

**KHOJA AHMET YASSAWI INTERNATIONAL KAZAKH-TURKISH
UNIVERSITY**

«APPROVED»
 Vice rector of the University
 Idrissova E.K.
 Based on the decision of the
 Educational-methodical committee
 No 8 protocol « 18 » 03 2024 y.

EDUCATIONAL PROGRAM

(project “Strengthening the potential of teacher education”)

<i>Program level</i>	<i>Bachelor</i>
<i>Code and classification of the field of education</i>	<i>6B01 Pedagogical sciences</i>
<i>Code and name of the direction of training</i>	<i>6B015 Teacher training in natural science subjects</i>
<i>Group and name of EP</i>	<i>B014 Teacher training in Geography</i>
<i>Gode and name of EP</i>	<i>6B01524- Geography (IP)</i>
<i>EP type</i>	<i>Innovative EP</i>
<i>EP distinctive features</i>	<i>Dual training</i>

Matriculated in 2024 year

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Құрастырушылар: /Разработчики:/ Developers:

Жаратылыстану пәндері мұғалімдерін даярлау бағыты бойынша Академиялық комитет құрамы:/ Состав академического комитета по направлению подготовки учителей естественных наук:/

The composition of the academic committee on the direction of training teachers of natural sciences:

АК төрағасы:/ Председатель ИК: /Chairman of the AK:

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«Жаратылыстану пәндері бойынша мұғалімдер даярлау» даярлау бағыты бойынша академиялық комитетте талқыланды/

Обсуждено в Академическом комитете по направлению подготовки «Подготовка учителей по естественнонаучным предметам»/

Discussed in the Academic committee on the direction of personnel training «Teacher training in natural science subjects»

Хаттама/Протокол/Protocol number № _____ «_____» _____ 2024 ж./г./у.

Contents

1. General information	5
2. Programme rationale	6
3. Teacher's professional competences	7
4. Program structure and learning outcomes	9
4.1. Structure of the pedagogical component	9
4.2 Structure of the subject component	18
4.3 The structure of the compulsory component	42
4.4 Progression of the studies	43
4.5 Requirements for the successful completion of curriculum	44
5. Description of pre-service teachers' work	56
6. Evaluation methods/Assessment	56
6.1 Assessment	56
6.2 External evaluation	57
7. Faculty requirements	58
8. Resources	58
8.1. Library Resources	58
8.2. IT Resources	58
8.3 Infrastructure	58
9. Additional information	58
9.1 Additional materials	58
9.2 E-learning	59
10. Approval	59
APPENDIX 1: Main principles of the curriculum	59
Literature	65

1.1. Curriculum title	<i>6B01524- Geography (IP)</i>	
1.2. Curriculum developing team:	Leader university	Member universities
	Abai Kazakh National Pedagogical University	K. Zhubanov Aktobe Regional University
		Shakarim University of Semey
		M.Kh. Dulati Taraz Regional University
1.3. Type of curriculum (in accordance with the National Qualifications Framework)	BACHELOR'S DEGREE Level 6	
1.4. Total academic credits	254 academic credits	
1.5. Study mode	full-time	
1.6. Expected program duration	4 years	
1.7. Short curriculum description Curriculum goals and objectives	<p>This Educational Programme (EP) "<i>Geography</i>" is a national teacher education curriculum, which has been designed in collaboration by various Kazakh universities and with international consulting. Due to the nature of a national curriculum, the descriptive texts within the curriculum do not provide specific information but highlight general pedagogical principles and cross-cutting themes (see also Annex 1.). The more detailed descriptions of e.g. methodologies and assessment will be identified in the implementation plans of the universities, considering also institutional and regional specific conditions.</p> <p>Educational programme (EP) "<i>Geography</i>" is a teacher education programme for Pre-service teachers who wish to specialize in teaching geography in educational establishments (schools, colleges, high schools). EP consists of a pedagogical component 60 academic credits (incl. pedagogical practice), a compulsory component 56 credits, and a subject component 130 academic credits (incl. a final attestation of 8 academic credits).</p> <p>Subject component consists of 7 modules: "Geographical picture of the world", "Physical geography", "Public geography", "Interaction of society and nature", "Geography of Kazakhstan", "Digitalization of geographical education", "Research skills in geography".</p> <p>In the EP, Pre-service teachers learn about modern geography, gain general professional, communicative and digital competences, and are capable of organizing educational process carrying out professional activities in the pedagogical field. The EP is unique in a way that it emphasizes the development of skills in research, geographic information and digital skills, functional literacy, critical thinking, interdisciplinarity and soft skills. Developed geography competences such as theory and methodology of geographical science, practical methods of teaching geography, research competences, and value-based competences focus on communication, collaboration, development, reflection, research, and the formation of an emotional and value-based attitude towards the world around us.</p> <p>The modules include cross-course subjects and are interdisciplinary by nature. EP addresses content relevant in both education and science and form Pre-service teachers' research skills. EP includes practical methods of geographical research during field practices from the beginning to attract Pre-service teachers to geographical research and project work. EP also uses practice-oriented integrated learning such as STEM and CLIL technologies to bring theoretical knowledge closer to the needs of life.</p> <p>EP provides an equal opportunity for learning without compromising Pre-service teachers' rights and interests, preserving the principles of equality, respect, tolerance.</p>	

	<p>It is interdisciplinary, student-oriented, scientifically integrated and problem-oriented by nature, and the selection of courses is guided by the topical issues of history and society and corresponds also to the international course descriptors.</p> <p>EP is based on the principles of constructive alignment, where teaching and assessment methods, as well as subject-specific courses are selected to ensure the achievement and measurement of the competences outlined in the EP. The EP also follows an inclusive approach considering the multi-ethnic and multi-confessional composition of per-service teachers and their versatile needs for support of learning.</p>
1.8 Main principles of the curriculum	
<p>Competence-based teacher education</p> <p>A teacher's expertise combines competence in pedagogy and their own subject-specific field with theoretical and practical teaching competence in different kinds of operating environments. A teacher has mastery of the knowledge and skill requirements of their subject-specific field and thus is able to teach and supervise young people and adults studying for the same subject.</p> <p>The competence of a teacher is focused on planning, guidance, teaching and assessment. For this reason, teacher must have sufficient theoretical knowledge of learning and competence development. In addition, modern working life emphasises cooperation and networking, development skills, and the support and maintenance of the well-being of oneself and one's community.</p> <p>A teacher's competence is influenced by changes in the labour market, the structures of education and society as a whole, and all these elements are emphasised in the dynamic nature of a teacher's work. Work characterized by continual change in the variety of working environments places an emphasis on the teacher's ability to assess and adjust their own activities. Self-assessment skills are an essential part of developing one's professional identity. A teacher is making value decisions all the time, which means that the consideration of questions of professional ethics is one of the professional skills needed. Change requires the development of expertise, the ability to learn, as well as the ability to reform and renew the way things are done as part of a community.</p> <p>Competence-based teacher education curriculum</p> <p>The competence-based teacher education curriculum is formed of three entities: 1) Pedagogical studies, 2) Subject-specific studies 3) Compulsory studies. Each of the entities includes modules and related courses. The courses' learning outcomes describe the competences required in teaching work and are placed in the NQF system's (National Qualifications Framework) reference level six.</p> <p>The curriculum is guided by the following main principles:</p> <ul style="list-style-type: none"> - Competence-based learning - Constructive alignment - Student-centred learning and active learning methodologies - Research-based teaching - Interdisciplinary learning - Inclusion - Teacher professional development and change management <p>(see Appendix for more details)</p>	
1.9. Academic degree	
Bachelor of Education in the Educational Program «6B01524 – Geography»	

2. Programme rationale

In the context of the Education Modernization Project funded by the World Bank, several universities providing pre-service teacher education have designed and revised in international collaboration thirty (30) pre-service teacher education curricula according to the principles of competence-based education that ensure a holistic development of pre-service teachers' competences. Moreover, the student-centered approach better prepares pre-service teachers to teaching profession by providing practical examples, experiments and experiences, which pre-service teachers can transfer to their classroom practices considering better the versatile needs and wellbeing of their students.

In order to match the requirements of the renewed primary and secondary education, teachers' professional competences need to be re-evaluated and completed. The new approaches in secondary education need to be reflected in pre-service

teacher education and the pre-service teachers' profiles. Furthermore, these thirty (30) revised or new pre-service teacher education curricula have been designed to better improve pre-service teachers' various generic competences that are essential in teacher's profession. Several important and cross-cutting pedagogical principles that Kazakhstan education system aims to develop, such as inclusiveness and interdisciplinarity, have been taken into consideration in the design and implementation of the curricula. In addition, these curricula emphasize the development of pre-service teachers' research skills in a way that they become practitioners who are constantly reflecting and evaluating their own practices and the practices of their schools to develop their own work and their work community, and the whole sector of education.

3. Teacher's professional competences

Teachers' professional competences are defined as consisting of **pedagogical competences** and **subject-specific competences** as well as **generic competences**. The competence-based teacher education curriculum is thus formed of three entities: 1) Pedagogical studies, 2) Subject-specific studies 3) Compulsory studies. Competence areas and competences have been defined separately for each entity.

3.1. Pedagogical and Generic Competence Areas/Learning Outcomes

- **Competence area for pedagogy and didactics**
 1. Pre-service teachers have basic knowledge and understanding of learning and students and are able consider the diversity of students in learning/teaching process and support their well-being in psychologically and ethically sound manner considering their life and learning contexts.
 2. Pre-service teachers are capable to design, implement, assess, and develop learning and guidance processes in different kinds of learning environments in a pedagogically meaningful way including ability to utilize different digital resources in a manner that supports learning.
- **Competence area for interaction**
 3. Pre-service teachers are able to communicate in different interactive relationships and partner networks in a meaningful manner both in face-to-face and online settings with regard to the goals set for the activity in question.
 4. Pre-service teachers are capable of working in different collaboration networks and have the ability to create new relationships that are appropriate for the development of one's own and one's community activities.
 5. Pre-service teachers are able to teach in accordance with the tri-lingual approach in secondary education and participate in the global professional community.
- **Competence area for teachers' work environment**
 6. Pre-service teachers are familiar with the international and national agreements and documents as well as legislation that affects his/her institution's and his/her work.
 7. Pre-service teachers are able to (a) to perceive his / her own activities in relation to the activities of his/her organization, and (b) work in a meaningful way to create positive relationships between the partners outside the school (families, regional actors, working life).
- **Competence area for professional development**
 8. Pre-service teachers are able to reflect and critically assess their values, attitudes, ethical principles and work methods as a teacher and are able to set new goals to his/her own and his/her organization's pedagogical development.
 9. Pre-service teachers are able to develop his / her own and his / her organization's pedagogical activities in relation to the anticipated changes at regional, national and international level.
 10. Pre-service teachers are able to produce, seek and critically select theoretical knowledge that, combined with experiential knowledge, serves the development of both him/her and his/her community's theory-in-use, and the ability and willingness to use knowledge to promote learning and own professional growth.

3.2 Subject-specific and Generic Competence Areas/ Learning Outcomes

- **Competence area for theory and methodology of geographical science**
 1. Pre-service teachers will be able to know and understand fundamental scientific concepts having fundamental methodological and theoretical meanings for understanding and mastering the system of geographical and its related (biology, chemistry, physics, ecology, tourism, fundamentals of economics, etc.) sciences.
 2. Pre-service teachers are able to generalize and analyze cause-and-effect relationships between phenomena and processes occurring in a geographical shell to present the idea of unity and integrity of nature, the organic unity of man with nature.
 3. Pre-service teachers will be able to understand the features and properties of geographical maps and are able to distinguish between cartographic methods of image and principles for understanding the space-time model of objects of nature.
 4. Pre-service teachers are able to argue the natural, economic and social factors that shape and change the geographical environment of human habitation at the levels from global to local in order to identify and substantiate the diversity of factors, the presence of complex and nonlinear relationships between them.
- **Competence area for practical methods of teaching geography**

5. Pre-service teachers will be able to design the conditions of educational activity in accordance with the set goals of teaching the subject, using innovative pedagogical technologies.
 6. Pre-service teachers are able to use IT to expand the geographical outlook of modern society and develop a demonstration experiment and practical work, as well as to create geographical maps, receive, store, process and transmit geographical science information.
 7. Pre-service teachers are able to use CLIL technologies of subject-language teaching of natural subjects, expanding students' intercultural knowledge to develop tasks for the development of analytical and critical thinking.
 8. Pre-service teachers are able to argue their own position of applying and integrating knowledge from other fields of science to solve global and local environmental problems;
 9. Pre-service teachers will use various methods to demonstrate knowledge in practice (including classroom and out-of-classes, independent and group projects, oral, written and kinesthetic tasks).
- **Competence area for Research**
 10. Pre-service teachers are able to interpret the content of the training based on the results of research and to focus the training on scientific research.
 11. Pre-service teachers will be able to obtain new reliable facts based on pedagogical observations, experiments and IT technology, apply them in the educational and research process, carry out critical analysis, evaluate information about the results of educational research.
 12. Pre-service teachers will be able to use physical-geographical and economic-geographical methods to conduct research in the educational process and apply field, geoinformation, statistical methods to solve practical problems.
 13. Pre-service teachers will be able to systematize and generalize their knowledge of geography to predict the dynamics of the consequences of geographical, environmental processes and phenomena;
 14. Pre-service teachers will use research and problem-oriented activities to understand the content of geography teaching in various variations.
 - **Competence area for Value-oriented competences**
 15. Pre-service teachers will be able to explain the conceptual foundations of value self-determination in the process of studying geography.
 16. Pre-service teachers will understand the value mechanism and the process of forming value orientations (interest in geographical objects and phenomena, love of nature and respect for natural resources, etc.).
 17. Pre-service teachers will interpret the geographical worldview and geographical culture of modern society and understand the psychological and pedagogical problems of teaching and educating students with disabilities in inclusive education, identify the main factors of formation and development of personality.
 18. Pre-service teachers are able to create fair, cooperative, sustainable and peace-loving democratic communities, using knowledge, to evaluate geographical approaches to solving sustainable development problems.

3.3 Compulsory component: Competence Areas/ Learning Outcomes

- **Competence area for worldview, historical, and moral development**
 1. Pre-service teachers are able 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. Pre-service teachers are capable to interpret the content and specific features of the mythological, religious and
- **Competence area for worldview, historical, and moral development**
 1. Pre-service teachers are able 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. Pre-service teachers are capable to interpret the content and specific features of the mythological, religious and scientific worldview
 3. Pre-service teachers have deep understanding and scientific analysis of the main stages, patterns and characteristics of the historical development of Kazakhstan.
 4. Pre-service teachers are able to analyse the causes and consequences of the events in the history of Kazakhstan.
- **Competence area for social, cultural, and civic development**
 5. Pre-service teachers are able to develop their own moral and civic position and able to operate with the social, business, cultural, legal and ethical norms of society.
 6. Pre-service teachers have knowledge and understanding of the basics of socio-political, economic and legal studies and are able to demonstrate personal and professional competitiveness.
 7. Pre-service teachers are able to assess situations and provide arguments for their own assessments of developments in the social and work environment.
- **Competence area for interpersonal social and professional communication**
 8. Pre-service teachers are able to assess situations in various spheres of interpersonal, social and professional communication and enter into communication in oral and written forms in Kazakh, Russian and foreign languages.
 9. Pre-service teachers are able 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.

10. Pre-service teachers are able to maintain a healthy lifestyle to achieve productive social and professional activities through the methods and means of physical education.
11. Pre-service teachers are able to select methodology and analysis, use scientific research methods and techniques, and synthesise new knowledge.

4. Program structure and learning outcomes

4.1. Structure of the pedagogical component

The extent of the Pedagogical Component shall be 60 academic credits, including teaching practice. This component is common for all curricula in initial teacher education. The Pedagogical Component has been jointly created by all the involved universities in a collaborative design process. The component is flexible and leaves space for individual universities to implement it according to their specific situation and needs.

The overall structure of the pedagogical studies component:

Module name and main disciplines	Academic credits
SUPPORTING LEARNERS AS INDIVIDUALS	17
Psychology in Education and Concepts of Interaction and Communication	4
Educational Science and Key Theories of Learning	3
Age and Physiological Features of the Development of Children	3
Inclusive Educational Environment	3
Teaching Planning and Individualization of Learning	4
TEACHING AND ASSESSMENT FOR LEARNING	9
Teaching Methods and Technologies	5
Assessment and Development	4
TEACHER AS A REFLECTIVE PRACTITIONER	9
Pedagogical Research	4
Research, Development and Innovation	5
TEACHER AS A FACILITATOR OF LEARNING (PEDAGOGICAL PRACTICE)	25
Introduction to the teaching profession (1st year pedagogical practice)	2
Psychological and pedagogical assessment (2nd year pedagogical practice)	2
Pedagogical approaches (3rd year pedagogical practice)	6
Research and innovation in education (4th year pedagogical practice)	15
Total academic credits	60

The modules, courses, their learning outcomes, and relation to competence areas in more detail:

Supporting learners as individuals 17 Academic credits

This module provides an overview of psychological theories, concepts, and models which help to understand the pupils' individual needs and individual differences in learning. The module provides the pre-service teachers with competences to acknowledge individualization of learning and the diversity of learners in teaching. The module highlights the importance of enhancing learner well-being through creating and maintaining a psychologically safe educational environment.

Course title	Psychology in Education and Concepts of Interaction and Communication
Component	Pedagogical component
Cycle	Core disciplines
Module	Supporting learners as individuals 17 Academic credits
Academic credits	4
Course / competence description	<p>The purpose of this course is to improve the following areas of pedagogical competence:</p> <ul style="list-style-type: none"> Competence area for pedagogy and didactics (1) Competence area for interaction (3, 4) <p>Pre-service teachers are familiar with the modern psychological theories and models, as well as personality functioning and individual properties. They can apply the knowledge in their teaching in diverse educational contexts. Pre-service teachers support positive development of learners by fostering dialogue, interaction, and communication in the educational process. They are able to communicate, interact, and collaborate with pupils' families as well as in various other partnership networks and create new relationships suitable for the development of their own pedagogical activity.</p>
Learning outcomes	<p>Pre-service teachers who demonstrate competence can:</p> <ul style="list-style-type: none"> understand the basic concepts and terms of educational psychology, and the main practical applications of psychological knowledge; understand the patterns, facts, and phenomena of cognitive and personal development of a person in the processes of education and upbringing;

	<ul style="list-style-type: none"> • apply an integrated approach to design, implementation, evaluation, and development of educational environments; • understand the concept of continuous learning as a part of the process of cognitive and personal development of a person. • apply basic communication and interaction concepts and theories at the individual, community, and network levels; • select the methods of communication and interaction that are most appropriate to facilitate learning in various forms (offline, online, blended, hybrid); • recognize the patterns of group dynamics and act in ways that promote community development and well-being.
Course title	Educational Science and Key Theories of Learning
Component	Pedagogical component
Cycle	Core disciplines
Module	Supporting learners as individuals 17 Academic credits
Academic credits	3
Course / competence description	<p>The purpose of this course is to improve the following areas of pedagogical competence:</p> <ul style="list-style-type: none"> • Competence area for pedagogy and didactics (1, 2) <p>Purpose: expansion and formation of knowledge about teaching theories, modern didactic concepts and innovative teaching technologies: is to improve pedagogical competence in the field of pedagogy and didactics. Content: future teachers study the basics of pedagogical science, such as conceptual ideas about a person leading to various learning theories and pedagogical models. Based on the understanding of theoretical concepts, future teachers can make appropriate pedagogical choices for various educational situations. Formed competencies: apply learning theories and pedagogical models suitable for versatile learning processes.</p>
Learning outcomes	<p>Pre-service teachers who demonstrate competence can:</p> <ul style="list-style-type: none"> • distinguish between concepts of human and their importance for understanding learning and the design of an educational process; • differentiate between learning theories and their importance for understanding learning and the design of an educational process; • apply learning theories and pedagogical models suitable for versatile learning processes.
Course title	Age and Physiological Features of the Development of Children
Component	Pedagogical component
Cycle	Core disciplines
Module	Supporting learners as individuals 17 Academic credits
Academic credits	3
Course/ competence description	<p>The purpose of this course is to improve the following areas of pedagogical competence:</p> <ul style="list-style-type: none"> • Competence area for pedagogy and didactics (2) <p>Pre-service teachers are familiar with the formation of psyche, its functioning, and the patterns of development. Pre-service teachers can observe the development of their students, and accordingly, plan and implement age-appropriate learning processes considering individual needs of students. Pre-service teachers act creatively and appropriately in different situations and support learning and well-being of the learners. Pre-service teachers who demonstrate competence can: • recognize the individual starting points of different students, their learning potential and specific support needs; • consider the individual needs of their students for specific support, guidance, teaching and assessment; • introduce various methodological solutions for inclusion and for providing specific support.</p>
Learning outcomes	<p>Pre-service teachers who demonstrate competence can:</p> <ul style="list-style-type: none"> • recognize the individual starting points of different students, their learning potential and specific support needs; • consider the individual needs of their students for specific support, guidance, teaching and assessment; • introduce various methodological solutions for inclusion and for providing specific support.
Course title	Inclusive Educational Environment
Component	Pedagogical component
Cycle	Core disciplines
Module	Supporting learners as individuals 17 Academic credits

Academic credits	3
Course / competence description	<p>The purpose of this course is to improve the following areas of pedagogical competence:</p> <ul style="list-style-type: none"> • Competence area for pedagogy and didactics (2) • Competence area for teachers' work environment (6, 7) <p>Goal: understanding and the ability to take into account the diversity of students in the learning/teaching process, in a reasonable way, psychologically and ethically maintain well-being, taking into account the context of their lives. Students can:</p> <ul style="list-style-type: none"> • Embrace diversity, identify barriers to participation and learning • identify development priorities, plan activities for the adaptation of educational programs, the development of differentiated lessons • promote collaboration within the school community to create a foundation of inclusive values and support student participation and academic achievement.
Learning outcomes	<p>Pre-service teachers who demonstrate competence can:</p> <ul style="list-style-type: none"> • identify the individual educational needs that affect participation and learning in a diverse group of students; • use ICT and assistive technologies to support students' learning and inclusion in the educational process. • teach values and attitudes beneficial to collaboration and inclusivity; • support collaboration in the community (teachers, students, parents/guardians).

