjects of the advanced level of education in the natural-mathematical direction.

1) Biology.

The content of the subject "Biology" shall be aimed at deepening students' knowledge of the diversity of living organisms, the evolution of the surrounding world, the laws and laws of natural phenomena; on the development of practical skills of observation, classification, systematization, comparison, analysis, evaluation of objects and information, the establishment of cause-effect relationships.

The content line of the in-depth course on the subject "Biology" shall provide for the development in students of a deeper understanding of the essence of natural biological phenomena and processes, understanding the influence of human activity on the plant and animal world, as well as human health. Understanding the characteristics of living nature, the essence of evolutionary processes shall allow students to assess the ecological situation and understand the need for careful attitude to the living world. The basis for structuring the content of the subject "Biology" at the level of general secondary education shall consist of the leading system-forming ideas: the diversity, structure and functions of living organisms; reproduction, heredity, variability and evolutionary development; organisms and the environment; applied integrated science;

2) Chemistry.

The content of the chemistry course shall be aimed at deepening knowledge of the significance of the diversity of chemicals and their transformations, the development of the careful use of natural resources; Expansion of students' understanding of the diversity of natural substances on the basis of deepening knowledge of the chemistry of natural phenomena, developing a wide range of experimental and practical skills, using critical thinking and a creative approach to the studied processes. The subject of study shall reveal the possibilities of creating new substances, teach us to evaluate the ecological situation of the environment on the basis of the available data and thus provides a deep connection with life.

The content line of the in-depth course shall provide students with an understanding of the essence of the chemical phenomena and processes occurring around them and encourages them to maintain a healthy lifestyle; provide the ability to use chemical knowledge to select high-quality products and tools in daily practice, to improve the quality of everyday life. The content of general secondary education in the subject "Chemistry" shall be structured in the following sections: "Particles and Their Structure", "Patterns of Chemical Reactions", "Energetics in Chemistry", "Chemistry Around Us", "Chemistry and Life";

### 3) Physics.

The advanced course of physics shall be aimed at the development of students' ideas about physics as a science of nature, methods and methodology of scientific knowledge, the role and relationship of theory and experiment in the process of knowledge.

The content of the subject shall be aimed at deepening students' knowledge about the laws of mechanics, thermal physics, electricity and magnetism, optics and atomic physics as general laws of nature. On the basis of scientific methods of knowledge, ideas about the physical picture of the world shall be expanded and the scientific worldview of students shall be formed. The course of physics shall involve the development of skills for observing natural phenomena, describing and summarizing the results, and using measuring instruments to study physical phenomena. In the content of the in-depth course, it shall be possible to plan and conduct experiments aimed at identifying empirical dependence based on the collection and analysis of experimental results.

Advanced general education training in physics shall involve the use of knowledge gained to explain the causes of various natural phenomena and processes, the principles of operation of the most important technical devices, hypotheses and model building;

### 4) Geography.

An advanced course of geography shall be aimed at enriching knowledge about the patterns of development of nature, population, geopolitics and economics, the formation of a comprehensive knowledge of the world necessary for an objective knowledge of the features of natural, social, economic and political processes.

The content of the school subject shall involve the development of geographical thinking, a sense of personal responsibility for the current and future state of the environment and humanity, which together contribute to the formation of value orientations among students.

The content of geographical education shall be aimed at the formation of ideas about the spatial diversity of the modern world, about its common and regional features and dynamics; analysis and synthesis of spatial-temporal patterns of interaction and interrelations of society and nature, the development of an understanding of cause-effect relationships and spatial-temporal patterns between geographical phenomena and processes; the formation and development of skills to use geographic knowledge to explain and evaluate a variety of natural, socio-economic and environmental phenomena and processes, the interpretation and use of geographic information in everyday practice.

25. The content of education in the academic subjects of the standard level of natural-mathematical direction shall be as follows:

1) Graphics and Design. The subject “Graphics and Design” shall be aimed at studying the fundamentals of the theory of graphic images and mastering the methods of geometrical-graphic modeling, developing the project creative activity of students, forming their graphic culture. The entire set of content of the subject shall be determined by the following educational lines: "Graphic Methods and Means of Visualizing Information", "Basic Types of Images and Their Construction. Image Transformation", "Shaping and Design. Form Conversion", "Elements of Technical, Architectural and Informational Graphics", "Design. Project Graphics. Creative Tasks";

2) World History.

The content of the subject “World History” shall be aimed at the formation of knowledge on the key problems of ethnogenesis, political genesis and cultural genesis of human civilization. This course shall be focused on deepening students' understanding of the essence of the world cultural and historical process in its unity and diversity. The subject "World History" shall provide for the development of the skills of historical thinking necessary for analyzing, classifying, systematizing, generalizing and evaluating events, phenomena and processes of world history. The axiological goal of this school subject shall be to instill in students a respect for national and universal values;

3) Fundamentals of Law.

The content of the subject "Fundamentals of Law" shall be aimed at the formation of legal literacy, understanding of the ideals and values of a democratic legal society. This course shall deepen the understanding of the essence and features of various legal areas by students. The subject "Fundamentals of Law" shall envisage the development of the skills of legal thinking necessary for analyzing, classifying, systematizing, generalizing and evaluating processes on the basis of legal norms, laws and regulatory legal acts. The axiological function of this academic subject shall be based on the formation of legal literacy, values of legal consciousness.

26. The content of education in school subjects in-depth level of education in the social and humanitarian areas.

1) World History.

The content of the subject “World History” shall be aimed at the formation of in-depth knowledge of the key problems of ethnogenesis, political genesis and cultural genesis of human civilization. This course shall be focused on deepening students' understanding of the essence of the world cultural and historical process in its unity

and diversity. The advanced course of the academic subject "World History" shall provide for the development of the skills of historical thinking necessary for analyzing, classifying, systematizing, summarizing and evaluating events, phenomena and processes of world history. The axiological goal of this school subject shall be to instill in students respect for national and universal values;

## 2) Geography.

The content of the subject "Geography" shall be aimed at forming the geographical picture of the world as a dynamically developing system of fundamental geographical laws and objective laws. The content shall be constructed on the basis of a regional geographic approach, which makes it possible to understand modern geographical features and regional characteristics. The course of geography shall be aimed at shaping the students' scientific outlook on the basis of the understanding of the inseparability of the unity of nature and society, the role of geography in harmonizing the relationship between man and nature.

This course shall involve the development of an understanding of the interaction of nature and society based on the study of contemporary global problems of mankind and ways to solve them; awareness of the importance of environmental protection and rational environmental management, geographic approaches to the problem of sustainable development in Kazakhstan and the world. The content line of the subject "Geography" shall include knowledge of the spatial-temporal patterns and features of the functioning and development of geographical objects, processes and phenomena, skills of the functional application of geographical knowledge to explain and evaluate natural, socio-economic and geopolitical phenomena and processes;

## 3) Fundamentals of Law.

The content of the school subject "Fundamentals of Law" shall be aimed at the formation of legal literacy, understanding of the ideals and values of a democratic legal society. This course shall deepen the understanding of the essence and features of various legal areas by students. The subject "Fundamentals of Law" shall provide for the development of the skills of legal thinking necessary for the analysis, classification, systematization, synthesis and evaluation of processes based on legal norms, laws and regulatory legal acts. The axiological function of this academic subject shall be based on the formation of legal literacy, values of legal consciousness;

## 4) Foreign Language.

The subject "Foreign Language" shall be aimed at developing language skills of students in four types of speech activity (listening, speaking, reading, writing).

Upon completion of general secondary education, students shall reach the B1 language level (intermediate - B1.2) in accordance with the Common European

Framework of Reference for Languages (Common European Framework of Reference, CEFR). This course shall increase students' confidence when communicating in various life situations, provide access to higher education not only in Kazakhstan, but also abroad, and shall expand access to authentic texts of literary works in the original language.

This academic subject shall be aimed at the formation of intercultural and communicative competences, a positive attitude to a different language and culture, raising the general culture, broadening the outlook and knowledge about the country of the language being studied, developing linguistic abilities and language guesswork, culture of verbal behavior, interest in learning a foreign language, mastering the main characteristics of a secondary linguistic personality, capable and ready for independent foreign language communication.

27. The content of education in the academic subjects of the standard level of study in the social and humanitarian field.

1) Physics.

The subject of study shall be aimed at developing students' understanding of physics as a science of nature, methods and methodology of scientific knowledge, the role and relationship of theory and experiment in the process of knowledge.

The content of the subject shall be aimed at expanding the understanding of the physical picture of the world and the formation of the scientific worldview of students. The course of physics shall involve the development of skills for observing natural phenomena, describing and summarizing the results, and using measuring instruments to study physical phenomena. General education training of students in physics shall involve the use of knowledge gained to explain the causes of various natural phenomena and processes, the principles of operation of the most important technical devices;

2) Chemistry.

The content of the course of chemistry shall be aimed at the development of knowledge about the significance of the diversity of chemicals and their transformations, the development of the careful use of natural resources; Expansion of students' understanding of the diversity of natural substances based on the deepening of knowledge about the chemistry of natural phenomena, the development of practical skills, the use of critical thinking and a creative approach to the studied processes. The subject shall teach us to assess the environmental situation of the environment on the basis of available data and thereby provides a link with life.

The content line of the subject shall provide students with an understanding of the essence of chemical phenomena and processes occurring around them and encourages

them to maintain a healthy lifestyle; shall provide the ability to use chemical knowledge to select high-quality products and tools in daily practice, to improve the quality of everyday life activities;

### 3) Biology.

The content of the subject "Biology" shall be aimed at developing students' knowledge of the diversity of living organisms, the evolution of the surrounding world, the laws and objective laws of natural phenomena; on the development of practical skills of observation, classification, systematization, comparison, comparison, analysis, evaluation of objects and information, the establishment of cause-effect relationships.

The content line of the subject "Biology" shall provide for the development of students' understanding of the essence of natural biological phenomena and processes, understanding the impact of human activity on the plant and animal world, as well as human health. Understanding the characteristics of living nature, the essence of evolutionary processes shall allow students to assess the ecological situation and understand the need for careful attitude to the living world. The basis for structuring the content of the subject "Biology" at the level of general secondary education shall consist of the leading system-forming ideas: the diversity, structure and functions of living organisms; reproduction, heredity, variability and evolutionary development; organisms and the environment; applied integrated science.

28. Content of education in the academic subjects of the standard level of education in natural-mathematical and social and humanitarian areas.

1) Fundamentals of Entrepreneurship and Business. The subject "Fundamentals of Entrepreneurship and Business" shall be aimed at studying the basic concepts and laws of the sphere of entrepreneurship, taking into account Kazakhstani and international practice, shall have a practice-oriented learning model that contributes to the formation of entrepreneurial thinking and developing students' skills of the 21st century.

This subject shall be developed for schools of the Republic of Kazakhstan in accordance with the message of the President of the Republic of Kazakhstan "Third Modernization of Kazakhstan: Global Competitiveness" in the context of one of the declared priorities - a radical improvement and expansion of the business environment through the implementation of the Program of productive employment and mass business development. The content line of the academic subject shall represent a completely new course integrating material on Entrepreneurship, Business using coaching and training elements.

The subject shall be aimed at developing students' business thinking and obtaining basic knowledge of the fundamentals of entrepreneurship, business and economics; instilling responsibility for their choices and the formation of entrepreneurial thinking, an active life position; creating a practical base of skills for future independent activities in the current market conditions.

29. The organization of education shall carry out educational activities in accordance with the license obtained and throughout the entire period of its validity it shall comply with the qualification requirements for educational activities and the list of documents confirming compliance with them, approved by order № 391 of the Minister of Education and Science of the Republic of Kazakhstan dated June 17, 2015 (registered with the Register of Regulatory Legal Acts under № 11716).

**Paragraph 2. Requirements for the content of education with a focus on learning outcomes**

30. General education academic programs for general secondary education shall be developed on the basis of differentiation, integration and vocational guidance of educational content with the introduction of specialized training in natural-mathematical and social-humanitarian areas.

31. General secondary education shall provide students with an integrated, relatively complete system of knowledge about nature, society and man, developing functional literacy, further intellectual, moral, spiritual and physical personality development, conditions for choosing the direction of a future profession based on differentiation, integration and profiling of educational content .

32. The content of general secondary education shall include six educational areas: "Language and Literature", "Mathematics and Computer Science", "Man and Society", "Natural Science", "Technology", and "Physical Training".

33. Each of the educational areas shall include related academic subjects.

34. The educational field "Language and Literature" shall include the following subjects: "Kazakh Language", "Kazakh Literature" (for general educational organizations with the Kazakh language of instruction, for general educational organizations with non-Kazakh language of instruction), "Russian Language", "Russian Literature" (for educational institutions with the Russian language of instruction), "Russian Language", "Russian Literature"(for educational institutions with Kazakh and other non-Russian languages of instruction), "Foreign Language".

35. In general education organizations with the language of instruction of an ethnic group compactly residing in the territory of Kazakhstan, the "Language and Literature" educational area shall additionally include the "Mother Tongue and Literature" of this ethnic group. The solution to the issue of studying the language of a specific ethnic group as a native in the places of its compact residence shall be within the competence of the local executive bodies of education. The subjects "Mother

Tongue" ("Uigur Language", "Uzbek Language", "Tajik Language") and "Literature" ("Uigur Literature", "Uzbek Literature", "Tajik Literature") shall be included in the invariant component of the standard curriculum (hereinafter - SC).

36. The educational field "Mathematics and Computer Science" shall include the following subjects: "Algebra and Elements of Analysis ", " Geometry ", " Computer Science ".

37. The educational field of "Natural Science" shall include subjects: "Geography", "Biology", "Physics", "Chemistry".

38. The educational field "Man and Society" shall include such subjects as: "History of Kazakhstan", "World History", "Man. Society. Law", "Self-Knowledge".

39. The "Technology" educational field shall include the following subjects: "Technology".

40. The educational field "Physical Training" shall consist of the following subjects: "Physical Training", "Basic Military Training".

41. The content of the course "Fundamentals of life safety" shall be implemented within the framework of the course "Initial Military Training" with an annual training load of 25 hours by the teachers-organizers of basic military training. Classes on the basics of life safety shall be mandatory and shall be held during school hours.

42. The invariant component of the content of general secondary education shall be implemented in the standard curricula, the variable component in the working curricula.

43. In order to preserve the fundamental nature of secondary education and comply with state requirements for the basic content of secondary education, the invariant component shall be determined not less than 75% - at the level of general secondary education of the total hours.

44. Compulsory academic programs shall implement the basic content of secondary education and shall determine the requirements for the preparation of students at relevant levels of secondary education. Variative academic programs shall implement the content of academic subjects and courses that shall be included in the variable component.

45. General secondary education shall be carried out on the basis of specialized training in two areas: social and humanitarian, natural and mathematical. In order to implement differentiated learning and meet the cognitive needs of students within the framework of two areas, a profiling of education in related (related) subjects shall be introduced according to the SC for in-depth study of individual subjects.

46. Continuity of the content of basic secondary education and technical and vocational education shall be implemented through in-depth study of individual and



related subjects, including technological subjects, as part of pre-profile education. The continuity of the content of general secondary education and higher education shall be implemented through an in-depth study of individual and related subjects as part of specialized education.

47. The choice of the direction of pre-profile education at the level of basic secondary education and specialized education at the level of general secondary education shall be carried out with the participation of parents and the board of trustees.

**Chapter 3. Requirements for the maximum amount of study load of students Paragraph 1.**

**Requirements for the maximum volume of academic load of students on the updated content of general secondary education**

48. The maximum amount of weekly study load of students at the level of general secondary education in each class shall not be more than 39 hours per week.

49. The total volume of the study load of students, constituting the invariant and variable components, as well as the weekly and annual academic load of classes shall be established by the standard curriculum.

50. The weekly study load shall include all types of study work defined by a standard curriculum (invariant and variable components). The curricula of special (correctional) educational organizations shall provide for a mandatory correction component, taking into account the type of developmental disorder. The invariant, correctional and variable components in the curricula of special (correctional) educational organizations shall be established taking into account the special educational needs of students.

51. Class division into two groups shall be allowed in urban educational organizations when filling a class of 24 or more students, in rural - in 20 and more students, in small schools - at least 10 students in conducting lessons on:

1) Kazakh Language and Literature - in classes with non-Kazakh language of instruction;

2) Russian Language and Literature - in classes with non-Russian language of instruction;

3) a Foreign Language;

4) Computer Science;

5) Physical Training according to gender (in urban areas - in each group at least 8 boys (or girls), and in rural areas - at least 5 boys (or girls).

**Paragraph 2. Requirements for the maximum amount of study load of students**

52. The maximum weekly study load for students, including all types of classroom and extra-curricular (elective, individual and circle classes) study work, shall not exceed in: 10-11 grades - 39 hours.

53. The study time allocated in the standard and working curricula for the study of the subject shall be taken into account when developing the structure and content of the corresponding mandatory and optional academic programs.

54. The total volume of the study load of students in the subjects that make up the invariant and variable components shall be established by the MS.

55. The volume of the compulsory study load of students in subjects, taking into account the direction of study, shall be established by the Standard Curriculum.

56. The maximum study load of students, taking into account their needs, shall be established by the working curriculum of the general education organization.

57. In order to improve the health of students and increase their physical activity, local executive bodies shall provide for the organization of sports sectional activities in the form of out-of-class work.

58. Students who, due to their state of health for a long time, cannot attend a general education organization, shall be provided with individual free tuition at home or in medical organizations.

59. For students with developmental disabilities, conditions shall be created for their education, correction of developmental disorders and social adaptation.

60. Local executive bodies and general educational organizations shall create conditions for the safety of life and the health of students by:

1) promoting healthy lifestyles;

2) strengthening the social and psychological services;

3) security of the building;

4) the organization of close ties with the local population and the parent community;

5) studying the informal environment of students;

6) conducting preventive measures (sociological survey, psychological support, holding meetings with employees of law enforcement agencies and medical institutions);

7) timely organization of preventive medical examination;

8) compliance with safety regulations, fire safety regulations;

9) compliance with the light and air-thermal regime of the premises;

10) compliance with the mode of work with computer equipment;

11) propaganda of observance of traffic safety rules;

12) compliance with safety measures when transporting children.

61. The educational process in general education organizations, including private ones, shall be carried out within the framework of a working curriculum, which is developed on the basis of the Standard CURRICULUM , shall be approved by the

general education organization independently and shall be coordinated with the local education authorities.

62. The educational process in the republican general education specialized boarding schools shall be carried out within the framework of a working curriculum, which is developed on the basis of the Standard curriculum and approved by the authorized body in the field of education of the Republic of Kazakhstan.

63. Class division into 2 groups shall be allowed in urban general education organizations when filling a class in 24 or more students, in rural groups - 20 and more students in conducting lessons:

- 1) non-Kazakh language classes in the Kazakh language;
- 2) in the Kazakh literature classes with non-Kazakh language of instruction;
- 3) in Russian classes with Kazakh, Uygur, Tajik and Uzbek languages of instruction;
- 4) in a foreign language;
- 5) on computer science;
- 6) in specialized subjects;
- 7) by technology (groups of boys and girls, regardless of the filling level);
- 8) on Physical Training.

64. If there are children with developmental disabilities in the class, the division of the class shall be made on the basis of reducing the total number of students by three for each such child.

65. The organization of socially useful work, the conduct of work practice in the amount of the workload of the student component of the standard curriculum shall be carried out with the participation of the board of trustees or the parent committee.

**Chapter 4. Requirements for the Level of Training of Students Paragraph 1. Requirements for the level of training of students on the updated content of general secondary education**

66. Standard academic programs for general secondary education shall be developed on the basis of differentiation, integration, and vocational orientation of the content of education with the introduction of specialized education in natural-mathematical and social-humanitarian areas.

67. The level of training of students, including students with special educational needs, shall be determined through the expected learning outcomes, which are designed taking into account the direction of specialized training: compulsory subjects and major subjects of natural-mathematical and social-humanitarian directions.

68. The expected learning outcomes in compulsory school subjects shall serve as the basis for determining the basic content of general secondary education.

69. The compulsory school subjects shall include: "Kazakh Language" and "Kazakh Literature" (for classes with the Kazakh language of instruction), "Russian

Language" and "Russian Literature" (for classes with the Russian language of instruction), "Mother Tongue", "Native Literature" (for classes with Uigur / Uzbek / Tajik language of instruction), "Kazakh Language and Literature" (for classes with non-Kazakh language of instruction), "Russian Language and Literature" (for classes with non-Russian language of instruction), "Foreign Language", "Algebra and the Elements of Analysis", "Geometry", "Computer Science", "History of Kazakhstan", "Self Knowledge", "Physical Training", "Basic Military Training and Technology."

70. The expected learning outcomes in the main academic subjects of each direction shall be presented in accordance with the standard and in-depth levels of education and shall serve as the basis for determining the content of academic subjects taking into account the specific features of the teaching profile.

71. The subjects of the advanced level of education in the natural-mathematical direction shall be: "Biology", "Chemistry", "Physics", "Geography". In this area of profile education, standard-level academic subjects shall include: "World History", "Fundamentals of Law", "Fundamentals of Entrepreneurship and Business", "Graphics and Design".

72. The study subjects of the advanced level of study in the social and humanitarian field shall include: "Foreign Language", "World History", "Geography", "Fundamentals of Law". In this area of profile education, standard-level academic subjects shall include: "Physics", "Chemistry", "Biology", "Basics of Entrepreneurship and Business".

73. In the curricula of general secondary education, the expected learning outcomes shall be concretized for the purpose of learning by sections of each academic subject.

74. The system of expected learning outcomes shall create an opportunity for building individual trajectories for the development of students, including students with special educational needs, and gradual advancement of them towards the achievement of long-term educational goals at the level of general secondary education.

75. Expected learning outcomes at the completion of general secondary education in compulsory subjects. Kazakh Language (for classes with Kazakh language of instruction) / Russian Language (for classes with Russian language of instruction):

1) listening and speaking:

the student understands texts related to different spheres of communication and styles, analyzing openly and covertly expressed forms of speech behavior, evaluation; achieves various goals of communication in the situation of prepared and unprepared monological and dialogical communication, including public communication;

implements the tactics of speech behavior, seeking to influence the listener; analyzes and critically evaluates information from the text heard, expressing their point of view; predicts the content of the text; complies with the structure and norms of the use of linguistic units, taking into account their stylistic differentiation;

2) reading:

the student understands and interprets the content of texts of various types, styles and genres, including scientific and technical subjects; recognizes the hidden meaning of the text and the meaning of the means of artistic representation introduced into the text; reveals the language, composition and genre features of complex texts; uses different reading strategies depending on the tasks facing the reader; performs information retrieval, extracts and converts the necessary information; compares compositional, linguistic, genre and stylistic features of texts of various genres and styles; critically evaluates the content of the problematic text, drawing conclusions and proposing solutions;

3) writing:

the student creates texts of different types, genres and styles, incl. impacting character; creates continuous and non-continuous texts using the techniques of folding and unfolding information; writes texts of a creative, academic nature, essay on global issues, arguing his/her opinion and using research skills; synthesizes information obtained from various written or oral sources, and presents it in the form of a clearly reasoned coherent message; corrects and edits texts; makes different types of plans; observes grammatical, spelling, punctuation and stylistic norms.

Kazakh Literature (for classes with the Kazakh language of instruction) / Russian Literature (for classes with the Russian language of instruction):

1) knows the basic laws of the historical and literary process; memorizes poetic texts and fragments of prose texts (optional); historical and literary information and theoretical and literary concepts in the framework of the topics studied; historical and cultural context of the studied works and the basic facts of the life and creative path of their authors;

2) understands the spiritual, moral and aesthetic value of literature; communication of literature with history, art; a work of art in the unity of form and content; theme, idea, problematics of the work, position of the author in the work; the imaginative nature and hidden meaning of artistic works; nationally determined differences and similarities between works of Russian, Kazakh and world literature;

3) applies artistic and imaginative means and stylistic techniques in oral or written statements on a literary theme, when creating their own analytical text, interpreting the text studied, in debates, public speaking, expressing active citizenship and showing

spiritual and moral qualities; conceptual language of literary criticism when analyzing the content of works of art;

4) analyzes various literary works and their critical and artistic interpretations; features of the plot, composition, the role of graphic expressive means, key episodes, actions and actions of the characters, especially the style of the writer; ideas about the moral ideal of the Kazakh and other peoples in works of art and folklore;

5) synthesizes written texts using various resources for generalizing artistic works, comparing the content of works with historical facts; reasoned judgment on the problem of the artwork, the spiritual and moral content of the content of the work;

6) evaluates works from the point of view of the relevance of the content and its significance for the formation of the spiritual and moral qualities of a person; oral and written statements from the point of view of compositional, stylistic unity and language design; interpretations of a work of art created by other types of art; works of art to determine the actual reading circle.

