А. БАЙТҰРСЫНОВ АТЫНДАҒЫ ҚОСТАНАЙ ӨҢІРЛІК УНИВЕРСИТЕТІ
КОСТАНАЙСКИЙ РЕГИОНАЛЬНЫЙ УНИВЕРСИТЕТ
ИМЕНИ А. БАЙТУРСЫНОВА
A. BAITURSYNOV KOSTANAY REGIONAL UNIVERSITY

Educational program

6B01302 Primary education (IP)

Level: bachelor course

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Протокол
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Председательствовал: Вице-министр науки и высшего образования Республики Казахстан К.Ергалиев

Присутствовали: (по списку)

Повестка дня

1. Одобрение 30 образовательных программ, разработанных в рамках проекта Всемирного Банка «Усиление педагогического потенциала РК»

Г.С. Джарасова

1. Информацию проректора по академическим вопросам Казахского национального педагогического университета имени Абая принять к сведению.

2. Одобрить 30 образовательных программ, разработанных в рамках проекта ВБ «Усиление педагогического потенциала РК».

3. Организациям высшего и (или) послевузовского образования (далее – ОВПО), участвующим в проекте ВБ «Усиление педагогического потенциала РК», обеспечить подготовку качественного пилотирования ОП с 2023-2024 учебного года (прием обучающихся, индивидуальные учебные планы обучающихся, силлабусы, повышение квалификации ППС).

4. УМО-ГУП по направлениям «Педагогические науки» определить соответствие 30 образовательных программ с действующими группами образовательных программ (далее – ГОП) в срок до 10 июня т.г.

5. Комитету высшего и послевузовского образования МНВО обсудить на заседании рабочей группы по рассмотрению нормативных документов вопрос по внесению изменений в государственные общеобязательные стандарты послевузовского образования по расширению академической самостоятельности вузов в срок до 30 июня т.г.

Contents

1. General information

1.1. Curriculum title	Primary Education	
1.2. Curriculum developing team:	**Leader university**	**Member universities**
	Kostanai Regional University named after A. Baitursynov	West Kazakhstan University named after M. Utemisov
		East Kazakhstan University named after S. Amanzholov
		Pavlodar Pedagogical University
		Kokshetau University named after Sh. Ualikhanov
		Taraz University named after Dulaty
1.3. Type of curriculum (in accordance with the National Qualifications Framework	BACHELOR'S DEGREE Level 6	
1.4. Total academic credits	240 academic credits	
1.5. Study mode	full-time	
1.6. Expected program duration	4 years	

1.7. Short curriculum description Curriculum goals and objectives	This Educational Programme (EP) "*Primary Education*" 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. Educational programme (EP) "*Primary Education*" is a teacher education programme for pre-service teachers who wish to specialize in teaching in primary education in schools. EP consists of a pedagogical component 60 academic credits (incl. pedagogical practice), a compulsory component 56 academic credits, and a subject component 124 academic credits (incl. a final attestation of 8 credits). Subject component consists of 4 modules: "Conceptual foundations of primary education", "Language education and communication in primary school", "Research and creativity in primary education", "Interdisciplinary professional skills". EP "*Primary Education*" is developed on the basis of competence-based, student-centered and inclusive approaches to learning. There is an integrative component in the content of the modules, which is typical for the profession of a primary school teacher. The modules of the educational program are focused on broadening one's horizons, and developing literacy, flexible skills, professional skills, and values. Pre-service teachers who have mastered the competences of the EP will be able to educate and teach primary school students in accordance with modern requirements in changing conditions and carry out self-education throughout their lives. EP provides an equal opportunity for learning without compromising pre-service teachers' rights and

interests, preserving the principles of equality, respect, tolerance. 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.

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.

1.8 Main principles of the curriculum

Competence-based teacher education

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.

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.

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.

Competence-based teacher education curriculum

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.