Course title	Teaching Planning and Individualization of Learning
Component	Pedagogical component
Cycle	Core disciplines
Module	Supporting learners as individuals 17 Academic credits
Academic credits	4
Course / competence description	<p>The purpose of this course is to improve the following areas of pedagogical competence:</p> <ul style="list-style-type: none"> • Competence area for pedagogy and didactics (1, 2) <p>Pre-service teachers are familiar with the curriculum in their area of teaching and the guiding pedagogical principles and cross-cutting development themes of a specific level of education, such as entrepreneurship and sustainable development. Pre-service teachers possess the necessary skills of individualization of teaching, considering the diversity of students and their inclusion to the learning process, as well as the use of teaching technologies, based on pedagogical and independent research</p>
Learning outcomes	<p>Pre-service teachers who demonstrate competence can:</p> <ul style="list-style-type: none"> • understand the main principles and requirements of the curriculum in their area of teaching and apply them in planning and conducting educational activities; • identify factors and conditions that affect students' learning; • apply in practice the principles of inclusion as well as individualized teaching and guidance (adapting curricula, developing differentiated lessons) by considering the needs of the students and support the development of their personality and self-esteem, including career guidance.

Teaching and assessment for learning 9 Academic credits

This module provides the teacher students with competencies to carry out interactive and student-centered teaching and assessment aligned with learning objectives. The module highlights the use of digital tools and technologies and the ability to update and apply teaching technologies in the context of ongoing changes in the society and the educational environment. This module supports the pre-service teachers' competence to communicate and collaborate in various partnership networks to enhance own pedagogical activity.

Course title	Teaching Methods and Technologies
Component	Pedagogical component
Cycle	Core disciplines
Module	Teaching and assessment for learning 9 Academic credits
Academic credits	5

Course / competence description	<p>The purpose of this course is to improve the following areas of pedagogical competence:</p> <ul style="list-style-type: none"> Competence area for pedagogy and didactics (1, 2) <p>Pre-service teachers have a comprehensive understanding of teaching strategies and methodologies, and can apply them in planning, teaching, and assessment in innovative ways matching the specific pedagogical situations, conditions of a specific school and the capabilities of students. Pre-service teachers are able to design suitable inclusive physical and online learning environments at different stages of the educational process. Pre-service teachers understand and can apply the regulations of copyright and data protection in their learning material planning. Pre-service teachers possess necessary knowledge of didactics, learning technologies and methods of motivating students being able to provide necessary pedagogical assistance to students.</p>
Learning outcomes	<p>Pre-service teachers who demonstrate competence can:</p> <ul style="list-style-type: none"> select pedagogical models suitable for teaching; apply teaching methods in a creative and varied manner, considering the opportunities offered by learning technologies; use a suitable inclusive learning environment in their teaching; acknowledge and apply the norms and principles of copyright and data protection; apply guidance methods to motivate students and to support their learning achievements.

Course title	Assessment and Development
Component	Pedagogical component
Cycle	Core disciplines
Module	Teaching and assessment for learning 9 Academic credits
Academic credits	4
Course / competence description	<p>The purpose of this course is to improve the following areas of pedagogical competence:</p> <ul style="list-style-type: none"> Competence area for pedagogy and didactics (2) <p>Objective: to increase pedagogical competencies in the field of pedagogy and didactics, to deepen the understanding of the value of assessment in the learning process and are able to provide constructive assessment in an ethical manner at various stages of the learning process and to involve students or students in the assessment; Content: various assessment technologies, principles, stages, tools for assessing one's field of knowledge (including formative and summative assessment and self-assessment, and mutual assessment, etc.), various assessment and feedback methods (for example, formative and final assessment), apply pedagogical principles to determine and recognize the levels of educational competence of students, development systems skills of self-assessment and mutual assessment of students.</p>
Learning outcomes	<p>Pre-service teachers who demonstrate competence can:</p> <ul style="list-style-type: none"> use and apply a variety of methods and tools of assessment and feedback (formative and summative assessment); apply pedagogical principles in defining and recognizing competence levels of learners; understand the importance and support the development of students' self- and peer-assessment skills.

Teacher as a reflective practitioner 9 Academic credits

This module focuses on the methodological foundations of pedagogy, and it provides understanding of how pedagogical research informs teaching practices. The module helps the pre-service teachers to develop their reflection skills to become aware of themselves as teachers and to develop their own teaching as well as the ability to set new goals for pedagogical development to ensure lifelong learning. The module also addresses the ethical aspects of the teachers' work and its development.

Course title	Pedagogical Research
Component	Pedagogical component
Cycle	Core disciplines
Module	Teacher as a reflective practitioner 9 Academic credits
Academic credits	4
Course / competence description	<p>The purpose of this course is to improve the following areas of pedagogical competence:</p> <ul style="list-style-type: none"> Competence area for professional development (10) <p>Purpose: to master search skills, critically select knowledge from various sources, use the results of research in the development of one's own pedagogical thinking and practice. Students know the changes in the field of education and the prospects for their development, recognize the foundations of pedagogy and its basic terminology, the central areas of research in pedagogy, and understand the difference between ordinary thinking and scientific knowledge.</p>
Learning	Pre-service teachers who demonstrate competence can:

outcomes	<ul style="list-style-type: none"> • recognize the nature of pedagogy and its basic terminology; • identify the central areas of research in pedagogy and understand the difference between everyday thinking and scientific knowledge; • follow the changes in the field of education and consider how they influence own work as a teacher.
Course title	Research, Development, and Innovation
Component	Pedagogical component
Cycle	Core disciplines
Module	Teacher as a reflective practitioner 9 Academic credits
Academic credits	5
Course / competence description	<p>The purpose of this course is to improve the following areas of pedagogical competence:</p> <ul style="list-style-type: none"> • Competence area for professional development (8, 9) • Competence area for interaction (5) <p>To stay up-to-date and be able to continuously develop themselves and their work, pre-service teachers acquire new research-based knowledge and conduct practice-based research in an ethical manner in various networks concerning the development of education and teacher profession, innovative approaches to learning, as well as learning and guidance of students. Pre-service teachers adopt development-oriented mindset and are able to develop, update and apply innovative teaching approaches and technologies in the context of ongoing changes in society and the educational environment.</p> <p>Pre-service teachers design a small-scale research project to familiarize themselves with research-based development of their work as teachers. They identify their research topic/questions, conduct the literature review and design the methodology for the data collection and analysis, including ethical aspects of research. After the course, pre-service teachers are able to develop and update their pedagogical activities based on ethically conducted research and development and carry out or participate in research projects. They are also able to present their research and development results using various professional forms and channels.</p>
Learning outcomes	<p>Pre-service teachers who demonstrate competence can:</p> <ul style="list-style-type: none"> • evaluate their own professional activities and work environment to find areas for improvement; • apply a research-based approach to their professional activities and carry out independent research work; • consider and apply ethical aspects of research procedures; • apply critical thinking in data collection and utilization for the development of initial teacher education; • participate in scientific design research and / or develop cooperation between universities and stakeholders; • document their own research activities and present the results using various forms of communication.
Teacher as a facilitator of learning (Pedagogical practice) 25 Academic credits <p>This module focuses on the transformation of theoretical knowledge into practical skills through two pedagogical practice periods/courses, as well as the formation of a teacher's professional identity that meets the requirements of teaching profession today and in the future. During the module, pre-service teachers also establish practice-based research skills promoting the continuous process of professional growth.</p> <p>Pedagogical practice is organized in four periods/courses, one per study year, and each having their specific learning outcomes where the competences of pre-service teachers are progressively deepened from orientation and observation to designing educational processes and conducting own lessons, and developing own work environment through practice-based research activities.</p> <p>All practice periods have some prerequisites and pre-service teachers must have completed a certain amount of subject and/or pedagogical studies before they can conduct their pedagogical practice, the number of credits may vary between the faculties and/or educational programmes.</p>	
Course title	Introduction to the teaching profession (1st year educational practice)
Component	Pedagogical component
Cycle	Core disciplines
Module	Teacher as a facilitator of learning 25 Academic credits
Academic credits	2

Course / competence description	<p>The purpose of this course is to improve the following areas of pedagogical competence:</p> <ul style="list-style-type: none"> • competence area for pedagogy and didactics (1, 2) • competence area for interaction (3, 4, 5) • competence area for teachers' work environment (6, 7) • competence area for professional development (8, 9, 10) <p>Pre-service teachers familiarize themselves with the educational process and the context of the educational institution and its adaptation to the conditions of future professional activity.</p>
Learning outcomes	<p>Pre-service teachers who demonstrate competence can:</p> <ul style="list-style-type: none"> • understand the regulatory and legislative framework of the education system of the Republic of Kazakhstan, and the documents regulating educational institutions; • distinguish the main documents for maintaining school records (work plans of the educational institution, Kundelik electronic diary, short-term, medium-term and long-term lesson planning, etc.); • comprehend the theoretical and applied aspects of pedagogy and educational psychology in the educational process at school considering social, age, psychophysical and individual characteristics of students, as well as their special educational needs. •

Course title	Psychological and pedagogical assessment (2nd year psychological -pedagogical practice)
Component	Pedagogical component
Cycle	Core disciplines
Module	Teacher as a facilitator of learning 25 Academic credits
Academic credits	2
Course / competence description	<p>The purpose of this course is to improve the following areas of pedagogical competence:</p> <ul style="list-style-type: none"> • competence area for pedagogy and didactics (1, 2) • competence area for interaction (3, 4, 5) • competence area for teachers' work environment (6, 7) • competence area for professional development (8, 9, 10) <p>Pre-service teachers familiarize themselves with the features of the integral pedagogical process of an educational institution and the formation of analytical-reflexive, research, design, and other skills in the field of psychological and pedagogical support of the educational process.</p>
Learning outcomes	<p>Pre-service teachers who demonstrate competence can:</p> <ul style="list-style-type: none"> • comprehend the psychological and pedagogical foundations of teaching strategies (critical thinking, functional literacy, collaborative learning, self-education, self-improvement, criteria-based learning); • apply psychological and pedagogical diagnostic methods to evaluate the needs of a group of students, and understand how the support processes of the student welfare services function in schools; • understand teacher's work from the socio-pedagogical aspect and reflect own professional identity as a future teacher; • establish effective dialogue to reinforce students' positive and responsible learning behaviours; • collaborate with all stakeholders of the educational process; • analyze and develop a holistic pedagogical process in its various forms (lesson, seminar, round table, debate, etc.), and conduct various forms of subject-related extracurricular activities. •

Course title	Pedagogical approaches (3rd year pedagogical practice)
Component	Pedagogical component
Cycle	Core disciplines
Module	Teacher as a facilitator of learning 25 Academic credits
Academic credits	6
Course / competence description	<p>The purpose of this course is to improve the following areas of pedagogical competence:</p> <ul style="list-style-type: none"> • competence area for pedagogy and didactics (1, 2) • competence area for interaction (3, 4, 5)

	<ul style="list-style-type: none"> • competence area for teachers' work environment (6, 7) • competence area for professional development (8, 9, 10) <p>During this course, pre-service teachers go through a comprehensive professional development where they improve in practice their professional practices and develop their pedagogical and subject-specific competences necessary for a teacher (preschool teacher, primary school teacher, subject teacher, assistant class teacher / curator).</p>
Learning outcomes	<p>Pre-service teachers who demonstrate competence can:</p> <ul style="list-style-type: none"> • design and organize independently a constructive and inclusive educational process; • choose purposeful and suitable learning materials, innovative pedagogical approaches, and active teaching considering also the use of educational technologies and digital environments; • apply subject-specific knowledge and didactics; • apply formative and summative assessment methods and techniques, and support the development of students' reflection, self- and peer-assessment skills; • establish dialogical atmosphere with all stakeholders of the educational process to solve problems and conflict situations and to promote safe learning environment. •

Course title	Research and innovation in education (4th year industrial- pedagogical practice)
Component	Pedagogical component
Cycle	Core disciplines
Module	Teacher as a facilitator of learning 25 Academic credits
Academic credits	15
Course / competence description	<p>The purpose of this course is to improve the following areas of pedagogical competence:</p> <ul style="list-style-type: none"> • competence area for pedagogy and didactics (1, 2) • competence area for interaction (3, 4, 5) • competence area for teachers' work environment (6, 7) • competence area for professional development (8, 9, 10) <p>The course focuses on establishing pre-service teachers' developmental approach towards their own professional activities and work environment. The course also emphasizes the development of pre-service teachers' collaborative, problem-solving and leadership skills. They deepen their pedagogical skills and develop research skills as well as practical skills (didactics) in accordance with their area of specialization.</p> <p>During this practice period pre-service teachers also collect and analyze data, test the hypothesis, or make experimentations according to the research plan created in the course "<i>Research, Development, and Innovation</i>". They make conclusions and explore various forms and channels of communicating the research results in a professional manner.</p>
Learning outcomes	<p>Pre-service teachers who demonstrate competence can:</p> <ul style="list-style-type: none"> • design and organize independently a constructive and inclusive educational process to test hypothesis, make pedagogical experimentations and/or collect data according to their research plan; • apply innovative teaching and learning strategies, and methods and tools for designing, conducting and assessing an educational process and/or extracurricular activities based on long-term, medium-term, short-term lesson / lesson plans, and educational and out-of-class activities in the subject; • analyze the results of their experimentations and/or data collected and draw conclusions; • document their research activities and present the results in a professional manner using various forms of communication; • evaluate their professional activities in relation to the activities of the organization and through experimentations and practice-based research create ideas for improvement of their work and their work environment.

Profile disipilins

The International Kazakh-Turkish University named after Khoja Ahmed Yasawi was established on the basis of an intergovernmental agreement between Kazakhstan and Turkey. In this regard, in order to train modern highly qualified

specialists from the youth of the Turkic-speaking countries, the university has obligations to introduce the module of the Turkic world of the disciplines "Yasauitanu", "Principles of Ataturk", "History of the Turkic States" and teaching the Turkish language in all areas of preparation of educational programs.	
The general structure of the university component:	
Module name and main disciplines	Academic credits
Turkic World	16
Turkish (Kazakh) Language – (Level 1- A1,B2)	5
Turkish (Kazakh) Language – (Level 2-A2, C1)	5
Principles of Ataturk	3
Turkic States history	
Yassawi Study	3
Total academic credits	16
Course title	Turkish (Kazakh) Language – (Level 1- A1,B2)
Component	University component
Cycle	Major disciplines
Module	Turkic World , 16 academic credits
Academic credits	5
Course competence description	The purpose of this course is to improve the following areas of subject competence: This course is designed to study the basic level of the Turkish language. The aim of the course is to equip students with practical knowledge of Turkish at the A1 level in accordance with the Common European Framework of Reference for Languages. The course is aimed at developing students' readiness and ability for intercultural and communicative communication. As a result of studying the discipline, the student understands and uses familiar everyday expressions and the simplest phrases aimed at solving specific problems.
	The discipline is designed to study the basic standard of the Turkish language at the B2 academic level. The course offers complex texts on specific and abstract topics in Turkish, including technical (specialized) topics. The aim of the course is to improve the academic language. As a result of studying the discipline, the student can compose a clear, detailed text on different topics, explain the point of view, give arguments for and against different points of view on the topic.
Learning outcomes	Pre-service teachers who demonstrate competence can: Students are at A1 level knows how to communicate in a foreign language, using data, using time categories; we can speak correctly with intonation, based on lexical requirements, within the framework of linguistic concepts and grammatically correct arrangement of words. takes into account stylistic features, determines trends in the development of a foreign language: describes and analyzes the causes and consequences of events in social texts from a linguistic point of view; makes reasonable use of language materials, using sufficient language resources appropriate to this level: promptly and independently corrects errors in error-free speech.
	Students are at B2 level Communicates in a foreign language, using reasonable data and using tense categories, learns grammatically correct words within the framework of language concepts, based on lexical requirements, speaks correctly with intonation; Social characteristics determine the causes and consequences of events in texts; Reasonable use of sufficient language tools and language materials based on this level; speaks without errors, independently corrects sent errors.
Course title	Turkish (Kazakh) Language – (Level 2-A2, C1)
Component	University component
Cycle	Major disciplines
Module	Turkic World , 16 academic credits
Academic credits	5

Course competence description /	The purpose of this course is to improve the following areas of subject competence: This course is designed for the advanced level of the Turkish language. The aim of the course is to develop students' practical skills at the A2 level in accordance with the Common European Framework of Reference for Languages. The course is aimed at developing students' written (reading, writing) and direct oral (speaking, listening) communication skills, depending on the language level. As a result of studying the discipline, the student can talk on simple everyday topics, describe simple situations.
	The discipline is designed to study the basic standard of the Turkish language at the C1 academic level. The course examines complex non-fiction and literary texts, their stylistic features. The aim of the course is to develop students' reading skills and understanding of scientific and literary works. As a result of studying the discipline, the student can clearly and in detail state complex topics, clearly and logically express his thoughts in writing and highlight his views in detail using the language style.
Learning outcomes	Pre-service teachers who demonstrate competence can: Students are at A2 level presents in a foreign language, using reasonable information, using categories; Assimilates grammatically correct words within the framework of linguistic concepts, speaks correctly with intonation, based on lexical requirements. Determines the causes and consequences of events in social texts; uses sufficient language resources and language materials appropriate to this level; scans without errors, independently corrects sent errors.
	Improves knowledge about the structure of the C1 level of the Turkish language; develops professional theoretical and linguistic thinking skills through practical topics; improves writing skills and literacy in Turkish through written assignments; listening and speaking tasks use specific communication methods and develop communication skills. develops vocabulary through reading texts.
Course title	Principles of Ataturk
Component	University component
Cycle	Major disciplines
Module	Turkic World , 16 academic credits
Academic credits	3
Course competence description /	The purpose of this course is to improve the following areas of subject competence: Pre-service teachers are able to develop their own moral and civic position and able to operate with the social, business, cultural, legal and ethical norms of society.
	The discipline forms students' comprehensive understanding of the historical development of Turkey, develops skills for obtaining, analyzing and summarizing historical information, forms a scientific assessment of the principles of Ataturk. During the course, the student receives knowledge about the basic laws, stages and content of the history of Turkey in the context of the world-historical process, forms students' creative thinking, independence of judgment, interest in studying, preserving, using and multiplying the spiritual, cultural and historical heritage of Ataturk.
Learning outcomes	Pre-service teachers who demonstrate competence can: LOD 1 - conducts scientific research in the field of humanities, applies modern methods, tools and forms of education, comprehensively studies, analyzes, and systematizes scientific data; LOD 2 - possesses research abilities and skills depending on the content of modern education, owns new forms and methods of technology of criterion assessment (design, critical thinking), uses information technologies and technical means at a professional level; LOD 3 - He is able to explain the main trends in the field of humanities, uses the ability to interpret historical problems, events, ideas and theories; LOD 4 - He is able to explain the complex connections between facts, phenomena, and theories in the field of scientific research;
Course title	Turkic States history
Component	University component
Cycle	Major disciplines
Module	Turkic World , 16 academic credits
Academic credits	3
Course competence description /	The purpose of this course is to improve the following areas of subject competence: The discipline is aimed at forming students' holistic understanding of the place and role of the Turkic peoples and states in the world-historical process, instilling in students the skills and abilities of searching, systematizing and comprehensive analysis of historical information, developing the ability to understand the historical conditioning of phenomena and processes of both the past and the present , defining their own position in relation to the surrounding reality, fostering feelings of citizenship, patriotism, national identity, interethnic and interreligious tolerance.
Learning	Pre-service teachers who demonstrate competence can:

outcomes	<p>LOD 1 - establishes the connection of historical events with the historical development of mankind;</p> <p>LOD 2 - he knows the techniques of scientific description and analysis of the course and consequences of historical events;</p> <p>LOD 3 - explains the ways to solve modern social problems based on critically informed data;</p> <p>LOD 4 - defines the importance of the formation of historical consciousness and worldview principles in accordance with national priorities;</p>
Course title	Yassawi Study
Component	University component
Cycle	Major disciplines
Module	Turkic World , 16 academic credits
Academic credits	3
Course competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <p>The discipline introduces the values of the Yasawi teaching, forms an understanding of the principles of science, religious tolerance, human relations, human rights in personal, cultural and professional relations. As a result of studying the subject, the student can understand the peculiarities of the Yasawi culture, compare it with the social, ethical, confessional, cultural characteristics of society, understand the importance of the Yasawi teaching in the national culture, religion of the Turkic peoples; be able to analyze the role of "Hikmets" in the spiritual life of the people, which is a source of social harmony and unity; develop the ability to establish active professional and social relations.</p>
Learning outcomes	<p>Pre-service teachers who demonstrate competence can:</p> <p>LOD 1 - The student can understand the characteristics of creative culture and compare them with the social, ethical, confessional and cultural characteristics of society;</p> <p>LOD 2 - Forms creative positions on issues of science, religious tolerance, human relations, rights in personal, cultural, professional relationships;</p> <p>LOD 3 - Explains the theoretical foundations of the religious and non-religious worldview of the Turkic peoples and the teachings of Yasawi;</p> <p>LOD 4 - Demonstrates skills in communicating Yasawi's worldview to the public;</p> <p>LOD 5 - Explains the importance of the teachings of Akhmet Yasawi in Kazakh culture from the point of view of the phenomenon of religious transformation;</p>

4.2 Structure of the subject component

Module name and main disciplines	Academic credits
GEOGRAPHICAL PICTURE OF THE WORLD	10
University Component	10
Theory and concept of modern geography	5
Nature Sciences	5
PHYSICAL GEOGRAPHY	23
University Component	10
General Earth Science	5
Geology with the basics of geomorphology	5
Optional Component	13
Physical geography of parts of the world and oceans	4
Regionalism	
Hydrology of the land	
Biogeography	
Landscape studies	
Meteorology and Climatology	4
Hydrology and protection of water resources	5
PUBLIC GEOGRAPHY	34
University Component	14
Geoeconomics	5
Geopolitics	5
Country studies	4
Optional Component	20
Medical geography	4
Human geography	
Recreational geography	
Cultural geography	5
Modern toponymy	

Geography of cities and rural settlements	5
Geography of the population	6
INTERACTION OF SOCIETY AND NATURE	15
University Component	11
Economics of Environmental management	4
Environment and Sustainable Development	4
Climate change and consequences	3
Optional Component	4
Geoglobalistics	4
Geography of natural risk	
Anthropogenic landscape studies	
Geoconflictology	
World economy and competitiveness of the countries of the world	
GEOGRAPHY OF KAZAKHSTAN	16
University Component	10
Physical Geography of Kazakhstan	5
Socio-economic geography of Kazakhstan	5
Optional Component	6
Geography of the Kazakhstan regions	6
Agricultural regions of Kazakhstan.	
Integration of Kazakhstan with border regions	
Tourist and recreational resources of Kazakhstan	
Industrial regions of Kazakhstan	
DIGITALIZATION OF GEOGRAPHICAL EDUCATION	10
University Component	10
Cartography with the basics of topography	5
GIS technologies in geography	5
RESEARCH SKILLS IN GEOGRAPHY	8
University Component	4
Methods of geographical research	4
Optional Component	4
GIS in geographical research	4
Digital transformation of geographical education	
Modern geoinformation systems and methods	
Remote methods in ecology and nature management	
Geoinformation modeling of natural resources processes	
FINAL ATTESTATION	8
Total academic credits	124

Geographical picture of the world 10 academic credits	
This module provides pre-service teachers an overview of the main conceptual ideas that contribute to their understanding of the structure of the geographical world view and methods of their research. During the module, pre-service teachers develop their competencies in the theory and methodology of geographical science in the context of the modern general scientific world view. Pre-service teachers also develop their competences in practical methods in teaching geography.	