Native Language, Native Literature (for classes with the Uighur / Uzbek / Tajik language of instruction):

1) listening and speaking:

The student understands texts related to different areas of communication and styles, analyzing openly and covertly expressed forms of speech behavior, evaluation; achieves various goals of communication in the situation of prepared and unprepared monological and dialogical communication, including public communication; implements the tactics of speech behavior, seeking to influence the listener; analyzes and critically evaluates information from the text heard, expressing their point of view; predicts the content of the text; complies with the structure and norms of the use of linguistic units, taking into account their stylistic differentiation;

2) reading:

the student understands and interprets the content of texts of various types, styles and genres, including scientific and technical subjects; recognizes the hidden meaning of the text and the meaning of the means of artistic representation introduced into the text; reveals the language, composition and genre features of complex texts; uses different reading strategies depending on the tasks facing the reader; performs information retrieval, extracts and converts the necessary information; compares compositional, linguistic, genre and stylistic features of texts of various genres and styles; critically evaluates the content of the problematic text, drawing conclusions and proposing solutions;

3) writing:

the student creates texts of different types, genres and styles, including those of impacting character; creates continuous and non-continuous texts using the techniques of folding and unfolding information; writes texts of a creative, academic nature, essay on global issues, arguing his/her opinion and using research skills; synthesizes information obtained from various written or oral sources, and presents it in the form of a clearly reasoned coherent message; corrects and edits texts; makes different types of plans; abides by grammatical, spelling, punctuation and stylistic norms;

4) knows the main trends in the development of literature, its connection with the history of the development of society; biographical information of prominent literary figures, the main stages in the development of world literature; main theoretical literary concepts; the content of works intended for detailed and reviewing, and reproduces their specific content (main characters, main storylines and events);

5) understands the place and role of works in the historical, cultural and literary processes; national values reflected in fiction; the process of the functioning of literature in its historical development; the ideological meaning of the works and the ways of its realization, the artistic structure of the work and the means used by the author; the meaning of the structural elements of the work (plot and composition, the ambiguity of artistic detail, its connection with the problematics of the text, figurative and expressive means of artistic speech, etc.); author's intention, the attitude of the writer to the heroes and events, the author's position; mood, which is imbued with the product;

6) applies acquired knowledge and skills when preparing an oral or written statement on a literary topic, when creating their own text of an analytical nature, interpreting the text studied; to determine the actual range of reading and evaluation of works of art in terms of ideological and thematic originality; in debates, public speeches, expressing an active civic stand and showing spiritual and moral qualities; for independent analysis of works of art;

7) analyzes a literary work as an artistic whole, conceptually interpreting it and interpreting the content; works of different genre-clan nature, revealing a universal, concrete historical and actual view of the reflected epoch; the problems inherent in the work of the author, and reflects on them;

8) synthesizes the content of works to create annotations, reviews; information from various sources, including from the Internet, to create creative works, summarizing their own ideas and extracted information; approaches to identifying the spiritual and moral content of the content of works for its correlation with the values of the Kazakh and other nations; methods of analysis of the work, adequate genre-generic nature of the artistic text;

9) assesses the artistic merit of the works; originality of national literature and its significance in the context of world culture; product in terms of the relevance of the content and its value for the formation of spiritual and moral qualities of a person; verbal and written statements from the point of view of compositional, stylistic unity, linguistic formulation, the effectiveness of achieving the stated communicative tasks; interpretation of a literary text created by other art forms.

Kazakh Language and Literature (for classes with non-Kazakh language of instruction) / Russian Language and Literature (for classes with non-Russian language of instruction):

1) listening:

the student fully understands the content of texts in various spheres of communication, communicative intentions, as well as social and emotional-expressive features of the speaker's speech; perceives information at the level of critical understanding; evaluates the listened text from the point of view of its expressiveness, image-creativity;

2) speaking:

the student effectively uses a variety of language tools in accordance with the communicative attitude, creating a reasoned monologue or dialogical statement; talks on the subject of works of art, expresses his attitude to the heroes of the works and their actions; critically evaluates various sayings; observes the norms of language, speech behavior and etiquette; predicts the cause and effect of the problem; synthesizes ideas related to the socio-economic, spiritual, moral, patriotic, cultural and historical development of society, offering possible solutions to problems;

3) reading:

the student understands in detail the content of continuous and non-continuous texts, revealing a hidden meaning; determines the meaning of unfamiliar words from the context; identifies features of academic texts in the framework of the topics studied; extracts information from different sources; compares works of literature with their representation in other types of art, analyzing ideas about the moral ideal of the Kazakh and other nations in works of art and folklore; uses different reading strategies depending on the tasks;

4) writing:

the student creates texts of different types and styles in accordance with the theme, purpose, problems and situation of communication, observing grammatical, spelling, punctuation and stylistic norms; creates continuous and non-continuous texts of various subjects on the basis of research and synthesis of the obtained information; makes various kinds of plans for texts; writes creative works on works of fiction,



assessing the problems of cultural and linguistic diversity, patriotism and the spiritual and moral development of the individual; uses artistic trails and stylistic techniques for more accurate expression of thoughts and feelings.

Foreign Language:

1) listening:

the student understands the main content of authentic texts of various genres, dialogues on familiar and partially familiar topics; retrieves the most functionally meaningful information, including detailed and specific, for filling in forms, tables, charts; understands the meaning of terms and key units of texts from various educational areas, as well as other areas of communication; distinguishes between fact and opinion; extracts and compares inconsistencies in the texts of the average volume of different genres and styles within the framework of the studied themes, guesses the meaning of unfamiliar words by context;

2) speaking:

the student engages in dialogue in situations of formal and informal daily communication; correctly draws up his/her own statements using the lexical and grammatical means of the language; expresses the emotional-evaluative attitude to the surrounding reality, realizing the pre-proposed tactics of verbal communication; analyzes and compares texts, arguing their point of view; reason, giving an assessment of events, opinions and problems; draws conclusions and offers its own solutions to the given problem;

3) reading:

the student understands the main content of journalistic, popular science, artistic texts of a certain complexity; uses different reading strategies; determines the time and cause-effect relationship of events and phenomena; analyzes and compares word meanings using book and electronic resources; critically evaluates the content of texts of different genres and styles;

4) writing:

The student draws up a plan, theses of a written message, edits and corrects texts of various genres and styles; abides by grammatical, spelling, punctuation and stylistic norms; writes a reasoned text based on media information; writes problematic texts, expressing his/her own attitude to the problem; creates business writings and documents; writes essays on various topics (150-200 words).

Algebra and the basics of the analysis, Geometry:

1) knows the definitions of exponential, logarithmic functions, their properties and graphs; the concept of a complex function; concept of inverse function; determining inverse trigonometric functions; methods for solving trigonometric, exponential,

logarithmic equations and inequalities; methods for solving rational and irrational equations; methods for solving rational inequalities; types of polyhedral, bodies of revolution and their development; formulas for the area and volume of polyhedral and bodies of revolution; stereometry axioms and their consequences; concept of vector in space; sphere equation; basic concepts of statistics; concepts of discrete and continuous random variables; determining the limit of a function at a point and at infinity; determines the continuity of a function at a point and on a set; definition of the derivative function; equation of the tangent to the function graph determination of anti-derivative function, indefinite and definite integral; formulas for finding the area of a flat figure and the volume of the body with the help of a definite integral.

For the natural-mathematical direction, he/she additionally knows the methods for solving irrational inequalities; formulas for addition and multiplication of probabilities; Bernoulli formula; types of distribution of discrete random variables; equations of a straight line and a plane in space; definition of the differential function;

2) understands the notation of a polynomial with one variable in the standard form; the terms "total population", "sample", "variance", "standard deviation"; the geometric and physical meaning of the derivative; integration as a process inverse to differentiation, a system of axioms of stereometry and consequences of axioms, methods of proof and solutions of geometric problems. For the natural-mathematical direction, he/she additionally understands the essence of the method of coordinates; The essence of the formulas shall be the number of permutations, combinations, placements with repetitions;

3) applies algorithms for solving trigonometric, exponential, logarithmic equations and inequalities; algorithms for solving irrational equations; the technique of performing the simplest stereometric drawings; signs and properties of parallel, intersecting and perpendicular straight, parallel and perpendicular planes in solving problems; formulas for finding the surface areas and volumes of geometric bodies; rules of action on vectors for solving geometric problems; collinearity and vector coplanarity conditions; methods for finding critical points and extremum points, intervals of increasing (decreasing) function; differentiation technique and a table of derivatives for finding derivatives; integral table and Newton-Leibniz formula for finding a definite integral.

For the natural-mathematical direction, he/she additionally applies algorithms for solving irrational inequalities; Newton's binomial for approximate calculations; Bernoulli formula; ways of finding asymptotes for the function graph;

4) analyzes the mutual arrangement of straight lines in space, a straight line and a plane in space, planes in space, a plane and a body of revolution; sections of rotation

bodies by a plane; difference of types of random variables and calculates the numerical characteristics of discrete random variables; properties of the function according to its schedule; problems of geometrical and physical content and solves them with the help of a derivative and (or) an integral. For the natural-mathematical direction, it additionally analyzes the cross-section of polyhedrons by the plane (cube, rectangular parallelepiped, pyramid);

5) synthesizes various methods for solving trigonometric, exponential, logarithmic equations and inequalities; methods for solving irrational equations; scan models of polyhedral and rotation bodies; probabilistic models of real phenomena and processes. For the natural-mathematical direction, he/she additionally synthesizes combinatorial formulas for finding the probability of an event; various methods of solving irrational inequalities; properties of inverse trigonometric functions based on their definition and properties of mutually inverse functions;

6) evaluates the solution of trigonometric, exponential, logarithmic equations and inequalities; solving irrational equations; values of indicators of variation of statistical data.

For the natural-mathematical direction, he/she additionally estimates the solution of irrational inequalities.

Computer Science:

1) knows the purpose and basic functions of the system and application software; basics of working with database management systems; life cycle models for software development; basics of web programming, database theory for creating websites; software for developing mobile applications; network protocols and principles of the Internet; security measures designed to ensure data and computer system security;

2) understands the principles of organizing relational databases; basic principles of network technology; principles of processing audio and video information; main trends in the development of information technology;

3) applies information and communication technologies to create information objects and formalizes the results of their work; rules for creating queries in databases; cloud technologies when editing and storing documents; programming elements when developing websites and mobile applications; rules of personal safety in the network and netiquette; audio and video processing software;

4) analyzes queries using several criteria and relational operators to search for information; the task to determine the appropriate methods and approaches to its solution through modeling, algorithmization and programming; the results of processing and computer calculations for compliance with the task; ways to solve the problem in various ways to determine the most effective;

5) synthesizes information in various forms to express their ideas and thoughts; databases using forms and controls; websites for solving user tasks;

6) evaluates the results of its activities in accordance with the goals set in the modeling and development of the project (concreteness, measurability, attainability, realism, correlation); advantages and disadvantages of the software used, including programming tools.

#### History of Kazakhstan:

1) knows the ancient Central Asian centers of culture and places of their localization; historical types of nomadism; stages of formation and development of the Eurasian steppe civilization; centers of development of urban culture in the territory of Kazakhstan in different historical periods; the achievements of the peoples of Central Asia, which significantly influenced the world cultural and historical progress; ethnic history of the Kazakh people; ethnosocial structure of traditional Kazakh society; the history of the formation of a poly-ethnic society of Kazakhstan; historical stages of development of statehood of Kazakhstan; historical figures who have made a significant contribution to the development of political thought in Kazakhstan; the most important achievements of national culture and science in different historical periods; main historical sources and scientific works on the history of Kazakhstan;

2) understands the essence of the main events, phenomena and processes of the historical development of Kazakhstan; characteristic features of the ancient Central Asian centers of civilization, various types and forms of nomadism, urban and nomadic culture in the territory of Kazakhstan; the significance of the achievements of the peoples of Central Asia for world cultural and historical progress; the influence of the geographic factor on the formation and development of the life support system of the population of Kazakhstan in different historical periods; the influence of external and internal factors on political, socio-economic, cultural changes in Kazakhstan in different historical periods; features of ethnosocial organization of traditional Kazakh society; historical aspects of the development of political thought in Kazakhstan; The contribution of historical personalities to the political, socio-economic and cultural development of Kazakhstan; the value of the cultural heritage of the Kazakhs for the preservation of national identity; the need to respect the culture and traditions of the ethnic groups of Kazakhstan in order to preserve peace and harmony in society;

3) applies the skills of historical thinking in determining the Central Asian centers of culture, the states that existed on the territory of Central Asia and Kazakhstan, in time and space; identifying features of the formation and development of the culture of nomads of Central Asia; identifying features of the political, socio-economic and cultural development of Kazakhstan in various historical periods; defining the role of

historical personalities in the development of Kazakhstan; determination of own position in relation to events and phenomena of the past and present of Kazakhstan;

4) analyzes the historical development of Kazakhstan in the context of world history, identifying common features and features; the influence of various factors (geographic, demographic, migration, political, socio-economic, cultural) on the formation and development of civilizations and states on the territory of Kazakhstan in different historical periods; historical events, phenomena, processes in the history of Kazakhstan in order to determine causal relationships; motives and results of the activities of historical personalities of Kazakhstan; sources and works of scientists on the history of Kazakhstan; main scientific theories concerning the process of ethnogenesis, political genesis and cultural genesis on the territory of Kazakhstan; trends and development prospects of modern Kazakhstan;

5) synthesizes works of a creative, educational, research, design nature using the methods of historical analysis; comparative historical characteristics in order to determine the general laws and peculiarities of the historical development of Kazakhstan and other regions of the world; conclusions and hypotheses for the formation of a historical understanding and a holistic view of the history of Kazakhstan;

6) assesses the degree of influence of various factors (geographic, demographic, migration, political, socio-economic, cultural, etc.) on the development of Kazakhstan in different historical periods; the activities of historical personalities in the context of their influence on national history; the contribution of the culture of the peoples of Central Asia to the development of world civilization; reliability of historical information; the degree of argumentation of various scientific theories on the problems of the ethnic, political, cultural and socio-economic history of Kazakhstan.

#### Self-Knowledge:

1) knows human values as the basis of a person's spiritual life; norms of moral behavior in society; about the role of positive thinking in everyday life; about the true spiritual nature; about the purpose of man; about the importance of manifesting selfless love in everyday life, following the voice of conscience;

2) understands the significance of spiritual and moral values, self-knowledge and self-development for the development of a person, the importance of striving for continuous spiritual self-improvement, its role in the family, team, and society; the need to develop high moral qualities, skills of serving the community; the interrelation of physical and spiritual health; their involvement in the life of the country, city, village, school, family; responsibility for thoughts, words and deeds;

3) applies knowledge of universal values in everyday life, the ability to moral choice and the willingness to live in the unity of thought, word and deed, in harmony with oneself; community service skills; the ability to freely express their thoughts, their position in life in creative activities; healthy lifestyle skills, personal experience of moral behavior, experience of serving the community;

4) analyzes his/her own behavior in terms of spiritual and moral values; human relationships; information from various sources, from the standpoint of morality; life situations in terms of moral lessons; the commensurability of desires and opportunities, his/her own goals and the ways to achieve them in accordance with moral norms, spiritual and moral foundations of life in the family, team, and society; solutions to problems based on moral choice; creates conditions for their own spiritual and moral, personal and professional growth; atmosphere of goodwill and mutual understanding in the family, team, society; harmonious relations with oneself and the world around on the basis of the principles of non-violence;

5) synthesizes spiritual and moral knowledge to improve relationships in the family, interpersonal and public spheres, search for ways of spiritual and moral improvement;

6) evaluates his/her actions, his/her emotional state, ways of interaction between man and nature from the point of view of universal human values.

#### Physical Training:

1) knows the rules and safety techniques when practicing physical training; rules and techniques for performing motor actions, complexes of physical exercises of various directions; biodynamic features and content of physical exercises, the basics of their use in solving problems of physical development and health promotion; the physiological bases of the activity of the systems of one's own organism under muscle loads, the possibilities of their development and improvement by means of physical training;

2) understands the psycho-functional characteristics of their own body; the possibility of the formation of individual traits and personality traits through regular physical training classes; the need for a healthy lifestyle; levels of complexity of the performed motor actions; the need to achieve the required intensity of various physical loads at different stages of physical fitness;

3) applies various types of physical exercises for the purpose of self-improvement, leisure activities and a healthy lifestyle; the main technical and tactical actions in the game or the process of performing a specially created set of exercises; individual ways to control the development of the adaptive properties of the body, health promotion and increased physical fitness; ways of organizing independent exercise with different

functional orientations, rules for the use of sports equipment and equipment, information and communication technologies; injury prevention during exercise and the provision of first aid;

4) analyzes the functional state of his/her own body when performing physical exercises in order to achieve a health effect and improve physical condition;

5) synthesizes acquired skills in a system of actions in various situations both in physical training classes and in everyday life; healthy and safe lifestyle skills; assimilation of the rules of individual and collective safe behavior in emergency situations that threaten the life and health of people;

6) assesses the importance of physical exercises of general, professional, applied and recreational orientation; levels of physical development and physical fitness; the effectiveness of physical exercise, the functional state of the body and physical performance; dosage of physical activity and the direction of the effects of exercise.

#### Elementary Military and Technological Training:

1) knows the basics of military affairs, mission, organizational structure, standard armament and equipment, the capabilities of a lower tactical unit, the basics of using orientation tools, robotics and IT technologies, and civil defense organizations of the Republic of Kazakhstan; warning system and procedures for the application of modern means of destruction, terrorist threat and natural disasters; characteristics of natural disasters, the organization of rescue and emergency rescue operations in the affected areas; the purpose, structure and procedure for the use of standard weapons, the use of individual and collective protective equipment, radioactive and chemical control devices, as well as the procedure for organizing and conducting evacuation and dispersal of the population; tasks and types of first aid; Traffic regulations;

2) understands the basics of military affairs, robotics and IT-technologies, features of the impact of nuclear, chemical, bacteriological (biological) weapons and other modern means of destruction on people, economic objects, the environment and the environmental consequences of its use; consequences and possible economic, environmental damage in case of emergencies of a natural or man-made nature;

3) acts as a soldier on the battlefield in various conditions of the situation, a scout as part of a post of radiation and chemical observation; uses regular weapons, means of individual and collective protection; renders first aid for injuries, bleeding and burns, open and closed fractures of various parts of the body, frostbite, sun (heat) shock, electric shock, drowning; applies bandage dressings for various types of lesions on different parts of the body; uses Internet connection, uses audio-visual technologies, owns the theoretical fundamentals of driving automobiles, robotics, uses digital photo and video equipment;

4) analyzes possible emergency situations when using modern means of destruction; possible situations in the event of a natural or man-made emergency;

5) synthesizes algorithms of actions in the event of possible emergency situations in the application of modern means of destruction; action algorithms in the event of possible emergencies of a natural or man-made nature;

6) assesses the consequences of decisions made.

76. Expected results after the completion of general secondary education in academic subjects of the advanced level of education in the natural-mathematical direction.

Physics:

1) knows the physical quantities and concepts of mechanics (kinematics, dynamics, statics, hydroaerostatics, hydrodynamics), molecular physics and thermodynamics; electromagnetism (electrostatics, direct and alternating electric current, magnetic field, electromagnetic induction), optics (geometric and wave), quantum physics; the main stages of the evolution of the universe; methods of transmitting and receiving information, principles for constructing basic radio engineering devices and systems; the history of the emergence and basic principles of nanotechnology;

2) understands the basic laws, principles and postulates of mechanics (kinematics, dynamics, statics, hydroaerostatics, hydroaerodynamics), molecular physics and thermodynamics; basic laws, principles of electromagnetism (electrostatics, direct and alternating electric current, magnetic field, electromagnetic induction), optics (geometric and wave), quantum physics; research methods of nanosystems and nanomaterials; the place of physical science in the modern scientific picture of the world; the role of physics in shaping horizons and solving practical problems;

3) applies fundamental physical concepts, laws, laws and theories; terminology and symbolism of physical science; The main methods of scientific knowledge used in physics: observation, description, measurement, experiment; the possibilities of new information technologies for searching, processing information on physics in computer databases and the Internet; methods of processing measurement results and experiments, determining the relationship between physical quantities;

4) analyzes dependencies presented as power functions; the relationship between two variables, the effects of various physical forces on phenomena, on bodies and objects in the Universe, graphs of the dependence of physical processes and the relationship between variables; principles of operation and characteristics of devices and devices, the scope of use of scientific discoveries; causal relationships between human production and the state of the environment, the scope of nanotechnology;



parameters characterizing the state of the Universe and possible ways of its development;

5) synthesizes collected and processed data, information for presentation in the form of a table, graph, message, report, presentation; scientific models and evidence for hypotheses, arguments, and explanations; plan for the experiment and research;

6) evaluates knowledge of laws and their application; the results of observations and experiments; the applicability of methods of scientific knowledge in specific cases; the consequences of household and industrial human activities related to physical processes from the standpoint of environmental safety.

#### Chemistry:

1) knows the basic chemical concepts; atomistic theory; theory of the chemical structure of organic substances; classification of substances for various reasons; nomenclature, structure, physico-chemical properties of the main classes of inorganic and organic compounds; special properties and some applications of polymeric materials, metals and alloys, non-metals and their compounds; some applications of nanotechnology;

2) understands the ability of various substances to enter into chemical reactions; energy changes in chemical reactions; basic mechanisms of chemical transformations; fundamentals of the kinetic theory, homogeneous and heterogeneous catalysis, electrochemistry; special properties of transition metals; chemical properties of inorganic and organic compounds, depending on the structure; principles of the study of compounds through instrumental methods of analysis; principles of chemical production of the most important inorganic and organic substances;

3) applies knowledge and skills to explain chemical phenomena occurring in nature, everyday life and in industry; to determine the possibility of chemical transformations under various conditions and assess their effects; methods of qualitative and quantitative analysis of substances; rules of environmentally friendly behavior in the environment; methods for assessing the impact of chemical pollution of the environment on living organisms; critical thinking and knowledge of scientific methods for developing, conducting, observing, recording and analyzing the results of chemical experiments; rules for the safe handling of flammable and toxic substances, laboratory equipment;

4) analyzes the dependence of the properties of substances on their composition and structure; the simplest spectra of substances to determine their structure and properties; the dependence of the rate of chemical reaction and chemical equilibrium on various factors; trends in the properties of elements in the periodic system; various theories of acids and bases, ionic equilibria in solutions;

5) synthesizes genetic relationships between the most important classes of inorganic and organic compounds; evidence-based arguments about the possibility and results of chemical transformations using the theory of chemical bonding and the structure of substances;

6) evaluates the properties of various materials; the influence of various factors on the rate of chemical reactions; the effect of various environmental conditions on chemical equilibrium; the effects of chemical production on the environment and human health; effects of radioactive decay; accuracy of information from different sources.

#### Biology:

1) knows the structure, composition and functions of proteins, fats, carbohydrates, nucleic acids; basic mechanisms of antigen-antibody reactions; the main provisions of the chromosomal theory of heredity, human chromosomal diseases; types / types of variability, nutrition and metabolism of living organisms; speciation methods; basics of genetics and possibilities of genetic engineering; scheme and stages of life on Earth formation, anthropogenesis; global and regional environmental issues and principles for the protection of natural resources;

2) understands the processes occurring during the dark and light phase of photosynthesis; the mechanism of substance transport, translocation, the occurrence of chromosomal, gene mutations; the essence of genetic engineering manipulations; stages of energy metabolism; the relationship between genetic variation and evolution; patterns of inheritance; mechanism of evolutionary processes; rules of the ecological pyramid; consequences of human impact on the environment;

3) applies schemes and methods for solving problems of molecular biology and genetics; statistical methods for ecosystem analysis, character inheritance and modification variability; methods of qualitative and quantitative analysis of substances; critical thinking and knowledge of scientific methods for developing, conducting, observing, recording and analyzing the results of experiments; rules for the safe handling of drugs, toxic substances, laboratory equipment;

4) analyzes the characteristics of the processes of photosynthesis and chemosynthesis; factors affecting the process of evolution; the structure of RNA and DNA molecules; the processes of mutation and repair, recombination and replication of DNA, the relationship between the structure of DNA and its function; differences between spermatogenesis and oogenesis; species diversity and ecosystem sustainability; environmental situation in the world and Kazakhstan;

5) synthesizes the scheme of gametogenesis in humans; food chain schemes in ecosystems; collected and processed data, information for presentation in the form of a

table, graph, message, report, presentation; scientific models and evidence for hypotheses, arguments, and explanations; plan for the experiment and research; research, educational and creative projects; possible solutions to environmental problems in Kazakhstan;

6) assesses the influence of various factors on the activity of enzymes, the structure of proteins, the productivity of photosynthesis; cytological basis of monohybrid, dihybrid crossing, patterns of modification variability; causes of mutagenesis; ecosystems of their region; ethical issues of genetically modified and transgenic organisms, research in biotechnology.