The curriculum is guided by the following main principles:

- Competence-based learning
- Constructive alignment
- Student-centred learning and active learning methodologies
- Research-based teaching
- Interdisciplinary learning
- Inclusion
- Teacher professional development and change management

(see Appendix for more details)

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 Theoretical knowledge in the field of teaching primary school disciplines** (includes professional knowledge related to the outlook, awareness of the theory of primary school disciplines, the logic of constructing a school course for grades 1-4)

  1. Pre-service teachers demonstrate awareness of primary school disciplines by using domain knowledge to teach school students.

  2. Pre-service teachers are able to design and develop the process of educating primary school students, taking into account inclusive and student-centered approaches

  3. Pre-service teachers use psychological and pedagogical interdisciplinary knowledge for interactive interaction in the educational environment

- **Competence area for Methodological skills in the field of education of primary school students** (knowledge of technologies and methods of teaching subdisciplines in primary school)

  4. Pre-service teachers own the methodology for assessing and teaching subdisciplines and technologies for teaching primary school students offline and online, including in ungraded schools.

  5. Pre-service teachers are able to support the development of independence, socialization, and personal development of each child in cooperation with specialists in various subjects to ensure the continuity of education and the continuity of secondary education.

  6. Pre-service teachers are capable of modeling and organizing active and integrated learning for development of functional literacy of primary students (reading skills, science, language skills, mathematical and digital literacy, etc.), supporting the development and well-being of each student.

  7. Pre-service teachers analyze one's own and other experiences in the process of interdisciplinary cooperation in order to improve learning and teaching.

  8. Pre-service teachers organize the educational process based on

national and regional characteristics using integrated, inclusive, student-centered learning.

- **Competence area for Research** (complement competences for professional development in the basic pedagogical module and reflect the features of the educational program "Pedagogy and Methods of Primary Education")

9. Pre-service teachers are able to organize the creative and research activities of primary school students individually and in a group, taking into account an inclusive and interdisciplinary approach to learning, while developing cognitive skills and critical thinking in students.

10. Pre-service teachers are able to select and critically evaluate various studies for use and implementation in pedagogical activity, and creation of educational and methodological content for primary school.

11. Pre-service teachers independently and in a team conduct research in the field of primary education in the domestic and international research environment in accordance with the requirements for research work (projects, start-ups), while observing the ethics of the researcher.

- **Competence area for Professional values and development** (Reflects the humanistic focus of the primary school teacher and the ambition for lifelong learning)

12. Pre-service teachers understand the value of childhood, the importance of love and care for the well-being of primary school students, and is aware of the personal contribution to the education of students.

13. Pre-service teachers are able to reflect and critically evaluate their professional values, principles, methods, use reflective skills to improve teaching

14. Pre-service teachers demonstrate leadership qualities in teaching practice and in the educational process and the basics of goal setting, time management, and self-regulation in everyday life

15. Pre-service teachers strive for lifelong learning to improve their own practice and develop their organization through self-education, self-improvement, self-development.

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 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)	**29**
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
Pre-Diploma Practice	4
Total academic credits	**64**

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	The purpose of this course is to improve the following areas of pedagogical competence: • Competence area for pedagogy and didactics (1) • Competence area for interaction (3, 4) 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.
Learning outcomes	**Pre-service teachers who demonstrate competence can:** • 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; • 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	The purpose of this course is to improve the following areas of pedagogical competence: • Competence area for pedagogy and didactics (1, 2) Pre-service teachers explore the basics of educational science such as the conceptions of man leading to various learning theories and pedagogical models. Based on their understanding of the theoretical concepts, pre-service teachers are able to make appropriate pedagogical choices for various learning situations.
Learning outcomes	**Pre-service teachers who demonstrate competence can:** • 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	The purpose of this course is to improve the following areas of pedagogical competence: • Competence area for pedagogy and didactics (2) 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.
Learning outcomes	**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.