Course title	Theory and concept in modern geography
Component	Subject component, University component
Cycle	Major disciplines
Module	Geographical picture of the world 10 academic credits
Academic credits	5

Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> Competence area for theory and methodology of geographical science (1) Competence area for practical methods of teaching geography (5,9) <p>Pre-service teachers develop their understanding of the integrity of the natural science world view. They evaluate and analyze the laws of nature, and promote their practical use for human benefit.</p>
Learning outcomes	<p>Pre-service teachers demonstrating competence can:</p> <ul style="list-style-type: none"> understand the conceptual ideas of fundamental methodological and theoretical importance; choose the geographic science research methods most appropriate to facilitate learning; apply changes in the field of geographical science to their teaching, taking into account the perspectives of their development.
Course title	Nature Sciences
Component	Subject component, University component
Cycle	Major disciplines
Module	Geographical picture of the world 10 academic credits
Academic credits	5
Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> Competence area for theory and methodology of geographical science (2) Competence area for practical methods of teaching geography (9) <p>Pre-service teachers develop their understanding of the integrity of the natural-scientific world view. They evaluate and analyze the laws of nature, and promote their practical use in the interests of man. They improve independent learning and activities, working individually or with a pair.</p>
Learning outcomes	<p>Pre-service teachers demonstrating competence can:</p> <ul style="list-style-type: none"> use the acquired integrated natural science knowledge to describe the integrity of nature and the spatio-temporal model of natural objects; decide on the type of model (analytical, simulation, combined) to develop a spatio-temporal model of natural objects; evaluate and analyze the basic laws of the natural sciences to establish cause-and-effect relationships between phenomena and processes.
Physical geography 23 academic credits	
During the module, pre-service teachers study issues such as general laws of the structure of the Earth, the functioning and development of the geographical shell in unity and interaction with the surrounding space at different levels of its organization. Pre-service teachers develop their scientific knowledge in the field of physical geography and ecology.	
Course title	General Earth Science
Component	Subject component, University component
Cycle	Major disciplines
Module	Physical geography 23 academic credits
Academic credits	5
Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> Competence area for theory and methodology of geographical science (1,2) Competence area for practical methods of teaching geography (9) <p>Pre-service teachers apply knowledge of the general and theoretical foundations of physical geography.</p>

Learning outcomes	Pre-service teachers demonstrating competence can: <ul style="list-style-type: none"> distinguish and compare the studied geographical objects, processes and phenomena on the basis of known characteristic properties and to classify them; make descriptions of geographical objects, processes and phenomena using different sources of geographical information; analyze the results of the interaction of the components of the environment at different levels of its organization; carry out an environmental assessment to make an environmentally sound management decision on the implementation of economic activities by determining possible adverse impacts.
Course name	Geology and the basics of geomorphology
Component	Subject component, University component
Cycle	Major disciplines
Module	Physical geography 23 academic credits
Academic credits	5
Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> Competence area for theory and methodology of geographical science (1) Competence area for practical methods of teaching geography (6,7,9) <p>During the course, pre-service teachers acquire knowledge about the internal structure of the Earth and especially detailed knowledge about the structure of the solid Earth shell - the lithosphere and its upper boundary - the relief of the Earth's surface. They develop basic general professional theoretical knowledge of geomorphology with the basics of geology, biogeography, soil geography with the basics of soil science, landscape science, and socio-economic geography. They also use various opportunities to demonstrate their knowledge in practice (when performing independent and group tasks).</p>
Learning outcomes	Pre-service teachers demonstrating competence can: <ul style="list-style-type: none"> apply knowledge of general and theoretical foundations of physical geography and landscapes of Kazakhstan; use physical and geographic knowledge to ask questions; determine the main relief-forming processes and, on this basis, to predict the development of the relief of the territory and the functioning of geosystems in various ways of its economic use value the patterns of spatial placement, the rock-forming value for the practical use of minerals.
Course title	Meteorology and Climatology
Component	Subject component, University component
Cycle	Major disciplines
Module	Physical geography 23 academic credits
Academic credits	4
Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> Competence area for practical methods of teaching geography (5,8) Competence area for Research (14) <p>During the course, pre-service teachers study modern ideas about circulation processes in the atmosphere, new challenges related to anthropogenic influence on the Earth's climate, and climate changes in the past and present. In the process of practical work, pre-service teachers acquire elementary skills in experimentation, get acquainted with the instruments, acquire skills in the simplest meteorological, gradient and actinometric observations.</p>

Learning outcomes	Pre-service teachers demonstrating competence can: <ul style="list-style-type: none"> • use methods of meteorological observations, methods of calculation of normative characteristics of precipitation, evaporation and wind in the design of water management and environmental facilities; • conduct an experiment to identify anthropogenic factors of the climate of the area; • analyze and evaluate the reliability of meteorological measurement materials and meteorological information and methods for calculating the main meteorological characteristics.
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Course title	Hydrology and protection of water resources
Component	Subject component, University component
Cycle	Major disciplines
Module	Physical geography 23 academic credits
Academic credits	5
Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> • Competence area for theory and methodology of geographical science (3) • Competence area for practical methods of teaching geography (6) • Competence area for Research (14) <p>During the course, pre-service teachers study water bodies and protection of water resources. They also examine the issues of rational and integrated use of water resources in the economy, and the challenges of ecology and nature protection. Pre-service teachers identify the main sources of water pollution, apply methods of assessment and analysis of natural and wastewater.</p>
Learning outcomes	Pre-service teachers demonstrating competence can: <ul style="list-style-type: none"> • distinguish basic hydrological processes in the hydrosphere in general and in water bodies of different types; • show the practical importance of geographical and hydrological studies of water bodies and hydrological processes for economy and nature protection tasks; • investigate the conditions of surface water resources, and dangerous hydrological phenomena in water bodies to ensure water safety and ways to prevent them in the future.

Course title	Physical geography of parts of the world and oceans
Component	Subject component, Optional component
Cycle	Major disciplines
Module	Physical geography 23 academic credits
Academic credits	4
Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> • Competence area for theory and methodology of geographical science (2,3) • Competence area for Research (10,14) <p>During the course, pre-service teachers study the systematic complex characterization of the largest taxons of the geographical shell - continents and oceans. They also develop the necessary knowledge about the main natural resources and their modern development arising in the process of economic use. Pre-service teachers develop their abilities to draw conclusions in the change of the properties of the landscape under the influence of anthropogenic influences.</p>
Learning outcomes	Pre-service teachers demonstrating competence can: <ul style="list-style-type: none"> • interpret geographical patterns, principles of complex characterization of continents and oceans; • investigate the main natural resources of the continents to identify its impact on economic activity;

	<ul style="list-style-type: none"> • compare the features of global and regional patterns of formation, development and differentiation of natural, geosystems; • apply information technology in research activities to solve problem situations in the region; • analyze and systematize the main groupings of natural geosystems and their anthropogenic modifications.
Course title	Regionalism
Component	Subject component, Optional component
Cycle	Major disciplines
Module	Physical geography 23 academic credits
Academic credits	4
Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> • Competence area for theory and methodology of geographical science (1,3,4) • Competence area for Research (12) <p>During the course, pre-service teachers examine the features of regionalization of the modern world, the formation of regions and the theoretical dimension of these processes, and compare the features of regional processes in different civilizational environments, based on the new methodological and theoretical model of regionalization.</p>
Learning outcomes	<p>Pre-service teachers demonstrating competence can:</p> <ul style="list-style-type: none"> • Interpret the strategy and features of the geopolitical regionalization of the countries of the world; • analyze the geo-economic foundations of regionalization processes, such as the formation of economic communities of states through trade agreements; • compare the features of regional processes in various civilizational environments to determine the growth of economic interdependence and convergence of economic interests.
Course title	Hydrology of the land
Component	Subject component, Optional component
Cycle	Major disciplines
Module	Physical geography 23 academic credits
Academic credits	4
Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> • Competence area for theory and methodology of geographical science (1) • Competence area for practical methods of teaching geography (5) • Competence area for Research (14) <p>Pre-service teachers acquire knowledge about hydrodynamic, hydrochemical, hydro-ecological features of hydrography and geographical distribution of water resources. The mastered competencies allow pre-service teachers to use problem-oriented learning activities.</p>
Learning outcomes	<p>Pre-service teachers demonstrating competence can:</p> <ul style="list-style-type: none"> • describe hydrological objects to assess the processes and principles of water distribution on the globe using different sources of geographical information; • analyze the interactions of climatic factors and factors of the underlying surface, taking into account anthropogenic influence; • apply information technology in the study of hydrography and geographical distribution of water resources to understand the hydrosphere as an essential part of the climate system; • distinguish the influence of tidal fluctuations on the interaction of land and ocean waters in the coastal zone; • estimate the amount of renewable water resources, their distribution over time and across

	the territory.
Course title	Biogeography
Component	Subject component, Optional component
Cycle	Major disciplines
Module	Physical geography 23 academic credits
Academic credits	4
Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> • Competence area for theory and methodology of geographical science (1,2,3) • Competence area for practical methods of teaching geography (5,9) • Competence area for Research (12,14) <p>During the course, pre-service teachers learn about the regularities of geographical distribution and location of living organisms and their communities on Earth. They also learn to apply the acquired knowledge in practice in order to consolidate and expand knowledge.</p>
Learning outcomes	<p>Pre-service teachers demonstrating competence can:</p> <ul style="list-style-type: none"> • explain the principles of biogeographic zoning and the problems associated with anthropogenic impact on biomes and biota; • analyze the theoretical basis for the rational use and protection of plant and animal resources in connection with the peculiarities of the geographical environment; • compare the features of the distribution of organisms and quantitative patterns of their distribution within the area; • explore new areas of science for the definition of biogeographic regions.
Course title	Landscape studies
Component	Subject component, Optional component
Cycle	Major disciplines
Module	Physical geography 23 academic credits
Academic credits	4
Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> • Competence area for theory and methodology of geographical science (2) • Competence area for practical methods of teaching geography (5,9) • Competence area for Research (10) <p>During the course, pre-service teachers learn about the basics of classical landscape science, its modern directions, the objects of landscape research. The mastered competencies allow pre-service teachers to analyze natural components and elements of landscape complexes or geosystems of different types, factors of their differentiation and integration, structural organization and dynamics.</p>
Learning outcomes	<p>Pre-service teachers demonstrating competence can:</p> <ul style="list-style-type: none"> • develop a landscape approach in application when justifying projects for the use, improvement and nature protection of specific territories; • analyze the patterns of organization and dynamics of different types of natural and anthropogenic, including cultural, landscapes; • explore scientific directions related to the study of anthropogenic transformation; • compare landscape approaches to the analysis and assessment of territorial environmental situations.
Public geography 34 academic credits	
During the module, pre-service teachers study social, political geography, country studies, population, and the results of its	

economic activity, as well as the territorial organization of society, its laws and laws. Pre-service teachers acquire skills in spatial analysis and planning.

Course title	Goeconomics
Component	Subject component, University component
Cycle	Major disciplines
Module	Public geography 34 academic credits
Academic credits	5
Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> • Competence area for theory and methodology of geographical science (2,3) • Competence area for practical methods of teaching geography (6,9) <p>During the course, pre-service teachers learn the basic categories of geo-economics, the structure and territorial model of the world economy, and indicators of economic development of the countries of the world. They also examine the issues of redistribution of resources and global income. Pre-service teachers learn the necessary knowledge of social and economic geography and develop practical skills to demonstrate their knowledge in practice.</p>
Learning outcomes	<p>Pre-service teachers demonstrating competence can:</p> <ul style="list-style-type: none"> • compile indicators of economic development of countries in order to compare industries, individual countries and major regions of the world; • research external and internal economic policies, in order to improve the economic development of a particular country; • analyze the fundamentals of the economics of environmental management, sustainable development, legal foundations of environmental management to assess the impact on the environment.

Course title	Geopolitics
Component	Subject component, University component
Cycle	Major disciplines
Module	Public geography 34 academic credits
Academic credits	5
Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> • Competence area for theory and methodology of geographical science (1,3) • Competence area for practical methods of teaching geography (6,7) • Competence area for Research (10) <p>During the course, pre-service teachers study geopolitical processes in the modern world. They learn to consider the characteristics of the geopolitical position of the countries of the world and the Republic of Kazakhstan, and study the factors affecting geopolitical security and integration processes. Pre-service teachers develop their knowledge of the theoretical foundations of geopolitics and the current state of the world geopolitical processes at global and regional levels. They also learn about modern geopolitical processes, and develop their skills in assessing the impact of the political situation on the organization of space.</p>
Learning outcomes	<p>Pre-service teachers demonstrating competence can:</p> <ul style="list-style-type: none"> • apply skills to analyze geopolitical processes; • interpret the evolution of geopolitics to determine the current position of individual countries; epochs, evolution and methods of geopolitics to determine the current situation of individual countries; • give examples of the geopolitical situation of the countries of the world to assess economic development and political system; • analyze the results of the study of modern geopolitical processes to determine the role of the

	country in the geopolitical space.
Course title	Country studies
Component	Subject component, University component
Cycle	Major disciplines
Module	Public geography 34 academic credits
Academic credits	4
Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> • Competence area for theory and methodology of geographical science (1,3) • Competence area for practical methods of teaching geography (6,7) • Competence area for Research (10) <p>During the course, pre-service teachers study the regions of the world, comprehensive geographic zoning, and methods of comparing countries. They also learn about the physical and geographical, historical and cultural, political and geographical zoning of the countries of the world. They also learn about theoretical aspects, history, geographical essence and purpose of country study as a discipline in geographical education. Pre-service teachers develop the necessary knowledge of the principles, laws and categories of country studies, as well as their main challenges and values.</p>
Learning outcomes	<p>Pre-service teachers demonstrating competence can:</p> <ul style="list-style-type: none"> • systematize methods of comprehensive study of countries and their parts; • apply the skills of familiarization and search reading of country-specific information; • describe comprehensively the main parameters and trends of social, political, economic and cultural development of countries based on several sources of information; • study the situation of countries on various indicators to determine the processes of globalization.
Course title	Geography of cities and rural settlements
Component	Subject component, University component
Cycle	Major disciplines
Module	Public geography 34 academic credits
Academic credits	5
Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> • Competence area for Research (10,11,12,14). <p>During the course, pre-service teachers study the features of the main types of settlements. They learn about the issues of urban and rural settlements, urbanization, the impact of urbanization on the environment, urban agglomeration functions of rural areas. Pre-service teachers analyze the differences between cities and rural settlements, and acquire the competencies of management and development, and preservation of environmental quality in cities and rural settlements.</p>
Learning outcomes	<p>Pre-service teachers demonstrating competence can:</p> <ul style="list-style-type: none"> • determine and compare the ratio of urban and rural population in different parts of the country according to statistical data; • investigate environmental problems of urbanized territories and ways to solve problems; • analyze the main stages of development of urban systems and patterns of placement and development of the agro-industrial complex; • evaluate the role of cities in the organization of geographical space, their structure and dynamics of development.
Course title	Geography of the population

Component	Subject component, University component
Cycle	Major disciplines
Module	Public geography 34 academic credits
Academic credits	6
Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> Competence area for theory and methodology of geographical science (4) Competence area for practical methods of teaching geography (9) <p>During the course, pre-service teachers study the theoretical and practical foundations of demographic processes occurring in the modern world. They also learn about the basic concepts and terms of population geography covering the totality of demographic processes, the sources of information about the population, and the history of demographic research in the world. Pre-service teachers learn to orient in modern trends of changes in the world population and carry out social monitoring of the development of regions of different hierarchical levels. They also acquire the skills of analysis and forecasting of demographic indicators.</p>
Learning outcomes	<p>Pre-service teachers demonstrating competence can:</p> <ul style="list-style-type: none"> apply modern scientific research methods in solving regional demographic problems of the population; distinguish demographic processes and phenomena that characterize the dynamics of the population of individual regions and countries; analyze general and regional features of demographic, migration, ethnic processes, settlement and urbanization processes; use the techniques of complex geographical analysis of processes related to the population; analyze emerging situations of a daily nature, determine the manifestation of demographic and social processes and patterns in them; study the theoretical foundations of the history of the development of the population geography for the development and justification of measures of regional socio-demographic and migration policy; substantiate hypotheses about changes in the population of individual countries, its gender and age structure, and the development of human capital; forecast the size and composition of the population, to assess the situation on the labor market and its dynamics for the creation of settlement schemes, spatial planning of territories of various scales.

Course title	Medical geography
Component	Subject component, Optional component
Cycle	Major disciplines
Module	Public geography 34 academic credits
Academic credits	4
Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> Competence area for theory and methodology of geographical science (1,3) Competence area for Research (10) <p>During the course, pre-service teachers study the influence of natural and socio-economic conditions on global health, as well as geographic factors in the spread of a disease and the influence of the geographic environment on population health. They develop the necessary knowledge of the influence of the geographic environment on the health of the population, and acquire skills in analyzing and evaluating the geographic spread of disease.</p>
Learning outcomes	<p>Pre-service teachers demonstrating competence can:</p> <ul style="list-style-type: none"> substantiate the impact of the geographical environment on the health of the population in order to study the issues of human adaptation to extreme conditions; create maps of the distribution of types of diseases to identify natural and social factors, and

	<p>features of the course of certain diseases among the population of different localities;</p> <ul style="list-style-type: none"> • analyze the geographical and medical points of view and on the basis of it draws a conclusion about the inclusion of medical geography in the system of geographical sciences; • assess the influence of natural and socio-economic conditions on human health; • develop medical and geographic forecasts, taking into account environmental factors.
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Course title	Human geography
Component	Subject component, Optional component
Cycle	Major disciplines
Module	Public geography 34 academic credits
Academic credits	4
Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> • Competence area for Research (10,11,14). <p>During the course, pre-service teachers study the characteristics of human-environment interaction. They also examine the issues of human interaction with the environment, and the issues of modern human development in the global world. Pre-service teachers acquire skills in analyzing and evaluating the issues of preservation of the environment, order and welfare in the conditions of rapid changes.</p>
Learning outcomes	<p>Pre-service teachers demonstrating competence can:</p> <ul style="list-style-type: none"> • apply geographic information technology to analyze negative effects on the environment; • analyze human influence on climate change and interpret the results of known changes; • assess the extent of the impact of anthropogenic activities on the Earth.

Course title	Recreational geography
Component	Subject component, Optional component
Cycle	Major disciplines
Module	Public geography 34 academic credits
Academic credits	4
Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> • Competence area for practical methods of teaching geography (8) • Competence area for Research (10.14) <p>During the course, pre-service teachers learn about the recreational resources and the prospects for tourism development in different regions of the world, and the comprehensive description of the recreational resources of the territory. They examine issues related to the role of recreation and tourism in the socio-economic development of countries. Pre-service teachers develop their understanding of the impact of recreational activities on public health. They also use various variations of research activities to understand the content of geography instruction.</p>
Learning outcomes	<p>Pre-service teachers demonstrating competence can:</p> <ul style="list-style-type: none"> • analyze the distribution of recreational resources and patterns of territorial organization of recreational activities; • investigate the conditions for implementing a variety of human recreational activities; • evaluate a variety of recreational activities of people focused on the restoration of psychophysical forces.