#### Geography:

1) knows the main categories of geography, geoComputer Science, geo-ecology, nature management, geopolitics, geo-economics; geo-ecological, economic-geographical, socio-geographical, political-geographical and geopolitical maps; geographical features and modern problems of environmental management; causes, factors and sources of anthropogenic impact on the geosphere; system and main directions of environmental protection measures; modern systematics of types and types of environmental management and general principles of rational environmental management; differences in the level and quality of life of the population, the geographical features of the sectoral and territorial structure of the economy of individual regions and countries; geographical specificity of individual countries and regions, their differences in the level of socio-economic development, specialization in the system of international geographical division of labor; the content of the modern political map of the world; development indicators of the world economy; structure of state territory and types of states; state borders, their types and dynamics; features of the current geopolitical and geo-economic situation of the Republic of Kazakhstan; Kazakhstan's participation in regional, international political processes, in the international geographical division of labor; geographical aspects of the global problems of mankind; Kazakhstan's participation in regional, international political processes, in the international geographical division of labor; geographical aspects of the global problems of mankind; Kazakhstan's participation in regional, international political processes, in the international geographical division of labor; geographical aspects of the global problems of mankind;

2) understands the modern economic-geographical and political-geographical picture of the world; the need to integrate geography with other sciences; features and dynamics of geo-ecological, social, geo-economic and geopolitical processes; unity and sustainability of the geographical system "nature - population (society) - economy (economy)"; ways to stabilize anthropogenic pressure on the environment; the role of

scientific and technological progress in environmental protection; natural, economic and social factors that shape and change the geographical (environmental) environment of human habitation at levels from global to local; the degree of dependence of the quality of life on the quality of the environment; geographical specificity of large regions and countries of the world in the context of globalization; the value and essence of modern integration and geopolitical processes; the role and spheres of influence, the nature of the interaction of subjects of geopolitics, especially the geopolitical zoning of the world, the causes of modern global problems of mankind and the ways to solve them;

3) applies modern methods of geographical research and their combinations; diverse sources of geographic information; elements of the additional characteristics of thematic maps; skills of search, processing, systematization, interpretation, transformation, storage, transfer and presentation of geographic information in the required context; cartometry techniques; various formulas for making calculations in the required context;

4) analyzes the causal relationships between processes and phenomena occurring in the geographical envelope and geographical environment; the relationship of nature and society and their spatial features; features of location, relationships and other spatial relationships of geographical objects, processes and phenomena; natural, socio-economic foundations of the modern world economy; quantitative and qualitative geospatial data; modern factors of location of industries; world ratings and indices;

5) synthesizes models, research and creative projects, information materials; development of solutions to the problems of the functioning and development of geographical objects; knowledge and skills for the classification, systematization, generalization and differentiation of the studied objects, processes and phenomena; knowledge and skills for explaining processes and phenomena, making forecasts, determining the nature of changes and prospects for the development of geographic objects, processes and phenomena;

6) assesses the degree of reliability of sources of geographic information; parameters and ecological state of geospheres; the degree of natural, anthropogenic and man-made changes in individual territories and their consequences; the effectiveness of environmental protection measures; the level of scientific and technological progress in environmental protection and nature management; environmental quality; the quality of life; indicators and place of various states in ratings and indices; geographical and geopolitical position of territories of any rank; countries of the world on the main socio-economic indicators; morphological features of the state territory.

77. Expected results at the completion of general secondary education in academic subjects of the standard level of education in natural-mathematical direction.

The World History:

1) knows the historical types of civilizations and the places of their localization; historical forms of the state and the stages of formation and development of state-legal institutions; military-political events that influenced the course of world history; world discoveries and achievements that influenced the world cultural and historical progress; history and current state of world culture; basic scientific theories concerning the origin and development of man, society, the peoples of the world and civilizations; historical figures who have made a significant contribution to the development of world social thought; main generalizing scientific works on world history;

2) understands the cultural and historical process in its unity and diversity; characteristic features of civilizations, historical forms and types of the state; the importance of state-legal institutions; the influence of the natural-geographical factor on the formation and development of world civilizations; the influence of military-political events on the course of history; the importance of the great discoveries and achievements of mankind for the world cultural and historical progress; the influence of external and internal factors on political, socio-economic, cultural changes in the world in various historical periods; historical aspects of the development of world social thought; the influence of personality on the development of history; the value of universal values for the preservation of peace and stability in the global world;

3) applies the skills of historical thinking in determining the state formations and cultural and civilizational centers of the world in time and space; determination of characteristic features of civilizations, historical forms and types of the state; identifying features of the political, socio-economic and cultural development of the peoples of the world in different historical periods; defining the role of a historical person in world history; determining their own position in relation to events and phenomena of the past and present;

4) analyzes the historical development of the peoples of the world, identifying common features and features; the influence of various factors (geographic, demographic, migration, political, socio-economic, cultural) on the formation and development of society in different historical periods; historical events, phenomena, processes of world history in order to determine cause-effect relationships; motives and results of historical personalities; historical sources; trends and prospects for the development of modern society in the context of globalization;

5) synthesizes works of a creative, educational, research, design nature using the methods of historical analysis; comparative historical characteristics in order to determine the general laws and peculiarities of the historical development of the peoples of the world;

6) assesses the degree of influence of various factors (geographic, demographic, migration, political, socio-economic, cultural) on the development of society in different historical periods; the activities of historical personalities in the context of their influence on world history; the contribution of the culture of various peoples of the world to the formation and development of world civilization; reliability of historical information; the degree of argumentation of various scientific theories on the problems of the ethnic, political, cultural and socio-economic history of the world.

#### Graphics and Design:

1) knows the basic tools, methods, ways of fixing visual information; main types of graphic images; basic design techniques and graphics tools; laws of shaping geometric bodies; general rules for drawing design; general concepts of engineering, construction drawings, elements of topographical drawing; stages of design and manufacture of the product; methods and means of displaying visual information by means of manual and computer graphics;

2) understands the meaning of graphic images in the visualization and transmission of information about the objective world, phenomena and processes; patterns of graphical modeling; the differences between the types of graphic images in the display of the shape of objects, their spatial and metric characteristics; opportunities and features of manual and computer graphics in practice; features of prototyping and modeling;

3) applies tools and materials for graphic works; projection methods; methods of constructing geometric (constructive) forms of the subject; methods for constructing a drawing of surface scans of geometric bodies; methods of converting the type and composition of images; reference documentation for making design and constructive decisions; tools for manual and computer graphics in solving various problems of graphic modeling, prototyping, design;

4) analyzes the properties of images and various ways of transmitting visual information; the geometric shape and design of objects when performing their images; the possibility of using different types of images to identify the shape of the object; integrated drawing for determining the shapes of objects and graphic composition of images;

5) synthesizes contour images to reconstruct the shape of the object; graphic information in source images for their systematization by type and composition;

various types of images for full and sufficient display of graphic information; various graphics tools for the transfer and implementation of creative ideas;

6) evaluates the methods of fixing visual information; graphic images of various objects; different ways to convert images; design methods and graphics tools used in the process of project activities; constructive and geometric characteristics of objects; process and result of creative activity.

#### Fundamentals of Law:

1) knows the systems, norms, sources of constitutional law; constitutional political rights; systems, norms, subjects of administrative law; labor law, its importance, the tasks of organizing administrative labor discipline, responsibility for violation of labor discipline, sources, civil law relations, forms of property rights, the scope of application of consumer law; family relationships, rights and duties of parents and children; the concept, signs of criminal law, criminal liability, its types, the concept of protecting the rights of citizens, as well as the need and possibility of its implementation;

2) understands the role and importance of law as the most important social regulator and element of culture of society, the basic legal principles of Kazakhstan society, the system and structure of law, legal relations, the essence of the offense and legal responsibility, legal regulation of the socio-economic sphere, legal activity as a type of implementation of the right;

3) applies evidentiary argumentation of its own position in specific legal situations using regulatory acts, legal knowledge to evaluate specific legal norms in terms of their compliance with the legislation of the Republic of Kazakhstan; the skill of independent search for legal information; legal rules when participating in discussions on current social and legal issues in everyday life;

4) analyzes legal norms, information of a legal nature, obtained from various sources;

5) synthesizes the information obtained in order to correlate their own behavior and the actions of other people with accepted moral and legal norms; knowledge, skills and abilities for collecting and analyzing information in a given context, for assessing the situation, expressing one's attitude, making decisions that do not contradict human and ethnocultural values;

6) independently evaluates the specifics of the application of the legislation of the Republic of Kazakhstan in solving specific problems.

78. Expected results at the completion of general secondary education in academic subjects of advanced level of studies in the social and humanitarian field.

#### Foreign Language.

1) listening: understands the basic meaning of clearly pronounced statements within the limits of the literary norm on known topics, simple informational messages about ordinary everyday issues and topics related to studies and future professional activities; able to follow the main points of a long discussion in general terms; understands a lecture or conversation on educational and professional topics, provided that the subject of the speech is familiar, and the performance itself is simple and has a clear structure; understands detailed technical instructions; most of the television programs on topics of interest, such as interviews, short lectures, reports, when they sound slow and clear;

2) speaking: can describe something or speak in the form of a series of consecutive statements; retell the plot of a book or film and describe your reaction to it; make short, rehearsed announcements on the topic as part of educational activities; make a report on familiar topics, which will be so clear that throughout its length it is possible to follow the thought, and the main provisions of which are clearly explained, to answer a number of questions regarding your speech with the right to ask a certain question; describe your experience, formulating your feelings and reactions to it in a complex coherent text;

3) reading: understands in detail simple texts containing factual information on the topic of interest, a description of events, sensations and desires in personal writings; can read long texts of fiction and non-fiction within certain unfamiliar general and educational topics; identify the main provisions of different types of newspaper articles, use unfamiliar paper and digital resources to test the meaning and increase understanding;

4) writing: able to write simple connected texts on a wide range of familiar and interesting questions, tying together a number of individual short elements, summarize and communicate their opinions on the collected factual information on familiar everyday and social issues within the field of activity quite freely; write personal writings, telling about the news and your thoughts on abstract topics or topics related to culture: music, movies; make entries in the form of a list of key points during a simple lecture, provided that the topic is familiar, the speech is simple and pronounced clearly in the normative dialect; retell the story in writing.

The World History:

1) knows the historical types of civilizations and the places of their localization; historical forms of the state and the stages of formation and development of state-legal institutions; military-political events that influenced the course of world history; world discoveries and achievements that influenced the world cultural and historical progress; history and current state of world culture; basic scientific theories



concerning the origin and development of man, society, the peoples of the world and civilizations; historical figures who have made a significant contribution to the development of world social thought; main generalizing scientific works on world history;

2) understands the cultural and historical process in its unity and diversity; characteristic features of civilizations, historical forms and types of the state; the importance of state-legal institutions; the influence of the natural-geographical factor on the formation and development of world civilizations; the influence of military-political events on the course of history; the importance of the great discoveries and achievements of mankind for the world cultural and historical progress; the influence of external and internal factors on political, socio-economic, cultural changes in the world in various historical periods; historical aspects of the development of world social thought; the influence of personality on the development of history; the value of universal values for the preservation of peace and stability in the global world;

3) applies the skills of historical thinking in determining the state formations and cultural and civilizational centers of the world in time and space; determination of characteristic features of civilizations, historical forms and types of the state; identifying features of the political, socio-economic and cultural development of the peoples of the world in different historical periods; defining the role of a historical person in world history; determining their own position in relation to events and phenomena of the past and present;

4) analyzes the historical development of the peoples of the world, identifying common features and features; the influence of various factors (geographic, demographic, migration, political, socio-economic, cultural) on the formation and development of society in different historical periods; historical events, phenomena, processes of world history in order to determine cause-effect relationships; motives and results of historical personalities; historical sources; main scientific theories concerning the process of ethnogenesis, political genesis and cultural genesis; trends and prospects for the development of modern society in the context of globalization;

5) synthesizes works of a creative, educational, research, design nature using the methods of historical analysis; comparative historical characteristics in order to determine the general laws and peculiarities of the historical development of the peoples of the world; conclusions and hypotheses for the formation of a historical understanding and a holistic view of the world cultural and historical process;

6) assesses the degree of influence of various factors (geographic, demographic, migration, political, socio-economic, cultural) on the development of society in different historical periods; the activities of historical personalities in the context of

their influence on world history; the contribution of the culture of various peoples of the world to the formation and development of world civilization; reliability of historical information; the degree of argumentation of various scientific theories on the problems of the ethnic, political, cultural and socio-economic history of the world.

Geography:

1) knows the place and role of geo-ecology, geo-Computer Science, geopolitics, geoeconomics, regional geography in the system of geographical sciences; basic scientific concepts in the field of environmental management, economic, social, political geography and geopolitics; factors, sources and consequences of anthropogenic impact on the geosphere; environmental risks; signs of an environmental crisis; ecological classification of territories; system and main directions of environmental protection measures; the specifics of regional environmental management systems; basic administrative, economic and legal mechanisms for environmental management; directions of modern environmental policy; environmental quality indicators; quality of life indicators; models of economic systems; key indicators of the development of the world economy and countries of the world; set of international relations between the countries of the world; globalization process; Kazakhstan's participation in regional and international organizations; modern global problems of mankind and their manifestations at the local, regional levels; directions of geopolitical activity of the Republic of Kazakhstan in the light of national interests; historical and cultural regions of the world;

2) understands the spatial diversity of the modern world, its general and regional features; patterns of development of nature, population and economy; problems of interaction between society and nature; features of natural, social, economic and political processes; personal responsibility for the environment; the dynamics of global and local natural and socio-economic, ecological processes; ways to optimize the interaction of society and nature, stabilize anthropogenic pressure on the environment; the role of scientific and technological progress in environmental protection; the degree of dependence of the socio-economic and political development of the territory on geographical factors; the dependence of the quality of life on the quality of the environment, the origins of modern socio-economic and environmental problems and ways to resolve them; the role and spheres of influence, the nature of the interaction of subjects of geopolitics;

3) applies the methods of geo-ecological, economic-geographical, socio-geographical, political-geographical and geopolitical research and their combination; geospatial data sources; skills of search, processing, systematization, interpretation,

transformation, storage, transmission and presentation of geospatial data in the required context; cartometry techniques;

4) analyzes quantitative and qualitative geospatial data; signs of classification of geographical objects, processes and phenomena; causal relationships between processes and phenomena occurring in the geographical envelope and geographical environment; features of location, relationships and other spatial relationships of geographical objects, processes and phenomena; the influence of environmental factors on people's lives and activities; natural, socio-economic foundations of social production; the impact of the proposed economic activity on the state of the environment and public health; signs of an environmental crisis; organizational and legal framework for environmental protection and environmental management; modern factors of location of industries; geoecological, geopolitical and economic processes; international political, economic, socio-cultural, environmental ties and relations; territorial and political systems; structure of the state territory; state borders, their types and dynamics; the system of national interests of the country; geopolitical activity of subjects of geopolitics; world geopolitical space; geographical and geopolitical position, features and factors of political, economic and social development, the role and place of Kazakhstan in the world; geographical and geopolitical position, features and factors of political, economic and social development, the role and place of Kazakhstan in the world; geographical and geopolitical position, features and factors of political, economic and social development, the role and place of Kazakhstan in the world;

5) synthesizes models, research and creative projects, information materials; development of solutions to the problems of the functioning and development of geographical objects; knowledge and skills for the classification, systematization, generalization and differentiation of the studied objects, processes and phenomena; knowledge and skills for explaining processes and phenomena, making forecasts, determining the nature of changes and prospects for the development of geographic objects, processes and phenomena;

6) assesses the parameters and the ecological state of the geospheres; anthropogenic load on the geosphere and their consequences; geographical and geopolitical position, natural resource potential of territories of any rank; quality of the natural environment; environmental risks; degree of environmental crisis; the effectiveness of environmental protection measures; the level of scientific and technological progress in environmental protection and nature management; environmental quality; the quality of life; indicators and place of various states in international comparisons; advantages and disadvantages of various models of the

development of the world economy; the positive and negative impact of globalization on the countries of the world; morphological features of the state territory; the effectiveness of geopolitical activity of subjects of geopolitics; results of international organizations activities activities.

#### The Basics of Law:

1) know the systems, norms, sources of constitutional law; constitutional political rights; systems, norms, subjects of administrative law; labor law, its importance, the tasks of organizing administrative labor discipline, responsibility for violation of labor discipline, sources, civil law relations, forms of property rights, the scope of application of consumer law; family relationships, rights and duties of parents and children; the concept, signs of criminal law, criminal liability, its types, the concept of protecting the rights of citizens, as well as the need and possibility of its implementation;

2) understands the role and importance of law as the most important social regulator and element of culture of society, the basic legal principles of Kazakhstan society, the system and structure of law, legal relations, the essence of the offense and legal responsibility, legal regulation of the socio-economic sphere, legal activity as a type of implementation of the right;

3) applies evidentiary argumentation of its own position in specific legal situations using regulatory acts, legal knowledge to evaluate specific legal norms in terms of their compliance with the legislation of the Republic of Kazakhstan; the skill of independent search for legal information; legal rules when participating in discussions on current social and legal issues in everyday life;

4) analyzes the information provided in the framework of controversial issues arising in the process of legal relations in a particular area of legislation, legal norms, information of a legal nature, obtained from various sources;

5) synthesizes the information obtained in order to correlate their own behavior and the actions of other people with accepted moral and legal norms; knowledge, skills and abilities for collecting and analyzing information in a given context, for assessing the situation, expressing one's attitude, making decisions that do not contradict human and ethnocultural values;

6) independently evaluates the specifics of the application of the legislation of the Republic of Kazakhstan in solving specific problems.

79. Expected results after the completion of general secondary education in academic subjects of the standard level of studies in the social and humanitarian field.

Physics.

1) knows the physical quantities and concepts of mechanics (kinematics, dynamics, statics, hydroaerostatics, hydrodynamics), molecular physics and thermodynamics; electromagnetism (electrostatics, direct and alternating electric current, magnetic field, electromagnetic induction), optics (geometric and wave), quantum physics; the main stages of the evolution of the universe; methods of transmitting and receiving information, the history of origin and the basic principles of nanotechnology;

2) understands the basic laws of molecular physics and thermodynamics; basic laws, principles of electromagnetism (electrostatics, direct and alternating electric current, magnetic field, electromagnetic induction), optics (geometric and wave); research methods of nanosystems and nanomaterials; the place of physical science in the modern scientific picture of the world; the role of physics in shaping horizons and solving practical problems;

3) applies fundamental physical concepts, laws, laws and theories; terminology and symbolism of physical science; The main methods of scientific knowledge used in physics: observation, description, measurement, experiment; determine the relationship between physical quantities;

4) analyzes dependencies presented as power functions; the relationship between two variables, the effects of various physical forces on phenomena, on bodies and objects in the Universe, graphs of the dependence of physical processes and the relationship between variables; causal relationships between human production and the state of the environment, the scope of nanotechnology; parameters characterizing the state of the Universe and possible ways of its development;

5) synthesizes collected and processed data, information for presentation in the form of a table, graph, message, report, presentation; scientific models and evidence for hypotheses, arguments, and explanations; plan for the experiment and research;

6) evaluates knowledge of laws and their application; the results of observations and experiments; the consequences of household and industrial human activities related to physical processes from the standpoint of environmental safety.

#### Chemistry:

1) knows the basic chemical concepts; atomistic theory; theory of the chemical structure of organic substances; classification of substances for various reasons; nomenclature, structure, physico-chemical properties of the main classes of inorganic and organic compounds; special properties and some applications of polymeric materials, metals and alloys, non-metals and their compounds;

2) understands the ability of various substances to enter into chemical reactions; fundamentals of kinetic theory, homogeneous and heterogeneous catalysis; chemical

properties of inorganic and organic compounds, depending on the structure; principles of chemical production of the most important inorganic and organic substances;

3) applies knowledge and skills to explain chemical phenomena occurring in nature, everyday life and in industry; methods for qualitative analysis of substances; rules of environmentally friendly behavior in the environment; methods for assessing the impact of chemical pollution of the environment on living organisms; critical thinking and knowledge of scientific methods for developing, conducting, observing, recording and analyzing the results of chemical experiments; rules for the safe handling of flammable and toxic substances, laboratory equipment;

4) analyzes the dependence of the properties of substances on their composition and structure; the dependence of the rate of chemical reaction and chemical equilibrium on various factors; trends in the properties of elements in the periodic system;

5) synthesizes genetic relationships between the most important classes of inorganic and organic compounds; evidence-based arguments about the possibility and results of chemical transformations using the theory of chemical bonding and the structure of substances;

6) evaluates the properties of various materials; the influence of various factors on the rate of chemical reactions; the effect of various environmental conditions on chemical equilibrium; the effects of chemical production on the environment and human health; accuracy of information from different sources.

#### Biology:

1) knows the structure, composition and functions of proteins, fats, carbohydrates, nucleic acids; basic mechanisms of antigen-antibody reactions; the main provisions of the chromosomal theory of heredity, human chromosomal diseases; types (types) of variability, nutrition and metabolism of living organisms; basics of genetics and possibilities of genetic engineering; scheme and stages of life on Earth formation, anthropogenesis; global and regional environmental issues and principles for the protection of natural resources;

2) understands the processes occurring during the dark and light phase of photosynthesis; the mechanism of transport of substances, the occurrence of chromosomal, gene mutations; stages of energy metabolism; the relationship between genetic variation and evolution; patterns of inheritance; mechanism of evolutionary processes; consequences of human impact on the environment;

3) applies schemes and methods for solving problems of molecular biology and genetics; statistical methods for ecosystem analysis, character inheritance and modification variability; critical thinking and knowledge of scientific methods for

developing, conducting, observing, recording and analyzing the results of experiments; rules for the safe handling of drugs, toxic substances, laboratory equipment;

4) analyzes the characteristics of the processes of photosynthesis and chemosynthesis; factors affecting the process of evolution; the structure of RNA and DNA molecules; mutation processes, the relationship between the structure of DNA and its function; differences between spermatogenesis and oogenesis; species diversity and ecosystem sustainability; environmental situation in the world and Kazakhstan;

5) synthesizes the scheme of gametogenesis in humans; food chain schemes in ecosystems; collected and processed data, information for presentation in the form of a table, graph, message, report, presentation; scientific models and evidence for hypotheses, arguments, and explanations; plan for the experiment and research; research, educational and creative projects; possible solutions to environmental problems in Kazakhstan;

6) assesses the influence of various factors on the activity of enzymes, the structure of proteins, the productivity of photosynthesis; cytological basis of monohybrid, dihybrid crossing, patterns of modification variability; causes of mutagenesis; ecosystems of their region; ethical issues of genetically modified and transgenic organisms, research in biotechnology.

80. Expected results upon the completion of general secondary education in academic subjects of the standard level of education in natural-mathematical and social-humanitarian fields.

#### Fundamentals of Entrepreneurship and Business:

1) understands entrepreneurship as an economic phenomenon and describes its role; describes the differences between entrepreneurship and business; understands entrepreneurship as a form of self-realization and personal motivation; analyzes the competence of the entrepreneur; evaluates the possibility of achieving their own goals through the prism of business; evaluates its level of development in relation to the potential entrepreneur; Recognizes current trends in entrepreneurship, including in Kazakhstan;

2) knows what markets are in the context of both economics and marketing; understands the value of ideas in entrepreneurship; makes a distinction between the business to business and business to consumer segments; applies ideas generation tools; proposes an idea design plan; converts the implementation needs of the idea into the requirements for the team; uses team building tools; applies business model tools; identifies the relationship between the constituent parts of the business model; describes the expected consequences of changing the available data; applies business

model building tools; uses the concepts and principles of Lean Start up (Lean Star standard curriculum ) (Lean Manufacturing) in terms of entrepreneurship;

3) explains the concept and functions of marketing; defines the notion of competition; analyzes the forms of influence of various forces on competition; describes the profile of its consumer; understands the essence of distribution channels and distinguishes between their classification; proposes a plan for bringing the value of your product / service to the end user; describes the relationship with each segment of consumers;

4) understands the value of money in the economy; understands the value of income and expenses; understands the difference between assets and liabilities; understands the essence of the concepts of excess and deficiency, assesses their impact on the pricing process; distinguishes between the concepts of "price", "value", "pricing structure"; understands the significance of fixed and variable costs in the pricing process; evaluates the possibilities of creative and innovative approaches in the formation of new profit channels; uses the AB-testing tool (method for evaluating the effectiveness of product variants);

5) understands the nature and value of resources in business; proposes a plan for the most efficient use of business resources; assesses the value of business resources; knows the principles of limited business resources; gives examples of efficient use of resources in conditions of limitedness; understands the essence of intellectual resources in business; develops a strategy for the replenishment of enterprise resources;

6) understands the value of the partnership and its types; evaluates the benefits of outsourcing business; describes key activities; distinguishes between the management of human, material and intellectual resources; explains the rules of sales management; describes the project and its characteristics; applies time management rules in the project; proposes a project plan; uses information tools in the project;

7) understand the key obligations of business to the state; identifies the relationship between the tax regime and the legal form of business; draws up a general income plan for your business idea; explains the formation of the statement of profit and loss; explains the scheme for generating a cash flow statement; identifies the relationship between project profitability and fixed and variable costs;

8) describes the market development forecast; makes a distinction between extensive and intensive way of business development; evaluates the effectiveness of various types of business scaling; understands quality management tools; understands the essence of strategic planning; makes the mission and vision of his future company;



distinguishes between strategic and financial business objectives; understands the composition of the legal responsibility of the entrepreneur.