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	The purpose of this course is to improve the following areas of pedagogical competence: • Competence area for pedagogy and didactics (2) • Competence area for teachers´ work environment (6, 7) Pre-service teachers have the ability to consider the diversity of learners and identify their individual needs in the learning / teaching process. Pre-service teachers support students' learning and inclusion in the educational process by using suitable ICT, teaching and assistive technologies. Pre-service teachers maintain students' well-being from psychological and ethical perspective in collaboration with the community (teachers, students, parents/guardians) considering the context of students' life and learning.

Learning outcomes	**Pre-service teachers who demonstrate competence can:** • 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	The purpose of this course is to improve the following areas of pedagogical competence: • Competence area for pedagogy and didactics (1, 2) 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.
Learning outcomes	**Pre-service teachers who demonstrate competence can:** • 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	The purpose of this course is to improve the following areas of pedagogical competence: • Competence area for pedagogy and didactics (1, 2) 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.
Learning outcomes	**Pre-service teachers who demonstrate competence can:** • 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	The purpose of this course is to improve the following areas of pedagogical competence: • Competence area for pedagogy and didactics (2) Pre-service teachers have a thorough understanding of the meaning of assessment in learning process and are able to provide constructive assessment in ethical manner in different phases of learning processes and engage learners in assessment. Pre-service teachers identify, differentiate, and use different assessment technologies, principles, stages, and assessment tools in their own field of expertise (including formative and summative assessment and self-and peer-assessment, etc). They can critically evaluate and analyze their understanding and practices concerning assessment and develop them further.
Learning outcomes	**Pre-service teachers who demonstrate competence can:** • 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	The purpose of this course is to improve the following areas of pedagogical competence: • Competence area for professional development (10) This course provides pre-service teachers with a theoretical foundation on pedagogical research. Pre-service teachers possess skills to seek and critically select theoretical knowledge from various reliable sources, utilize research findings in the development their pedagogical thinking and practice, and adopt willingness to promote research-based learning and education as well as their own continuing development and professional growth.
Learning outcomes	**Pre-service teachers who demonstrate competence can:** • 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	The purpose of this course is to improve the following areas of pedagogical competence: • Competence area for professional development (8, 9) • Competence area for interaction (5) 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. 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.
Learning outcomes	**Pre-service teachers who demonstrate competence can:** - 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) 29 Academic credits

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.

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.

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.

Course title	**Introduction to the teaching profession (1st year pedagogical practice)**
Component	Pedagogical component
Cycle	Core disciplines
Module	Teacher as a facilitator of learning 25 Academic credits
Academic credits	2
Course / competence description	The purpose of this course is to improve the following areas of pedagogical competence: • 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) 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. The prerequisite for the course is that the Pre-service teachers have completed the courses "*Psychology in Education and Concepts of Interaction and Communication*" and "*Age and physiological features of the development of children*" of the pedagogical component before entering their first pedagogical practice.
Learning outcomes	**Pre-service teachers who demonstrate competence can:** • 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 pedagogical practice)**
Component	Pedagogical component
Cycle	Core disciplines
Module	Teacher as a facilitator of learning 25 Academic credits
Academic credits	2
Course / competence description	The purpose of this course is to improve the following areas of pedagogical competence: • 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) 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. The prerequisite for the course is that the Pre-service teachers have completed the course "*Pedagogical Research*" of the pedagogical component before entering their second pedagogical practice.
Learning outcomes	**Pre-service teachers who demonstrate competence can:** • 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	The purpose of this course is to improve the following areas of pedagogical competence: • 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) 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). The prerequisite for the course is that the Pre-service teachers have completed the courses "*Methods and Technologies of Teaching*", "*Assessment and Development*", and "*Inclusive Educational Environment*" of the pedagogical component before entering their third pedagogical practice.