Course title	Cultural geography
Component	Subject component, Optional component
Cycle	Major disciplines
Module	Public geography 34 academic credits
Academic credits	5
Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> Competence area for theory and methodology of geographical science (1) Competence area for practical methods of teaching geography (9) <p>During the course, pre-service teachers study the spatial cultural differences and territorial distribution of cultures resulting from the interaction of nature and society. They develop theoretical knowledge of cultural and socioeconomic geography.</p>
Learning outcomes	<p>Pre-service teachers demonstrating competence can:</p> <ul style="list-style-type: none"> use knowledge about the interaction of cultural space (noosphere) and geographical space to explain a certain level of development of society; analyze general trends in the relationship between cultural geography and cultural studies; investigate spatial and cultural differences between the regions of the Earth, based on the identification of geographical spaces in terms of their cultural identity; analyze the traditions of studying images of geographical space in philosophy, natural science and other humanities to understand geographical images in culture; apply geographic information technology to create electronic maps of cultural areas of the world; evaluate the patterns of spatial diversity of different types of cultures.

Course title	Modern toponymy
Component	Subject component, Optional component
Cycle	Major disciplines
Module	Public geography 34 academic credits
Academic credits	5
Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> Competence area for practical methods of teaching geography (6,9) Competence area for Research (11) <p>During the course, pre-service teachers study the principles of toponym formation and their use in teaching and research. They also conduct a study of place names in the field, collect and analyze toponymic information, obtaining information about local uses of place names and their applications. Pre-service teachers develop their knowledge of the principles of toponymic formation and acquire skills to use them in teaching and research.</p>
Learning outcomes	<p>Pre-service teachers demonstrating competence can:</p> <ul style="list-style-type: none"> identify differences between the established official name and the one used by the local population; apply different methods of recording toponymic information during the survey; conduct field research to obtain information on the local use of geographical names and their application; analyze and compare the location of the place, object or area to which the given name refers.

Interaction of society and nature 15 academic credits

During the module, pre-service teachers study the interaction between society and nature on a national and global scale. They develop their knowledge about the constant exchange of substances between society and the geographic environment. Pre-service teachers build their understanding of the impact of the relationship between society and nature on the

economic, physiological, moral, and ecological well-being of society. They acquire skills in conducting ecological research and spatial analysis of the environment.

Course title	Economics of Environmental management
Component	Subject component, University component
Cycle	Major disciplines
Module	Interaction of society and nature 15 academic credits
Academic credits	4
Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> • Competence area for theory and methodology of geographical science (2) • Competence area for practical methods of teaching geography (9) <p>Pre-service teachers develop their competences in basic theoretical knowledge of the fundamentals of natural resource economics. They also acquire skills in summarizing and analyzing global and domestic experiences in the economic valuation of natural resources.</p>
Learning outcomes	<p>Pre-service teachers demonstrating competence can:</p> <ul style="list-style-type: none"> • provide examples of the organization of environmental protection activities; • conduct an environmental analysis of industrial activity to identify economic efficiency in the use of natural resources; • create projects about the features of environmental management of individual areas of the country on the basis of the use of various data; • conduct an economic assessment of natural resources to determine the amount of economic damage caused by environmental pollution.

Course title	Environment and Sustainable Development
Component	Subject component, University component
Cycle	Major disciplines
Module	Interaction of society and nature 15 academic credits
Academic credits	4
Course/ Competence description	<p>The purpose of this course is to enhance the following areas of subject competencies:</p> <ul style="list-style-type: none"> • Competence area for theory and methodology of geographical science (2,4) • Competence area for Research (13) • Competence area for Value-oriented competences (18) <p>During the course, pre-service teachers study the current state of the environment and sustainable development of regions. They learn to provide a comprehensive analysis of the current state of the environment in the interests of sustainable development of regions.</p>
Learning outcomes	<p>Pre-service teachers demonstrating competence can:</p> <ul style="list-style-type: none"> • investigate the interaction between man and the environment, environmental crises and ways to overcome them; • analyze nature protection, sustainable development of the Republic of Kazakhstan; • present their point of view in preservation of the environment for realization of ideas of sustainable development in different countries and in Republic of Kazakhstan; • apply various methods of monitoring of various indicators with use of geoinformation technologies for definition of sustainable development of regions; • evaluate the state of the environment and sustainable development of the country.

Course title	Climate change and consequences
Component	Subject component, University component

Cycle	Major disciplines
Module	Interaction of society and nature 15 academic credits
Academic credits	3
Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> Competence area for Research (10,11,13). <p>During the course, pre-service teachers study the current issues of global climate change, which is currently one of the most pressing challenges for the world community. They build their understanding of the relevance of research on various manifestations and consequences of climate change as a large-scale natural hazard. They also acquire skills in assessing climate change and its impact on various sectors of economic activity.</p>
Learning outcomes	<p>Pre-service teachers demonstrating competence can:</p> <ul style="list-style-type: none"> encourage independent observation of weather and climate change in order to assess extreme weather phenomena; analyze various approaches to climate change research and predict their consequences; investigate temperature rise, extreme weather events, sea level rise, changing populations of wild animals and their habitats on climate change; analyze statistical weather and climate data from previous years with climate models to assess extreme weather events; present their point of view in the preservation of the environment for the implementation of the ideas of sustainable development in different countries and in the Republic of Kazakhstan; assess the possible consequences of climate changes in individual territories of the country associated with global climate change.

Course title	Geoglobalistics
Component	Subject component, Optional component
Cycle	Major disciplines
Module	Interaction of society and nature 15 academic credits
Academic credits	4
Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> Competence area for theory and methodology of geographical science (2) Competence area for practical methods of teaching geography (9) <p>During the course, pre-service teachers study global challenges, global processes and globalization, the history of the formation of the global world, and the set of processes occurring on Earth. They become proficient in summarizing the analytical materials that characterize the formation of global understanding.</p>
Learning outcomes	<p>Pre-service teachers demonstrating competence can:</p> <ul style="list-style-type: none"> interpret global processes of nature and society in order to understand the problem of globalization; consider the situation of modern Kazakhstan in the context of globalization; apply the results of global studies in the classroom to summarize the problem of globalization; evaluate global processes affecting the development of the country's economy and politics.

Course title	Geography of natural risk
Component	Subject component, Optional component
Cycle	Major disciplines

Module	Interaction of society and nature 15 academic credits
Academic credits	4
Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> • Competence area for theory and methodology of geographical science (4) • Competence area for practical methods of teaching geography (9) <p>During the course, pre-service teachers learn about and become proficient in the knowledge of the natural and natural-technogenic hazards and risks, as well as their mechanisms. They develop their abilities to draw conclusions about the manifestations of natural and natural-technogenic hazards.</p>
Learning outcomes	<p>Pre-service teachers demonstrating competence can:</p> <ul style="list-style-type: none"> • write descriptions of natural and natural-environmental hazards and risks; • analyze natural hazards to prevent adverse consequences; • give examples of spatial and temporal manifestations of dangerous natural and socio-technogenic phenomena, their impact on sectors of the economy and population; • investigate global problems to determine the sustainable development of the economy and the environment.

Course title	Anthropogenic landscape studies
Component	Subject component, Optional component
Cycle	Major disciplines
Module	Interaction of society and nature 15 academic credits
Academic credits	4
Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> • Competence area for theory and methodology of geographical science (2) • Competence area for Research (10,11) <p>During the course, pre-service teachers study the formation, structure, and dynamics of the anthropogenic forms of landscapes. They examine the doctrine of natural-anthropogenic landscapes as one of the major components of the geo-ecological basis of geographic science. Pre-service teachers also build their understanding of the natural and natural-anthropogenic geosystems, natural territorial complex, landscape, and ecological approaches in modern scientific research.</p>
Learning outcomes	<p>Pre-service teachers demonstrating competence can:</p> <ul style="list-style-type: none"> • apply landscape-ecological knowledge in solving problems of rational nature management, ecological optimization of modern landscapes and design of cultural landscapes; • analyze the structure and functioning, evolution and dynamics of modern natural and natural-anthropogenic landscapes; • apply in practice the techniques of landscape interpretation of remote aerospace materials, landscape mapping; • investigate the structure, dynamics and functioning of the natural and anthropogenic landscape; • evaluate the results of field and desk landscape studies for monitoring and forecasting anthropogenic landscapes.

Course title	Geoconflictology
Component	Subject component, Optional component
Cycle	Major disciplines
Module	Interaction of society and nature 15 academic credits
Academic credits	4

Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> Competence area for Research (10,11,12). <p>During the course, pre-service teachers explore in unity the geographical, political, and other interacting factors that influence the emergence and development of political conflicts. They build their understanding of the basic ideas of political geography and geopolitics, and the emergence and nature of political conflict.</p>
Learning outcomes	<p>Pre-service teachers demonstrating competence can:</p> <ul style="list-style-type: none"> interpret the interaction of countries in solving geopolitical problems; identify interacting factors on the emergence and development of political conflicts; model "geoconflictological processes" in order to find ways to prevent negative trends in different regions of the world; apply skills to perceive contemporary problems of geopolitics, political geography, and geoconflictology through geographical thinking.
Course title	World economy and competitiveness of the countries of the world
Component	Subject component, Optional component
Cycle	Major disciplines
Module	Interaction of society and nature 15 academic credits
Academic credits	4
Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> Competence area for theory and methodology of geographical science (1) Competence area for practical methods of teaching geography (9) <p>During the course, pre-service teachers study the main factors affecting the competitiveness of developed countries in the global economy. They learn about the world economy and its main subjects, as well as the resource potential of the development of the world economy. They also build their understanding on the topic and learn to distinguish the main challenges of the structure of the world economy, and compare competitiveness between countries.</p>
Learning outcomes	<p>Pre-service teachers demonstrating competence can:</p> <ul style="list-style-type: none"> interpret the patterns of development of the world economy and the result of internationalization, its impact on the structure of the world economy; determine the relationship of national economies, which are based on the international division of labor, various economic relations; apply IT to research the development of regional forms of territorial organization of production, clusters, industrial areas and territorial production complexes; analyze the results of a global study of the ranking of countries of the world in terms of economic competitiveness.
Geography of Kazakhstan 16 academic credits	
<p>During the module, pre-service teachers develop integrated knowledge by studying natural socio-economic, geo-economic, geopolitical features, population, and results of economic activity of their country. They develop their knowledge about the spatial diversity of human life and activity, the role of humans and mankind in the geographical environment, and the contribution of people to the development of world civilization. They also consider the issues of fostering citizenship and patriotism, and develop their spiritual and moral values, as well as respect for the history and culture of their country.</p>	
Course title	Physical Geography of Kazakhstan
Component	Subject component, University component
Cycle	Major disciplines
Module	Geography of Kazakhstan 16 academic credits
Academic credits	5

Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> • Competence area for theory and methodology of geographical science (3) • Competence area for practical methods of teaching geography (7,9) • Competence area for Value-oriented competences (15,18) <p>Pre-service teachers learn to apply the knowledge of the theoretical foundations of physical geography of Kazakhstan.</p>
Learning outcomes	<p>Pre-service teachers demonstrating competence can:</p> <ul style="list-style-type: none"> • characterize the main regularities of formation and interrelation of components of geosystems to study the features of the natural environment of Kazakhstan; • create reports on the peculiarities of the components of the nature of Kazakhstan on the basis of several sources of information; • identify the problems of nature of Kazakhstan at the local and regional levels; • use cartographic material to analyze the relationship between components of geosystems of Kazakhstan; • analyze and synthesize applied economic problems, environmental problems of Kazakhstan.
Course title	Socio-Economic Geography of Kazakhstan
Component	Subject component, University component
Cycle	Major disciplines
Module	Geography of Kazakhstan 16 academic credits
Academic credits	5
Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> • Competence area for theory and methodology of geographical science (3,4) • Competence area for Research (14) <p>During the course, pre-service teachers learn about the trends in theoretical and applied economics in Kazakhstan. They develop the necessary knowledge of the social and economic geography of Kazakhstan and acquire skills in assessing the current state of economic and geographical position of Kazakhstan in relation to the transit position of the territory.</p>
Learning outcomes	<p>Pre-service teachers demonstrating competence can:</p> <ul style="list-style-type: none"> • compile indicators of economic development of countries in order to compare the economic sectors of Kazakhstan; • apply the knowledge of the factors of economic distribution and peculiarities of the location of economic sectors of Kazakhstan to solve problems in real life; • evaluate the development of the economy of Kazakhstan for sustainable economic development and the creation of favorable living conditions for people; • analyze the economic and geographic characteristics in order to classify the industries of Kazakhstan.
Course title	Geography of the Kazakhstan regions
Component	Subject component, Optional component
Cycle	Major disciplines
Module	Geography of Kazakhstan 16 academic credits
Academic credits	6

Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> • Competence area for theory and methodology of geographical science (3,4) • Competence area for practical methods of teaching geography (9) • Competence area for Value-oriented competences (17) <p>During the course, pre-service teachers learn about the issues of complex study of nature, population, economy, culture, and social organization of separate regions of Kazakhstan. They develop the necessary knowledge of the complex study of individual regions of Kazakhstan and acquire skills in assessing the characteristics of regions and the concentration of industrial production of Kazakhstan.</p>
Learning outcomes	<p>Pre-service teachers demonstrating competence can:</p> <ul style="list-style-type: none"> • develop a mini-project on the state of the regions in the context of socio-economic development of the regions of Kazakhstan; • compare the socio-economic development, population and economy of the regions; • develop examples for solving the problem of economic development of the country; • justify on the basis of analysis of a set of sources of information hypotheses about changes in the sectoral and territorial structure of the economy of Kazakhstan and possible ways of solving problems of economic development.
Course title	Agricultural regions of Kazakhstan
Component	Subject component, Optional component
Cycle	Major disciplines
Module	Geography of Kazakhstan 16 academic credits
Academic credits	6
Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> • Competence area for theory and methodology of geographical science (3) • Competence area for practical methods of teaching geography (6,7) • Competence area for Value-oriented competences (15) <p>During the course, pre-service teachers learn about the issues of state regulation of agriculture, the sustainable mechanism of agriculture in the agricultural economy, and the growth factors of competitiveness of Kazakhstan. They develop the necessary knowledge of agriculture and acquire practical skills in demonstrating knowledge in practice.</p>
Learning outcomes	<p>Pre-service teachers demonstrating competence can:</p> <ul style="list-style-type: none"> • characterize the current state of agricultural development; • identify regions with great agricultural potential of the country, to solve the problems of the economy; • analyze the growth of product competitiveness for the development of rural areas; • assess the level of employment of the rural population, taking into account the peculiarities of its development.
Course title	Integration of Kazakhstan with border regions
Component	Subject component, Optional component
Cycle	Major disciplines
Module	Geography of Kazakhstan 16 academic credits
Academic credits	6

Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> Competence area for theory and methodology of geographical science (3) Competence area for Research (14) <p>During the course, pre-service teachers learn about the issues of integration of Kazakhstan with frontier regions, the improvement of competitiveness of the region in conditions of market economy, and the employment and living standards of the population of the region at the expense of full use of its industrial and resource potential. They develop the necessary knowledge in the field of integration of Kazakhstan border regions and acquire skills in comparing the economy of the border regions with the aim of economic growth of the country.</p>
Learning outcomes	<p>Pre-service teachers demonstrating competence can:</p> <ul style="list-style-type: none"> argue the role of Kazakhstan in world economic integration; conduct research on various sources of information related to the study of Kazakhstan's integration with border regions; compare the structure of economic cooperation and trade turnover of Kazakhstan with world economic associations and with border regions; analyze the geographical structure of Kazakhstan's exports and imports; forecast the prospects of Kazakhstan's participation in world economic integration.
Course title	Tourist and recreational resources of Kazakhstan
Component	Subject component, Optional component
Cycle	Major disciplines
Module	Geography of Kazakhstan 16 academic credits
Academic credits	6
Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> Competence area for theory and methodology of geographical science (3) Competence area for Research (14) Competence area for Value-oriented competences (15,16) <p>During the course, pre-service teachers study the scope of tourism needs of both natural and socio-economic nature. They acquire skills in summarizing the set of phenomena and relations of recreational tourism for the purpose of recreation, entertainment, and treatment.</p>
Learning outcomes	<p>Pre-service teachers demonstrating competence can:</p> <ul style="list-style-type: none"> apply knowledge about tourist and recreational resources of Kazakhstan to classify attractive mountain, recreational, natural, water, excursion zones of the country; compare climatic conditions of Kazakhstan with other countries for tourism development; evaluate the recreational resources of Kazakhstan to meet modern trends in tourist demand.
Course title	Industrial regions of Kazakhstan
Component	Subject component, Optional component
Cycle	Major disciplines
Module	Geography of Kazakhstan 16 academic credits
Academic credits	6
Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> Competence area for theory and methodology of geographical science (3,4) Competence area for practical methods of teaching geography (9) <p>During the course, pre-service teachers define the industrial regions of Kazakhstan. They learn about the issues in extraction of raw materials, production and processing of materials and energy, manufacturing of machines and different goods, as well as rendering of services to the population</p>

	according to the regions of the country. They develop their knowledge about the impact of industry on the economy of Kazakhstan and acquire skills in estimating the reserves of raw materials and natural resources of the earth.
Learning outcomes	Pre-service teachers demonstrating competence can: <ul style="list-style-type: none"> • apply the knowledge of industrial complexes of Kazakhstan to explain the location of the productive forces of the country; • analyze the impact of industry to explain the level of development of the productive forces of society; • evaluate the development of industry in Kazakhstan to explain its impact on the ecology of the country.
Digitalization of geographical education 10 academic credits	
During the module, pre-service teachers learn about the basic issues of using geographic information system technologies contributing to their understanding of mapping by using innovative technologies and reflecting various aspects of the territorial organization of the population and all aspects of life in society. Pre-service teachers develop their competences in the use of innovative methods in geography teaching.	
Course title	Cartography with the basics of topography
Component	Subject component, University component
Cycle	Major disciplines
Module	Digitalization of geographical education 10 academic credits
Academic credits	5
Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> • Competence area for theory and methodology of geographical science (3) • Competence area for practical methods of teaching geography (6) <p>During the course, pre-service teachers learn about modern cartography, which is a ramified system of scientific disciplines and technical branches, all of them closely connected with each other and with many other branches of science and technology. Pre-service teachers develop the necessary knowledge of cartography and acquire skills in using geographic maps in science and practice.</p>
Learning outcomes	Pre-service teachers demonstrating competence can: <ul style="list-style-type: none"> • distinguish the types and kinds, content of general geographic, thematic and special maps for use in various spheres of life; • use topographic maps in educational and practical research to conduct computational and graphic work; • develop practical techniques for the use of cartographic methods for making profiles on topographic maps; • structure cartographic models in order to acquire new knowledge, obtain and store information about geographical space.
Course title	GIS technology in geography teaching
Component	Subject component, University component
Cycle	Major disciplines
Module	Digitalization of geographical education 10 academic credits
Academic credits	5
Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> • Competence area for theory and methodology of geographical science (3) • Competence area for practical methods of teaching geography (6,9) <p>During the course, pre-service teachers acquire skills in processing geographic information by using</p>

	geographic information system technologies. They learn about the methods and means of carrying out the search of necessary information for certain physical and economic-geographical research.
Learning outcomes	Pre-service teachers demonstrating competence can: <ul style="list-style-type: none"> interpret the information embedded in digital geographical maps for the description, modeling and analysis of spatial data; use methods and methods of processing and visualization of geographical data to solve the tasks of educational activities; apply geoinformation technologies to solve practical problems and perform measurements and calculations using digital maps; create their own territory's digital maps based on the results of observations of the weather condition.
Research skills in geography 8 academic credits	
During the module, pre-service teachers study a set of scientific courses that investigate the characteristics of geographical research methods. Pre-service teachers develop their competences of research activities allowing them to reveal the methodology of scientific knowledge.	
Course title	Methods of geographical research
Component	Subject component, University component
Cycle	Major disciplines
Module	Research skills in geography 8 academic credits
Academic credits	4
Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> Competence area for theory and methodology of geographical science (3) Competence area for Research (12,13) <p>During the course, pre-service teachers study the basic methods and sources of geographic information relevant for geographic research. They develop the necessary knowledge of geographic research methods and their abilities to process the data obtained.</p>
Learning outcomes	Pre-service teachers demonstrating competence can: <ul style="list-style-type: none"> understand the concepts of "method", "approach", "research paradigm", the specifics and scope of each of the geographical research methods; make cartos and graphs of socio-economic content and is able to analyze them; carry out observations of geographical phenomena and processes using mathematical techniques; make analytical descriptions of territorial socio-economic systems and formulate appropriate conclusions based on them; apply research methods in geography for scientific description of processes and phenomena, complex analysis of the territory.
Course title	GIS in geographical research
Component	Subject component, Optional component
Cycle	Major disciplines
Module	Research skills in geography 8 academic credits
Academic credits	4
Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> Competence area for theory and methodology of geographical science (3) Competence area for practical methods of teaching geography (9) Competence area for Research (10,11)

	Pre-service teachers acquire practical skills in using modern geoinformation methods that ensure the collection, storage, processing, display, and dissemination of data. They also develop their skills in using modern geographic information methods in geography research. Pre-service teachers learn to design, present, defend, and disseminate the results of research activities.
Learning outcomes	Pre-service teachers demonstrating competence can: <ul style="list-style-type: none"> • use digital topographic and thematic information for their spatial analysis; • put into practice various spatial data using geoinformation methods and technologies; • visualize for compilation and design of electronic geographical maps; • conduct an experiment on forecasting and modeling of various geographical processes under study.