81. The content of the course "Fundamentals of life safety" is implemented in the framework of the course "Initial military and technological training" with an annual workload of 12 hours by teachers and organizers of basic military training. Classes on the basics of life safety are mandatory and are held during school hours.

82. Evaluation of the educational achievements of students shall be carried out through the use of criteria for assessing the knowledge of students. Evaluation criteria shall be used to measure the level of learning achievement of students.

83. Evaluation criteria shall be developed in accordance with the learning objectives for each study program.

84. The evaluation of the educational achievements of students shall be carried out in the form of formative and summative assessment.

85. Criteria for assessing students' knowledge shall be developed and approved by the authorized body in the field of education.

86. For students with special educational needs, conditions shall be created for their education, correction of developmental disorders and social adaptation.

**Paragraph 2. Requirements for the level of training of students**

87. The level of training of students shall be assessed in three aspects:

- 1) personal results;
- 2) system-activity results;
- 3) subject results.

88. Personality results shall be reflected in:

- 1) respect for the Constitution of the Republic of Kazakhstan, for law and Order;
- 2) manifestation of active citizenship, high patriotic feelings, readiness to serve their homeland and protect its interests;
- 3) knowledge of the state and native languages, respect for the history, culture, traditions and other values of the Kazakh people and other ethnic groups living in Kazakhstan;
- 4) the desire to preserve and enhance the nature of his/her native land, his/her country, the manifestation of an active position in environmental protection;
- 5) maintaining a healthy lifestyle, skills to maintain their own safety and the people around them;
- 6) the manifestation of a high culture of human communication, compliance with ethical standards;
- 7) the ability to self-education and self-realization and creative work;
- 8) respect for the older generation and care for the younger, the manifestation of kindness and sensitivity to others;

9) the ability to adequately assess the characteristics of the social environment, to resist antisocial phenomena, the destructive influences of an ideological, illegal and religious nature.

89. Personality results shall be tracked in the form of psychological and pedagogical monitoring of the level of education, socialization and spiritual and moral, creative and physical development of the student and shall be recorded in his/her portfolio.

90. System activity results shall be reflected in:

1) possession of a system of knowledge on the fundamentals of science and fields of application of scientific achievements for the progress of human society;

2) the ability to analyze, process, synthesize and use scientific information;

3) possession of methods of knowledge, design, construction and research, creative application;

4) possession of modern information and communication technologies;

5) possession of advanced communication skills, multilingual culture.

91. Systemic activity results shall be determined by the student's achievements in subject Olympiads, course E on the selection, implementation of creative educational projects, as well as other types of research activities and shall be recorded in his/her portfolio.

92. Subject results shall be reflected in students' knowledge and activity training in mastering the basic content of secondary education.

93. Subject results shall be established at three levels: basic (compulsory), advanced possible (for mastering the variable component of 1 hour volume when choosing a subject) and advanced core (for mastering the types of curricula chosen by the general educational organization for the deepening subjects).

94. The basic level of mastering academic subjects shall include a mandatory minimum of students' knowledge and skills.

95. Advanced (possible and core) levels of mastering academic subjects shall include an expanded and in-depth amount of students' knowledge and skills. The possible level of mastering academic subjects shall be implemented when choosing the general educational organization on the basis of variable curricula.

Profile levels of learning subjects shall be implemented on the basis of standard curricula for in-depth study.

96. The development of the content of general secondary education (advanced, expanded) offered by a general educational organization shall be controlled by local education authorities.

97. The substantive results of mastering the content of secondary education shall be evaluated by a five-point system.

98. Forms of control shall be oral, written and in the form of creative exams, open and closed forms of test tasks, tests, oral questionnaires or interviews.

#### **Chapter 5. Requirements for the duration of training**

99. The term of mastering the general education curriculum of general secondary education shall be two years.

100. The duration of the school year in grades 10-11 –shall be 34 school weeks.

101. Duration of vacation time in the school year shall be at least 30 days.

Vacations shall be available three times per school year - in the autumn, winter and spring. Exact terms of holidays shall be established by the authorized body of the Republic of Kazakhstan in the field of education.

Appendix 5  
to Order № 604 of the Minister of  
Education and science of the  
Republic of Kazakhstan  
of October 31, 2018,

#### **State obligatory standard for technical and vocational education Chapter 1. General Provisions**

1. This State Compulsory Standard for Technical and Vocational Education (hereinafter - the standard) shall be developed in accordance with subparagraph 5-1) of Article 5 and Article 56 of the Law of the Republic of Kazakhstan dated July 27, 2007 “On Education” and determines the requirements for the content of education, the maximum study load, to the level of training of students and the period of study on educational programs of technical and vocational education (hereinafter - educational programmes TaVE).

This standard shall be applied by educational organizations implementing TAVE) educational programs (hereinafter referred to as TAVE) organizations), including in military, special educational institutions (hereinafter referred to as the University), regardless of their form of ownership and departmental subordination, and the developers of TAVE) educational programs.

2. The following terms and definitions shall apply in this standard:

1) academic period - the period of theoretical training in the credit technology of training, established independently by the TAVE) organization in one of three forms: semester, trimester, quarter;

2) academic hour - the contact time of the student with the teacher on a schedule for all types of training sessions;

3) special technical and vocational education curriculum - a curriculum aimed at vocational training and development of persons (children) with special educational needs, taking into account the psychophysical features and cognitive abilities of

students and pupils, determined based on the recommendations of psychological, medical and pedagogical consultations (for minors) and medical and social expertise (for adults);

4) the component of the Higher Educational Institution (hereinafter - UC) - a list of academic disciplines and the corresponding minimum volumes of academic credits determined by the Universities independently for the development of the educational program;

5) military internship - a type of training activity in military special educational institutions, aimed at consolidating theoretical knowledge, skills, acquisition and development of practical skills and competences in the process of performing functional duties associated with future professional activities;

6) evaluation criteria - indicators for making decisions on the evaluation of learning outcomes for compliance with the requirements for competence;

7) basic competence - the ability to control oneself and one's own activities, the tendency to self-motivation and self-organization;

8) basic module - an independent, self-sufficient section of the educational program or a period of study, aimed at acquiring students the ability to control themselves and their own activities, the tendency to self-motivation and self-organization;

9) qualification - the level of training, preparedness for the competent performance of a certain type of activity in the profession and specialty acquired;

10) qualification characteristic - a document defining the generalized requirements for the personality and professional competence of a specialist; the model of the personal potential of an employee to perform certain labor requiring professional training;

11) the thesis (project) - an independent creative work of students, which is a synthesis of the results of the students' Master'sing of the TAVE) educational program and performed by them at the graduation course;

12) individual curriculum - a student's curriculum that promotes the realization of individual educational needs for the choice of educational trajectory, including accelerated learning, within the Master'sed educational program of TAVE);

13) professional module - an independent, self-sufficient section of the educational program of the TPE or training period, aimed at acquiring students the ability to solve a set of professional tasks based on competencies;

14) professional competence - the ability of a specialist to solve a set of professional tasks on the basis of knowledge, skills and personal qualities, which allow to effectively carry out professional activities;

15) credit - a unified unit for measuring the volume of student's (teacher's) educational work within educational programs;

16) module - an independent, self-sufficient and complete section of the educational program of the TPE or the period of study;

17) modular education - a way of organizing the educational process on the basis of mastering the modular educational programs of vocational education and training;

18) compulsory component - a list of academic disciplines and (or) modules and the corresponding minimum amounts of credits established by the standard curriculum and studied by students in the mandatory course of the curriculum;

19) curriculum model - a form of presentation of the curriculum, reflecting the main invariant structural components of the curriculum content of technical and vocational education;

20) working curriculum (syllabus) - a document developed by the organization of technical and vocational education for a specific module (discipline) of the working curriculum;

21) working curriculum - a document developed by the TAVE) organization, regulating the list, sequence and scope of educational disciplines and (or) modules, forms of control;

22) the period of study is the period of mastering the educational program of the TAVE in a specific form of study (full-time, evening, correspondence);

23) a component of choice - a list of academic disciplines and (or) modules and the corresponding minimum volumes of credits (or academic hours) offered by the TAVE) organization with a credit technology of learning selected by students in any academic period, taking into account their prerequisites and post requisites;

24) transcript - a document containing a list of mastered disciplines and (or) modules for the relevant period of study, indicating credits and grades in alphabetic and numerical terms;

25) inclusive education tutor - a specialist who acts as a mentor for persons with special educational needs, creates conditions for the individualization of the learning process, and ensures the level of training of students.

26) standard curriculum - a document developed on the basis of this standard, regulating the volume (complexity) of study time by modules and (or) cycles (list of academic disciplines), professional practices, other types of students' learning activities, forms of control, terms of study depending from specialties and qualifications;

27) typical curriculum - a document that defines the content and scope of knowledge, skills, abilities and competencies to be mastered in a particular discipline and (or) module of a typical curriculum;

28) cycle - a set of academic disciplines of one educational orientation;

29) catalog of elective disciplines and (or) modules - a list of disciplines and (or) modules of a component of choice, containing a brief description of them;

30) adviser - a teacher who performs the functions of an academic mentor of a student in a relevant specialty, assisting in the choice of a learning trajectory (formation of an individual curriculum) and mastering an educational program on a credit technology of instruction during the period of study.

3. The organization of the educational process for the training of personnel with technical and vocational education (hereinafter referred to as TAVE)) shall be carried out on the basis of:

1) TAVE) educational programs by specialties;

2) educational and program documentation - standard and working curricula and plans, individual training plans (with the exception of higher and TaVe institutions), as well as a complex of educational and methodical support of the educational process, developed in accordance with the requirements of this standard.

**Chapter 2. Requirements for the content of technical and vocational education with a focus on learning outcomes**

4. The content of training at the level of TAVE) shall be determined by the educational programs of TAVE) and shall be focused on learning outcomes.

The content of educational programs of TAVE) shall provide for the study of:  
when preparing qualified personnel:

1) general educational, general humanitarian, general professional, special disciplines or the study of general educational and general humanitarian, general professional, special disciplines integrated into basic and professional modules;

2) the implementation of laboratory and practical classes;

3) vocational training and professional practice;

4) passing the intermediate and final certification.

When training mid-level specialists:

1) general educational, general humanitarian, socio-economic, general professional, special disciplines or the study of general educational and integrated general and humanitarian, socio-economic, general professional, special disciplines integrated into basic and professional modules;

2) the implementation of laboratory and practical classes;

3) professional practice;

4) implementation of the course and diploma design (work), unless otherwise provided by the working curriculum;

5) the passage of intermediate and final certification.

In higher educational and TaVe institutions, the content of the educational programs of the TAVE) shall provide for the study of general humanitarian, general professional, special disciplines and military training.

5. The educational programs of TAVE) shall include educational components aimed at instilling national values, the formation of patriotism and citizenship, the development of diverse interests and abilities of students.

6. The implementation of educational programs of TAVE) shall be provided by:

1) the availability of a library fund of textbooks and teaching aids, including: electronic educational content (electronic textbooks , audio and video materials), visual aids and recommendations on modules (disciplines), professional practices, writing and qualification works, independent student work, course and diploma projects;

2) engineering and pedagogical personnel with basic higher, technical and vocational, post-secondary education, corresponding to the profile of the specialty. It shall be allowed to attract qualified specialists from production with basic higher, technical and professional, post-secondary education, corresponding to the profile of the specialty.

The implementation of special training programs for the training of persons with special educational needs shall be provided by specialists accompanying the training process.

7. Planning and organization of educational activities shall be carried out on the basis of curricula and plans.

Training programs and plans shall be divided into standard, work and individual.

In higher education and TaVe institutions, curricula and plans shall be divided into typical, working.

For persons with special educational needs, special educational programs shall be developed, which represent the partial or complete content of the educational program, depending on the psychophysical characteristics and capabilities of students.

8. Standard curricula and academic programs shall be developed for specific TAVE) specialties.

When planning the educational process, standard curricula shall be developed on the basis of the models of the curriculum of the TaVE , the curriculum with the modular technology of training or the curriculum model of the credit technology of

training given in Appendices 1, 2 and 3 to this standard and differ in the following cases:

- 1) training of specialists from among persons with special educational needs;
- 2) the training of specialists in military, medical specialties and specialties of culture and art (admission to choreographic educational institutions is carried out from 4 (5) class).

In standard curricula for credit technology training shall be determined by the complexity of the mandatory component and each type of educational activity (theoretical training, vocational training, professional practice (military internship), intermediate and final certification, writing a graduation project (work)) in credits, and a component of choice indicates the total number of credits and hours.

9. Working curricula shall be developed by the educational organization for a specific profile, specialty and qualifications with an indication of the form and duration of training based on the standard curriculum, if not, based on the TaVE curriculum models, curriculum with a modular training technology or curriculum model with a credit technology training given in Appendixes 1, 2 and 3 to this standard.

The working curriculum shall be developed for the entire period of study and shall be approved by the head of the TAVE) organization.

In working curricula for persons with special educational needs, up to 15% of the amount of study time for each discipline and (or) module shall be allocated for individual training.

Individual curriculum for persons with special educational needs shall be developed taking into account the peculiarities of their psychophysical development, individual capabilities.

Based on working curricula for persons with special educational needs, an individual curriculum shall be drawn up with the help of a tutor.

The working curricula and training programs of TAVE shall differ from the standard curricula and programs in the following cases:

- 1) work in an experimental mode;
- 2) training of middle level specialists, qualified workers on the basis of vocational education;
- 3) training of persons with special educational needs;
- 4) training specialists in military specialties and specialties of culture and art;
- 5) training in accordance with the needs of employers, taking into account the specifics of the region and TAVE) organizations. With modular technology training standard curricula and programs shall be developed taking into account the need to



Master's several levels or related qualifications. For other qualifications of one specialty, the TAVE organizations shall develop working curricula using a standard curriculum.

10. With the credit technology of education, in addition to the working curricula, the TAVE organization shall develop a catalog of elective disciplines and (or) modules (with the exception of higher education institutions).

On the basis of working curricula and a catalog of elective disciplines and (or) modules for students by specialty, an individual curriculum shall be drawn up with the help of an adviser.

The individual curriculum shall include disciplines and (or) modules of the mandatory component and types of educational activities (theoretical training, vocational training, professional practice, intermediate and final certification, writing and defense of the thesis (project)), or disciplines and / or modules of the component optionally.

The form, structure, Order of development and approval of the catalog of elective disciplines and (or) modules, the individual curriculum shall be determined by the TAVE) organization independently.

11. With modular training technology, dual training can be used in the period of mastering workers' qualifications, without taking into account the module for training middle-level specialists.

12. Working academic programs shall be developed on the basis of standard academic programs (if available) or independently in all disciplines and / or curriculum modules and shall be approved by the TAVE) organization.

13. When developing and implementing working curricula and programs based on standard curricula and programs of the TAVE organization:

1) change up to 50% of the training time allocated for mastering educational material for cycles, up to 50% for each discipline and (or) module and up to 60% (up to 80% with dual training) of industrial training and professional practice with preservation of the total number of hours for compulsory education;

2) change the content of curricula to 50% (up to 80% with dual training) for each discipline, industrial training, including integrated disciplines (modules) and up to 60% (up to 80% for dual training) for a professional module;

3) introduce additional disciplines (professional modules) upon the request of employers with preservation of the total number of hours for compulsory education;

4) choose various training technologies, forms, methods of organization and control of the educational process;

5) choose the form, Order and frequency of the ongoing monitoring of progress and intermediate certification of students.

14. The sequence of study and integration of the academic discipline and (or) module, the distribution of study time for each of them for course and semesters shall be made taking into account interdisciplinary connections.

In the formation of the name and content of the academic discipline and (or) module, continuity shall be ensured and recount of learning outcomes and credits at the next level of education according to related qualifications.

15. General education disciplines shall be defined for training on the basis of basic secondary education in accordance with the invariant part of typical curricula for general secondary education.

The list and scope of general education disciplines shall be determined on the basis of the vocational orientation of the content of education, taking into account specialized training.

At the discretion of the TAVE organization, general education course shall be integrated into the modules.

Classes in "Physical Training" shall be mandatory and shall be planned at least 4 hours per week (depending on the specialty). For higher education and TaVE institutions, "Physical Training" classes shall be mandatory and shall be planned at least 4 hours per week (depending on the specialty). At the end of each semester, exams shall be held. Classes in the sports sections shall be provided in the amount of not more than 4 hours per week. For specialties involving increased physical activity (choreography, sports, circus art) classes in "Physical Training" shall be implemented within the framework of special disciplines or professional modules.

The discipline "Elementary Military and Technological Training" shall be carried out in the amount of 100 hours, including 36 hours for field training. During the period of field training, students (girls) shall undergo medical training. The integrated educational program "Fundamentals of Life Safety" shall be implemented within the framework of the training course "Elementary Military and Technological Training" (with the exception of higher education institutions). The list of general educational disciplines in special educational programs for persons with special educational needs shall be determined depending on the specialty by the TAVE) organization independently. With a modular technology of training, at the discretion of the TaVE organizations, general education disciplines shall be integrated into basic and (or) professional modules.

16. Socio-economic disciplines, including those integrated into basic and (or) professional modules, shall be implemented by training mid-level specialists with a

study time of not more than 180 hours depending on the profile of the specialty, with the exception of military specialties.

17. Educational programs of TAVE shall include, along with compulsory disciplines and (or) modules, disciplines and (or) modules defined by the TAVE organization, optional classes and consultations.

18. The educational process in the institutions of vocational education and training, implementing educational programs of vocational education and training, shall include theoretical training in organizations of vocational education and training, as well as industrial training and professional practice carried out in training workshops, educational facilities and training grounds, based on enterprise (organizations).

Professional practice shall be divided into educational, industrial and undergraduate. Educational practice shall be carried out in training workshops, laboratories, training farms, training grounds and in production.

Professional practice shall be conducted at enterprise (organizations) at workplaces corresponding to the profile of the specialty provided by employers on the basis of an agreement, and shall be aimed at the formation of professional competencies.

In higher educational and TaVE institutions, professional practice shall include practical and methodological studies in the disciplines that define combat training. Classes shall be planned in classes, laboratories, exercises, during the field outputs, aimed at consolidating the knowledge gained in the process of theoretical training. These classes shall be aimed at the acquisition of practical skills and professional competencies in accordance with the assigned qualifications.

The terms and content of practical classes shall be determined by the working curricula, the schedule of the educational process and the working curricula.

The terms and content of professional practice shall be determined by the working curriculum and work curriculum.

In higher educational and TaVE institutions, the amount of time devoted to professional practice, military training, to study general humanitarian, general professional, special disciplines, shall be determined by the appropriate authorized body.

Course projects (works) shall be considered as one of the types of educational work in general professional and special disciplines, including those integrated into modules, and shall be carried out within the study time allocated for their study. The number of course projects (works) in the semester shall not be more than one, it shall be allowed to additionally plan one course work (project) for the entire period of study.

19. The level of acquired knowledge, skills, abilities and competencies shall be provided by various types of control.

The plan of the educational process shall reflect the following forms of quality control of students' learning of TAVE programs:

- 1) intermediate certification;
- 2) final certification.

In Order to monitor the development of the educational programs of TAVE by students, TAVE organizations shall monitor the progress of students and shall conduct an intermediate certification of students.

Educational organizations shall be independent when choosing the forms, the Order and frequency of the implementation of the ongoing monitoring of progress and the intermediate certification of students.

Examinations and tests shall be carried out at the expense of the training time allocated for the study of the discipline, including integrated into the modules - in the time allotted for the intermediate or final certification.

The number of examinations and examinations shall be determined on the basis of the requirements for the level of knowledge, skills and competencies that students need to have.

For higher schools in all disciplines shall provide for an intermediate certification, the main form of which is the exam. Intermediate certification in general educational disciplines, including those integrated into modules, shall provide for exams in: language, literature, history of Kazakhstan, mathematics, and the choice of the TAVE organization.

Upon full completion of the development of the TAVE educational program, final certification shall be carried out. In standard curricula and programs, final certification of students shall be provided upon completion of each level of qualification.

For students who have mastered working qualifications and do not continue training, final certification in the form of a qualification exam shall be held.

In case of mastering the full program, a qualification exam for the level of qualified personnel shall be held as part of an intermediate certification, the amount of study time of the final certification shall be assigned to professional practice.

Qualification exams shall be held at production sites, laboratories, workshops or training centers equipped with the necessary equipment for each qualification.

For specialties in the field of art and culture, creative tasks shall be provided. For graduate schools, final certification shall include passing a comprehensive exam in special disciplines and passing an exam in the discipline of Physical Training.

The final certification for persons with special educational needs shall be carried out in the form of practical work on industrial training with explanations of the actions performed. The form of the final attestation of students shall be determined by the TAVE organization.

When carrying out laboratory work, practical classes, including Physical Training and classes in certain general professional and special disciplines, industrial training in workshops (at training grounds and in educational farms), the list of which is determined in accordance with the curriculum, training groups shall be divided into subgroups of no more than 13 people; for medical and pharmaceutical educational organizations in clinical disciplines, study groups shall be divided into subgroups of no more than 8 people.

20. The TAVE organization shall carry out educational activities in accordance with the license obtained and throughout the entire period of its validity it shall comply with the qualification requirements for educational activities and the list of documents confirming compliance with them, approved by Order № 391 of the Minister of Education and Science of the Republic of Kazakhstan dated June 17, 2015 (registered with the Register of Regulatory Legal Acts under № 11716).

### **Chapter 3. Requirements for the maximum amount of study load of students**

21. Requirements for the maximum amount of study load of students shall contain a weekly study load, the duration of the school year, the mandatory amount of study time.

22. The maximum amount of study load of students shall not be more than 54 hours per week, including the compulsory study load for full-time education - at least 36 hours per week.

23. The total amount of training time for full-time theoretical training shall be determined on the basis of the compulsory study load of at least 36 hours per week (at the same time, the specified volume does not include classes in optional disciplines and (or) modules and consultations). For higher schools in the exercise, during the field exits, at the sites, all types of practices, military internships, training shall be planned at the rate of up to 54 hours of training sessions per week.

24. The amount of study time for compulsory education shall be 1,440 hours per year.

25. Optional disciplines and (or) modules shall be provided for the period of theoretical training in the amount of not more than 4 hours per week for 1 study group. In case of credit technology of education, electives shall be included in the component of student's choice at the discretion of the TAVE organization.

Consultations for full-time students shall be provided in the amount of not more than 100 hours per study group for each academic year and shall be planned for the

disciplines and / or modules for which intermediate and final attestations are provided in the form of examinations and course and diploma projects (projects).

26. The amount of training time for conducting final certification shall not be more than 2 weeks.

The time allotted for the implementation of the thesis (project) shall not be more than 6 weeks. The duration of pre-diploma practice shall be planned depending on the complexity of the specialty in accordance with the working curriculum.

27. When a credit technology is used, the academic year shall consist of academic periods, intermediate and final appraisal periods, internships and vacations. The academic period shall be a 15-week semester (for military and medical specialties of at least 15 weeks), or a 10-week trimester, or a 7.5-week quarter. The TAVE organization shall independently determine the form of the academic period, including the combined form of its organization.

28. In the case of credit technology, the student's study load shall be measured in credits mastered by him/her for each academic discipline and (or) module or other types of educational work. When planning the amount of academic work, one credit shall be equal to 30 academic hours.

29. The volume of study time of compulsory studies shall be 70% for evening education and 30% for correspondence courses for the corresponding study time required for full-time education.

#### **Chapter 4. Training Requirements for Students**

30. Requirements for the level of training shall be determined by the content of educational programs of TAVE, basic and professional competences in accordance with the level of education.

31. Depending on their content and the envisaged qualification level of students, the educational programs of TAVE) shall be aimed at acquiring competences:

1) conduct activities under the guidance with a certain degree of autonomy, apply basic knowledge, carry out practical tasks, choose a course of action according to an algorithm specified by instructions, adjust actions in accordance with the conditions of the working situation;

2) conduct activities with a certain degree of independence on the basis of the task set, apply basic, general educational and practice-oriented professional knowledge, solve standard and simple practical tasks of the same type, choose actions from known knowledge-based and practical experience, adjust activities taking into account the results obtained ;

3) lead the standard work of others, taking into account significant social and ethical aspects, be responsible for their own learning and training of others, apply professional (practical and theoretical) knowledge to carry out activities and practical

experience, solve typical practical tasks of a wide range that require independent analysis of the working situations and its predictable changes, choose technological ways to carry out activities, conduct current and final control, carry out assessment and corrections activities.