Learning outcomes	**Pre-service teachers who demonstrate competence can:** • 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 pedagogical practice)**
Component	Pedagogical component
Cycle	Core disciplines
Module	Teacher as a facilitator of learning 25 Academic credits
Academic credits	15
Course / competence description	The purpose of this course is to improve the following areas of pedagogical competence: • 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) 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. 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 *"Research, Development, and Innovation"*. They make conclusions and explore various forms and channels of

	communicating the research results in a professional manner. The prerequisite for the course is that the Pre-service teachers have completed the courses "*Teaching planning and individualization of learning*" and "*Research, development and innovation*" of the pedagogical component.
Learning outcomes	**Pre-service teachers who demonstrate competence can:** • 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.

Course title	**Pre-Diploma Practice 4th year**
Component	Pedagogical component
Cycle	Major disciplines
Module	Teacher as a facilitator of learning 29 Academic credits
Academic credits	4
Course / competence description	The pre-graduate internship is a preparation for the final certification and is conducted with the aim of deepening professional knowledge and conducting a pedagogical experiment as part of a graduate study. Pre-graduate practice is conducted on the basis of on-the-job educational organizations.

Learning outcomes	Upon completion of the pre-graduate internship, students will demonstrate the following professional competencies: • To choose ways of solving the tasks of professional pedagogical activity, in relation to various contexts of preschool education • To search, analyze and interpret information necessary for conducting a graduate study • Plan and implement their own professional and personal development and cooperation within the framework of the graduation project • • Conduct a pedagogical experiment, analyze and summarize its results for the presentation and defense of the thesis

4.2 Structure of the subject component

Module name and main disciplines	Academic credits
CONCEPTUAL FOUNDATIONS OF PRIMARY EDUCATION	31
University Component	26
Conceptual foundations of mathematical education	5
Nature and society	6
Primary school pedagogy	5
Psychology of preschool and primary school age	5
Theory and technology of educational work in primary school	5
Optional Component	5
Global perspectives in education	
Local history	5
Leisure pedagogy	
Ethnopedagogy	
LANGUAGE EDUCATION AND COMMUNICATION IN PRIMARY SCHOOL	31
University Component	16

Methodic of language education of primary school children	6
Methodic of teaching literacy and calligraphy	5
Methodic of teaching literary reading	5
Optional Component (choose at least three courses)	**15**
Children's literature and text analysis	
Methodic of teaching a foreign language in primary school	
Workshop on the formation of speech activity	
Basics of modern Kazakh/Russian language	
Pedagogical rhetoric	5
Content and Language Integrated Learning (CLIL) in Primary school	
Primary school student in the world of a foreign language and culture	
RESEARCH AND CREATIVITY IN PRIMARY EDUCATION	**34**
University Component	**22**
Methods of teaching mathematics with a practical course on solving problems	6
Methodic of teaching natural science and 'learning the world' subjects in elementary school	6
Development of the research activity of the younger schoolchild/Making projects in lower grades	5
Visual arts and work in elementary school	5
Optional Component (choose at least three courses)	**12**
Digital learning and media literacy in primary education	
STEAM-education of primary school students	
Cognitive development and critical thinking of primary school students	4
Theater pedagogy	
Robotics in primary education	
INTERDISCIPLINARY PROFESSIONAL SKILLS	**16**
University Component	**8**
Specifics of the educational process in an ungraded primary school	5
Distance learning in primary schools	3
Optional Component (choose at least two courses)	**8**
Safe school environment and child welfare	
Prevention of school bullying	5
Tutoring in primary education	3
Modern technologies in primary education	
FINAL ATTESTATION	**8**
Total academic credits	**120**

	Conceptual foundations of primary education 29 academic credits
	The module is aimed at building awareness of primary school disciplines, and the development of a common outlook on primary education. It forms pre-service teachers' professional knowledge, a prerequisite for the study of specific methods.