Course title	Digital transformation of geographical education
Component	Subject component, Optional component
Cycle	Major disciplines
Module	Research skills in geography 8 academic credits
Academic credits	4
Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> • Competence area for theory and methodology of geographical science (3) • Competence area for practical methods of teaching geography (6,7) <p>Pre-service teachers identify the main problems and determine the prospects of digitalization in the field of geographical education. They examine the implementation of information and communication technologies and the use of technical means of teaching at school using digital resources. Pre-service teachers develop their knowledge of the digital cultures of modern education, and their abilities to use digital technology to transform digital solutions.</p>
Learning outcomes	Pre-service teachers demonstrating competence can: <ul style="list-style-type: none"> • choose high-quality learning content secure platforms that respect privacy and ethical standards. • apply advanced digital skills to ensure competent use in digital research. • use digital technology tools as a key platform to support independent learning and improve learning outcomes and research support; • use modern ICT, online technologies and open educational resources in professional activities.

Course title	Modern geoinformation methods
Component	Subject component, Optional component
Cycle	Major disciplines
Module	Research skills in geography 8 academic credits
Academic credits	4
Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> • Competence area for theory and methodology of geographical science (3) • Competence area for practical methods of teaching geography (6,9) <p>During the course, pre-service teachers acquire practical skills in using modern geoinformation methods. They develop their basic theoretical knowledge of geoinformatics, as well as software tools and technologies for processing and displaying geographic information. Pre-service teachers acquire skills in using software tools and working in computer networks. They also acquire skills in using geographic information technology, in analyzing geographic and cartographic data, in creating databases, and in using Internet resources.</p>

Learning outcomes	Pre-service teachers demonstrating competence can: <ul style="list-style-type: none"> • use modern computer technologies for collecting, storing, processing, analyzing and transmitting geographic information and for solving research and production and technological problems of professional activity; • use modern methods for processing and interpreting general and sectoral geographic information in scientific and applied research; • use modern geoinformation methods for the solution of practical tasks, construction of digital terrain models; • model various geographical processes for research, experiment and prediction of geographical objects, processes and phenomena.
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Course title	Remote methods in ecology and nature management
Component	Subject component, Optional component
Cycle	Major disciplines
Module	Research skills in geography 8 academic credits
Academic credits	4
Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> • Competence area for practical methods of teaching geography (6.9) <p>During the course, pre-service teachers master modern methods of remote sensing in the field of geoeology, as well as environmental management and protection. They acquire basic skills in analyzing and evaluating the quality of images obtained by remote sensing imaging systems, and interpreting natural and anthropogenic objects.</p>
Learning outcomes	Pre-service teachers demonstrating competence can: <ul style="list-style-type: none"> • create a variety of thematic maps based on the results of collecting various environmental parameters; • analyze the results of environmental monitoring using various methods of spatial and geostatistical analysis; • determine the territories of human habitation, which characterizes the safety of living; • create environmental forecasts of changes in the situation in the future.determine the territories of human habitation, which characterizes the safety of living; • create environmental forecasts of changes in the situation in the future.

Course title	Geoinformation modeling of natural resources
Component	Subject component, Optional component
Cycle	Major disciplines
Module	Research skills in geography 8 academic credits
Academic credits	4
Course/ Competence description	<p>The purpose of this course is to improve the following areas of subject competence:</p> <ul style="list-style-type: none"> • Competence area for practical methods of teaching geography (6,9) • Competence area for Research (10,11,12) <p>During the course, pre-service teachers develop general and specialized knowledge in the field of geoinformatics, modern computer and information technologies. They learn about a range of issues related to geographic information systems in geographic research. They also acquire skills in describing the scientific directions of geoinformation modeling, and the natural resource and geoinformation model of the region, as well as their use in various variations of research activities.</p>

Learning outcomes	Pre-service teachers demonstrating competence can: <ul style="list-style-type: none"> • interpret knowledge in the field of general resource science, regional nature management, cartography; • apply modern methods of geoinformation processing in geographic research; • structure geoinformation models as a tool for integrating heterogeneous data on natural resources; • analyze the spatial distribution of phenomena, establish dependencies and relationships between phenomena.
FINAL ATTESTATION 8 academic credits	FINAL STATE CERTIFICATION 12 ECTS
<p>Final attestation of the graduate is mandatory and is carried out after mastering the educational programme in full. The aim of the attestation is to evaluate the level of maturity of general cultural and professional competences of the graduate, as well as their readiness to perform basic professional activities.</p> <p>Final attestation work (<i>Oral Exam, Written Exam, Diploma work, Research project, Development project, Organisational project, Strategic project, Art project</i>)</p>	<p>Final state certification of the graduate is mandatory and is carried out after mastering the educational programme in full. The aim of the certification is to evaluate the level of maturity of general cultural and professional competences of the graduate, as well as their readiness to perform basic professional activities - teaching geography in schools.</p> <p>Final qualification work (thesis work/ thesis project)</p>

4.3 The structure of the compulsory component

The Compulsory Component (Cycle of General Education Studies) consists of 56 academic credits (51 academic credits mandatory studies and 5 academic credits optional studies) and includes the following modules and courses

Name of modules and courses	Academic credits
COMPULSORY COMPONENT (CYCLE OF GENERAL EDUCATION STUDIES)	56
MANDATORY STUDIES	51
Module of historical and philosophical competencies	10
<p><i>History of Kazakhstan</i> Kazakhstan in Ancient and Medieval Times. Prehistoric society. Settlements, economy, and household (2.5 million - 12 thousand B.C. - 4th century). Ethnogenesis of Kazakh nation. Medieval Kazakhstan (IV-XV cc.). Kazakh Khanate. Geopolitical position of the Kazakh state. Kazakh Khanate: formation, rise, decline. Social history (mid- XV - beginning XVIII cc.). Kazakhstan in a colonial period (30-40s of XVIII - 60s XIX cc). Kazakhstan in the beginning of XX century. Formation of a poly-ethnic structure of the population. Kazakhstan in the Soviet period (February-October, 1917 - August, 1991) Kazakhstan - Independent State. The Modern period in the country's history (December 1991 - up to the present).</p>	5
<p><i>Philosophy</i> Origins of a culture of thinking. The subject and method of philosophy. Foundations of philosophical understanding of the world. Consciousness, spirit and language. Ontology and metaphysics. Ethics. Philosophy of values. Philosophy of freedom. Philosophy of art. Society and culture. Philosophy of history. Philosophy of religion. Philosophy of modern Kazakhstan.</p>	5
Module of socio-political knowledge (sociology, political studies, cultural studies, psychology)	8
<p><i>Sociology</i> Sociological studies in understanding the social world. Sociological research. Social structure and stratification of society. Socialization and identity. Family and modernity. Deviation, crime, social control. Religion, culture, society. Sociology of ethnicity and the nation. Education and social inequality. Mass media, technology and society. Economics, globalization, labor. Health and medicine. Population, urbanization, and social movements. Social change.</p>	2
<p><i>Political studies</i> Main stages in the development of political science. Politics as part of social life. Political power. Political elites, leadership. Political system of society. State and civil society. Political regimes. Electoral systems, elections. Political parties, party systems and socio-political movements. Political culture, behavior. Political consciousness, ideology; development, modernization; conflicts and crises. World politics, modern international relations.</p>	2
<p><i>Cultural studies</i> Morphology of culture. Language of culture. Semiotics of culture. Anatomy of culture. Nomadic culture. Cultural heritage of proto-Turks. Medieval culture. Central Asia. Cultural heritage of Turks. Basis of the Kazakh culture. Kazakh culture in the XVIII - end of XIX century, XX century. Kazakh culture in the context of modern world processes, and in the context of globalization. Cultural policy of Kazakhstan. State program "Cultural heritage".</p>	2
<p><i>Psychology</i> Personality in the context of national consciousness. Me and my motivation. Emotions, emotional intelligence. Human will, psychology of self-regulation. Individual-typological features. Values, interests, norms. Psychology of the meaning of life, professional self-determination, health. Communication between individuals and groups. The perceptive side of communication. The interactive side of communication. The communicative side of communication. Social and psychological conflict. Patterns of behavior in conflict. Effective communication techniques</p>	2
Instrumental and communication module	25
<p><i>Russian /Kazakh language</i> Proficiency in accurate use of vocabulary, scientific terms, syntactic constructions in oral and written communication; conversation skills. Business communication, letter-writing, report-writing, review, essay-writing skills; meaningful reading of texts, ability to express own idea. Fluent speaking in various conversations, mastering the ability to carry on a conversation, discussion. Functional styles of speech as a historically developed system of speech means, a variety of literature language.</p>	10

<p><i>Foreign language</i></p> <p>Social and domestic sphere of communication. Me and my family. Social and cultural sphere of communication. World map. Customs and Traditions. Educational and professional sphere of communication: Future profession. A modern home. Family in modern society. Cultural and historical background. Education. Profession. Human and nature, environmental problems. News, media, advertising.</p>	10
<p><i>Information and communication technologies</i></p> <p>ICT role in society development. Standards in ICT. Introduction to computer systems. Software. Operating systems. Human-computer interaction. Database systems. Data analysis. Data management. Networks and telecommunications. Cybersecurity. Internet technologies. Cloud and mobile technologies. Multimedia technologies. Smart technology. E-technologies. E-business. E-learning. E-government. ICT in industries. Prospects of ICT development.</p>	5
Health Promotion module	8
<p><i>Physical education</i></p> <p>Principles of physical education. Scientific basis of physical education. Modern recreational systems, basics of body physical state monitoring. Main methods of practicing sports and physical education independently. Professional physical training. General physical training. Speed. Running. Relay races. Execution of exercises for: endurance, flexibility, agility, coordination, balance, gymnastic and acrobatic exercises. Strength. General training exercises. Special physical training.</p>	8
OPTIONAL COMPONENT	5
<p>Economic and Business Research Methods</p> <p>General principles, techniques and methods for collecting, processing and analyzing data, studying patterns and trends in the development of mass economic phenomena and processes. Essence, forms, structure of capital. Production. production costs. Income production in a market economy. Business concept. Types of entrepreneurial activity. The theory of property, social forms of management. Goods, money. Socio-economic system. The emergence of the market. Financial system. The role of the state in business development. Macroeconomics. Resource saving. The cycle of economic development. inflation and unemployment. Kazakhstan in the system of world economic relations.</p>	5
<p>Research skills in law and anti-corruption culture</p> <p>The discipline "Research skills in the field of law and anti-corruption culture" is a part of the educational program focused on developing students' skills and competencies necessary for conducting scientific research in the field of law and anti-corruption activities. This discipline includes the development of methodological tools, analysis of legal phenomena and the study of anti-corruption practices in order to prepare students for an effective research approach in this area. This discipline is aimed at developing students' skills of analysis, research and assessment of situations in the field of law and the fight against corruption, as well as preparing for independent scientific activity and active participation in solving urgent social and legal problems.</p>	5
<p>Fundamentals of research in ecology and safe life</p> <p>The main patterns of functioning of living organisms, ecosystems of various levels of organization, the biosphere as a whole, their stability; the interaction of the components of the biosphere and the environmental consequences of human economic activity, especially in the context of the intensification of nature management; modern ideas about the concepts, strategies and practical tasks of sustainable development in various countries and the Republic of Kazakhstan; problems of ecology, environmental protection, sustainable development. Life safety, its main provisions. Dangers, emergencies. Risk analysis, risk management. Human security systems. Destabilizing factors of the present. Social dangers, protection from them: dangers in the spiritual sphere, politics, protection from them: dangers in the economic sphere, dangers in everyday life, everyday life. The system of bodies for ensuring life safety, and the legal regulation of their activities</p>	5
Total academic credits	56
4.4 Progression of the studies	

Жоғары білім беру бағдарламасы бойынша НЕГІЗГІ ОҚУ ЖОСПАРЫ / Yüksek Eğitim Alanı TEMEL EĞİTİM PLANI
По программе высшего образования ОСНОВНОЙ УЧЕБНЫЙ ПЛАН / High education program BASIC EDUCATION PLAN
6B01514 –География (ІР) /6B01514 - Coğrafya (ІР) / 6B01514 –География(ІР) /6B01514 – Geography (ІР)

Пәннің (модульдің) атауы / Наименование предмета (модуля) / Subject (module) name	ECTS	Бакалавр дәрежесі, 4 академиялық жыл / Lisans derecesi, 4 akademik yıl/ Степень бакалавра, 4 академических года / BA degree, 4 academic years								Пререквизит Постреквизит Çekişmeler Sonra görüşecek Prerequisites Post-Requisite
		I		II		III		IV		
		1	2	3	4	5	6	7	8	
Жалпы білім беретін пәндер (ЖБП) циклі /Genel Eğitim Dersler Döngüsü(GED)/ Цикл общеобразовательных дисциплин (ООД)/Cycle of general education (CGE)- 56акад.кр./akademik kredit/ academ.credits Міндетті компонент МК/ Zorunlu bileşen ZB/ Обязательный компонент ОК/ Required component RC - 51акад.кр./akademik kredit/ academ.credits Тандау компоненті (ТК)/ Seçmeli bileşen SB/Компонент по выбору KB/ Component of Choice CC – 5 акад.кр./akademik kredit/ academ.credits										
Тарихи және философиялық құзыреттіліктер модулі / Tarihsel ve Felsefi Yeterlilikler Modülü / Модуль историко-философских компетенций/ Module of historical and philosophical competencies	10									
Философия /Felsefe/Философия/Philosophy	5	5								
Қазақстан тарихы/KazakistanTarihi/История Казахстана/History of Kazakhstan	5		5							
Аспаптық және коммуникациялық модуль/ Enstrümantasyon ve iletişim modülü / Инструментальный и коммуникационный модуль/ Instrumental and communication module	25									
Қазақ (орыс) тілі/Kazak (Rus) Dili /Казахский (русский) язык/Kazakh(Russian) Language	10	5	5							Қазақ (орыс) тілі A1- пре - жоқ, пост A2/ B1- пре A2, пост- B2/ C1 пре B2, C1-пост жоқ
Шетел тілі/Yabancı dil/Иностранный язык/ForeignLanguage	10	5	5							Ағылшын тілі 1 сем- A2- пре - жоқ, пост B1/ B1- пре A2, пост- жоқ 2 сем-B2- пре жоқ, пост -C1/ C1 пре B2, C1-пост жоқ
Ақпараттық-коммуникациялық технологиялар /Bilişim ve İletişimTecnolojileri Информационно-коммуникационные технологии /Information and communication technology	5			5						
Әлеуметтік-саяси білім модулі/ Sosyo-politik bilgi modülü / Модуль социально-политических знаний/ Module of socio-political knowledge	8									
Әлеуметтік-саясаттану білім модулі (әлеуметтану, саясаттану, мәдениеттану, психология) / Sosyo-politik bilgi modülü (sosyoloji, siyaset bilimi, kültürel çalışmalar, psikoloji)/ Модуль социально-политических знаний (социология,	8				2					
					2					
					2					

политология, культурология, психология) /Social and political education module (sociology, political science, cultural studies, psychology)					2					
Денсаулықты нығайту модулі/ Sağlğın teřviki modřlř /Модуль укрепления здоровья / Health Promotion module	8									
Дене шынықтыру/BedenEđitimi/Физическая культура/PhysicalCulture	8	2	2	2	2					
Модуль-Қоғамдық даму негіздері/ Modřl - Sosyal geliřimin temelleri / Модуль-Основы общественного развития/ Module- The basis of social development	5									
Құқық және сыбайлас жемқорлыққа қарсы саласындағы зерттеу дағдылары / Hukuk ve yolsuzlukla mřcadele alanında arařtırma becerileri/ Исследовательские навыки в области права и антикоррупционной культуры / Research skills in law and anti-corruption culture	5			5						
Экономика мен кәсіпкерлікті зерттеу әдістері/ Ekonomi ve giriřimciliđi inceleme yřntemleri/ Методы изучения экономики и предпринимательства/ Economic and Business Research Methods										
Экология және өмір қауіпсіздігі зерттеу негіздері /Ekoloji ve yařam gřvenliđi /Экология и безопасность жизнедеятельности/EcologyandLife Safety										
Базалық және бейіндеуші пәндер циклі/ Temel ve profiloluřturma disiplinleri /Базовые и профилирующие дисциплины/ Basic and profile disiplins 190 акад.кр./akademik kredit/ academ.credits										
Базалық пәндер циклі / Temel disiplinleri /Базовые дисциплины Basic and profile disiplins. ПЕДАГОГИКАЛЫҚ КОМПОНЕНТ/ PEDAGOLİK BİLEŐEN / ПЕДАГОГИЧЕСКИЙ КОМПОНЕНТ/ PEDAGOGICAL COMPONENT -60 акад.кр./akademik kredit/ academ.credits										
Модуль-Білім алушыны тұлға ретінде қолдау / Modřl - Őđretmen Adaylarının Birey Olarak Desteklenmesi / Модуль-Поддержка обучающихся как личностей / Module- Supporting learners as individuals / – 17 акад.кр./akademik kredit/ academ.credits										
Балалардың жас ерекшелік және физиологиялық даму ерекшеліктері / Çocuk Geliřiminde Yař ve Fizyolojik Geliřim Őzellikleri /Возрастные и физиологические особенности развития детей/ Age and Physiological Features of the Development of Children	3		3							
Білім берудегі психология және өзара әрекеттесу мен коммуникация тұжырымдамалары /Eđitimde Psikoloji ve Etkileřim-İletiřim Kavramları / Психология, взаимодействие и коммуникация в образовании / Psychology in Education and Concepts of Interaction and Communication	4			4						
Білім беру туралы ғылым және оқытудың негізгі теориялары / Eđitim Bilimi ve Temel Őđrenme Teorileri / Наука об образовании и ключевые теории обучения / Educational Science and Key Theories of Learning	3			3						
Инклюзивті білім беру ортасы / Kapsayıcı (Kaynařtırma) Eđitim Ortamları / Инклюзивная образовательная среда / Inclusive Educational	3					3				
Оқытуды жоспарлау және дербес оқыту / Eđitim planlaması ve kendi kendine Őđrenme /Планирование преподавание и индивидуализация обучения / Teaching Planning and individualization of learning	4						4			

Модуль-Оқыту және үйрету үшін бағалау/ Modül- Öğretme ve Öğrenmenin Değerlendirilmesi / Модуль-Преподавание и оценивание для обучения / Module-Teaching and assessment for learning / – 9 акад.кп./akademik kredit/ academ.credits										
Оқыту әдістері мен технологиялары / Öğretim Yöntem ve Teknikleri / Методы и технологии преподавания / Teaching Methods and Technologies	5				5					
Бағалау және дамыту / Değerlendirme ve Geliştirme / Оценивание и развитие / Assessment and Development	4					4				
Модуль-Мұғалім - рефлексиялық практика иесі / Modül- Bir Yansıtıcı Uygulayıcı Olarak Öğretmen /Модуль-Учитель как рефлексирующий практик / Module-Teacher As A Reflective Practitioner/ – 9 акад.кп./akademikkredit/ academ.credits										
Педагогикалық зерттеулер / Pedagojik Araştırmalar / Педагогические исследования / Pedagogical Research	4				4					
Зерттеулер, даму және инновациялар / Araştırma, Geliştirme ve Yenilikçilik / Исследования, развитие и инновации / Research, Development and Innovation	5							5		
Педагогикалық практика – Мұғалім – оқу фасилитаторы / Öğretimin Kolaylaştırıcısı Olarak Öğretmen (Pedagojik Uygulama) / Педагогическая практика – Учитель как фасилитатор обучения / Pedagogical practice -Teacher as a facilitator of learning / – 25 акад.кп./akademikkredit/ academ.credits										
Мұғалім кәсібіне кіріспе (оқу практикасы1-курс) / Öğretmenlik Mesleğine Giriş (Pedagojik Uygulama, 1. sınıf) / Введение в профессию учителя (учебная практика, 1 курс)/ Introduction to the teaching profession (1st year, educational practice)	2		2							Пре: - Пост: психологиялық-педагогикалық практика
Психологиялық және педагогикалық бағалау (психологиялық-педагогикалық практика, 2-курс) / Psikolojik ve Pedagojik Değerlendirme (psikolojik ve pedagojik uygulama , 2. sınıf)/ Психолого-педагогическое оценивание (психолого-педагогическая практика, 2 курс) / Psychological and pedagogical assessment (2nd year psychological and pedagogical practice)	2				2					Пре: оқу практикасы Пост: педагогикалық практика
Педагогикалық технология (педагогикалық практика, 3-курс) / Pedagojik Yaklaşımlar (Pedagojik Uygulama, 3. sınıf)/ Педагогическая технология (Педагогическая практика, 3 курс)/ Pedagogical approaches (3rd year, pedagogical practice)	6						6			Пре: психологиялық-педагогикалық практика Пост: өндірістік-педагогикалық практика
Білім берудегі зерттеулер мен инновациялар (өндірістік-педагогикалық практика, 4-курс) / Eğitimde Araştırma ve Yenilikler (Pedagojik Uygulama, 4. sınıf)/ Исследования и инновации в образовании (производственная-педагогическая практика, 4 курс)/ Research and innovation in education (4th year industrial- pedagogical practice)	15								15	Пре: өндірістік-педагогикалық практика
Бейіндеуші пәндер циклі / Profil oluşturma disiplinleri / Профилирующие дисциплины/ Profile disiplins – 130 акад.кп./akademikkredit/ academ.credits										
Жоғары оқу орны компоненті ЖК/ Üniversite Seçmeli/ Вузовский компонент ВК/ University Component UC – 105 акад.кп./akademikkredit/ academ.credits										
Тандау компоненті (ТК)/ Seçmeli bileşen SB/ Компонент по выбору KB/ Component of Choice CC – 25 акад.кп./ akademik kredit/ academ.credits)										
Модуль – Түркі дүниесі/ Modül – Türk Dünyası/ Модуль – Тюркский мир/ Module – Turkic World	16									
Түрік (Қазақ) тілі – (Деңгей 1-A1,B2) /Türk (Kazak) Dili –(Seviye 1-A1,B2)/Турецкий (Казахский) язык – (Уровень 1- A1,B2)/Turkish (Kazakh) Language – (Level 1- A1,B2)	5	5								Пре: жоқ Пост: Түрік (Қазақ) тілі – (Деңгей 2-A2, C1)
Түрік (Қазақ) тілі – (Деңгей 2-A2, C1) /Türk (Kazak) Dili –(Seviye 2-A2, C1)	5		5							Пре: Түрік (Қазақ) тілі –