32. Requirements for the level of preparedness of students in TAVE organizations shall provide the opportunity of the:

1) assignment of working qualifications - based on the results of final certification with full development of the educational program for training qualified workers, or according to the results of interim certification in the case of passing the qualification examination and care of the student to the labor market;

2) assignment of qualifications of a mid-level specialist - based on the results of final certification with full development of the educational program for training middle-level specialists, for military specialties upon completion of training in higher education institutions and passing final certification of students;

3) assignment of a working qualification in a particular specialty with the full completion of a special curriculum for persons with special educational needs with the issuance of a state-approved education certificate.

33. The level of training of students in the modular technology of training shall provide for the development of basic and professional modules for the formation of basic and professional competencies.

Basic competencies shall be developed for the specialty and shall address the issues of social responsibility, work organization, relationships with other people in the workplace, as well as responsibility for the environment.

Professional competencies shall be developed for each qualification on the basis of professional standards (if available) and (or) a functional analysis of the labor market, taking into account the requirements of employers and the social needs of society.

#### **Chapter 5. Duration Requirements**

34. The requirements for the terms of training shall indicate the terms of mastering the educational programs of TAVE.

35. The school year shall begin on September 1, except for the TAVE organizations that conduct practical training in the field, according to the regional norms of the beginning of the field season and ends depending on the organization of the educational process related to the specifics of the specialty. Holiday time shall be 11 weeks per year, including during the winter period - at least 2 weeks, except for military specialties. With dual training, at the discretion of the institutions of technical and vocational education, students shall undergo professional practice at enterprise during the holidays.

36. The term of development of the educational program of TAVE with full-time mode of study shall be :

1) on the basis of basic secondary education without general secondary education and for training persons with special educational needs - 1 year 10 months;

2) on the basis of basic secondary education with obtaining general secondary education - 1 year 10 months, 2 years 6 months, 2 years 10 months, 3 years 6 months or 3 years 10 months;

3) on the basis of general secondary education - 10 months, 1 year 6 months, 1 year 10 months, 2 years 6 months or 2 years 10 months;

4) on the basis of technical and vocational education - 10 months, 1 year 6 months or 1 year 10 months;

5) on the basis of post-secondary or higher education - 10 months or 1 year 6 months;

6) for higher educational and TaVE institutions on the basis of general secondary, technical and vocational, post-secondary and higher education, depending on the complexity of the qualifications awarded - 10 months, 1 year 6 months or 1 year 10 months;

7) for specialties: art, geology, operation of water transport, medicine, military specialties; the period of study is determined depending on the specifics of the corresponding specialty.

Appendix 1  
to the state compulsory  
standard of technical and  
vocational education

**Model curriculum for technical and vocational education for the levels of skilled workers and mid-level specialists**

Item number	Name of cycles, disciplines and training activity	Duration of training				
		on the basis of basic secondary education without general secondary education and for training people with special educational needs	on the basis of basic secondary education	on the basis of general secondary education	on the basis of post-secondary education *	on the basis of technical and vocational education *



[illegible]

Total academic hours:	33 12	33 12	43 20	49 60	58 00	65 88	16 56	26 80	33 12	43 20	49 60	16 56	26 80	16 56	26 80	33 12
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\* the period of study shall be established depending on the level of education and the profile of training;

\*\* including laboratory and practical classes in general professional and special disciplines, course and diploma design.

Appendix 2  
to the state compulsory  
technical and vocational  
education standard

**Model curriculum for technical and vocational education with modular technology training for the levels of skilled workers and mid-level specialists**

Item number	Name of disciplines / modules, practice	On the basis of basic secondary education without general secondary education and for persons with special educational needs	on the basis of basic secondary education				on the basis of general secondary education			on the basis of post-secondary, higher education *	on the basis of technical and vocational education *
		Duration of training (year (year) month (m.))									
		1 y.10 m.	1 y.10 m.	2 y. 10 m.	3 y. 10 m	10 m	1 year 10 m	2 y. 10 m.	10 m	10 m	
1	2	3	4	5	6	7	8	9	10	11	
1	General education **	540	1448	1448	1448	-	-	-	-	-	
2	Basic modules ***	+	+	+	+	+	+	+	-	-	
3	Professional modules for working qualifications (no more than 3 qualifications)	+	+	+	+	+	+	+	-	-	
3.1	Including: industrial training and professional practice	Not less than 40% of the total amount of study time of training in module (qualification)									
4	Intermediate certification	+	+	+	+	+	+	+	+	+	
5	final examination	+	+	+	+	+	+	+	+	+	
6	Professional	-	-	+	+	-	+	+	+	+	

	modules for qualification: mid-level specialist "_____"									
6.1	Including: industrial training and professional practice	Not less than 40% of the total amount of study time of training in module (qualification)								
1	2	3	4	5	6	7	8	9	10	11
7	Intermediate certification	+	+	+	+	+	+	+	+	+
8	final examination	+	+	+	+	+	+	+	+	+
9	Consultation	no more than 100 hours per academic year								
10	Optional classes	no more than 4 hours a week								
	Total academic hours:	3312	3312	4960	6588	1656	3312	4960	1656	1656

\* By related specialty;

\*\* At the discretion of the TAVE organization, GED will be integrated into the modules;

\*\*\* If there is no possibility to integrate into professional modules.

Appendix 3  
to the state compulsory  
standard of technical  
and vocational education

**Model curriculum for technical and vocational education at the credit technology of training for the levels of skilled workers and mid-level specialists**

Item number	Name of modules and types of educational activities	on the basis of basic secondary education		on the basis of general secondary education		on the basis of technical and vocational education *
		Duration of training (year (year) month (m.))				
		1 y.10 m.	2 y. 10 m.	10 m	1 year 10 m	10 m
1	2	3	4	5	6	7
1	General education **	48	48	-	-	-
2	Basic modules ***	+	+	+	+	+
3	Professional modules on working qualifications	+	+	+	+	-
3.1	Required component (up to 70%)	+	+	+	+	-
3.2	Elective Component (up to 30%)	+	+	+	+	-
3.3	Professional practice	At least 40% of the total training time for work qualifications				

	and industrial training					
4	Professional Qualification Specialist Modules	-	+	-	+	+
4.1	Required component (up to 70%)	-	+	-	+	+
4.2	Component of choice (up to 30%)	-	+	-	+	+
4.3	Professional practice	Not less than 40% of the total training time for qualifications of a mid-level specialist				
5	Intermediate certification	+	+	+	+	+
6	final examination	+	+	+	+	+
	Total for compulsory education (in credits and academic hours)	120/3600 (2880 + 720 IWS ****)	180/5400 (4320 + 1080 IWS)	60/1800 (1440 + 360 IWS)	120/3600 (2880 + 720 IWS)	60/1800 (1440 + 360 IWS)
7	Electives	no more than four hours a week				
8	Consultation	no more than one hundred hours a year				
	Total credits and academic hours	134/4020 (3300 + 720 IWS)	201/6030 (4950 + 1080 IWS)	67/2010 (1650 + 360 IWS)	134/4020 (3300 + 720 IWS)	67/2010 (1650 + 360 IWS)

\* related specialty;

\*\* at the discretion of the TAVE organization shall be integrated into the modules;

\*\*\* at the discretion of the TAVE organization shall be integrated into professional modules;

\*\*\*\* Independent work of the student (IWS) - the planned work of students, performed on assignment with the methodological guidance of the teacher, but without his/her direct participation.

Appendix 6  
to Order No. 604 of the Minister  
of Education and Science  
of the Republic of Kazakhstan  
of October 31, 2018,

### **State compulsory standard for post-secondary education Chapter 1. General Provisions**

1. This state compulsory standard for post-secondary education (hereinafter - the standard) shall be developed in accordance with subparagraph 5-1) of Article 5 and Article 56 of the Law of the Republic of Kazakhstan dated July 27, 2007 "On Education" and determines the requirements for the content of education, the maximum amount of academic load, to the level of training of students and the period of training in educational programs of post-secondary education.

2. The following terms and definitions shall be used in this standard:

1) the academic period is the period of theoretical training in credit technology of study, established independently by the organization of post-secondary education in one of three forms: semester, trimester, quarter;

2) academic hour - the contact time of the student with the teacher on a schedule for all types of training sessions;

3) evaluation criteria - indicators for making decisions on the evaluation of learning outcomes for compliance with the requirements for competence;

4) basic competence - the ability to control oneself and one's own activities, the tendency to self-motivation and self-organization;

5) basic module - an independent, self-sufficient section of the educational program or a period of study, aimed at acquiring students the ability to control themselves and their own activities, the tendency to self-motivation and self-organization;

6) qualification - the level of training, preparedness for the competent performance of a certain type of activity in the profession and specialty acquired;

7) the thesis (project) - an independent creative work of students, which is a synthesis of the results of Master'sing the educational program of post-secondary education by students and performed by them at the graduation course;

8) individual curriculum - a student's curriculum that promotes the realization of individual educational needs and academic rights of students to choose an educational path at a fixed stage of study, including accelerated learning, within the mastered educational program;

9) professional module - an independent, self-sufficient section of the educational program or a period of study, aimed at acquiring students the ability to solve a set of professional tasks based on competencies;

10) professional competence - the ability of a specialist to solve a set of professional tasks on the basis of knowledge, skills, and personal qualities, allowing to effectively carry out professional activities;

11) credit - a unified unit of measurement of the volume of student's (teacher's) study work;

12) credit technology of training - training based on the selection and self-planning by the students of the sequence of studying disciplines and (or) modules with the accumulation of credits;

13) module - an independent, self-sufficient section of the educational program or a period of study;

14) modular education - a way of organizing the educational process on the basis of mastered modular educational programs;

15) compulsory component - a list of academic disciplines and (or) modules and the corresponding minimum amounts of credits established by the model curriculum and studied by students in the mandatory course of the program of study;

16) curriculum model - a form of presentation of the curriculum, reflecting the main invariant structural components of the content of post-secondary education;

17) working curriculum (syllabus) - a document developed by an educational organization for a specific discipline and (or) module of a working curriculum;

18) working curriculum - a document developed by the organization of post-secondary education on the basis of a model curriculum or this standard, regulating the list, the sequence of study and the volume of academic disciplines and (or) modules, forms of control;

19) the period of study - the period of development of the educational program for a specific form of education (full-time, evening, correspondence);

20) component by choice - a list of academic disciplines and (or) modules and corresponding minimum volumes of credits (or academic hours) offered by the organization of post-secondary education, independently chosen by students in any academic period, taking into account their prerequisites and post requisites;

21) transcript - a document containing a list of Master'sed disciplines and (or) modules for the relevant period of study, indicating credits and grades in alphabetic and numerical terms;

22) tutor - a specialist who acts as a mentor for persons with special educational needs, creating conditions for the individualization of the learning process (drawing up individual curricula and planning individual educational and professional trajectories), ensuring the level of training of students;

23) typical curriculum - a document that defines the content and scope of knowledge, skills, abilities and competencies to be mastered in a particular discipline and (or) module of a typical curriculum;

24) model curriculum - a document developed on the basis of this standard, regulating the volume (complexity) of study time by modules, professional practices, other types of students' learning activities, forms of control, terms of training depending on specialties and qualifications;

25) advisor - a teacher who performs the functions of an academic mentor of a student in a relevant specialty, assisting in the choice of a learning trajectory (forming an individual curriculum) and mastering the post-secondary educational program on credit technology during the period of study;

26) catalog of elective disciplines and (or) modules - a list of disciplines and (or) modules of a component of choice, containing a brief description.

3. Training with post-secondary education shall be carried out in accordance with this standard, as well as with:

- 1) curriculum documentation - the curriculum model of this standard, model and work curricula and plans, individual training plans;
- 2) integrated post-secondary education programs.

**Chapter 2. Requirements for the content of post-secondary education with a focus on learning outcomes**

4. The content of educational programs for post-secondary education shall provide for the study of technical and vocational education integrated into the modules of educational programs with the inclusion of individual modules or disciplines of undergraduate educational programs. Integrated educational programs of post-secondary education shall be developed by educational organizations of post-secondary education by combining relevant substantive aspects of educational programs necessary to perform specific activities and the formation of professional competence. Types of integrated educational programs: interdisciplinary, interlevel, intercollegiate and international. The educational program of post-secondary education shall contain:

- 1) mastering the basic and professional modules;
- 2) performance of laboratory and practical work on basic and professional modules;
- 3) vocational training and professional practice;
- 4) implementation of course and diploma design (work);
- 5) the passage of intermediate and final certification.

The implementation of educational programs of post-secondary education shall be provided by:

- 1) the availability of a library fund of textbooks and teaching aids, including digital educational resources on modules (disciplines), independent student work, course and degree works (projects);
- 2) engineering and teaching staff with a basic higher education, with industrial experience. It shall be allowed to attract qualified specialists from production with a basic higher education corresponding to the profile of the specialty.

5. The educational components of educational programs shall be aimed at instilling national values, the formation of patriotism and citizenship, the development of diverse interests and abilities of students.

6. Integrated educational programs of post-secondary education shall be structured on the basis of the competence-based approach using credit-modular technology.

7. Basic and professional modules shall include modules of a mandatory component and an optional component.

The list of modules of the mandatory component shall be determined by the model curriculum or curriculum model of this standard.

The list of component modules of choice shall be determined by the organization of post-secondary education independently.

The volume of the compulsory component of the basic and professional modules shall not be less than 70% of the total amount of time allocated for their study. The volume of the component at the choice of basic and professional modules shall not be more than 30% and shall make it possible:

1) to expand the main activities for which the graduate should be ready, who has mastered the educational program of post-secondary education

2) deepening the training of the student, determined by the content of the obligatory component;

3) obtaining additional competencies necessary to ensure the graduate's competitiveness in accordance with the demands of the regional labor market and the possibility of continuing education in the relevant specialty at the next level.

8. The component of choice shall take into account the specifics of the socio-economic development of a particular region and the needs of the labor market, as well as the individual interests of the learner himself/herself. The component of choice shall be formed on the proposals of employers and partners of the organization of post-secondary education, subject-cycle commissions.

9. Basic modules shall include the content of general humanitarian and socio-economic disciplines.

Professional modules shall include the content of general professional, special disciplines, vocational training and professional practice.

10. When planning the educational process, model curricula shall be developed on the basis of the model of the curriculum of post-secondary education given in the appendix to this standard.

11. The organization of educational activities shall be carried out through the planning of the educational process, the content of education, the choice of methods for conducting studies, the independent work of students, and forms of the final control of their educational achievements.

12. Planning and organization of educational activities shall be carried out on the basis of curricula and plans. Training programs and plans shall be divided into standard, work and individual.

13. Model curricula and plans shall be developed for specific post-secondary specialties based on this standard. The model curricula shall define the laboriousness of the mandatory component and each type of educational activity (professional



practice, intermediate and final certification, writing a thesis (project)) in credits and hours, and the component of choice shall be indicated by the total number of credits and hours.

14. The model curricula shall correspond to the model of the curriculum of post-secondary education given in the appendix to this standard and shall differ in the case of preparing:

- 1) specialists from among persons with special educational needs;
- 2) specialists in military, medical specialties and specialties of culture and art.

15. Working curricula shall be developed by the organization of post-secondary education in a specific profile, specialty and qualifications for each training group, with an indication of the form and duration of training based on this standard and model curriculum.

The working curriculum shall consist of a schedule of the educational process, a summary of the time budget, an explanatory note and a grid plan, regulating the list of the sequence and volume of academic disciplines and / or modules, forms of control, distribution of hours (credits) of theoretical training and professional practice by semesters .

The working curriculum shall be developed for the entire period of study and shall be approved by the head of the organization of post-secondary education.

The working curriculum shall serve as the basis for calculating the laboriousness of the student's and teacher's academic work. Working curricula and curricula for post-secondary education organizations shall differ from standard curricula and programs in the following cases:

- 1) work in an experimental mode;
- 2) training of specialists from among persons with special educational needs.

16. When developing and implementing working curricula and programs on the basis of model curricula and programs of post-secondary education:

1) change up to 50% of the amount of study time allocated for mastering basic and vocational modules and up to 60% of vocational training, and professional practice from preservation of the total number of training hours;

2) select various training technologies, forms, methods of organization and control of the educational process;

3) in accordance with the needs of employers change the content of training programs up to 50% in the basic and professional module, vocational training and professional practice. Introduce additional professional modules at the request of employers while maintaining the total number of hours of compulsory education;

4) choose the form, Order and frequency of the current monitoring of student performance and intermediate certification of students.

17. In addition to working curricula, the organization of post-secondary education shall develop a catalog of elective disciplines and (or) modules.

18. On the basis of standard or working curricula and a catalog of elective disciplines and (or) modules for the specialty of students, an individual curriculum shall be drawn up with the help of an adviser. The individual curriculum shall determine the individual educational trajectory for each student. The individual curriculum shall include disciplines and (or) modules of the compulsory component and types of educational activities (professional practice, intermediate and final certification, writing and defense of the thesis (project), disciplines and (or) modules of the component of choice.

Individual curriculum for individuals with special educational needs shall be developed taking into account the peculiarities of their psychophysical development, individual capabilities.

Based on working curricula for persons with special educational needs, an individual curriculum shall be drawn up with the help of a tutor.

19. The form, structure, Order of development and approval of the catalog of elective disciplines and (or) modules, individual curriculum shall be determined by the organization of post-secondary education independently.

20. Working training programs ( syllabus) shall be developed in all disciplines and / or curriculum modules. At the same time, in the disciplines and (or) modules of the obligatory component, their development shall be carried out on the basis of model curricula, if any. The form, structure, Order of development and approval of working curricula (syllabus) shall be determined by the organization of post-secondary education independently.

21. At the end of each discipline and / or module, a procedure shall be carried out for assessing the level of academic achievements in the form of an exam or a differential test. Evaluation of the results of all types of professional practices, coursework (projects) shall be carried out in the form of protection reports (works).

22. Upon completion of the post-secondary education program, final certification shall be carried out in the form of the defense of diploma projects (projects) and / or exams.

The amount of study time for its implementation shall not be more than two weeks.

For specialties in the field of art and culture, creative tasks shall be provided.

For students who have mastered working qualifications and do not continue training in the level of post-secondary education, a final certification shall be held in the form of a qualifying exam with an issuance of a diploma of the appropriate level.

23. In model curricula and plans, final certification of students shall be provided upon completion of each level of qualification.

In case of mastering the educational program of post-secondary education, the qualification exam for the level of qualified personnel shall be held as part of an intermediate certification, the amount of study time for the final certification shall be assigned to professional practice.

According to the results of the intermediate certification, students shall be assigned the achieved level of professional qualification (grade, class, category) for a specific qualification.

Qualification exams shall be held at production sites, laboratories, workshops or training centers equipped with the necessary equipment for each qualification.

24. Industrial training shall be carried out in training workshops, laboratories, training farms, training grounds, enterprises (organizations) of employers under the guidance of a master's of industrial training and (or) a mentor.

Professional practice shall be divided into educational, industrial and undergraduate ones.

Educational practice shall be carried out in training workshops, laboratories, training farms, training grounds and in production.

Professional practice shall be conducted at enterprises (organizations), at workplaces provided by employers on a contractual basis, and shall be aimed at the formation of professional competencies.

During the period of the professional practice, students shall be expected to master one or several related qualifications with a qualifying exam.

Upon completion of professional practice, students shall be assigned the achieved level of professional qualification (grade, class, category).

The terms and content of professional practice shall be determined by the work curriculum and academic programs.

At the discretion of the organization of post-secondary education, professional practice shall be integrated into professional modules.

25. Educational programs in post-secondary education shall include counseling and optional classes aimed at providing for the individual needs of students.

26. Coursework (projects) shall be considered as one of the types of educational work in general professional and professional disciplines and (or) modules, and shall be carried out within the study time allocated for their study.

The number of coursework (projects) in the semester shall not be more than one. Additionally, it shall be allowed to plan one course work (project) for the entire period of study.

27. The organization of post-secondary education shall carry out educational activities in accordance with the license obtained and throughout the entire period of its validity it shall comply with the qualification requirements for educational activities and the list of documents confirming compliance with them, approved by Order № 391 of the Minister of Education and Science of the Republic of Kazakhstan of June 17 2015 (registered with the Register of Regulatory Legal Acts under № 11716).

### **Chapter 3. Requirements for the maximum amount of study load of students**

28. The volume of a student's workload shall be measured in credits that he/she mastered for each academic discipline and / or module or other types of educational work.

Taking into account the peculiarities of the credit technology of education, depending on the form and technology of education, certain categories of students shall be allowed to master a smaller or larger number of academic credits for an academic year.

29. One academic hour of classroom and out-of-class work, all types of practice, intermediate and final certification shall be 50 minutes.

30. When planning the amount of academic work, one credit shall be equal to 30 academic hours.

31. An academic year shall consist of academic periods, an intermediate certification period, internship and holidays. In the last year, the period of the final certification shall be included in the academic year.

32. The academic period shall be a 15-week semester (for military and medical specialties of at least 15 weeks), or a trimester of 10 weeks, or a quarter of 7.5 weeks. The organization of post-secondary education shall independently determine the form of the academic period, including the combined form of its organization.

33. The duration of vocational training shall be determined in weeks based on the student's standard work time for a week of 36 hours (6 hours a day with a 6-day working week).

The duration of pre-diploma (qualification) practice shall be planned depending on the complexity of the specialty.

34. The main criterion for the completion of studies in post-secondary education programs shall be that the student has mastered all credits for the entire period of study, including all types of student's educational activities.

35. The number of credits and the required amount of the post-secondary education program for students enrolled on the basis of technical and vocational, post-secondary or higher education for training under reduced educational programs with an accelerated term of study shall be determined by the organization of post-secondary education independently taking into account the correspondence of the profile of the previous level of education and the results achieved learning.

36. A student in reduced post-secondary education programs with an accelerated term of study shall:

1) form its individual curriculum depending on the achieved learning outcomes, mastered prerequisites at the previous level of education, which are necessarily recalculated by the organization of post-secondary education and are included in its transcript;

2) have individual training periods and the volume of the educational program, which are determined by the organization of post-secondary education independently based on the current educational program of post-secondary education.

37. The amount of study time of compulsory studies shall be 70% for evening courses and 30% for correspondence courses for the corresponding amount of study time provided for full-time education.

38. The maximum amount of study load of students, including all types of training activities, shall not exceed 54 academic hours per week.

39. The volume of mandatory workload of students with full-time education shall be at least 36 hours per week.

#### **Chapter 4. Training Requirements for Students**

40. Requirements for the level of training of students shall contain the requirements for educational programs of post-secondary education, basic, professional competences and the level of training of students in organizations of post-secondary education.

41. Integrated educational programs of post-secondary education shall provide for the training of applied Bachelors with the development of several working qualifications.

Educational programs of post-secondary education shall be aimed at acquiring the following competencies: conduct independent management and control of labor and educational processes within the framework of the strategy, policies and goals of the organization, discuss the problem, argue the conclusions and competently operate the information, apply a wide range of theoretical and practical knowledge in the professional field, perform an independent search for information necessary to solve professional problems, solve practical problems suggesting ways to address the variety and choice to be creative (or skills to independently develop and put forward a variety,

including alternative solutions to professional problems), to maintain a current and final control, to perform the evaluation and correction activities.

42. The level of training of students shall include the development of basic and professional competencies. Basic competencies shall be defined for the specialty and shall be aimed at developing a social and humanitarian worldview in the context of the formation of national consciousness and spiritual modernization, social responsibility, work organization, relationships with other people at the workplace, and environmental responsibility. Professional competencies shall be determined for each qualification on the basis of professional standards (if any) or functional analysis of the labor market, taking into account the requirements of employers and the social demand of society.

43. Individuals who have completed training in the post-secondary education program and have successfully completed their final certification shall be awarded the degree of “Applied Bachelor” in the relevant specialty.

#### **Chapter 5. Duration Requirements**

44. The requirements for the terms of study shall contain the terms for the development of educational programs of post-secondary education and shall be determined by the content of educational programs, the results of training and the volume of credits mastered.

The academic year shall begin on September 1, except for organizations of post-secondary education, which provide practical training in the field, according to the regional norms of the beginning of the field season and shall be ended depending on the organization of the educational process related to the specifics of the specialty.

Holiday time shall be 11 weeks per year, including during the winter period - at least 2 weeks, except for military specialties.

Duration of training shall be based on general secondary education 2 years 10 months, on the basis of technical and vocational education in related specialties, depending on the base of admission: 10 months for a middle-level specialist, 1 year 10 months for skilled workers.