Course title	**Conceptual foundations of mathematical education**
Component	Subject component, University component
Cycle	Major disciplines
Module	Conceptual foundations of primary education 31 academic credits
Academic credits	5
Course / competence description	The purpose of this course is to improve the following areas of subject competence: • Competence area for Theoretical knowledge in the field of teaching primary school subjects (1, 2) The course presents mathematical material that is necessary for the competent teaching of mathematics to primary school students and contributes to pre-service teachers' deep understanding of the essence of mathematical concepts and facts.
Learning outcomes	**Pre-service teachers demonstrating competence can:** • describe the concepts of a natural number and magnitude; • explain different approaches to the definition of arithmetic operations on • numbers, their properties; • apply mathematical modeling; • interpret the properties of geometric shapes on the plane and in space; • solve textual, logical, combinatorial problems; • solve geometric problems.

Course title	**Nature and society**
Component	Subject component, University component

Cycle	Major disciplines
Module	Conceptual foundations of primary education 31 academic credits
Academic credits	6
Course / competence description	The purpose of this course is to improve the following areas of subject competence: • Comptence area for Theoretical knowledge in the field of teaching primary school subjects (1, 3) • Comptence area for social, cultural and civic development (1,2) Pre-service teachers study a wide range of topics, including knowledge from the fields of biology and ecology, zoology, earth science, and learning the world. Also the issues of earth science, geographical patterns, and cause-and-effect relationships between the components of nature, the basics of botany and zoology, and the relationship between the living and inanimate nature and man are considered.
Learning outcomes	**Pre-service teachers demonstrating competence can:** • Apply the knowledge of the principles of teaching the theory and practice of the issues of earth science, geographical patterns, and cause-and-effect relationships between the components of nature, the basics of botany and zoology, and the relationship between the living and inanimate nature and man are examined • describe the structure of cells, tissues, and organs of plants, the variety of structural organization, methods of their reproduction, features of morphology, ecology, reproduction of plants, common features of the main classes of animals, features of the internal and external structure of invertebrates and vertebrates in connection with the habitat and lifestyle, the importance of animals in nature and human life; • apply the methods of natural sciences in solving environmental, social and professional problems; • conduct surveillance of biological objects; • use the acquired knowledge to explain a variety of physical phenomena, and properties of substances.

Course title	**Primary school pedagogy**
Component	Subject component, University component
Cycle	Major disciplines
Module	Conceptual foundations of primary education 31 academic credits
Academic credits	5
Course / competence description	The purpose of this course is to improve the following areas of subject competence: • Comptence area for Methodological skills in the field of education of primary school students (2, 5) • Comptence area for Professional values (1,2) Pre-service teachers study the issues of primary school pedagogy, general patterns of development, age periodization, in particular, preschoolers and primary school students. They also study the features of the pedagogical process, the essence and content of learning, methods, types, and forms of learning, and the essence of the educational process, including personality-oriented education, diagnostics of the educational process at school.
Learning outcomes	**Pre-service teachers demonstrating competence can:** • Understand the value of childhood and be aware of the personal contribution to the development of the personality of a younger student; • Design pedagogical situations in elementary school; • Understand the peculiarities of teaching and educating children of primary school age; • Apply basic knowledge of pedagogy in the practice of primary school; • Reasonably apply solutions in the pedagogical reality of elementary school; • Correlate the content, methods, means, forms of education and upbringing of younger students with age, individual characteristics

Course title	**Psychology of preschool and primary school age**

Component	Subject component, University component
Cycle	Major disciplines
Module	Conceptual foundations of primary education 31 academic credits
Academic credits	5
Course / competence description	The purpose of this course is to improve the following areas of subject and pedagogical competence: • Comptence area for interaction (3,4,5) • Comptence area for teachers' work environment (7) • Comptence area for professional values (12,13,14) The course includes fundamental achievements of child psychology throughout its formation and development, and pre-service teachers analyze the world and domestic theories of mental development of a child of preschool and primary school age. The course will help pre-service teachers to master not only theoretical knowledge, but also methods of research and diagnostics of various spheres of mental activity and personality of a child of preschool and primary school age.
Learning outcomes	**Pre-service teachers demonstrating competence can:** • explain the basic concepts and theoretical approaches to the study of the development of a child of preschool and primary school age; • describe patterns and mechanisms of mental development, symptom complexes, age-related syndromes, neoplasms in preschool and primary school age; • interpret data on the mental development of the psychomotor, cognitive, intellectual, personal systems of a child of preschool and primary school age; • analyze the factors influencing the development of various functions and spheres of personality in preschool and primary school age; • select diagnostic methods and use them to measure the level of development of various areas of the psyche of a child of preschool and primary school age