/Турецкий (Казахский) язык – (Уровень 2-A2, C1) /Turkish (Kazakh) Language (Level 2-A2, C1)										(Деңгей 1-A1, B2) Пост: жоқ
Ататүрік принциптері/Atatürk İlkeleri/ПринципыАтатюрка/PrinciplesofAtaturk	3			3						
Түркі мемлекеттер тарихы/Türk memleketleri tarihi/История тюркских государств/Turkic States history										
Ясауитану/YesevilikBilgisi/Ясавиведение/YassawiStudy	3				3					
ПӘНДІК КОМПОНЕНТ/ KONU BİLEŞENİ / ПРЕДМЕТНЫЙ КОМПОНЕНТ/ SUBJECT COMPONENT -114 академиялық кредит										
Модуль -Әлемнің географиялық көрінісі / Modül-Dünyanın coğrafi temsili / Модуль- Географическая картина мира / Module- Geographical picture of the world	10									
Табиғат жайлы ғылымдар / Doğa Bilimleri /Науки о природе/ Nature Sciences academic credits	5			5						Пре: Жалпы жертану Пост: Заманауи география теориясы мен тұжырымдамасыПост:
Заманауи географияның теориясы мен тұжырымдамдары/ Modern Coğrafya Teorisi ve Kavramı /Теория и концепция современной географии / Theory and concept of modern geography	5						5			
Модуль- Физикалық география / Modül - Fiziki Coğrafya / Модуль Физическая география / Module-Physical geography	25									
Жалпы жертану / Genel Çalışmalar / Общее землеведение/ / General Earth Science	5	5								Пре: жоқ Пост: Қоршаған орта және тұрақты даму
Геология геоморфология негіздерімен / Jeomorfolojinin temelleri ile jeoloji / Геология с основами геоморфологии / Geology with the basics of geomorphology	6	6								Пре: жоқ Пост: Табиғатты пайдалану экономикасы
Метеорология және климатология / Meteoroloji ve Klimatoloji / Метеорология и климатология/ Meteorology and Climatology	4						4			Пре: Климат өзгерістері және оның салдары Пост: жоқ
Гидрология және су ресурстарын қорғау/ Hidroloji ve su kaynaklarının korunması / Гидрология и охрана водных ресурсов/ Hydrology and protection of water resources	5						5			Пре: Геоморфология негіздері мен геология Пост: жоқ
Дүниежүзі бөліктері мен мұхиттардың физикалық географиясы/ Dünyanın bazı bölgelerinin ve okyanusların fiziki coğrafyası / Физическая география частей света и океанов / Physical geography of parts of the world and oceans	5				5					
Аймақтану/ Bölgesel Çalışmalar / Регионалистика / Regionalism										
Құрлық гидрологиясы/ Kara Hidrolojisi / Гидрология суши / Hydrology of the land										
Биогеография / Biyocoğrafya / Биогеография / Biogeography										
Ландшафттану/ Peyzaj Çalışmaları / Ландшафтоведение / Landscape studies										
Өлке топонимиясы/ Bölgenin toponomisi /Топонимия края / Toponyms of the region										

Шет елдер географиясы / Yabancı ülkelerin coğrafyası/ /География зарубежных стран/ Geography of foreign countries											
Модуль-Әлеуметтік география / Modül- Sosyal Coğrafya / Модуль- Социальная география /Publik geography	29										
Қалалар мен ауылдық елді мекендер географиясы / Şehirlerin ve kırsal yerleşimlerin coğrafyası / География городов и сельских поселений/ Geography of cities and rural settlements	5					5				Пре: жоқ Пост:Геосаясат	
Тұрғындар географиясы / Nüfusun coğrafyası /География населения / Geography of the population	6						6			Пре: Қалалар мен ауылдық елді мекендер географиясы Пост: Геоэкономика	
Геоэкономика / Jeoeconomî / Геоэкономика / Geoeconomics	5							5		Пре:Халық географиясы Пост: Елтану	
Геосаясат/ Jeopolitik / Геополитика/ Geopolitics	5							5		Пре: Қалалар мен ауылдық елді мекендер географиясы Пост: Елтану	
Елтану / Ülke Çalışmaları /Страноведение/ Country studies	4								4	Пре: Халық географиясы Пост: жоқ	
Медициналық география / Tıbbi Coğrafya/ Медицинская география / Medical geography	4							4			
Қоғамдық география /Kamu coğrafyası/Общественная география /Public geography											
Рекреациялық география / Eğlence Coğrafyası / Рекреационная география / Recreational geography											
Мәдениет географиясы / Kültürel Coğrafya/ Культурная география / Cultural geography											
Заманауи топонимика / Modern yer adları / Современная топонимика/ Modern toponymy											
Модуль- Қоғам мен табиғаттың өзара әрекеттестігі / Modül- Toplum ve doğa arasındaki etkileşim / Модуль- Взаимодействие общества и природы / Module- Interaction of society and nature	17										
Қоршаған орта және тұрақты даму/ Çevre ve sürdürülebilir kalkınma/ Окружающая среда и устойчивое развитие/ Environment and Sustainable Development	6			6						Пре: Жалпы жертану Пост: Заманауи география теориясы мен тұжырымдамасы	
Климаттың өзгеруі және салдары / İklim Değişiklikleri ve etkileri/ Изменения климата и последствия/ Climate change and consequences	4				4					Пре: Жалпы жертану Пост: Метеорология және климатология	

Табиғатты пайдалану экономикасы / Çevre yönetimi ekonomisi / Экономика природопользования / Economics of Environmental management	4					4				Пре: Геоморфология негіздері мен геология Пост: Заманауи география теориясы мен тұжырымдамасы	
Геоглобалистика/ Jeoglobalizm/ Геоглобалистика/ Geoglobalistics	3								3		
Табиғи тәуекел географиясы / Doğal Risk Coğrafyası/ География природного риска/ Geography of natural risk											
Геокикілжің /Jeokonfliktoloji/ Геоконфликтология/ Geoconflictology											
Әлемдік шаруашылық / Dünya ekonomisi / Мировое хозяйство / World economy											
Модуль-Қазақстан географиясы / Modül- Kazakistan Coğrafyası / Модуль-География Казахстана / Module-Geography of Kazakhstan	16										
Қазақстанның физикалық географиясы / Fiziksel Kazakistan'ın coğrafyası / Физическая география Казахстана/ Physical Geography of Kazakhstan	5					5				Пре: жоқ Пост: Қазақстанның әлеуметтік-экономикалық географиясы	
Қазақстанның әлеуметтік-экономикалық географиясы / Kazakistan'ın sosyo-ekonomik coğrafyası /Социально-экономическая география Казахстана/ Socio-economic geography of Kazakhstan	5						5			Пре: Қазақстанның физикалық географиясы Пост :жоқ	
Қазақстан аймақтарының географиясы /Kazakistan bölgelerinin coğrafyası/ География регионов Казахстана/Geography of the Kazakhstan regions	6							6			
Қазақстанның ауылшаруашылық аймақтары/ Kazakistan'ın tarım bölgeleri/ Сельскохозяйственные регионы Казахстана/ Agricultural regions of Kazakhstan											
Қазақстанның шекаралық аймақтармен интеграциясы /Kazakistan'ın sınır bölgeleriyle birleşmesi /Интеграция Казахстана с пограничными регионами /Integration of Kazakhstan with border regions											
Қазақстанның туристік-рекреациялық ресурстары / Kazakistan'ın turizm ve eğlence kaynakları / Туристско-рекреационные ресурсы Казахстана / Tourist and recreational resources of Kazakhstan											
Қазақстанның өнеркәсіптік аймақтары / Kazakistan'ın sanayi bölgeleri / Промышленные регионы Казахстана / Industrial regions of Kazakhstan											
Қазақстанның агроөнеркәсіптік кешені/ Kazakistan'ın Tarımsal sanayi kompleksi /Агропромышленный комплекс Казахстана/ Agro-industrial complex of Kazakhstan											
Модуль- Географиялық білім беруді цифрландыру/ Modül- Coğrafi eğitim dijitalleşmesi / Модуль- Цифровизация географического образования / Module- Digitalization of Geographical education	10										
Картография топография негіздерімен / Topografyanın temelleri ile haritacılık / Картография с основами топографии/ Cartography with the basics of topography	5		5							Пре: жоқ Пост: Географиядағы ГА технологиялар	

Географиядағы ГАЖ технологиялары/ Coğrafyada HA teknolojisi/ ГИС технологии в географии / GIS technologies in geography	5							5		Пре: Географиядағы зерттеу әдістері Пост: жоқ	
Модуль- Географиядағы зерттеу дағдылары/ Modül- Coğrafyada araştırma becerileri / Модуль -Исследовательские навыки в географии / / Module- Research skills in Geography	7										
Географиялық зерттеу әдістері/ Coğrafyada araştırma yöntemleri- Методы географических исследование / Methods of geographical research	3		3							Пре:жоқ Пост: Географиядағы ГА технологиялар	
Географиялық зерттеулердегі ГАЖ / Coğrafi araştırmalarda CBS/ ГИС в географическом исследовании / GIS in geographical research	4						4				
Географиялық білім берудің цифрлық түрленуі/ Coğrafi eğitimin dijital dönüşümü/ Цифровая трансформация географического образования/ Digital transformation of geographical education											
Қорытынды аттестаттау / Final Sınav/ Итоговая аттестация/ Final Attestation - / 8 акад.кр./ akademik kredit/ academ.credits)											
Дипломдық жұмысты, дипломдық жобаны жазу және қорғау немесе кешенді емтихан тапсыру/Tezi Veya Projeyi hazırlama ve Savunma yada Kapsamlı Snavına girme/Написание и защита дипломной работы, дипломного проекта или подготовка и сдача комплексного экзамена/Writing and defending a diploma work, diploma project or preparing and passing of Complex exam									8		
Жалпы барлығы/ Genel Toplam /Общий итог/ General:	254	33	35	33	33	30	30	30	30		

Learning outcomes and a matrix of subjects included in the register of educational institutions

6B01514 – Geography (IP)

Learning outcomes: (RO)	<p>Graduates of the educational program will be able to:</p> <p>PO1 -to collect and interpret information for the formation of knowledge, taking into account social, ethical and scientific considerations, critically evaluate their values, attitudes, ethical principles and teaching methods, set new goals for their own pedagogical development;</p> <p>PO2 -generalize and analyze cause-and-effect relationships between phenomena and processes occurring in the geographical environment to interpret the idea of unity and integrity of nature of the organic unity of man with nature;</p> <p>PO3 –apply IT to expand the geographical worldview of modern society and develop demonstration experiments and practical works, use CLIL technologies for subject-language teaching of natural subjects, expanding students' intercultural knowledge to develop tasks for the development of analytical and critical thinking;</p> <p>PO4 –to recognize and understand fundamental scientific concepts that have fundamental methodological and theoretical significance for understanding and mastering geographical sciences, to argue their own position of applying and integrating knowledge from other fields of sciences to solve global and local environmental problems;</p> <p>PO5 –critically select theoretical knowledge based on concepts in the field of geography with the help of various information and communication technologies and use the knowledge to improve geography education and their own professional growth;</p> <p>PO6 –to understand the features and properties of geographical maps and distinguish cartographic methods of image and apply in practice various spatial data using geoinformation methods and technologies to understand the spatial-temporal model of objects of nature;</p> <p>PO7 –use physical-geographical and economic-geographical methods for conducting research in the educational process and apply field, geoinformation, statistical methods to solve practical problems;</p> <p>PO8 — possess intercultural and communicative competence, apply skills of independent continuation of further education and build professional relationships in pedagogical and social activities; purposefully use means and methods that ensure the preservation and strengthening of health in professional activities;</p> <p>PO9 –to understand the psychological and pedagogical problems of teaching and educating students with disabilities in inclusive education, to take into account the diverse abilities of students in the learning process, to ethically support their psychological well-being in the life and educational context;</p> <p>PO10 –to systematize and generalize the acquired knowledge of geography to predict the dynamics of the consequences of geographical, ecological processes and phenomena, to model various geographical processes for research, experiment and prediction of geographical objects, processes and phenomena;</p> <p>PO 11– to comprehensively and objectively cover the main stages of the history, evolution of the forms of statehood and civilization of the Kazakh people, to know the methods of scientific research and academic writing, to understand the importance of the principles and culture of academic honesty;</p> <p>PO 12-to apply theoretical and practical knowledge to solve educational, practical and professional tasks in the field of geographical education, to design the conditions of educational activity in accordance with the set goals of teaching geography, using modern pedagogical technologies;</p>
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	ECTS	ON 1	ON 2	ON 3	ON 4	ON 5	ON 6	ON 7	ON 8	ON 9	ON 10	ON 11	ON 12
Құқық және сыбайлас жемқорлыққа қарсы саласындағы зерттеу дағдылары / Hukuk ve yolsuzlukla mücadele alanında araştırma becerileri/Исследовательские навыки в области права и антикоррупционной культуры / Research skills in law and anti-corruption culture	5	+							+				
Экономика мен кәсіпкерлікті зерттеу әдістері/ Ekonomi ve girişimciliği inceleme yöntemleri/ Методы изучения экономики и предпринимательства/ Economic and Business Research Methods	5	+						+					
Экология және өмір қауіпсіздігі зерттеу негіздері /Ekoloji ve yaşam güvenliği /Экология и безопасность жизнедеятельности/ Ecology and Life Safety	5	+									+		
Білім берудегі психология және өзара әрекеттесу мен коммуникация тұжырымдамалары /Eğitimde Psikoloji ve Etkileşim-İletişim Kavramları / Психология, взаимодействие и коммуникация в образовании / Psychology in Education and Concepts of Interaction and Communication	4		+		+								
Білім туралы ғылым және оқытудың негізгі теориялары / Eğitim bilimi ve temel öğretim teorileri/ Наука об образовании и ключевые теории обучения / Educational Science and Key Learning Theories	3	+	+										
Инклюзивті білім беру ортасы / Kapsayıcı (Kaynaştırma) Eğitim Ortamları / Инклюзивная образовательная среда / Inclusive Educational	3		+							+			
Балалардың жас ерекшелік және физиологиялық даму ерекшеліктері / Çocuk Gelişiminde Yaş ve Fizyolojik Gelişim Özellikleri /Возрастные и физиологические особенности развития детей/ Age and Physiological Features of the Development of Children/	3		+		+								
Оқытуды жоспарлау және дербес оқыту / Eğitim planlaması ve kendi kendine öğrenme /Планирование преподавание и индивидуализация обучения / Teaching Planning and individualization of learning	4			+		+							
Оқыту әдістері мен технологиялары / Öğretim Yöntem ve Teknikleri / Методы и технологии преподавания / Teaching Methods and Technologies /	5			+							+		
Бағалау және дамыту / Değerlendirme ve Geliştirme / Оценивание и развитие / Assessment and Development	4		+		+								

Педагогикалық зерттеулер / Pedagojik Araştırmalar / Педагогические исследования / Pedagogical Research	4	+										+	
Зерттеулер, даму және инновация / Araştırma, Geliştirme ve Yenilikçilik / Исследования, развитие и инновации / Research, Development and Innovation	5					+							+
Ататүрік принциптері/Atatürk İlkeleri/ ПринципыАтатюрка/PrinciplesofAtaturk	3	+				+							
Түркі мемлекеттер тарихы/Türk memleketleri tarihi/История тюркских государств/TurkicStateshistory		+						+					
Ясауитану/Yesevilik Bilgisi/Ясавиведение/YassawiStudy	3	+	+										
Түрік (Қазақ) тілі – (Деңгей 1-A1,B2) /Türk (Kazak) Dili – (Seviye 1- A1,B2)/Турецкий (Казахский) язык – (Уровень 1- A1,B2)/Turkish (Kazakh) Language – (Level 1- A1,B2)	5	+				+							
Түрік (Қазақ) тілі – (Деңгей 2-A2, C1) /Türk (Kazak) Dili –(Seviye 2-A2, C1) /Турецкий (Казахский) язык – (Уровень 2- A2, C1) /Turkish (Kazakh) Language – (Level 2-A2, C1)	5	+				+							
Табиғат жайлы ғылымдар / Doğa Bilimleri /Науки о природе/ Nature Sciences academic credits	5					+		+					
Заманауи географияның теориясы мен тұжырымдары/ Modern coğrafyanın teorisi ve bulgulari/Теория и концепция в современной географии / Theory and concept of modern geography	5			+		+							
Жалпы жертану / Genel Çalışmalar / Общее землеведение// General Earth Science	5			+		+							
Геология геоморфология негіздерімен / Jeomorfolojünün temelleri ile jeoloji / Геология с основами геоморфологии / Geology with the basics of geomorphology	6			+				+					
Метеорология және климатология / Meteoroloji ve Klimatoloji / Метеорология и климатология/ Meteorology and Climatology	4					+		+					
Гидрология және су ресурстарын қорғау/ Hidroloji ve su kaynaklarının korunması / Гидрология и охрана водных ресурсов/ Hydrology and protection of water resources	5			+		+							
Дүниежүзі бөліктері мен мұхиттардың физикалық географиясы/ Dünyanın bazı bölgelerinin ve okyanusların fiziki coğrafyası / Физическая география частей света и океанов / Physical geography of parts of the world and oceans						+							+
Аймақтану/ Bölgesel Çalışmalar / Регионалистика / Regionalism				+					+				
Құрлық гидрологиясы/ Kara Hidrolojisi / Гидрология суши / Hydrology of the land	5					+							+

Биогеография / Biyocoğrafya / Биогеография / Biogeography						+						+
Ландшафттану/ Peyzaj Çalışmaları / Ландшафтоведение / Landscape studies						+						+
Өлке топонимиясы/ Bölgenin toponomisi /Топонимия края / Toponyms of the region			+					+				
Шет елдер географиясы / Yabancı ülkelerin coğrafyası/ География зарубежных стран/ Geography of foreign countries			+					+				
Қалалар мен ауылдық елді мекендер географиясы / Şehirlerin ve kırsal yerleşimlerin coğrafyası / География городов и сельских поселений/ Geography of cities and rural settlements	5		+					+				
Тұрғындар географиясы / Nüfusun coğrafyası /География населения / Geography of the population	6		+									+
Геоэкономика / Jeoekonomi / Геоэкономика / Geoeconomics	5		+								+	
Геосаясат/ Jeopolitik / Геополитика/ Geopolitics	5		+								+	
Елтану / Ülke Çalışmaları /Страноведение/ Country studies	4							+			+	
Медициналық география / Tıbbi Coğrafya/ Медицинская география / Medical geography			+									+
Қоғамдық география /Kamu coğrafyası/ Общественная география /Public geography	4		+									+
Рекреациялық география / Eğlence Coğrafyası / Рекреационная география / Recreational geography			+									+
Мәдениет географиясы / Kültür coğrafyası/ Культурная география /Cultural geography			+									+
Заманауи топонимика / Modern yer adları / Современная топонимика/ Modern toponymy			+					+				
Қоршаған орта және тұрақты даму/ Çevre ve sürdürülebilir kalkınma/ Окружающая среда и устойчивое развитие/ Environment and Sustainable Development	6					+		+				
Климаттың өзгеруі және салдары / İklim değişikliği ve sonuçları/ Изменения климата и последствия/ Climate change and impacts	4							+				+
Табиғатты пайдалану экономикасы / Çevre yönetimi ekonomisi /Экономика природопользования/ Economics of Environmental management	4							+				+
Геоглобалистика/ Jeoglobalizm/ Геоглобалистика/ Geoglobistics						+						+
Табиғи тәуекел географиясы / Doğal Risk Coğrafyası/ География природного риска/ Geography of natural risk	3					+						+
Геокикілжің /Jeokonfliktoloji/ Геоконфликтология/ Geoconflictology						+						+

Әлемдік шаруашылық / Dünya ekonomisi / Мировое хозяйство / World economy						+							+
Қазақстанның физикалық географиясы / Fiziksel Kazakistan'in coğrafyası / Физическая география Казахстана/ Physical Geography of Kazakhstan	5					+						+	
Қазақстанның әлеуметтік-экономикалық географиясы / Kazakhstan'in sosyo-ekonomik coğrafyası /Социально-экономическая география Казахстана/ Socio-economic geography of Kazakhstan	5		+									+	
Қазақстан аймақтарының географиясы /Kazakistan bölgelerinin coğrafyası/ География регионов Казахстана/Geography of the Kazakhstan regions	6												
Қазақстанның ауылшаруашылық аймақтары/ Kazakistan'in tarım bölgeleri/ Сельскохозяйственные регионы Казахстан/ Agricultural regions of Kazakhstan			+									+	
Қазақстанның шекаралық аймақтармен интеграциясы / Kazakistan'in sınır bölgeleriyle entegrasyonu/ Интеграция Казахстана с пограничными регионами /Integration of Kazakhstan with border regions			+									+	
Қазақстанның туристік-рекреациялық ресурстары / Kazakistan'in turizm ve eğlence kaynağında/ Туристско-рекреационные ресурсы Казахстана / Tourist and recreational resources of Kazakhstan			+									+	
Қазақстанның өнеркәсіптік аймақтары / Kazakistan'in sanayi bölgeleri / Промышленные регионы Казахстана / Industrial regions of Kazakhstan			+									+	
Қазақстанның агроөнеркәсіптік кешені/ Kazakistan'in Tarımsal sanayi kompleksi /Агропромышленный комплекс Казахстана/ Agro-industrial complex of Kazakhstan			+									+	
Картография топография негіздерімен / Topografyanın temellerini içeren haritacılık/ Картография с основами топографии/ Cartography with the basics of topography	5			+			+						
Географиядағы ГАЖ технологиялар/ Coğrafyada HA teknolojisi/ ГИС технологии в географии / GIS technologies in geography	5			+			+						
Географиядағы зерттеу әдістері/ Coğrafyada araştırma yöntemleri- Методы географических исследование / Methods of geographical research	3											+	+
Географиялық зерттеулердегі ГАЖ / Coğrafi araştırmalarda CBS/ ГИС в географическом исследовании / GIS in geographical research	4			+			+						
Географиялық білім берудің цифрлық түрленуі/ Coğrafi eğitimin dijital dönüşümü/ Цифровая трансформация географического образования/ Digital transformation of geographical education				+			+						

4.5 Requirements for the successful completion of curriculum

For successful completion of the educational program, students shall have:

- minimum credits for core and major subjects;
- achievement of all learning outcomes;
- successful completion of compulsory and optional courses;
- successful fulfillment and defense of Final attestation work (*Oral Exam, Written Exam, Diploma work, Research project, Development project, Organisational project, Strategic project, Art project*);
- the minimum average achievement score.