For specialties: art, geology, operation of water transport, medicine, military specialties; the period of study shall be determined depending on the specifics of the corresponding specialty.

Appendix  
to the state compulsory standard  
of post-secondary education Model  
of post - secondary curriculum

Item number	Name of modules and types of educational activities	Total labor intensity	
		Duration of training (year (y.) month (m.))	
		On the basis of technical and	On the basis of general secondary

		vocational education	education	
		10m	1y.10m.	2y.10m.
1	2	3	4	5
1	Basic modules *	+	+	+
2	Professional modules on working qualifications	-	-	+
2.1	Required component (at least 70%)	-	-	+
2.2	Component of choice (no more than 30%)	-	-	+
2.3	Professional practice and industrial training	At least 40% of the total training time for work qualifications		
3	Professional modules of applied Bachelor qualifications			+
3.1	Required component (at least 70%)	+	+	+
3.2	Elective Component (no more than 30%)	+	+	+
3.3	Professional practice	Not less than 40% of the total educational time for studying applied Bachelor's qualifications		
4	Intermediate certification	+	+	+
5	final examination	+	+	+
	Total for compulsory tuition in credits and academic hours	60/1800 (1440 + 360 IWS **)	120/3600 (2880 + 720 IWS)	180/5400 (4320 + 1080 IWS)
6	Electives (no more than 4 hours a week)	+	+	+
7	Consultations (no more than 100 hours per year)	+	+	+
	Total credits and academic hours	67/2010 (1650 + 360 IWS)	134/4020 (3300 + 720 IWS)	201/6030 (4950 + 1080 CPO)

\* At the discretion of the organization of post-secondary education shall be integrated into professional modules;

\*\* Independent work of the student (IWS) - the planned work of students, performed on assignment with the methodological guidance of the teacher, but without his/her direct participation.

Appendix 7  
to Order № 604 of the Minister  
of Education and Science of the  
Republic of Kazakhstan  
of October 31, 2018,

#### **State obligatory standard for higher education Chapter 1. General Provisions**

1. This State Compulsory Standard for Higher Education (hereinafter - SCSHE) is developed in accordance with subparagraph 5-1) of Article 5 and Article 56 of the Law of the Republic of Kazakhstan dated July 27, 2007 "On Education" (hereinafter - the Law) and determines the requirements for the content of education with a focus on learning outcomes, the maximum amount of study load of students, the level of

training of students, the period of study in organizations of higher and (or) postgraduate education (hereinafter - the university), including in military special educational institutions (hereinafter referred to as the MSEI ), regardless of the form of incorporation and departmental subordination.

2. The following terms and definitions shall be used in the SCSHE:

1) qualification characteristics in higher educational institutions - knowledge, skills and abilities necessary for the effective implementation of professional activities in the field of defense of the Republic of Kazakhstan and the relevant position;

2) professional competences in higher educational institutions - the knowledge and skills necessary for the effective implementation of professional activities in the system of national security and law enforcement in the relevant position;

3) Bachelor degree - a higher education level aimed at training personnel with the award of a Bachelor's degree in a relevant educational program with the required mastering of at least 240 academic credits;

4) descriptors (descriptors) - a description of the level and amount of knowledge, skills, abilities and competencies acquired by students upon completion of the study program of the corresponding level (level) of higher and postgraduate education, based on learning outcomes, formed competencies and academic credits;

5) thesis (project) - final work, which is a synthesis of the results of self-study by a student and a cadet (hereinafter referred to as a student) of an actual problem relevant to the profile of the educational program;

6) an individual curriculum (hereinafter referred to as IC) - a student's curriculum, independently formed by him for each academic year with the help of an adviser on the basis of the educational program and catalog of elective disciplines;

7) higher special education (specialty) - the level of higher education aimed at training personnel with the assignment of specialist qualifications in a relevant educational program with the obligatory mastering of at least 300 academic credits;

8) the university component (hereinafter - UC) - a list of academic disciplines and the corresponding minimum amounts of academic credits, determined by the university independently for the development of the educational program;

9) competences - the ability to practically use the knowledge acquired in the process of learning, skills and abilities in professional activities;

10) compulsory component - a list of academic disciplines and the corresponding minimum amounts of academic credits established by SCSHE, and studied by students on a mandatory basis under the curriculum;



11) working curriculum (hereinafter - WC) - a training document developed by universities independently on the basis of the educational program and individual curricula of students;

12) component by choice - a list of academic disciplines and corresponding minimum amounts of academic credits offered by the university, independently chosen by students in any academic period, taking into account their prerequisites and post requisites;

in higher educational and TaVE institutions WC is - a training document developed by a HTaVE independently on the basis of the educational program and qualification requirements, characteristics;

13) standard curriculum (hereinafter - SC) - an educational document of the discipline of a mandatory component of the educational program, which defines the content, volume, recommended literature in accordance with subparagraph 5-2) of Article 5 of the Law.

#### **Chapter 2. The requirements for the content of higher education with a focus on learning outcomes**

3. The content of the educational program of higher education shall consist of three cycles - general education disciplines (hereinafter - GED), basic disciplines (hereinafter - BD) and major disciplines (hereinafter - MD) and shall be given in Appendices 1 and 2 to this SCSHE.

The GED cycle shall include the disciplines of the obligatory component (hereinafter - OC), the university component (hereinafter - UC) and (or) the elective component (hereinafter – EC ). The cycles of the BD and MD shall include disciplines of the UC and EC. In a higher educational institution, the cycles of the GED, BD, and MD shall consist of the disciplines of compulsory and university components, the structure of which shall be given in Appendix 3 to this SCSHE.

4. The list of GED cycle shall not allow for a reduction in the volume of disciplines of the obligatory component, the content of which shall be determined by the model curricula. The exceptions shall be abbreviated educational programs of higher education with an accelerated period of study based on technical and vocational, post-secondary or higher education.

5. UC and EC shall be determined by the university independently and shall take into account the needs of the labor market, the expectations of employers and the individual interests of the student. In higher education institutions, the university component shall take into account the specificity of requirements of higher education institutions to qualification characteristics, qualification requirements, established scientific schools in a specific higher education institution.

6. The volume of the GED cycle shall not be more than 23% of the total volume of the educational program of higher education or 56 academic credits. Of these, 51

academic credits shall be devoted to the disciplines of the obligatory component: Modern History of Kazakhstan, Philosophy, Kazakh (Russian) Language, Foreign Language, Information and Communication Technologies (in English), Physical Culture, Module of Social and Political Knowledge (Political Science, Sociology, Cultural Studies, Psychology).

In this case, students of universities of all specialties and (or) the direction of training at the undergraduate level shall pass the state exam in the discipline "Modern History of Kazakhstan" upon its completion, in the same academic period.

Disciplines of compulsory component of GED cycle:

1) aimed at shaping the ideological, civil and moral positions of the future specialist, competitive on the basis of owning information and communication technologies, building communication programs in the state, Russian and foreign languages, focusing on a healthy lifestyle, self-improvement and professional success;

2) form a system of general competencies that ensure the socio-cultural development of the personality of the future specialist based on the formation of his/her ideological, civic and moral positions;

3) develop the capacity for interpersonal social and professional communication in the state, Russian and foreign languages;

4) contribute to the development of information literacy through the mastering and use of modern information and communication technologies in all spheres of their life and work;

5) form the skills of self-development and education throughout life;

6) form a personality capable of mobility in the modern world, critical thinking and physical self-improvement.

7. Upon completion of the study of compulsory disciplines of the GED cycle, the student will be able:

1) to assess the surrounding reality on the basis of ideological positions, formed by a knowledge of the fundamentals of philosophy, which provide scientific understanding and study of the natural and social world by methods of scientific and philosophical knowledge;

2) to interpret the content and specific features of the mythological, religious and scientific worldview;

3) to argue their own assessment of everything happening in the social and industrial spheres;

4) to show a civil position on the basis of a deep understanding and scientific analysis of the main stages, patterns and peculiarities of the historical development of Kazakhstan;

5) to use the methods and techniques of the historical description to analyze the causes and consequences of the events of the modern history of Kazakhstan;

6) to assess situations in various spheres of interpersonal, social and professional communication, taking into account the basic knowledge of sociology, political science, cultural studies and psychology;

7) to synthesize knowledge of these sciences as a modern product of integrative processes;

8) to use scientific methods and research techniques of a specific science, as well as the entire socio-political cluster;

9) to develop their own moral and civic position;

10) to operate with the social, business, cultural, legal and ethical norms of Kazakhstan society;

11) to demonstrate personal and professional competitiveness;

12) to put into practice knowledge in the field of social sciences and humanities with world-wide recognition;

13) to make a choice of methodology and analysis;

14) to summarize the results of the study;

15) to synthesize new knowledge and present it in the form of humanitarian socially significant products;

16) to enter into communication in oral and written forms in Kazakh, Russian and foreign languages for solving problems of interpersonal, intercultural and industrial (professional) communication;

17) to implement the use of language and speech tools based on a system of grammatical knowledge; analyze information in accordance with the situation of communication;

18) to evaluate the actions and actions of communication participants.

19) to use in their personal activities various types of information and communication technologies: Internet resources, cloud and mobile services for searching, storing, processing, protecting and distributing information;

20) to build a personal educational trajectory throughout life for self-development and career growth, focus on a healthy lifestyle to ensure a full social and professional activities through methods and means of physical culture.

8. The disciplines of the UC and (or) the EC of the GED cycle shall comprise at least 5 academic credits that shall be aimed at developing students' competences in the field of economics and law, the fundamentals of anti-corruption culture, ecology and life safety, as well as skills of entrepreneurship, leadership, and receptivity of innovations.

9. Institutions of higher education shall develop integrated programs in the disciplines of the GED cycle that are interdisciplinary in nature.

10. For higher schools, the volume of the GED cycle shall not be more than 23% of the total volume of the educational program of higher education or 56 academic credits. Of these, no more than 51 academic credits shall be assigned to the disciplines of the obligatory component: Contemporary History of Kazakhstan, Philosophy, Kazakh (Russian) Language, Foreign Language, Information and Communication Technologies (in English), Physical Training, Social and Political Knowledge Module (Sociology, Political Science, Cultural Studies, Psychology).

In HTaVE it shall be allowed to transfer the discipline “Physical Training” to the database cycle or additional types of training, and the credits allocated to it may be transferred to the UC of the GED cycle.

In HTaVE, the disciplines of the UC of the GED cycle shall comprise at least 5 academic credits.

11. The database cycle shall include the study of academic disciplines and professional practice and shall make up at least 47% of the total educational program of higher education or at least 112 academic credits. For HTaVE, the database cycle shall not be more than 47% of the total educational program of higher education or not more than 112 academic credits.

The database cycle shall include all types of practices (professional practice, training practice, military training, combat training, and others), which in total amount to no more than 30% of the database cycle volume.

12. The PD cycle shall include academic disciplines and types of professional practices, the volume of which shall be at least 25% of the total volume of the educational program of higher education or at least 60 academic credits.

In HTaVE, the volume of disciplines of the PD cycle shall be at least 25% of the total volume of the educational program of higher education or at least 60 academic credits.

13. The programs of disciplines and modules of the cycles of the database and PD shall be interdisciplinary and multidisciplinary in nature, providing training at the interface of a number of areas of knowledge.

14. The final certification shall be 12 academic credits or not more than 5% of the total educational program of higher education and shall be carried out in the form of writing and defending a thesis (project) or preparing and passing a comprehensive exam.

At the same time, the comprehensive exam program shall reflect the integrated knowledge and core competencies formulated by the labor market in accordance with the educational program of higher education.

Students instead of a thesis (project) can take two comprehensive examinations for the following reasons:

1) long-term hospital treatment for health reasons;

2) raising a child under the age of 2 years;

3) care for sick parents. In this case, the student shall write a statement addressed to the head of the university and shall submit the corresponding document.

Other cases of replacement of the thesis (project) for the delivery of additional comprehensive examinations shall not be allowed.

15. Forms of conducting final certification shall be determined by the university independently.

In higher educational and TaVE institutions final certification shall be carried out in the form of defending a thesis (project), preparing and passing a comprehensive exam and (or) exam in the discipline "Physical Training", or in the form of passing a comprehensive state exam, state exams in two basic and (or) major disciplines, and (or) exam in the discipline "Physical Training". In higher educational institutions, the forms for conducting final certification shall be determined by the Rules for the ongoing monitoring of progress, interim and final certification of students approved by the state bodies in charge of the higher educational institutions.

16. The purpose of the final assessment shall be to assess the learning outcomes and key competencies achieved upon completion of the study of the educational program of higher education.

17. Additional types of training include military training and other types of training activities determined by the student independently. In higher education institutions, additional types of training shall be determined independently by higher education institutions.

18. Military training shall be provided within the state educational Order or on a paid basis. The development of other additional types of training shall be provided on a fee basis, with the exception of higher education institutions.

19. Higher education institutions introducing programs of trilingual education shall plan and shall organize educational activities in three languages: the language of instruction, the second and English.

In this case, 50% of academic disciplines shall be taught in the language of instruction (state or Russian), 20% of academic disciplines in the second language (Russian or state respectively) and 30% of academic disciplines in English.

Higher education institutions introducing programs of trilingual education shall provide instruction in three languages: state, Russian, and English. Higher education institutions introducing bilingual education programs shall provide training in two languages: state and Russian.

The percentage of subjects taught in different languages shall be determined independently by the Higher Education Institution.

20. Universities that introduce elements of the dual system of education, shall plan and organize educational activities based on a combination of theoretical training with practical training in the workplace.

At the same time, it shall be necessary to master up to 40% of the educational material of the discipline directly at work (technological process, process of creative activity, financial and economic process, psychological and pedagogical process, and others).

21. Universities shall independently develop educational programs of higher education in accordance with the requirements of SCSHE, reflecting the learning outcomes, on the basis of which curricula shall be developed (work curricula, students' individual curricula) and work curricula in disciplines (syllabus). Educational programs of higher education shall be developed on the principle of modular education, with the exception of higher education institutions.

22. Training of personnel with higher education shall be carried out on the basis of general educational curricula of general secondary education, technical and vocational education, post-secondary education, and also higher education — upon receipt of a second higher education.

On the basis of educational programs of technical and vocational education, post-secondary education at the entrance, if the profile of the educational program of higher education coincides with the educational program of technical and vocational education or post-secondary education, the learning results of the previous level of formal education shall automatically be recognized and the period of study shall be reduced. In the case of a mismatch of the profile of the educational program, training shall be carried out under the full program of higher education.

If the learning outcomes correspond to the prerequisites, the individual disciplines of the previous level of formal education, as well as the results of training of non-formal education of the corresponding level, shall be re-counted.

23. Planning the content of education, the method of organizing and conducting the educational process shall be carried out by the university independently on the basis of the credit technology of education.

24. The profile of the educational program of higher education, representing its specific features, shall mean belonging to the relevant field of education, a description of the field of study, levels of training, learning outcomes, main types of professional activity and shall be determined in accordance with the Classifier in the following areas:

- 1) "Pedagogical Sciences" - Higher pedagogical education;
- 2) "Arts and Humanities" - higher education in art history or higher education in arts;
- 3) "Social Sciences, Journalism and Information" - higher education in the social sciences or higher education in the field of PR;
- 4) "Business, Management and Law" - higher economic education or higher legal education;
- 5) "Natural Sciences, Mathematics and Statistics" - higher natural science education or higher mathematical education;
- 6) "Information and Communication Technologies" - higher education in the field of ICT;
- 7) "Engineering, Manufacturing and Construction Industries" - higher engineering education;
- 8) "Agriculture and Bioresources" - higher agricultural education;
- 9) "Veterinary" - higher veterinary education;
- 10) "Health and Social Welfare (medicine)" - higher medical education;
- 11) "Services" - higher education in the field of services;
- 12) "National Security and Military Affairs" - higher education in the field of national security and military affairs.

The names of the awarded degrees by regions and levels of education shall be determined in accordance with Appendix 3 to this SCSHE.

### **Chapter 3. Requirements for the maximum volume of student workload**

25. Academic load shall be measured by the time required for the student to study the academic discipline, module or entire educational program of higher education and shall be necessary to achieve the established learning outcomes in the educational program of higher education.

26. The study load shall include all student's learning activities — lectures, seminars, term papers (projects), practical and laboratory work, studio classes, on-the-job training (with dual training), professional practice, thesis (project), independent work, including under the guidance of a teacher.

27. When determining the student's workload, it shall be necessary to take into account that the academic year consists of academic periods, the forms of which (semester - 15 weeks, trimester - 10 weeks, quarter - 7-8 weeks) shall be determined

by the university independently, intermediate certification periods, practices, holidays, the period of final certification (graduation course).

In special higher educational institutions, when determining the academic load of a cadet, the duration of the academic period shall be taken into account, which is determined independently by the special higher educational institution.

28. Full academic load of one academic year shall correspond to 60 academic credits or 1800 academic hours. In this case, during one semester a student shall master 30 academic credits.

In higher schools, the full academic load of one academic year shall be at least 60 academic credits. In this case, during one semester the student shall master at least 30 academic credits.

29. One academic credit shall be equal to 30 academic hours.

30. The study load indicated in paragraphs 27, 28 of this SCSHE shall be a typical study load. A student shall be allowed to master a smaller or larger number of academic credits for a semester. For certain categories of students, depending on the form and technology of training, the actual time to achieve learning outcomes may differ and shall be calculated by the university itself.

31. The main criterion for the completion of undergraduate programs shall be that students acquire at least 240 academic credits for the entire period of study, including all types of student learning activities.

Taking into account the specifics of educational programs of higher education, the main criterion for the completion of higher education shall be mastering of the following by a student:

1) in the direction of the preparation of "Art", "Veterinary", "National Security and Military Affairs" - at least 240 academic credits;

2) in the direction of training "Health and social security (medicine)" - 300 academic credits.

32. The number of academic credits and the required amount of a higher education educational program for students enrolled on the basis of a technical and vocational program or a post-secondary program, or a higher education program, or on the basis of a general secondary education program for training in reduced educational programs of accelerated education with an accelerated term of study shall be determined by the University itself, taking into account the recognition of previously achieved learning outcomes of formal education.

33. The university shall carry out educational activities in accordance with the obtained license, and throughout the entire period of its validity it shall comply with the qualification requirements for educational activities and the list of documents



confirming compliance with them, approved by Order № 391 of the Minister of Education and Science of the Republic of Kazakhstan dated June 17, 2015 (registered with the Register of Regulatory Legal Acts under the number 11716).

#### **Chapter 4. Requirements for the level of student training**

34. Requirements for the level of training of students shall be determined on the basis of Dublin descriptors of the first level of higher education (Bachelor degree) and shall reflect the acquired competencies expressed in the achieved learning outcomes.

Learning outcomes shall be formed both at the level of the entire educational program of higher education, and at the level of individual modules or academic disciplines.

35. Descriptors shall reflect learning outcomes that characterize students' abilities:

1) to demonstrate knowledge and understanding in the study area, based on advanced knowledge of this area;

2) to apply knowledge and understanding at the professional level, formulate arguments and solve problems of the studied area;

3) to collect and interpret information to form judgments taking into account social, ethical and scientific considerations;

4) to communicate information, ideas, problems and solutions, both to specialists and non-specialists;

5) training skills necessary for independent continuation of further education in the studied area.

36. Persons who have completed training in a higher education program and have successfully completed their final attestation shall be awarded a Bachelor's degree and (or) appropriate qualifications and a diploma of higher education with an application (transcript) free of charge.

37. The university shall also issue a graduate European Diploma Supplement (Diploma Supplement) free of charge.

#### **Chapter 5. Requirements for the duration of training**

38. The term of study for the Bachelor (undergraduate) degree shall be determined by the volume of mastered academic credits. When mastering a set amount of academic credits and achieving the expected learning outcomes for obtaining a Bachelor's degree, the educational program of higher education shall be considered mastered in full.

39. The main criterion for the completion of undergraduate programs shall be that students acquire at least 240 academic credits for the entire period of study, including all types of student learning activities.

Higher Education Standard

**The structure of the educational program for higher education (4-year study)**

No	Name of cycles and disciplines	Total labor intensity	
		in academic hours	in academic credits
1	2	3	4
1	Cycle of general education (GED)	1680	56
1	Required component	1530	51
	Modern history of Kazakhstan	150	5
	Philosophy	150	5
	Foreign language	300	10
	Kazakh (Russian) language	300	10
	Information and communication technology (in English)	150	5
	The module of socio-political knowledge (sociology, political science, cultural studies, psychology)	240	8
	Physical Training	240	8
2)	University Component and (or) Optional Component	150	5
2	The cycle of basic disciplines (BD)	3360	112
1)	University component	180-1680	6-56
2)	Elective Component	not less than 1680	not less than 56
3	The cycle of the main disciplines (PD)	1800	60
1)	University Component and (or) Optional Component	1800	60
4	Additional types of training (DVO)		
1)	Elective Component		
5	final examination	360	12
1)	Writing and defending a thesis (project) or preparing and passing a comprehensive exam	360	12
	Total	7200	240

Appendix 2  
to State Compulsory  
Higher Education Standard

**The structure of the educational program for higher education (the term of study is 5 years)**

No	Name of cycles and disciplines	Total labor/academic intensity	
		in academic hours	in academic credits
1	2	3	4
1	Cycle of general education (GED)	1680	56
1)	Required component	1530	51
	Modern history of Kazakhstan	150	5
	Philosophy	150	5

	Foreign language	300	10
	Kazakh (Russian) language	300	10
	Information and communication technology (in English)	150	5
	The module of socio-political knowledge (sociology, political science, cultural studies, psychology)	240	8
	Physical Training	240	8
2)	University Component and (or) Optional Component	150	5
2	The cycle of basic disciplines (BD)	4260	142
1)	University component	180-2130	6-71
2)	Elective Component	not less than 2130	not less than 71
3	The cycle of the main disciplines (PD)	2700	90
1)	University Component and (or) Optional Component	2700	90
4	Additional types of training (DVO)		
1)	Elective Component		
5	final examination	360	12
1)	Writing and defending a thesis (project) or preparing and passing a comprehensive exam	360	12
	Total	9000	300

Appendix 3  
to State Compulsory Higher  
Education Standard

**The structure of the educational program for higher education in higher educational institutions (the term of study is 4 years)**

No	Name of cycles and disciplines	Total labor/academic intensity	
		in academic hours	in academic credits
1	2	3	4
1	Cycle of general education disciplines (GED)	No more than 1680	No more than 56
1)	Required component	No more than 1530	Not more than 51
	Modern history of Kazakhstan	150	5
	Philosophy	150	5
	Foreign language	300	10
	Kazakh (Russian) language	300	10
	Information and communication technology (in English)	150	5
	Social and political knowledge module	240	8
	Physical training	240	8
2)	University component	Not less than 150	At least 5
2	The cycle of basic disciplines (BD)	No more than 3360	No more than 112
1)	University component		
3	The cycle of the main disciplines (PD)	Not less than 1800	Not less than 60

1)	University component		
4	Additional types of training (DVO)		
5	final examination	360	12
	Total	Not less than 7200	Not less than 240

Appendix 4  
to State Compulsory Higher  
Education Standard

**Names of awarded degrees in accordance with areas and levels of education**

Item number	Name of the field of education	Awarded degree in undergraduate education programs	Awarded degree in educational programs of the Master's course (scientific and pedagogical areas / profile)	Awarded degree in PhD / Doctoral degree programs
1.	Pedagogical sciences	Bachelor of Education in the educational program "code and name of the educational program"	Master's of Pedagogical Sciences / Master's of Education in the educational program "code and name of the educational program"	Doctor of Philosophy (PhD) / Doctor of Education in the educational program "code and name of the educational program"
2	Arts and Humanities	1. Bachelor of Arts in the educational program "code and name of the educational program"; 2. Bachelor of Arts in the educational program "code and name of the educational program"; 3. Bachelor of linguistics according to the educational program "code and name of the educational program."	1. Master's of Arts in Arts / Master's of Arts in the educational program "code and name of the educational program" 2. Master's of Humanities / Master's of Arts in the educational program "code and name of the educational program" 3. Master's of Philology / Master's of Linguistics according to the educational program "code and name of the educational program"	1. PhD / Doctor of Art in the education alprogram "code and name of the educational program" 2. PhD / PhD / educational program "code and name of the educational program" 3. PhD / educational program "code and name of the educational program"
3	Social Sciences, Journalism and Information	Bachelor of social knowledge in the educational program "code and name of the educational program"	Master's of Social Sciences / Master's of Social Knowledge in the educational program "code and name of the educational program"	PhD / educational program "code and name of the educational program"
4.	Business, Management and Law	1. Bachelor of Economics, or Bachelor of Business and Management in the educational program "code and name of the educational program"	1. Master's of Economic Sciences / Master's of Business and Management, or MBA in the educational program "code and name of the educational program"	1. PhD / Doctor of Economics, or DBA in the educational program "code and name of the educational program" 2. PhD / Doctor of Law

		2. Bachelor of Law in the educational program "code and name of the educational program"	2. Master's of Laws / Master's of Laws according to the educational program "code and name of the educational program"	in the educational program "code and name of the educational program"
5.	Natural sciences, mathematics and statistics	Bachelor of Natural Science in the educational program "code and name of the educational program"	Master's of Science / Master's of Science in the educational program "code and name of the educational program"	PhD / educational program "code and name of the educational program"
6	Information and communication technology	Bachelor of Information and Communication Technology in the educational program "code and name of the educational program"	Master's of Technical Sciences / Master's of Engineering and Technology in the educational program "code and name of the educational program"	PhD / educational program "code and name of the educational program"
7	Engineering, manufacturing and construction industries	Bachelor of Engineering and Technology in the educational program "code and name of the educational program"	Master's of Technical Sciences / Master's of Engineering and Technology in the educational program "code and name of the educational program"	PhD / educational program "code and name of the educational program"
8.	Agriculture and bioresources	Bachelor of Agriculture in the educational program "code and name of the educational program"	Master's of Agricultural Sciences / Master's of Agriculture in the educational program "code and name of the educational program"	PhD / educational program "code and name of the educational program"
9.	Veterinary medicine	Bachelor of Veterinary in the educational program "code and name of the educational program"	Master's of Veterinary Science / Master's of Veterinary in the educational program "code and name of the educational program"	PhD / educational program "code and name of the educational program"
10	Health welfare and	1. Bachelor of Health in the educational program "code and name of the educational program" 2. Bachelor of Social Security in the educational program "code and name of the educational program"	1. Master's of Medical Sciences / Master's of Health in the educational program "code and name of the educational program" 2. Master's of Science / Master's of Social Welfare according to the educational program "code and name of the educational program"	PhD / Doctor of Medicine in the educational program "code and name of the educational program"
11.	Services	Bachelor in services in the educational program "code and name of the educational program"	Master's of Science / Master's of Arts in the educational program "code and name of the educational program"	PhD / educational program "code and name of the educational program"
12.	National Security and Military	Bachelor of National Security and Military Affairs in the educational program "code and name of the educational program"	Master's of National Security and Military Affairs in the educational program "code and name of the educational program"	PhD / Doctor of National Security and Military Affairs on the educational program "code and name of the educational program"

**State obligatory standard for postgraduate education Chapter 1. General Provisions**

1. This State Compulsory Standard of Postgraduate Education (hereinafter - SCSHE) is developed in accordance with subparagraph 5-1) of Article 5 and Article 56 of the Law of the Republic of Kazakhstan dated July 27, 2007 "On Education" (hereinafter - the Law) and determines the requirements for the content of education with a focus on learning outcomes, the maximum amount of study load of students, the level of training of students and the period of study in organizations of higher and (or) postgraduate education (hereinafter - the university), including military special educational institutions notions (hereinafter - the MSEI ), regardless of the form of incorporation and departmental subordination. In educational institutions under the President of the Republic of Kazakhstan, the content of education shall be determined by a special contingent of students and educational standards shall be developed independently in accordance with the special status of functioning of these educational institutions.