5. Description of pre-service teachers' work

Students' work includes contact teaching, individual, pair and group work, assignments, exams, etc. 1 ECTS = 30 hours of student work.

Students' individual and/or pair and group work is divided into two parts: individual and/or pair and group work supervised by a teacher and the work that is performed entirely independently.

Students' individual and/or pair and group work is carried out on a specific list of topics allocated for independent/group study, provided with educational and methodical literature and recommendations for each course. Students' individual and/or pair and group work supervised by a teacher is carried out according to the schedule, which determines the university or the teacher themselves.

The entire scope of work performed entirely independently is supported by assignments that require the student to work independently on a daily basis.

The ratio of time between classroom contact work, students' individual and/or pair and group work supervised by a teacher, and the work that is performed entirely independently for all types of educational activities is determined by the educational institution independently. At the same time, the amount of classroom work and students' individual and/or pair and group work supervised by a teacher is 1440 hours per year, the scope of work that is performed entirely independently - 360 hours per year.

6. Evaluation methods/Assessment

6.1 Assessment

The Assessment of learning outcomes is based on the competence objectives of the modules and the resulting evaluation criteria of the courses. Assessment criteria are used as a basis for various tasks. Learning tasks include independent tasks, group tasks, plans, reports, group discussions, group tests, development tasks, laboratory tasks, various tasks for reflection and evaluation, or activating tasks. The assessment generates information for the pre-service teacher about his or her achievement of the competence goals of the pedagogical education modules.

Assessment is at the heart of all competence-based education. Competence-based assessment should measure not only what a pre-service teacher knows, but also take into account skills and whether Pre-service teachers can apply what they know to real life problems or situations. Pre-service teachers should be given assignments and non-standard problems in situations that students are likely to encounter in the workplace. Assessment plays a very important role in competence-based training. Based on the recognition of prior competence and personal situation, competence can be demonstrated on a per-course basis. The demonstration of competence can cover the entire training module. Specific guidelines regarding the practice of recognizing and accrediting prior training or training received elsewhere.

Studies are evaluated on a scale basis. Learning achievements (knowledge, abilities, skills and competencies) of Pre-service teachers are evaluated in points on a 100-point scale, corresponding to the internationally accepted letter system with a numeric equivalent (positive grades, in descending order, from "A" to "D", and "unsatisfactory" - "FX", "F")

Alphabetic system of evaluation of Pre-service teachers' learning achievements, corresponding to the digital equivalent of the four-point system.

Assessment by letter system	Digital equivalent of points	% content	Assessment according to the traditional system
A	4.0	95-100	Excellent
A-	3.67	90-94	

B+	3.33	85-89	Good
B	3.0	80-84	
B-	2.67	75-79	
C+	2.33	70-74	
C	2.0	65-69	Satisfactory
C-	1.67	60-64	
D+	1.33	55-59	
D	1.0	50-54	
FX	0.5	25-49	Unsatisfactory
F	0	0-49	

The purpose of assessment is to provide guidance and encouragement to Pre-service teachers, develop their self-assessment abilities, provide information about Pre-service teachers' competences, and ensure that the competences and intended learning outcomes defined in the educational programme are achieved. Self-assessment skills and peer assessment are considered as the main skills of the world of work, and assessment is a central tool to support the development of these skills during study.

6.2 External evaluation

1) Design of new educational programmes Internal quality assurance system

The new curriculum needs to be designed through engagement with all stakeholders, including students, faculty and employers. The aim throughout the process is to retain and further develop the strengths and high quality of the existing programme while addressing some of the challenges of the current programme, such as the workload demand on students and the need for a course on education management. A survey of all students and alumni, together with focus group discussions and interviews with alumni and employers, also inform the design of the programme. All faculty are involved in discussions of programme aims and learning outcomes, and programme teams worked collaboratively to design the courses for their area of specialization.

On the basis of the faculty (school) of the university, a council on academic quality is formed, which makes decisions on the content and conditions of implementation of curricula, on the policy of evaluation and other academic issues of the faculty (school), organizing a survey of students on the quality of curricula and (or) disciplines/modules.

2) Procedures for external evaluation of the educational programmes. Continuous Improvement

All faculty are actively engaged in continuous improvement of their courses as an integral part of the culture of university and their own professionalism as experts in education. In addition to formal student feedback mechanisms such as course evaluations and Student Committee meetings, faculty and students are to communicate closely regarding specific courses and the programme as a whole. The process of continuous reflection and improvement informs the Annual Programme Monitoring process, in which individual faculty reflect on courses they have taught, this feeds into specialization-level reflection and suggestions for improvements, and this in turn goes to programme and School level reflection and plans for further improvement.

Universities have regular, formal mechanisms for obtaining feedback from employers and the professional community. These interactions also inform the continuous improvement of the programme.

For the improvement of the quality assurance of the educational programmes, the universities need to:

- develop an internal quality system that has a delicate balance between quality assurance and quality enhancement. While quality assurance is more of a preventive measure, quality enhancement has higher-order aims and implies transformational change (Jones, 2003).
- raise institutional awareness and develop deep understanding of the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG) (2015) and implement ESG 2015 standards.
- regularly revisit the existing institutional quality processes for ongoing improvement.

3) Accreditation

There are institutional and specialised accreditation in Kazakhstan, they remain voluntary for higher educational institutions. However, accreditation is one of the conditions for obtaining state grants for student education.

7. Faculty requirements

7.1 Faculty Requirements

Availability of teachers in accordance with the disciplines of the educational programme, the correspondence of teachers' education to the profile of the taught disciplines and/or their academic or research degree of "Doctor of Philosophy (PhD)" or "Doctor in Profile", and/or the academic title of "Associate Professor (Associate Professor)", or "Professor" (if any) and/or teachers with the degree of "Master" to the profile of disciplines and (or) senior teachers with at least three years of experience as a teacher or experience practical work on the profile for at least five years.

The advanced/academic degree of the teaching staff corresponds to the academic degree of the doctor/candidate of sciences or the advanced/academic PhD degree of the doctor or master. Basic education or postgraduate education or doctorate/candidate of science degree, advanced/academic PhD degree must correspond to the subjects taught.

7.2 Additionally Required Faculty

Part-time teachers in the main place of work engaged in practical professional activities in the profile of the subjects taught, with at least 3 years of work experience in the field of training. Additionally, leading scientists, specialists from other higher education institutions and research organizations, teachers, and supervisors of schools in corresponding categories such as: expert teacher, research teacher, master teacher, can be involved in the work.

7.3 Required professional development of faculty

On the basis of the Law of the Republic of Kazakhstan "On Education" (2007; with amendments dated 27.12.2019) and other regulatory legal acts regulating the activities of higher education organizations in the Republic of Kazakhstan, a teacher who carries out professional activity in a higher education organization has the right for professional development at least once every five years for a duration of no more than four months.

The development of professional competences is also one of the priorities adopted in the Republic of Kazakhstan "Concepts of lifelong learning (continuing education)" (2021).

7.4 Required additional administrative staff

Vice-rector for academic affairs is responsible for planning and monitoring the implementation of educational services.

Responsibility for arranging and coordinating the implementation of the specific steps of the procedure and the quality of the outputs rests with the heads of divisions.

8. Resources

8.1. Library Resources

The library collection is an integral part of the information resources and includes educational, teaching, scientific and other literature.

Availability of a library fund of educational and scientific literature: in the format of printed and electronic publications for the last ten years, providing 100% of the disciplines of the curricula, including those published in the languages of instruction. Updating of the library fund should be carried out in accordance with the regulations of the Republic of Kazakhstan.

8.2. IT Resources

University provides Pre-service teachers with educational and teaching literature and (or) electronic resources necessary for successful implementation of curricula, provides the functioning of the information system of education management (high-tech information and educational environment, including the website, information and educational portal, automated system of credit technology training, a set of information and educational resources).

8.3 Infrastructure

University provides equipment with educational, methodological, scientific and other literature, classrooms with multimedia complexes, computer rooms, access to broadband Internet, sports, material and technical, educational and laboratory facilities and equipment necessary for the implementation of curriculum.

9. Additional information

9.1 Additional materials

Inclusion is one of the most important cross-cutting principles of the curriculum (see more in Annex 1.). Inclusion in education means that all students, regardless of their possible impairments or disability, should have the opportunity to participate in the regular school systems and study with their peers. The teacher education emphasizes on Pre-service

teachers' perceptions of themselves as experts in implementing curriculum for diverse learners based on the principles of pedagogy of difference or universal design for all. It is important to renew inclusive pedagogies such as co-teaching and differentiating. It is important that not only the specialized teachers (special education teachers) but all teachers can work in an inclusive educational environment. Thus, competences of all Pre-service teachers need to be developed in areas such as:

Knowledge of the concepts and principles of inclusive education:

- Evaluation of one's own activity in terms of the values of inclusion.
- Understanding of the implementation of the principle of inclusiveness in education implemented by a flexible model of the educational process: adaptive programmes, changing the ways of assessing educational achievements.
- Understanding of children's different abilities and application of different trajectories to support versatile learners.

Practical applications in teaching:

- Designing of an adapted/individual programme for a child with special education needs in specific subject.
- Using of multimodal universal teaching methods, simple structured speech, use alternative communication.

9.2 E-learning

The rapid development of digital technologies requires the study of not only specific software tools, but the development of Pre-service teachers' competences on using virtual learning environments and tools in teaching and choosing pedagogical methods suitable for learning processes in digital learning environments (psychological and didactic justification). For this the universities need:

- to create provisions for the professional development of Pre-service teachers with the effective use of digital technology;
- to develop competences of Pre-service teachers on understanding how individual educational needs of their students can be considered when using digital tools or in virtual learning environments;
- to develop digital competences of Pre-service teachers on using digital learning environments and tools in assessment, such as gamification, digital tests and quizzes, and other formats of digital evaluation;
- to promote Pre-service teachers' capabilities in assessing their digital competences and the use of digital tools in pedagogical processes in relation to the requirements of the employers (schools) daily operations;
- to put into practice the integration of education, science, and industry, and involve professional communities in teaching school students the basics of applying and using digital technology, and perform an independent assessment of the practical skills acquired;
- to include digitalization into the educational process for in-service teachers to increase efficiency and practical application of digitalization in education;
- to promote the implementation of global standards in digitalization in initial teacher education (i.e. International Society for Technology in Education (ISTE) and the establishment of an expert community of educators in digitalization.

10. Approval

- Ensure a review of the developed curricula, its coordination and approval by the Republican Educational and Methodological Council of Higher and Postgraduate Education.

- Scale up all developed curricula in pedagogical universities

APPENDIX 1: Main principles of the curriculum

Competence-based approach

Competence-based approach is a learning-oriented way to organise and implement teaching. It is an alternative to more traditional educational approaches mainly focusing on what learners are expected to learn about in terms of traditionally-defined subject content. In designing the curriculum following the principles of competence-based approach, the focus is on what we want our students to learn. Thus, it is essential to define the competences that the students are supposed to learn during their degree programs. The articulation of competences should include both discipline specific skills as well as the generic competences or soft skills that the teacher students should develop during the curricula. Soft skills include, for example, leadership, communication and collaboration skills, reflection skills, social and emotional intelligence etc. The development of these soft skills should be included in all the curricula, the competences and learning outcomes as well as the implementation of the curricula.

After defining the degree level competences, the learning outcomes of study units and study modules should be compiled by comparing them to the objectives of the entire degree. Learning outcomes represent the desired state, which is expressed as knowledge, skills and attitudes. The written learning outcomes of all the interconnected study units should also make visible the accumulated competence. Planning competence-based learning thus starts at degree programme level and is then realised at study unit level through the learning outcomes, the execution of the study unit and its assessment.

The reason for using competence-based approach to designing curricula is that it makes it possible to design courses and study programs in a more student-centred way. Student-centred approach means that the key knowledge and skills that the students need to achieve during their studies determine the content of the course or study programme. The aim of the competence-based approach to designing curricula is that the students acquire the knowledge, skills and attitudes/values that are essential. Further, the competence-based approach supports students to identify the knowledge and skills specific to their discipline or field of education as well as the generic competences that accumulate during their studies and are common to all degrees.

To sum up the key elements in designing competence-based curricula, it is essential to focus on describing explicitly a) what competences (including subject-specific and general competencies) should a student have after graduation/after study unit/after an individual course, b) how do different study modules, courses and study modes support the development of the competencies, c) how is it ensured that the degree program and the learning objectives of the courses form a coherent entity supporting the development of the competencies, and d) how is it possible for students to make their competence visible (assessment related decision)

The implementation of all curricula should introduce methodologies that promote student-centeredness and active learning, such as gamification, PBL, etc. In a student-centred learning approach, students are active participants, placed at the core of the learning process. The learner is not seen as a passive receiver of knowledge but, rather, an active participant. The teacher's role becomes that of a guide who assists the learner in the difficult process of constructing his/her knowledge. Student-centred approach to teaching broadly means the shift of focus from the teacher to the student and their learning processes (Tran et al., 2010). The emphasis in student-centred approach to teaching is on what the student does and the ways to improve students' active engagement and deep approach to learning (Biggs and Tang, 2011; Prosser and Trigwell, 2014). In student-centred approach the student is seen as an active constructor of knowledge. Thus, the focus of the student-centred teaching practices is to develop autonomy and active learning that eventually enable lifelong learning.

Student-centred approach & Active Learning Methodologies

Student-centredness differs from traditional teaching approach, also known as teacher-centredness, in that the focus is on designing the teaching-learning process in a way that it promotes students' active participation and deep approach. Teaching that requires active engagement from students is likely to increase quality learning (Biggs and Tang, 2011). However, student-centered learning does not sideline or diminish the role of teachers. Instead, it seeks to use teachers' expertise in different ways to increase student engagement.

Student-centeredness requires a change in the mindset of the teachers and has many implications for the teaching practices. For example, teaching and learning activities should be designed in a way that they support and promote active learning. Active learning methods place greater responsibility on the learner rather than passive approaches such as lectures. Active learning activities promote higher order thinking skills such as application of knowledge and analysis and engage students in deep learning processes rather than surface learning. Furthermore, they enable students to transfer and apply knowledge better. There is a variety of active learning methods, such as case studies, problem-solving, group projects, debates, peer teaching, games etc. to mention a few. However, it should be kept in mind that the methods should always be chosen purposefully to support the attainment of the intended learning outcomes. Thus, when choosing the active learning methods, it should always be considered from the perspective of which methods support the attainment of the intended learning outcomes in a best possible way.

Constructive alignment

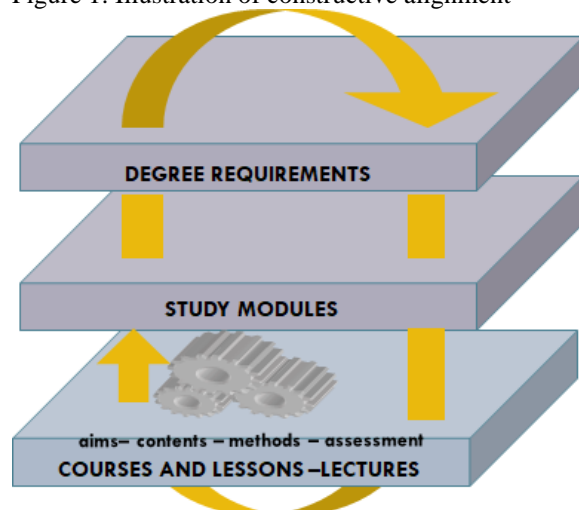
The principle of constructive alignment has long been promoted as a powerful way to enhance the quality of teaching and learning (Biggs and Tang, 2011). Constructive alignment is an integrative design for teaching and curriculum design in which the alignment between intended learning outcomes/competences, teaching-learning activities and assessment tasks is emphasised to optimise the conditions for quality learning. The fundamental principle is that curriculum should be designed in such a way that the learning activities and assessment tasks are aligned with the intended learning outcomes (ILOs), and what the students should be able to do or demonstrate after completing the degree, module or a course. High quality learning may be supported by integrating these components together.

Constructive alignment reflects the more general paradigm shift from teacher-centred teaching to student-centred teaching described above. The central step in designing teaching is to define the intended learning outcomes or the competences that the students are supposed to learn during the learning process and how they will demonstrate that learning has taken place (Biggs and Tang, 2011). The role of the instructor is to engage the student in relevant activities that support the attainment of the intended learning outcomes (Biggs, 1996). By choosing appropriate teaching and

assessment methods and tasks and aligning them with the intended learning outcomes/competences it is possible to effectively guide students' study practices and enhance deep, meaning-oriented learning (Biggs and Tang, 2011; Boud and Falchikov, 2006). Constructively aligned teaching is essentially a criterion-referenced system where the central elements, that is, intended learning outcomes, teaching-learning activities and assessment, are aligned and there is consistency throughout these elements.

Constructive alignment should be applied at all levels of the educational system, including institutional, departmental and classroom levels as teaching and learning take place in the whole system. In a good system, all aspects of teaching and assessment are tuned to support high level learning, so that all students are encouraged to use higher-order learning processes.

Figure 1. Illustration of constructive alignment



Research-based Initial Teacher Education

The recognition of the importance of research-based teacher education is growing worldwide (Flores, 2018). The research-teaching integration in the teacher educators' work has been suggested to be an effective solution to develop the profession in many aspects. They should be able to make explicit links between the educational theory, research and teaching practices. There is an increasing recognition that research is an important component of teacher education practices and is beneficial for preparing reflective practitioners (Flores, 2018). Research-based teacher education can take place in different forms. In its simplest form, it can mean that the teaching content is based on research, or that the teaching methods and pedagogical designs are based on research. It can also mean that teachers use inquiry-oriented methods in their teaching to enhance their students' own knowledge construction and research skills. Moreover, research-based teacher education can mean that the teacher educators themselves conduct research of their own work or more generally about topics related to teacher educators' work. The different forms of research-based teacher education identified in a recent research are presented in Table 1.

Teaching content is based on research	Teacher educators use their own or others' research as their teaching content to transfer academic knowledge to student teachers and develop the student teachers' independent thinking (Visser-Wijnveen et al. 2010).
Teaching methods and course design are based on research	Teacher educators benefit from their research work in teacher education and develop their teaching methods accordingly (Cochran-Smith 2005; Krokfors et al. 2011).
Applying inquiry-oriented methods in teaching	Teacher educators organise the course based on inquiry-oriented activities to guide student teachers to learn in an analytical and inquiring way to develop their pedagogical thinking (Krokfors et al. 2011).
Acting as researchers in teacher education	Teacher educators work as researchers and conduct research on what and how they teach, and on topics in teacher education (Cochran-Smith 2005).
Encouraging student teachers' involvement in research work	Teacher educators involve student teachers in research process to provide them with the experience of conducting research (Visser-Wijnveen et al. 2010).
A supportive relationship between research and teaching	Teacher educators consider the research-teaching nexus is complementary and fairly evident. Teaching and research support each other in a general and broad sense.

Table 1. Forms of research-based teacher education (Cao, Postareff, Lindblom-Ylänne & Toom, 2021)

Teacher education can adopt the research-based approach in diverse ways, and it is important to consider what kind of forms fit the cultural context and practices. The ultimate goal of research-based teacher education is to support student

teachers to become pedagogically-thinking, reflective and inquiry-oriented teachers with an inquiring attitude towards teaching. Teachers' pedagogical thinking means the ability to analyse and conceptualise educational occasions and phenomena, to evaluate them as part of larger instructional processes and to make rational and theory-based decisions and justify their decisions and actions as teachers. Their readiness to consume as possibly also conduct research enhances their ability to meet the challenges of the future (Toom et al., 2010).

Research-based teacher education not only enhances the teacher educators' own professional development, but also enhances teacher students' reflective and deep learning. By engaging in research-based activities, the students can acquire a set of highly valued competences, such as critical thinking, problem solving and reflective skills (Lunenberg, 2010). Thus, it is important, that teacher educators support the student teachers' to become reflective practitioners with an inquiring attitude (see Toom et al., 2010), which they can learn not only from what their teachers say about how to teach, but most importantly, from how their teachers engage their students in collaborative and interactive teaching-learning activities (Berry, 2004).

To make research-based teacher education occur in practice, it should be made visible in the teacher education curricula. Secondly, the teacher education programmes should develop their students' inquiry-oriented and research-oriented approach to their work and enhance their research skills. Becoming an inquiry-oriented reflective practitioner requires time and space to deeply reflect on theory, practice, and the link between them. Therefore, the curriculum of teacher education should provide possibilities for reflection and practicing new skills.

Interdisciplinary learning

Content and Language Integrated Learning (CLIL)

CLIL (Content and Language Integrated Learning) is a dual-focused educational approach in which an additional language is used for learning and teaching of both content and language (Coyle, Hood & Marsh, 2010:1). The umbrella term of CLIL also includes a range of other language programs, such as bilingual education, English- medium of education or immersion programs (Coyle, 2007; Mehisto, Marsh, and Frigols, 2008). But CLIL differs from those language programs by its equal focus on both content and language (Coyle, 2008; Dalton-Puffer, 2008; De Zarobe, 2008; Marsh, 2012). Thus, this approach is neither language learning nor subject learning but a combination of both; hence, attention is given both to the language and the content. Contrary to the common belief, the CLIL instruction takes place with and through a foreign language and it is not the approach when non-language subjects are taught in the foreign language (Eurydice, 2006).

The reasons for introducing CLIL include provision of a more holistic educational experience for the student as well as content-and language-learning outcomes realized in class. Furthermore, benefits of CLIL are also linked with insights from interdisciplinary research within neurosciences and education (Coyle, Hood & Marsh, 2010). Due to these advantages CLIL is increasingly attracting stakeholders' attention across continents.

In terms of the curriculum implementation, the CLIL approach is inclusive and flexible; it includes a range of models that can be adapted according to the age, ability and needs of the students (Coyle, 2007). Thus, implementing CLIL varies based on the context. In primary stage, language learning can be embedded across the curriculum and link with one or more subjects of the curriculum. For example, through specific themes or projects (e.g. lifestyle, sports, and holidays).

Secondary CLIL can make specific links between a language and a subject (e.g. history through Kazakh, science through English) or it can take a broader approach integrating language with parts of curriculum. More recently, CLIL is less aligned to a single subject and is evolving through links with a variety of subjects or themes. The content for lessons can include particular aspects of the curriculum for individual subjects. In practical terms, lesson planning involves joint effort across a number of subjects focusing on the cross-curriculum feature for the secondary curriculum. But there is a need for research to explore whether such an approach is compatible with the local context.

The existing curriculum models integrating CLIL vary in length from a single unit which comprise a sequence of 2-3 lessons to a more sustained approach through modules lasting half a term or more. Some successful cases include schools with bilingual sections where subjects are taught through the medium of another language for extensive periods (Coyle et al., 2010).

STEM (Science, Technology, Engineering, Mathematics) education

Interdisciplinarity in natural sciences and mathematics, so called STEM -education can be defined as "an effort to combine some or all of the four disciplines of science, technology, engineering, and mathematics into one class, unit, or lesson that is based on connections between the subjects and real-world problems" (Moore et al. (2014). Implementation and integration of engineering in K-12 STEM education. In S. Purzer, J. Strobel, & M. Cardella (Eds.), *Engineering in Pre-College Settings: Synthesizing Research, Policy, and Practices* (pp. 35–60). West Lafayette: Purdue University Press.). STEM -pedagogy in teacher education aims to prepare students to design, teach and develop research-based active learning STEM -lesson plans to educate competent citizens, who can access and make sense of science relevant to

their lives and global perspectives (Feinstein, N. W., Allen, S., & Jenkins, E. (2013). Outside the pipeline: Reimagining science education for nonscientists. *Science*, 340(6130), 314-317.).

Active learning includes student centered active methods, such that project based education, and benefitting from diverse out of classroom learning environments and communities of learners and ICT. On the hand, Science education should also focus on competences with an emphasis on learning through science and shifting from STEM to STEAM (A = All) by linking science with other subjects and disciplines (Hazelkorn, Ellen & Ryan, Charly & Beernaert, Yves & Constantinou, Costas & Deca, Ligia & Grangeat, Michel & Karikorpi, Mervi & Lazoudis, Angelos & Pintó, Roser & Welzel-Breuer, Manuela (2015). *Science Education for Responsible Citizenship*. 10.2777/12626). In the ITE curricula in Kazakhstan, the A should include at least developing the English linguistic skills of teacher students (KAZ ITE D-3 Framework Report).

Digitalisation in Education and Teachers' Digital competence development

New information and communication technologies (ICTs) provide teachers and learners with an innovative learning environment to stimulate and enhance the teaching and learning process. In this context, novel educational concepts such as online learning, or blended and hybrid learning are being developed (López-Pérez, Pérez-López & Rodríguez-Ariza, 2011). Hybrid or blended learning can be defined as the integration of face-to-face classroom instruction learning with web-based tools and materials (e.g. Garrison & Kanuka, 2004), as contrast to fully online learning. Blended or hybrid learning is becoming increasingly significant to complement traditional forms of learning. Often these two terms are defined similarly, but can also be differentiated. Blended learning can be defined as a mix of various event-based activities, including conventional face-to-face classrooms instruction, e-learning, and self-paced learning, while in hybrid learning a part of the learning activities and assignments are transferred from the face-to-face environment to the distance learning environment (see Valiathan, 2002, in Koohang, Britz & Seymor, 2006).

Blended forms of learning has the potential to enhance both the effectiveness and efficiency of meaningful learning experiences, and some researchers have suggested that blended learning has the potential to be even more effective and efficient when compared to a traditional classroom model (see Garrison & Kanuka, 2004). Other benefits of blended forms of learning include convenience, student satisfaction, flexibility and higher retention (Koohang, Britz & Seymor, 2006).

Especially in situations where student numbers are high, online, blended or hybrid forms of learning have the potential to provide greater opportunities for improved learning (Osguthorpe & Graham, 2003). In teacher education, student teachers can also learn from their teachers the use of various digital tools and platforms. Thus, not only teacher educators should have the skills to adopt digital tools in their teaching, but also student teachers should develop their digital skills during teacher education. Times faced with uncertainty and sudden changes, such as pandemics, require flexible and advanced use of digital tools and instructional practices functional in online contexts.

Inclusion in education and recognition of different learners

Inclusion in education is a principle which means that all students, regardless of their possible impairments or disability, should have the opportunity to participate in the regular school systems and study with their peers. Inclusion is based on several international United Nations declarations, such as the Salamanca Statement (1994) and The Universal Declaration of Human Rights (1948). Inclusive pedagogy is a pedagogical approach that is impacted by the sociocultural context of learning (Florian & Black-Hawkins, 2011) and it aims to respond to the diverse learning needs of students in as varied ways as possible.

The concepts of 'inclusion' and 'diversity' are reviewed in the teaching and education practices with the activities and arrangements that promote inclusion as the centre. The key words in education are educational equality, accessibility, individuality, lifelong learning and co-operation. The teacher training emphasizes on teachers' perceptions of themselves as experts in implementing curriculum for diverse learners based on the principles of pedagogy of difference or universal design for all. It is important to renew inclusive pedagogies such as co-teaching and differentiating. The teacher's task is to teach and guide students to become lifelong learners while taking each student's individual learning style into account. Four core values related to teaching and learning have been identified as the basis for the work of all teachers in inclusive education (European Agency). These core values are associated with areas of teacher competence. The areas of competence are made up of three elements: attitudes, knowledge and skills. All teachers must commit to the idea of equality for all students. (Saloviita, 2018.)

Teachers' professional development and change management

Considering the dynamic and constantly changing nature of teachers' work, teachers at all levels must be continuous learners throughout their professional careers. Teachers' professional development needs to address simultaneously the teachers' beliefs and conceptions and the improvement in their practices (Timperley & Phillips, 2003), as well as integration of theoretical and practical knowledge (Tynjälä, Häkkinen & Hämäläinen, 2004). Often an experience of a successful implementation in teaching changes teachers' attitudes and beliefs, and therefore, positive experiences are central for teachers' professional development (Guskey, 1989).

Development and growing as a teacher can be understood in different ways: 1) growing understanding of one's content area, in order to become more familiar with what to teach; 2) getting more practical experience as a teacher, in order to become more familiar with how to teach; 3) building up a repertoire of teaching strategies, in order to become more skilful as a teacher; 4) finding out which teaching strategies work best for the teacher, in order to become more effective as a teacher, and 5) continually increasing understanding of what works for students, in order to become more effective in facilitating student learning (Åkerlind, 2007).

It is important to notice, that professional development of teachers is often a slow process. Furthermore, the development is not a linear continuum, but instead, the development may be interrupted by various reasons (Beijaard, Meijer & Verloop, 2004). Some teachers may experience change and development as threatening and change processes often include feelings of anxiety or uncertainty (Postareff et al., 2008). Such negative emotions towards the change may narrow the teacher's attention (Fredrickson, 2001). Therefore, it is important to ensure that teachers receive enough support from diverse sources (e.g. peers, supervisors, work environment) and encouraging feedback. It is also important for teachers to understand, that failures are part of the teachers' professional development, and mistakes should be seen as learning opportunities. When teachers have the possibility to share experiences and engage in collaboration with their peers, it has been shown to have positive influences of their learning and development (Voogt, et al., 2011). When teachers feel well and are engaged in their work, they are more likely to engage in pedagogical practices that promote their development (Fredrickson, 2001) The development of teaching is, at best, a continuous process, and thus, teachers should be encouraged to reflect on their own teaching on a continuous basis to increase their pedagogical awareness (Parpala & Postareff, 2021).

Teachers should also be provided with agency, which refers to the teacher's possibilities to influence, make decisions and take actions. The aim of exercising agency is to create new work practices and transforming the course of activities (Hökkä et al., 2012). When teachers have a possibility engage in development and changes, and when they experience that their opinions truly matter, they are likely to become highly engaged in their work (e.g. Day, Elliot & Kington, 2005; Pyhältö et al. 2012).

Literature

- Beijaard, D., Meijer, P. C., & Verloop, N. (2004). Reconsidering research on teachers' professional identity. *Teaching and teacher education*, 20(2), p. 107-128.
- Berry, A. (2004). Self study in teaching about teaching. In J. J. Loughran, M. L. Hamilton, V. K. LaBoskey, & T. Russell (Eds.), *International handbook of self-study of teaching and teacher education practices*. Dordrecht: Springer. 1295-1332.
- Biggs, J. (1996). Enhancing Teaching through Constructive Alignment. *Higher Education*, 32, p. 347-364.
- Biggs, J., & Tang, C. (2011). *Teaching for Quality Learning at University*. Maidenhead, UK: Open University Press.
- Boud, D. & Falchikov, N. (2006): Aligning assessment with long-term learning. *Assessment & Evaluation in Higher Education*, 31(4), p. 399-413
- Cao, Y., Postareff, L., Lindblom-Ylänne, S. & Toom, A. (2021). A survey research on Finnish teacher educators' research-teaching integration and its relationship with their approaches to teaching. *European Journal of Teacher Education*.
- Cochran-Smith, M. (2005). Teacher Educators as Researchers: Multiple Perspectives. *Teaching and Teacher Education*, 21(2), p. 219–225.
- Coyle, D. (2007). Content and Language Integrated Learning: Towards a Connected Research Agenda for CLIL Pedagogies. *International Journal of Bilingual Education and Bilingualism*, 10(5), p. 543–562.
- Coyle, D. (2008). CLIL - a Pedagogical Approach From the European Perspective. In *Encyclopedia of Language and Education*, edited by N. Hornberger, p. 1200–1214. Boston: Springer US.
- Coyle, D., Hood, P., & Marsh, D. (2010). *CLIL: Content and Language Integrated Learning*. Cambridge: Cambridge University Press.
- Dalton-Puffer, C. (2008). Outcomes and Processes in Content and Language Integrated Learning (CLIL): Current Research From Europe. In *Future Perspectives for English Language Teaching*, edited by W. Delanoy, and L. Volkmann, p. 1–19. Heidelberg: Carl Winter.
- Day, C., Elliot, B., & Kington, A. (2005). Reform, standards and teacher identity: Challenges of sustaining commitment. *Teaching and teacher Education*, 21(5), p. 563-577.
- De Zarobe, Y. R. (2008). CLIL and Foreign Language Learning: A Longitudinal Study in the Basque Country. *International CLIL Research Journal*, 1(1), p. 60–73.
- European Agency. *Profile of Inclusive Teachers*. <https://www.european-agency.org/projects/te4i/profile-inclusive-teachers>
- Eurydice. 2006. *Content and Language Integrated Learning (CLIL) at School in Europe*. Brussels: Eurydice.
- Fimyar, O., Yakavets, N., & Bridges, D. (2014). The contemporary policy agenda. In D. Bridges (Ed), *Educational Reform and Internationalisation. The case of school reform in Kazakhstan* (pp. 53-68). Peterborough, UK: Printondemand-worldwide.
- Feinstein, N. W., Allen, S., & Jenkins, E. (2013). Outside the pipeline: Reimagining science education for nonscientists. *Science*, 340(6130), p. 314-317
- Flores, M.A. (2018). Linking Teaching and Research in Initial Teacher Education: Knowledge Mobilisation and Research-informed Practice. *Journal of Education for Teaching*, 44 (5), p. 621–636.
- Florian, L., & Black-Hawkins, K. (2011). Exploring inclusive pedagogy. *British Educational Research Journal*, 37(5), p. 813–828.
- Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: the broaden-and-build theory of positive emotions. *American psychologist*, 56(3), p. 218.
- Garrison, D. R., & Kanuka, H. (2004). Blended learning: Uncovering its transformative potential in higher education. *The internet and higher education*, 7(2), p. 95-105.

Guskey, T.R. (1989). Attitude and perceptual change in teachers. , 13, p. 439-453.

Hazelkorn, E., Ryan, C., Beernaert, Y., Constantinou, C., Deca, L., Grangeat, M., Karikorpi, M., Lazoudis, A., Pintó, R. & Welzel-Breuer, M. (2015). *Science Education for Responsible Citizenship*. European Commission: Directorate-General for Research and Innovation, Science with and for Society.

Hökkä, P., Eteläpelto, A., & Rasku-Puttonen, H. (2012). The professional agency of teacher educators amid academic discourses. *Journal of Education for Teaching*, 38(1), p. 83-102.

IAC (2018). Analytical Report. Monitoring and assessment of implementation of a flexible form of management in universities. IAC.

Jones, S. (2003). Measuring the quality of higher education: linking teaching quality measures at the delivery level to administrative measures at the university level. *Quality in Higher Education*, 9(3), 223-229.

Koohang, A., Britz, J., & Seymour, T. (2006). Panel Discussion. Hybrid/blended learning: Advantages, Challenges, Design and Future Directions. In *Proceedings of the 2006 Informing science and IT education joint conference* (p. 155-157).

Krokfors, L., Kynäslähti, H., Stenberg, K., Toom, A., Maaranen, K., Jyrhämä, R., Byman, R. & Kansanen, P. (2011). Investigating Finnish Teacher Educators' Views on Research-based Teacher Education. *Teaching Education*, 22(1), p. 1-13.

López-Pérez, M. V., Pérez-López, M. C., & Rodríguez-Ariza, L. (2011). Blended learning in higher education: Students' perceptions and their relation to outcomes. *Computers & education*, 56(3), p. 818-826.

Lunenberg, M. (2010). Characteristics, scholarship and research of teacher educators. In P. Peterson, E. Baker, & B. McGaw (Eds.), *International encyclopedia of education* (p. 676-680). Oxford, UK: Elsevier.

McLaughlin, C., Winter, L., Kurakbayev, K., Kambatyrova, A., Torrano, D., Fimyar, O., Ramazanova, A. (2016). The Improvement of Secondary Education Curriculum of Kazakhstan in the Context of Modern Reforms (unpublished report). Astana: Nazarbayev University Graduate School of Education.

Marsh, D. (2012). *Content and Language Integrated Learning (CLIL). A Development Trajectory*. Cordoba: Servicio de Publicaciones de la Universidad de Córdoba.

Mehisto, P., Marsh, D. & Frigols, M. J. (2008). *Uncovering CLIL Content and Language Integrated Learning in Bilingual and Multilingual Education*. London: Macmillan.

Moore, T. J., Stohlmann, M. S., Wang, H. H., Tank, K. M., Glancy, A. W., & Roehrig, G. H. (2014). Implementation and integration of engineering in K-12 STEM education. In *Engineering in Pre-College Settings: Synthesizing Research, Policy, and Practices* (p. 35-60). West Lafayette: Purdue University Press.

OECD (2014). Reviews of National Policies for Education: Secondary Education in Kazakhstan. Retrieved from: <http://dx.doi.org/10.1787/9789264205208-en>

OECD (2020). *Raising the Quality of Initial Teacher Education and support for early career teachers in Kazakhstan*. OECD Education Policy Perspectives, No. 25, OECD Publishing, Paris.

"On Education" (2007) Law of the Republic of Kazakhstan; with amendments dated 27.12.2019.

On approval of the Lifelong Learning (continuing education) Concept (2021). Resolution No. 471 of the Government of the Republic of Kazakhstan dated 8 July 2021.

Osguthorpe, R. T., & Graham, C. R. (2003). Blended learning environments: Definitions and directions. *Quarterly review of distance education*, 4(3), p. 227-33.

Parpala, A., & Postareff, L., (2021). Supporting high-quality teaching in higher education through the HowU Teach self-reflection tool. *Ammattikasvatuksen aikakauskirja*, 4, 2021.

Postareff, L., Lindblom-Ylänne, S., & Nevgi, A. (2008). A follow-up study of the effect of pedagogical training on teaching in higher education. *Higher Education*, 56(1), p. 29-43.

Prosser, M., & Trigwell, K. (2014). Qualitative Variation in Approaches to University Teaching and Learning in Large First-Year Classes. *Higher Education*, 67, p. 783-795.

Pyhältö, K., Pietarinen, J., & Soini, T. (2012). Do comprehensive school teachers perceive themselves as active professional agents in school reforms? *Journal of Educational Change*, 13(1), p. 95-116.

Salamanca Statement. (1994). *The Salamanca statement and framework for action on special needs education*. Salamanca: UNESCO, Ministry of education and Science. <https://www.european-agency.org/sites/default/files/salamanca-statement-and-framework.pdf>

Saloviita, T. 2018. Attitudes of Teachers Towards Inclusive Education in Finland. <https://www.tandfonline.com/doi/full/10.1080/00313831.2018.1541819>

Sharplin, E., Ibrasheva, A., Shamatov, D., Rakisheva, A. (2020). Analysis of Teacher Education in Kazakhstan in Context of Modern International Practice. *Bulletin of KazNU, Pedagogical Series*, 64(3), pp. 12-27.

SESPE (State Educational Standard for Primary Education). (2015) Available from: <http://nao.kz/loader/fromorg/2/22> Accessed: 29 November 2021.

Silova, I., and G. Steiner-Khamsi. (2008). *How NGOs React: Globalization and Education Reform in the Caucasus, Central Asia, and Mongolia*. Bloomfield, CT: Kumarian Press.

The Universal Declaration of Human Rights (1948). <https://www.un.org/en/aboutus/universal-declaration-of-human-rights>

Timperley, H. S., & Phillips, G. (2003). Changing and sustaining teachers' expectations through professional development in literacy. *Teaching and teacher education*, 19(6), p. 627-641.

Toom, A., Kynäslähti, H., Krokfors, L., Jyrhämä, R., Byman, R., Stenberg, K., Maaranen, K., & Kansanen, P. (2010). Experiences of a research-based approaches to teacher education: Suggestions for future policies. *European Journal of Education*, 45(2), p. 331-344.

Tran, N., Charbonneau, J., Benitez, V.V., David, M.A., Tran, G., & Lacroix, G. (2016). Tran et al conference ISBT 2010.

Tynjälä, P., Häkkinen, P., & Hämäläinen, R. (2014). TEL@ work: Toward integration of theory and practice. *British Journal of Educational Technology*, 45(6), p. 990-1000.

Yakavets, N., Bridges, D. & Shamatov, D. 2017. 'On constructs and the construction of teachers' professional knowledge in a post-Soviet context', *Journal of Education for Teaching: International Research and Pedagogy*. 1-22.

Visser-Wijnveen, G. J., Van Driel, J. H., Van Der Rijst, R.M., Verloop, N. & Visser, A. (2010). The Ideal Research-teaching Nexus in the Eyes of Academics: Building Profiles. *Higher Education Research & Development*, 29 (2), p. 195–210.

Voogt, J., Westbroek, H., Handelzalts, A., Walraven, A., McKenney, S., Pieters, J., & De Vries, B. (2011). Teacher learning in collaborative curriculum design. *Teaching and teacher education*, 27(8), p. 1235-1244.

Åkerlind, G. S. (2007). Constraints on academics' potential for developing as a teacher. *Studies in higher education*, 32(1), p. 21-37.