2. The SCSHE shall apply concepts in accordance with the Law. In addition to them, the following concepts shall be included:

1) qualification characteristics in higher educational institutions - knowledge, skills and abilities necessary for the effective implementation of professional activities in the field of defense of the Republic of Kazakhstan and relevant to a particular position;

2) qualification requirements in higher educational institutions - knowledge, skills and abilities necessary for the effective implementation of professional activities in the system of national security, law enforcement and relevant to a particular position;

3) professional competence in higher educational institutions - the knowledge, skills and abilities necessary for the effective implementation of professional activity in the system of law enforcement agencies in the relevant position;

4) Master's's thesis in higher educational institutions - graduate work of the undergraduate, which is an independent scientific research containing theoretical and (or) practical developments of the actual problem in the field of the chosen educational program, based on modern theoretical, methodological and technological achievements of science;

5) REP in MSEI is - a training document developed by an educational organization independently on the basis of an educational program or MC.

6) Doctor of profile - the degree awarded to persons who have mastered the doctoral program in the relevant field of professional activity and defended a dissertation in the Republic of Kazakhstan or outside its borders, recognized in the manner prescribed by the legislation of the Republic of Kazakhstan;

7) GED program - the GED program is designed to train management personnel, senior managers with practical experience, as well as those interested in conducting applied research for the development and development of modern concepts and management models with the award of a doctorate degree in profile;

8) doctoral student - a person studying in a doctoral program;

9) doctoral studies - postgraduate education, the educational programs of which are aimed at training personnel for scientific, pedagogical and (or) professional activities, with the award of the degree of Doctor of Philosophy (PhD) (Doctorate in Profile) with the compulsory mastering of at least 180 academic credits;

10) Doctoral thesis - a doctoral student's scientific work, which is an independent research that develops theoretical concepts, the totality of which can be qualified as a new scientific achievement, or a scientific problem is solved, or scientifically grounded technical, economic or technological solutions are set out, the introduction of which makes a significant contribution in the development of the country's economy;

11) descriptors (descriptors) - a description of the level and amount of knowledge, skills, abilities and competencies acquired by students upon completion of the study program of the corresponding level (degree) of higher and postgraduate education based on learning outcomes, formed competencies and academic credits;

12) Executive MBA (hereinafter - EMBA (Executive EMBA) - MBA program, focused on training top managers, taking into account the specifics of the target audience;

13) the individual curriculum (hereinafter referred to as IC) - the student's curriculum, which he independently forms for each academic year with the help of an adviser on the basis of the educational program and catalog of elective disciplines;

14) the university component (hereinafter - UC) - a list of academic disciplines and the corresponding minimum amounts of academic credits determined by the university independently for the development of the educational program;

15) competences - the ability to practically use the knowledge and skills acquired in the learning process in professional activities;

16) Master's - degree awarded to persons who have mastered the educational programs of the Master's course;

17) undergraduate - a person studying in the Master's course;

18) Master's - the level of postgraduate education, aimed at training with the award of the degree "Master's" in the relevant educational program with the mandatory development of at least 60-120 academic credits;

19) Master's thesis - the graduate work of a graduate student of a scientific and pedagogical Master's course, which is an independent scientific study containing theoretical and / or practical developments of a pressing problem in the field of a chosen educational program, based on modern theoretical, methodological and technological achievements of science and technology;

20) Master's project - the graduate work of the Master's student of the specialized Master's course, which is an independent study containing theoretical and (or) experimental results, allowing to solve the applied problem of the actual problem of the chosen educational program;

21) MBA program - a program for the training of management personnel with modern knowledge and skills in the field of business, capable of managing processes and personnel assets, shaping the company's strategy, being able to identify strategic and operational tasks and achieve their achievements using scientific tools;

22) compulsory component - a list of academic disciplines and the corresponding minimum amounts of academic credits established by SCSHE and studied by students in the mandatory Order of the educational program;

23) working curriculum (hereinafter - REP) - a training document developed by the university independently on the basis of the educational program and individual curricula of students;

24) component by choice - a list of academic disciplines and corresponding minimum amounts of academic credits offered by the university, independently chosen by students in any academic period, taking into account their prerequisites and post requisites;

25) Doctor of Philosophy (PhD) - the degree awarded to persons who have mastered the doctoral program in the scientific and pedagogical field and defended a thesis in the Republic of Kazakhstan or outside its borders, recognized in the manner established by the legislation of the Republic of Kazakhstan;

26) Doctor of Business Administration (hereinafter referred to as the DBA program) - a degree awarded to persons who have mastered the DBA program;

27) Master's of Business Administration - the degree awarded to persons who have mastered the MBA or EMBA program.



**Chapter 2. Requirements for the content of graduate education programs with a focus on learning outcomes Paragraph 1. Master's degree program**

3. The content of the Master's educational program shall consist of:

- 1) theoretical training, including the study of cycles of basic and major disciplines;
- 2) practical training of undergraduates: various types of practices, scientific or professional internships;
- 3) research work, including the implementation of a Master's's thesis - for scientific and pedagogical Master's course, or experimental research work, including the implementation of a Master's project - for the profile Master's course. Universities - the Master's thesis or Master's project;
- 4) final certification.

4. The cycles of basic (hereinafter - BD) and profiling (hereinafter - PD) disciplines shall include disciplines of the university component (hereinafter - UC) and the elective component (hereinafter – EC ).

In MSEI , the cycles of BD and MD shall include disciplines of the UC.

5. The list of disciplines of the university component and the elective component shall be determined by the university independently. This shall take into account the needs of the labor market, the expectations of employers, the needs and interests of undergraduates. The university component of the database cycle of all educational programs of the Master's course of the scientific and pedagogical direction shall include such disciplines as "History and Philosophy of Science", "Foreign Language (professional)", "Higher School Pedagogy", "Management Psychology", for the core direction - the disciplines "Management", " Management Psychology ", " Foreign Language (professional) ", with the exception of High Schools. Universities shall develop integrated programs in the disciplines of the UC database cycle, having an interdisciplinary nature.

6. In the Master's program of scientific and pedagogical direction the volume of the database cycle shall be 29% of the total educational program of the Master's course or 35 academic credits. Of these, 57% or 20 academic credits shall be assigned to the UC. In higher education institutions in the Master's program of the scientific and pedagogical direction, the volume of DB shall be at least 20% of the total educational program.

7. In the Master's degree program the volume of the DB cycle shall be 17% of the total educational program of the Master's course or 10 academic credits (with a one-year study period) and 15 academic credits (with a 1.5-year student period). Of these, the volume of the UC disciplines shall be 60% or 6 academic credits (with a one-year study period) and 40% or 6 academic credits (with a 1.5-year study period).

In MSEI the Master's program of the core direction, the volume of the DB cycle shall be at least 15% (with a one-year study period) and at least 15% (with a one-year study period).

8. In the Master's course of the scientific and pedagogical direction the volume of the cycle of MD shall be 41%, or 49 academic credits of the total educational program of the Master's course. In higher educational institutions, the volume of the cycle of the main disciplines (MD) in the Master's course of the scientific and pedagogical direction shall be at least 50%.

9. In the Master's program in the core field, the volume of the MD cycle shall be 42%, or 25 academic credits (with a one-year study period) and 40%, or 45 academic credits (with a 1.5-year study period) from the total Master's educational program between the UC and the EC at the discretion of the university.

In graduate schools in the Master's direction of the core direction, the volume of the cycle of the main disciplines (MD) (with a 1 year and 1.5 year course of study) shall be at least 50%.

10. Programs of disciplines and modules, as a rule, shall be interdisciplinary and multidisciplinary in nature, providing training at the interface of a number of areas of knowledge.

11. The structure of the Master's educational program in the relevant areas shall be determined in accordance with Appendixes 1, 2, 3 and 4 to this SCSHE.

12. The university shall carry out educational activities in accordance with the license obtained and throughout the entire period of its validity, it shall comply with the qualification requirements for educational activities and the list of documents confirming compliance with them, approved by Order № 391 of the Minister of Education and Science of the Republic of Kazakhstan dated June 17, 2015 (registered with the Register of Regulatory Legal Acts under the number 11716).

13. Planning the content of education, the method of organizing and conducting the educational process shall be carried out by the university and the scientific organization independently on the basis of the credit technology of education.

14. The Master's degree in scientific and pedagogical direction shall implement educational programs of postgraduate education in the preparation of scientific and pedagogical staff for universities and scientific organizations with in-depth scientific, pedagogical and research training. In higher educational institutions, scientific-pedagogical and specialized magistracies shall implement educational programs of post-graduate education for the preparation of managerial, scientific and pedagogical personnel with in-depth professional or scientific-pedagogical training.

15. The Master's degree program shall implement educational programs of postgraduate education in management training for the economy, medicine, law, education, arts, services and business, defense and national security, law enforcement with in-depth professional training. In Order to prepare specialists for the business environment, the university shall implement MBA programs.

16. The obligatory component of the Master's program shall be :

1) practical training of undergraduates, including various types of practices, scientific or professional internships;

2) research work, including the implementation of a Master's thesis for scientific and pedagogical Master's course or experimental research work, including the implementation of a Master's project for the specialized Master's course.

17. The educational program of the scientific and pedagogical Master's course shall include two types of practices that shall be conducted in parallel with the theoretical training or in a separate period:

1) teaching in the database cycle - in the university;

2) research in the cycle MD - at the place of the dissertation.

18. Pedagogical practice shall be conducted with the aim of developing practical skills in teaching and learning. In this case, undergraduates shall be attracted to conduct classes in the Bachelor at the discretion of the university.

19. The research practice of the undergraduate shall be conducted in order to familiarize with the latest theoretical, methodological and technological achievements of domestic and foreign science, modern methods of scientific research, processing and interpretation of experimental data.

20. The educational program of the Master's program shall include practical training in the MD cycle. Production practice in the MD cycle shall be carried out in order to consolidate the theoretical knowledge gained in the learning process, the acquisition of practical skills, competencies and professional experience in the Master's' educational program, as well as the development of advanced experience. In higher educational institutions, practical training shall be conducted in the form of professional practice or military training.

21. The content of research (production) practice shall be determined by the theme of the dissertation (project) research.

22. As part of the research (experimental research) work of the undergraduate (hereinafter referred to as RW ER), an individual work plan of the undergraduate to familiarize himself/herself with innovative technologies and new types of productions shall be provided for compulsory scientific internships in scientific organizations or

areas of activity. RW (ER) shall be planned in parallel with other types of educational work or in a separate period.

23. The results of research or experimental research at the end of each period of their passage shall be recorded by the undergraduate in the form of a report.

24. Requirements for a graduate's research work in a scientific and pedagogical Master's course:

1) correspond to the profile of the Master's course educational program, which is the Master's thesis;

2) relevant and contains scientific novelty and practical significance;

3) is based on modern theoretical, methodological and technological achievements of science and practice;

4) is performed using modern scientific research methods;

5) contains research (methodical, practical) sections on the main protected provisions;

6) is based on international best practices in the relevant field of knowledge.

25. Requirements for the experimental research work of a graduate student in the specialized Master's course:

1) corresponds to the profile of the educational program of the Master's course, on which the Master's project is carried out and defended;

2) is based on modern achievements of science, technology and production and contains specific practical recommendations, independent solutions of managerial tasks;

3) performed using advanced information technology;

4) contains experimental research (methodological, practical) sections on the main protected provisions.

26. Every year, at the end of the school year, the undergraduate shall undergo academic certification for the implementation of the individual work plan.

The procedure for conducting academic certification of a student shall be determined by the university independently.

27. The final result of the research and experimental research work of the undergraduate shall be a Master's thesis (project).

28. The main results of the Master's thesis shall be presented in no less than one publication and (or) one presentation at a scientific-practical conference.

29. The university shall assist the undergraduate in publishing the results of the study.

30. Within two months after enrollment, each undergraduate shall be appointed a supervisor from among candidates or doctors of sciences, or PhDs, or qualified

specialists from relevant industries with at least 5 years of experience to manage a Master's thesis (project).

If necessary, scientific advisers shall be appointed for related fields of science.

In the Higher Education Institution, during the first semester after enrollment, each undergraduate shall be assigned a supervisor to supervise his/her Master's thesis. The supervisor and the research topic of the student on the basis of the decision of the academic council shall be approved by Order of the head of the university. The supervisor of the undergraduate shall be appointed from among candidates or doctors of science, or doctors of PhD, as well as persons with a Master's degree or military (special rank, rank) colonel with at least 5 years of research and teaching experience or qualified specialists of the relevant branch of science. If necessary, scientific advisers shall be appointed for related fields of science.

31. The supervisor and the research topic of the undergraduate shall be approved by the decision of the academic council.

32. Requirements for the content and design of the Master's thesis (project), its preparation and protection shall be determined by the university independently. In a higher education institution, the requirements for the content and design of a Master's thesis, its preparation and protection shall be determined by the higher education institution independently or by the appropriate authorized state body.

33. Master's thesis (project) shall be tested for plagiarism, the rules and procedures for which shall be determined by the university independently.

34. The defense of the Master's thesis (project) shall include the preparation of the Master's thesis (project), its execution and protection procedure.

35. The procedure for defending a Master's thesis (project) shall be determined by the university and scientific organization independently.

36. The holder of a Master's degree who graduated from a specialized Master's course shall be admitted to pedagogical activity after additional mastering of the educational program of the Master's course of a pedagogical profile, with the exception of higher education institutions.

37. The content of the educational program of a pedagogical profile for persons who have completed a specialized Master's course shall be established in accordance with Appendix 5 to this standard, with the exception of a higher education institution.

38. A Master's degree program that completes the educational program of the Master's program in pedagogical profile shall be issued with a certificate to the main diploma, with the exception of higher education institutions.

The form of the certificate of Master's the educational program of the Master's program of pedagogical profile shall be determined by the university independently

and shall be necessarily recognized by universities, regardless of the form of incorporation and departmental subordination.

39. The final certification shall be 12 academic credits or not more than 10% of the total educational program of the Master's course in the scientific and pedagogical direction (20% or 13% in the specialized Master's course with a typical training period of 1 year or 1.5 years, respectively) and shall be held in the form of writing and defending a Master's thesis (project). For higher schools, the final certification shall be at least 12 academic credits.

40. The purpose of the final assessment shall be to assess the learning outcomes and key competencies achieved upon completion of the study of the graduate education program. In higher educational institutions, final certification shall be carried out in the form of passing a comprehensive state exam and / or defense of a Master's thesis (project), or in the form of passing a state exam and additionally in two basic and / or major subjects. The university, taking into account the level of theoretical training, educational achievements, learning outcomes and research and analytical abilities of students, shall independently determine the forms of final certification: passing the state exam and defending a Master's thesis, or passing state exams and additionally in two basic and / or major subjects.

41. The student in the Master's course, if necessary, shall develop additional types of training independently on a fee basis, with the exception of students who graduate from a higher school.

42. The terms of entrance examinations and enrollment in the MBA (EMBA) educational programs shall be determined by the university independently. Training in educational programs MBA (EMBA) shall be carried out on a fee basis.

43. Requirements for key competencies of graduates of MBA (EMBA). The competences of an MBA (EMBA) graduate program shall be determined by the following knowledge and skills:

1) the essence of business management from a strategic point of view of an organization's activities in a modern market environment;

2) the organization of organizations, the mechanisms of their interaction with stakeholders (stakeholders), the principles of work in the external context in the long term;

3) the concept of leadership in strategic management;

4) modern approaches to management;

5) analytical methods of management, methods of diagnostics, analysis and problem solving, as well as methods of decision making and their implementation in practice;

- 6) the importance of business globalization;
- 7) analyze problem aspects of the business and generate solutions;
- 8) identify the influence of the external environment and take it into account when solving practical management problems;
- 9) integrate various functional aspects of management, based on the knowledge of the theory, modern research and practice requirements;
- 10) use a marketing and financial approach to solving company management problems;
- 11) to consider the problems of running a business and managing it from the standpoint of competition in an international environment.

44. The MBA educational program (EMBA) shall contain:

- 1) disciplines on the formation of professional competencies and personal development, leadership skills;
- 2) practical training (for persons studying with a job);
- 3) the implementation of a Master's thesis or project;
- 4) final certification.

45. The MBA educational programs (EMBA) for the development of professional competencies shall consist of the disciplines of compulsory and elective components.

The list of elective disciplines shall be determined in accordance with the direction of preparation and specialization of the MBA program (EMBA) for a particular business industry.

46. The structure of the MBA and EMBA educational programs shall be established in accordance with Appendix 6 to this SCSHE.

47. The preparation of Master's within the framework of the MBA educational program (EMBA) shall be carried out in various areas, subject to the requirements for the training of professional general managers (general manager), as well as the corporate program.

48. Teaching on MBA programs (EMBA) shall be provided by faculty members involved in conducting business research and consulting, research activities, as well as having managerial experience.

49. The university shall independently develop postgraduate education programs in accordance with the requirements of SCSHE, reflecting the learning outcomes, on the basis of which curricula shall be developed (working curricula, student's individual curricula) and working curricula in disciplines (syllabus). The university shall provide the conditions for the implementation of the MBA program (EMBA), with the use of modern educational technologies and the provision of necessary educational services. Educational programs of postgraduate education shall be developed according to the

principle of modular education (in higher education institutions it shall be developed according to other principles).

50. Training in the Master's course shall be carried out on the basis of educational programs of higher education. At the same time, at the "entrance" if the profile of the educational program of the Master's course coincides with the higher education program, the learning results of the previous level shall be automatically recognized; in case of a mismatch of the profile of the educational program of the Master's course with the educational program of higher education, the undergraduate shall be established prerequisites for development (in pre-requisites in higher education institutions is not established). The list of required prerequisites and the terms of their development shall be determined by the universities themselves. Prerequisites shall be Master's degree on a fee basis, with the exception of a higher school of higher education.

As a prerequisite, the undergraduate shall present the results of teaching non-formal education of the appropriate level, the recognition of which is carried out by the university in accordance with subparagraph 38-3) of Article 5 of the Law.

The results of training in the programs of higher special education shall be equal to the results of training in the relevant graduate programs in the field of study. For higher educational institutions, the results of training in higher specialized education programs shall be equated with the results of training in relevant Master's programs in the core area if a specific academy is available.

51. Individuals who complete the MBA / EMBA educational program and successfully complete their final certification shall be awarded the Master's degree of Business Administration and receive a postgraduate diploma with an application (transcript) for free.

### **Chapter 3. Requirements for the maximum volume of academic load of undergraduate**

52. The study load shall be measured by the time required for the undergraduate to study the academic discipline, module or the entire educational program of the Master's course and necessary to achieve the established learning outcomes in the educational program of the Master's course.

53. The study load shall include all the training activities of the undergraduate - lectures, seminars, group classes, group exercises, practical classes, term papers (projects), practical and laboratory work, studio classes, practice, scientific or professional training, research work (experimentally - research work), the implementation of the Master's thesis (project), independent work, including under the guidance of a teacher.

54. The Master's student shall be trained on the basis of an individual work plan, which is compiled under the guidance of a supervisor.



55. The individual work plan of a graduate student shall be compiled for the entire period of study and shall include the following sections:

- 1) IEP (if necessary, shall be updated annually);
- 2) research (experimental research) work (topic, research direction, deadlines and reporting form);
- 3) practice (program, base, deadlines and reporting form);
- 4) the theme of the Master's thesis (Master's project) with the rationale and structure;
- 5) a plan for the implementation of the Master's thesis (Master's project);
- 6) a plan of scientific publications, internships.

In higher educational institutions, an individual work plan for a student shall be prepared for the entire period of study and shall include the following sections:

- 1) research, experimental research (topic, research direction, deadlines and reporting form);
- 2) practice (if necessary pedagogical), military internship (program, base, terms and form of reporting);
- 3) the theme of the Master's thesis (Master's project) with the rationale and structure;
- 4) a plan for the implementation of the Master's thesis (Master's project);
- 5) the plan of scientific publications, participation in scientific and practical (scientific and theoretical conferences), and more.

56. In determining the academic load of a graduate student, it shall be assumed that the academic year consists of academic periods, the forms of which (semester - 15 weeks, trimester - 10 weeks, quarter - 7-8 weeks) shall be determined by the university independently or by a scientific organization, the period of final certification ( at graduation course).

57. A full study load of one academic year shall correspond to at least 60 academic credits and shall correspond to at least 1,800 academic hours per academic year. In this case, during one semester the student Master's at least 30 academic credits.

58. One academic credit shall correspond to 30 academic hours.

59. The study load indicated in paragraphs 56 and 57 of this SCSHE shall be a typical study load. Undergraduate development shall be allowed for a semester of a smaller or larger number of academic credits. For certain categories of undergraduates, depending on the form and technology of training, the actual time to achieve learning outcomes shall be different and shall be calculated by the university independently.

60. The main criterion for completing the Master's program shall be mastering of the following by students:

1) at least 120 academic credits in a scientific pedagogical course for the entire period of study, including all types of graduate's educational and scientific activities (for higher education institutions at least 120 credits);

2) 60 Master's credits with a 1 year study period and 90 academic credits with a 1.5 year study period (for higher education institutions with a 1 year study period of at least 60 credits, a 1.5 year study period of at least 90 credits and no more than 110 credits).

#### **Chapter 4. Requirements for the level of training of a student**

61. Requirements for the level of training of a graduate student shall be determined on the basis of the Dublin descriptors of the second level of higher education (Master's course) and shall reflect the acquired competencies expressed in the achieved learning results. Learning outcomes shall be formulated both at the level of the entire Master's educational program and at the level of individual modules or an academic discipline.

62. Descriptors shall reflect learning outcomes that characterize a learner's abilities:

1) to demonstrate developing knowledge and understanding in the studied area, based on advanced knowledge of this area, in the development and / or application of ideas in the context of the study;

2) to apply at the professional level their knowledge, understanding and abilities to solve problems in a new environment, in a wider interdisciplinary context;

3) to collect and interpret information to form judgments taking into account social, ethical and scientific considerations;

4) to clearly and unambiguously communicate information, ideas, conclusions, problems and solutions, both to specialists and non-specialists;

5) training skills necessary for independent continuation of further education in the studied area.

63. Persons who have completed the study program of the Master's course and have successfully completed the final certification, awarded the degree of "Master's" and issued a diploma of postgraduate education with the application (transcript) for free.

64. The university or scientific organization shall additionally issue a European Diploma Supplement (Diploma Supplement) to a graduate for free.

#### **Chapter 5. Requirements for the duration of studies within the Master's degree program**

65. The period of study in the Master's course shall be determined by the volume of mastered academic credits. When mastering a set amount of academic credits and achieving the expected learning outcomes for a Master's degree, the Master's educational program shall be considered as fully mastered.

66. Training in the Master's program shall be carried out on the basis of educational programs of higher education in two areas:

- 1) scientific and pedagogical with a study period of at least two years;
- 2) specialized with a study period of at least one year.

67. Typical periods of study in the MBA educational program shall be 2 years, EMBA programs - at least 1 year.

## **Chapter 2. Content requirements for postgraduate education with a focus on learning outcomes**

### **Paragraph 2. Doctoral Program**

68. The educational component shall be 30% of the total educational program of the doctoral program or 53 academic credits and shall consist of cycles of basic (hereinafter - BD) and major (hereinafter - MD) disciplines, which include disciplines of the university component (hereinafter - UC) and an elective component (hereinafter -EC), practice. In this case, the ratio of the volume of the BD and MD shall be determined by the university independently. In higher education institutions, educational programs shall include BD and MD cycles, which consist of disciplines of the university component.

69. The list of the UC and EC disciplines shall be determined by the university independently. Herewith, the needs of the labor market, the expectations of employers, the needs and interests of doctoral students shall be taken into account. In higher schools, the list of disciplines of the university component shall be determined by the higher educational institution independently.

Programs of disciplines and modules, as a rule, shall be interdisciplinary and multidisciplinary in nature, providing training at the interface of a number of areas of knowledge.

70. Training in PhD doctoral studies shall be carried out on the basis of educational programs of the Master's course, in the profile doctoral programs, including the DBA programs - on the basis of the Master's course, or higher specialized education, equivalent to the profile Master's course. At the same time, at the "entrance" in the case of coincidence of the profile of the educational program of the doctoral program with the Master's program, the learning outcomes of the previous level of education shall be automatically recognized; in case of a mismatch of the profile of the educational program of the doctoral program with the Master's program, the pre-doctoral candidate shall be provided with pre-requisites for mastering (in special higher educational institutions institutions there is no prerequisite).

The list of required prerequisites and the terms of their development shall be determined by the universities themselves. Prerequisites shall be mastered on a fee basis, with the exception of a higher school of higher education. As prerequisites, the doctoral candidate shall present the results of non-formal education of the appropriate

level, the recognition of which is carried out by the university in accordance with subparagraph 38-3) of Article 5 of the Law.

Upon admission of a holder of a master's degree to a doctoral PhD, as prerequisites, he/she shall be additionally established an educational program for postgraduate education of a pedagogical profile of a scientific and pedagogical Master's course, with the exception of higher education institutions.

71. The educational program for the preparation of a Ph.D. shall have a scientific and pedagogical orientation and shall involve fundamental educational, methodological and research training and in-depth study of disciplines in relevant areas of science for the system of higher and postgraduate education and science.

72. The educational program for the preparation of a doctoral degree program shall involve fundamental educational, methodological and research training and in-depth study of disciplines in relevant areas of science for the sectors of the national economy, social sphere: education, medicine, law, art, economics, business administration and in the field of national security. and military affairs.

73. Doctoral education programs in terms of vocational training shall be developed on the basis of studying the experience of foreign universities and research centers that implement accredited training programs for PhDs or doctors in the field.

74. The practice shall be carried out in order to develop practical skills of scientific, research, pedagogical and professional activities. The doctoral education program shall include:

1) teaching and research practice - for students in the PhD program;

2) practical training - for students under the program of specialized doctoral studies. In the period of teaching practice, doctoral students, if necessary, shall be invited to conduct classes in undergraduate and graduate programs.

The research practice of the doctoral candidate shall be carried out with the purpose of studying the latest theoretical, methodological and technological achievements of domestic and foreign science, as well as consolidating practical skills, applying modern methods of scientific research, processing and interpreting experimental data in the dissertation research. The internship of a doctoral candidate shall be carried out in order to consolidate the theoretical knowledge gained in the learning process, and improve the professional level. The content of research and industrial practice shall be determined by the theme of the doctoral dissertation.

75. The scientific component of the doctoral education program shall be formed from the research (hereinafter - RW) or experimental research work (hereinafter – EW ) of the doctoral candidate, scientific publications, writing and defending a doctoral

dissertation. The volume of the scientific component shall be 64% of the total educational program of the doctoral program or 115 academic credits.

76. Within the framework of the research and development work RW (EW), an individual work plan for a doctoral candidate to familiarize himself/herself with innovative technologies and new types of production shall provide for mandatory scientific internships in scientific organizations and (or) organizations of relevant industries or fields of activity, including abroad. The terms of the internship shall be determined by the university independently.

77. Requirements for research students' research under the PhD program:

1) compliance with the main issues of the doctoral educational program, for which the doctoral dissertation is defended;

2) relevant and contains scientific novelty and practical significance;

3) is based on modern theoretical, methodological and technological achievements of science and practice;

4) is based on modern methods of processing and interpreting data using computer technology;

5) is performed using modern scientific research methods;

6) contains research (methodical, practical) sections on the main protected provisions.

78. Requirements for the student's EW by profile:

1) compliance with the main issues of the doctoral education program, which defends a doctoral dissertation;

2) relevant and contains scientific novelty and practical significance;

3) is based on modern achievements of science, technology and production and contain specific practical recommendations, independent solutions of managerial tasks of an integrated, cross-functional nature;

4) performed using advanced information technologies;

5) contains experimental research (methodological, practical) sections on the main protected provisions.

79. Every year, at the end of the school year, the doctoral candidate shall undergo academic certification for the implementation of the individual work plan. The procedure for conducting academic certification of a doctoral candidate shall be determined by the university independently.

80. Doctoral dissertation shall be carried out in the period of research and development work (RW) (EW). The final result of the RW (EW) shall be a doctoral thesis.

81. For the management of a doctoral thesis, a doctoral candidate shall be assigned scientific management within two months after enrollment. Scientific management shall be approved by Order of the Rector of the University on the basis of the decision of the Academic Council.

82. The scientific leadership of doctoral candidates for the PhD degree shall be carried out by consultants in the amount of at least 2 persons appointed from among doctors or candidates of sciences or PhDs, one of whom shall be a scientist from a foreign university (except for groups of training areas "National Security and Military"). Scientific management of doctoral candidates for the degree of a doctor in a profile or DBA shall be carried out by consultants in the amount of at least 2 people appointed from among doctors or candidates of sciences or doctors of philosophy (PhD), one of whom is a highly qualified specialist of the relevant industry or field of activity.

Scientific consultants shall be responsible for the compliance of doctoral students with the discipline, the implementation of the individual work plan of the doctoral candidate and the timely submission of the dissertation work.

83. The topic of a doctoral dissertation shall be determined during the first semester and shall be approved by the decision of the academic council.

84. The content of the dissertation research shall be aimed at the implementation of national priorities, government programs, programs of basic or applied research.

85. The main results of the research of a doctoral candidate shall be published in scientific, scientific-analytical and scientific-practical editions in accordance with the Rules for Awarding Academic Degrees and Academic Ranks, approved by Order № 127 of the Minister of Education and Science of the Republic of Kazakhstan dated March 31, 2011 (registered with the Register of Regulatory Legal Acts under № 6911).

86. The structure of the educational program of doctoral studies in the scientific and pedagogical direction shall be given in accordance with Appendix 7 to this SCSHE. The content of the educational program of specialized doctoral studies shall be established by the university itself. For higher schools, the structure of the doctoral education program shall be given in accordance with Appendix 8 to this SCSHE.

Doctoral educational programs shall be structured on the principle of modular learning.

87. The final certification shall be 12 academic credits or 6% of the total educational program of the doctoral program and shall be carried out in the form of writing and defending a doctoral dissertation (project). The final certification of a doctoral candidate shall be carried out in the form of writing and defending a doctoral

dissertation. The doctoral thesis shall be tested for borrowing without reference to the author and the source of borrowing (checking the thesis for plagiarism), which is carried out by the National Center for State Scientific and Technical Expertise.

88. The purpose of the final certification shall be to assess the scientific-theoretical and research-analytical level of the doctoral candidate, formed professional and managerial competencies, readiness for independent performance of professional tasks and the compliance of his/her training with the requirements of the professional standard and doctoral education program.

89. The terms of the entrance examinations and admission to the DBA educational programs shall be determined by the university independently. Training in educational programs DVA shall be carried out on a fee basis.

90. The key competencies of DBA graduates shall reflect learning outcomes that characterize the learner's abilities:

1) possess the methodology of a systematic approach to the organization, modern approaches to management and analytical methods of management, methods of diagnostics, analysis and problem solving, as well as methods of decision making and their implementation in practice;

2) competently solve practical management problems and implement these solutions, be prepared for the implementation of management functions and be able to solve professional problems in the interests of the organization as a whole;

3) possess the knowledge, skills and abilities necessary for taking up a relevant managerial position and based on a deep understanding of the characteristics of a market economy and its capabilities, functions and economic role of the state, understanding environmental problems, awareness of the social responsibility of business and adherence to civilized ethical norms of its management:

4 ) be able to assess current problems and prospects for the socio-economic development of Kazakhstan, understand current trends in the development of the global eco-economic nomics and globalization, to navigate in matters of international competition.

91. The DBA educational program shall contain:

1) theoretical education;

2) research work, including the implementation of a doctoral dissertation;

3) final certification.

92. The content of the DBA educational program shall be developed taking into account the features and principles of functioning of Kazakhstan business and management, studying international business and foreign management experience. The list of disciplines of the university component and the component of choice shall

be determined by the university independently in accordance with the requests of employers and the labor market.

93. The structure of the DBA educational program shall be given in accordance with Appendix 9 to this SCSHE.

94. The research component of the DBA educational program shall be formed from the applied and research work of a doctoral student, publications and writing a doctoral dissertation.

95. The results of doctoral studies shall be published in at least 7 (seven) scientific journals, journals, including at least 3 (three) in scientific journals abroad and presented at international scientific conferences.

96. The scientific management of doctoral students of the DBA program shall be carried out by no less than two consultants appointed from among doctors (candidates of science) with research (academic) experience or having a DBA degree with management and consulting experience.

97. DBA programs shall be provided by faculty members who have a doctoral degree or doctoral degree and / or individuals with professional knowledge and skills in the field of study, with international internships and publications.

98. The university shall provide the conditions for the implementation of the DBA program, with the use of modern educational technologies and the provision of necessary educational services.

99. Persons who have completed training in the DBA educational program and have successfully completed their final attestation shall be awarded the degree of “Doctor of Business Administration” in the manner determined in accordance with the Rules for Awarding Academic Degrees approved by Order № 127 of the Minister of Education and Science of the Republic of Kazakhstan of 31 March 2011 (registered with the Register of Regulatory Legal Acts under № 6911).

### **Chapter 3. Requirements for a maximum doctoral study load**

100. The study load shall be measured by the time required for a doctoral candidate to study the academic discipline, module or the entire educational program of the doctoral program and shall be necessary to achieve the established learning outcomes in the educational program of the doctoral program.

101. The study load shall include all the educational activities of a doctoral student - lectures, seminars, group classes, group exercise , practical and laboratory work, studio classes, practical work, scientific or professional internship, research work (experimental research), writing and defense of a doctoral thesis (project), independent work, including under the guidance of a teacher.

102. The doctoral student shall be trained on the basis of an individual work plan, which is compiled under the guidance of scientific consultants.



103. An individual work plan for a doctoral candidate shall be drawn up for the entire period of study and shall include the following sections:

- 1) IWP (if necessary, it may be updated annually);
- 2) research, experimental research work (topic, research direction, deadlines and reporting form);
- 3) practice (program, base, deadlines and reporting form);
- 4) the topic of the doctoral dissertation with the rationale and structure;
- 5) a plan for completing a doctoral dissertation;
- 6) a plan of scientific publications and internships, including foreign ones.

In higher educational institutions, an individual work plan for a doctoral candidate shall be drawn up for the entire period of study and includes the following sections:

- 1) research, experimental research (topic, research direction, deadlines and reporting form);
- 2) practice (if necessary pedagogical), internship (program, base, terms and reporting form);
- 3) the topic of the doctoral dissertation with the rationale and structure;
- 4) a doctoral dissertation implementation plan;
- 5) the plan of scientific publications, participation in scientific and practical (scientific and theoretical conferences), and more.

104. When determining the academic load of a doctoral candidate, it shall be assumed that the academic year consists of academic periods, the forms of which (semester - 15 weeks, trimester - 10 weeks, quarter - 7-8 weeks) shall be determined by the university or scientific organization, the period of final certification (graduation course).

105. The full academic load of one academic year shall correspond to 60 academic credits and shall correspond to 1800 academic hours in one academic year. At the same time, during one semester the doctoral candidate shall master 30 academic credits.

106. One academic credit shall correspond to 30 academic hours.

107. The study load indicated in paragraphs 104 and 105 of this SCSHE shall be a typical study load. Doctoral studies for a semester of a smaller or larger number of academic credits shall be allowed. For certain categories of doctoral students, depending on the form and technology of training, the actual time to achieve learning outcomes may differ and shall be calculated by the university itself.

108. The main criterion for the completion of the educational process for the preparation of PhDs (PhD) shall be the mastering of at least 180 academic credits by a doctoral student, including all types of educational and scientific activities.

In cases of early mastering of the educational program of the doctoral program and successful defense of the thesis, the doctoral candidate shall be awarded the degree of doctor of philosophy (PhD) or doctor of profile regardless of the length of study.

#### **Chapter 4. Requirements for the level of preparation of a doctoral student**

109. Requirements for the level of preparation of a doctoral candidate shall be determined on the basis of the Dublin descriptors of the third level of higher education (doctoral studies) and shall reflect the acquired competencies expressed in the achieved learning results. Learning outcomes shall be formulated both at the level of the entire doctoral educational program and at the level of individual modules or an academic discipline.

110. The third level descriptors within the Comprehensive European Qualifications Framework for Higher Education Area (EQRF) shall reflect learning outcomes that characterize the learner's abilities:

1) to demonstrate a systematic understanding of the field of study, skills and research methods used in this field;

2) demonstrate the ability to think, design, implement and adapt the essential research process with a scientific approach;

3) to contribute by own original research to the expansion of the boundaries of the scientific field, which deserves publication at the national or international level;

4) critically analyze, evaluate and synthesize new and complex ideas;

5) to communicate their knowledge and achievements to colleagues, the scientific community and the general public;

6) to promote the advancement in the academic and professional context of the technological, social or cultural development of a society based on knowledge.

111. Persons who have mastered Doctor's degree as well as the doctoral education program and have defended a doctoral dissertation, with a positive decision of the dissertation councils of the university with a special status or the Committee for Control in the Field of Education and Science of the Ministry of Education and Science of the Republic of Kazakhstan following the results of the examination, shall be awarded the degree of the Doctor of Philosophy (PhD) or the doctor in profile and shall be issued a state diploma with the enclosure thereto (transcript).

112. Persons who have received a PhD degree in order to deepen scientific knowledge, solve scientific and applied problems on a specialized topic, shall perform a post-doctoral program or conduct scientific research under the guidance of a leading scientist chosen by the university.

113. A graduate of a specialized doctoral program shall be engaged in scientific and pedagogical activities only in cases of mastering the cycle of pedagogical disciplines and teaching practice. This cycle shall be mastered during the additional

academic period (if it is not provided for by the educational program of the doctoral program), after which it shall be issued a corresponding certificate to the basic diploma.

114. A doctoral candidate who has mastered the full course of theoretical study of the doctoral educational program, but has not completed the scientific component, shall be given the opportunity to re-master the academic credits of the scientific component and defend a thesis in subsequent years on a fee basis.

A doctoral candidate who has mastered the full course of theoretical study of the doctoral education program, who has completed the scientific component, but has not defended his/her doctoral dissertation (project), the learning results and academic credits shall be assigned and the opportunity to defend the dissertation in subsequent years on a paid basis in the amount of 4 academic credits shall be provided. In a graduate school, a doctoral candidate who has mastered a full course of theoretical study of an educational program of a doctoral program, but has not defended his/her doctoral dissertation, shall be given the opportunity to defend a thesis in subsequent years. The procedure for re-mastering the credits of the scientific component and defending a thesis shall be determined by the university itself.

#### **Chapter 5. Requirements for the term of doctoral studies**

115. The duration of doctoral studies shall be determined by the volume of academic credits covered. When mastering a set amount of academic credits and achieving the expected learning outcomes for a Ph.D. degree or profile, the doctoral education program shall be considered as fully mastered.

116. Training in doctoral studies shall be carried out on the basis of educational programs of the Master's course in two areas:

- 1) scientific and pedagogical with a study period of at least three years;
- 2) specialized with a study period of at least three years.

117. The typical training period for the DBA educational program shall be at least 3 years.

#### Appendix 1 to the State Compulsory Standard for Postgraduate Education

#### **The structure of the Master's educational program in the scientific and pedagogical direction**

Item number	The name of the cycles of disciplines and activities	Total labor intensity	
		in academic hours	in academic credits
1	2	3	4
1.	Theoretical training	1920	64
1.1	The cycle of basic disciplines (BD)	1050	35
1)	University component (UC):	600	20

	including:		
	History and philosophy of science		
	Foreign language (professional)		
	Higher School Pedagogy		
	Psychology of management		
	Teaching practice		
2)	Elective Component (EC)	450	15
1.2	The cycle of the main disciplines (PD)	1470	49
1)	University component (UC)		
2)	Elective Component (EC)		
3)	Research practice		
2	Research work	720	24
1)	Undergraduate research work, including internships and the implementation of a Master's thesis (RW)	720	24
3	Additional types of training (ATT)		
4	Final certification (FC)	360	12
1)	Registration and defense of the Master's thesis (RDMT)	360	12
	Total	3600	120

Appendix 2  
to the State Compulsory  
Standard for Postgraduate Education

**The structure of the educational program of the Master's course in the scientific and pedagogical direction in higher education institutions**

Item number	The name of the cycles of disciplines and activities	Total labor intensity in academic credits
1	2	3
1.	Theoretical training	64
1.1	The cycle of basic disciplines (BD)	not less than 20%
1)	University component (UC):	
1.2	The cycle of the main disciplines (PD)	not less than 50%

1)	University component (UC)	
2	Research work	24
1)	Undergraduate research work, including internships and the implementation of a Master's thesis	24
3	Additional types of training (ATT)	
4	Final certification (FC)	12
1)	Registration and defense of the Master's thesis	12
	Total	not less than 120

Appendix 3  
to the State Compulsory  
Standard for Postgraduate Education

**The structure of the Master's educational program in the profile direction**

Item number	The name of the cycles of disciplines and activities	Total labor/academic intensity			
		with a typical training period of 1 year		with a typical training period of 1.5 years	
		in academic hours	in academic credits	in academic hours	in academic credits
1	2	3	4	5	6
1.	Theoretical training	750	25	1500	50
1.1	The cycle of basic disciplines (BD)	300	10	450	15
1)	University component (UC)	180	6	180	6
	including:				
	Foreign language (professional)				
	Management				
	Psychology of management				
2)	Elective Component (EC)	120	4	270	9
1.2	The cycle of the main disciplines (MD)	750	25	1350	45
1)	University component (UC)				
2)	Elective Component (EC)				
3)	Internship				
2	Experimental research	390	13	540	18
1)	Experimental research work of a student, including an internship and the implementation	390	13	540	18

	of a Master's project				
3	Additional types of training (ATT)				
4	Final certification (FC)	360	12	360	12
1)	Registration and protection of the Master's's project	360	12	360	12
	Total	1800	60	2700	90

Appendix 4  
to the State Compulsory  
Standard for Postgraduate Education

**The structure of the Master's educational program in the profile direction in higher educational institutions**

Item number	The name of the cycles of disciplines and activities	Total labor/academic intensity	
		with a typical training period of 1 year	with a typical training period of 1.5 years
		in academic credits	in academic credits
1	2	3	4
1.	Theoretical training	25	50
1.1	The cycle of basic disciplines (BD)	not less than 15%	not less than 15%
1)	University component (UC)		
1.2	The cycle of the main disciplines (PD)	not less than 50%	not less than 50%
1)	University component (UC)		
2	Experimental research		
1)	Experimental research work of a student, including an internship and the implementation of a Master's's project (ERW)	13	18
3	Additional types of training (ATT)		
4	Final certification (FC)	not less than 12	not less than 12
1)	Comprehensive State Examination (CSE)		
2)	Registration and defense of the Master's thesis (project) (RDMT) (P)		
	Total	not less than 60	not less than 90 *

\* In the profile Master's course with a typical study period of 1.5 years, the total labor/academic intensity may not exceed 110 credits.

Appendix 5  
to the State Compulsory  
Standard for Postgraduate Education

**The structure of the educational program of pedagogical profile for persons who have completed a specialized Master's course**

Item number	The name of the cycles of disciplines and activities	Total labor/academic intensity	
		in academic hours	in academic credits
1	2	3	4
1.	Theoretical training	600	20
1.1	The cycle of basic disciplines (BD)	600	20
1)	University component (UC):		
	including:		
	History and philosophy of science		
	Higher School Pedagogy		
	Teaching practice		
2)	Elective Component (EC)		
1.2	The cycle of the main disciplines (MD)	300	10
1)	University component (UC)		
2)	Elective Component (EC)		
	Total	900	30

Appendix 6  
to the State Compulsory  
Standard for Postgraduate Education

**Structure of the MBA and EMBA educational programs**

No.	Names of blocks and disciplines	Total labor intensity			
		MBA		EMBA	
		in academic hours	in academic credits	in academic hours	in academic credits
1	Block of disciplines for the formation of professional competencies	1740	58	600	20
1)	University component:	180	6	180	6
	Strategic management	90	3	90	3
	Business research	90	3	90	3
2)	Elective Component	1320	44	1320	14
	Including Exit module / Internship abroad *				

3)	Internship	Not less than 240	At least 8		
2	Block of disciplines of personal development and leadership development	600	20	300	10
1)	University component				
2)	Elective Component				
3	Experimental research, Master's thesis / project	900	30	540	18
4	Final certification (writing and defense of a Master's thesis / project)	360	12	360	12
	Total	3600	120	1800	60

Appendix 7  
to the State  
Compulsory Standard for  
Postgraduate Education

**The structure of the educational program of doctoral studies in scientific and pedagogical direction**

Item number	The name of the cycles of disciplines and activities	Total labor/academic intensity	
		in academic hours	in academic credits
1	2	3	4
1.	Educational component	1590	53
1.1	The cycle of basic disciplines (BD)		
1)	University component		
2)	Elective Component		
3)	Teaching practice		
1.2	The cycle of the main disciplines (MD)		
1)	University component		
2)	Elective Component		
	University Component and (or) Optional Component		
3)	Research practice		
2	Research work	3450	115
1)	Doctoral student research work, including internship and doctoral dissertation		
3	Additional types of training		



4	final examination	360	12
1)	Writing and defending a doctoral dissertation	360	12
	Total	5400	180

Appendix 8  
to the State Compulsory  
Standard for Postgraduate Education

**The structure of the doctoral education program in universities**

Item number	The name of the cycles of disciplines and activities	Total labor intensity	
		in academic hours	in academic credits
1	2	3	4
1.	Educational component	1590	53
1.1	The cycle of basic disciplines (BD)		
1)	University component		
1.2	The cycle of the main disciplines (MD)		
1)	University component		
3)	Research practice		
2	Research work	3450	115
1)	Doctoral student research work, including internship and doctoral dissertation		
3	Additional types of training		
4.	final examination	360	12
1)	Writing and defending a doctoral dissertation	360	12
	Total	5400	180

Appendix 9  
to the State Compulsory  
Standard for Postgraduate Education

**DBA program structure**

No	Names of blocks and disciplines	Academic hours	Volume in academic credits
1	Block of disciplines for the formation of professional competencies	1290	43
1.1	University component:	150	5
	Methodology and research methods	150	5
1.2	Elective Component	300	10
1.3	Research practice	840	28
	Including Exit module / Internship abroad		

2	Block of disciplines of personal development and leadership development	300	10
	Elective Component	300	10
3	Research work, including doctoral dissertation	3450	115
4	Final certification (writing and defense of a doctoral thesis)	360	12
	Total	5400	180