Course title	**Theory and technology of educational work in primary school**
Component	Subject component, University component
Cycle	Major disciplines
Module	Conceptual foundations of primary education 31 academic credits
Academic credits	5
Course / competence description	The purpose of this course is to improve the following areas of subject and pedagogical competence: • Competence area for interaction (3,4,5) • Competence area for teachers' work environment (7) • Competence area for professional values (12,13,14) Pre-service teachers reveal the theoretical foundations of the technology of educational work in primary school based on national values and the essence of the process of education, its forms, and methods. Pre-service teachers are introduced to modern concepts and models of education in domestic and foreign pedagogical theory and practice.
Learning outcomes	**Pre-service teachers demonstrating competence can:** • describe modern concepts and models of education, the educational system of the school as a factor of socialization and development of children, goal setting and planning, organization and conduct of educational work in primary school; • explain the essence of the process of education, forms, methods and means of education; • determine the signs of the interaction of students in the classroom, the interaction of the class teacher with subject teachers, children's associations, to determine the criteria for the effectiveness of extracurricular educational work; • diagnose the level of education of students and the level of development of the class team, the learning; • develop a plan of educational work and scenarios of extracurricular educational activities in the main areas of education of primary school students taking into account the national and regional components;

	• analyze and evaluate educational work using self-assessment tools.

Course title	**Global Perspectives in Education**
Component	Subject component, Optional component
Cycle	Major disciplines
Module	Conceptual foundations of primary education 31 academic credits
Academic credits	5
Course / competence description	The purpose of this course is to improve the following areas of subject and pedagogical competence: • Competence area for professional values (15) • Competence area for social, cultural, civic development (1) • Competence area for research (10) Pre-service teachers examine the issue of the impact on education, including primary education, global trends in the development of society and the economy, as well as the role of primary school in modern society. They also analyze the problems and risks of primary education based on a comparison of international practices and modern research in the field of primary education.
Learning outcomes	**Pre-service teachers demonstrating competence can:** • reflect and give examples about the value of childhood, the importance of lifelong learning/education for life, success, optimism, and inclusion in education; • evaluate ideas and opportunities in primary school education; • compare different primary education experiences using various strategies; • argue their own or group point of view on the basis of their own and collective ideas about world events in education, key issues affecting the lives of children; • create a project in a group that reflects the perspectives of primary education.

Course title	**Local history**
Component	Subject component, Optional component
Cycle	Major disciplines
Module	Conceptual foundations of primary education 31 academic credits
Academic credits	5
Course / competence description	The purpose of this course is to improve the following areas of subject competence: • Competence area for Theoretical knowledge in the field of teaching primary school subjects (1,2,3) • Competence area for Methodological skills in the field of education of primary school students (5) • Competence area for Professional values (12,13,14) Pre-service teachers get familiarized with the peculiarities of the organization of local history work with primary school students during the educational process at school and in extracurricular activities.
Learning outcomes	**Pre-service teachers demonstrating competence can:** • describe the content and scope of local history information, taking into account the age characteristics of students, types and organizational forms of local history work in primary school; • use the historical and local history potential of one's region for the education of the spiritual personality of the younger student and the development of his/her creative abilities; • develop and implement a plan for studying the native land in the classroom and in extracurricular activities; • organize the joint work of parents of students, school teachers, teachers of additional education, leading a creative search on the problems of local lore, with primary school students

Course title	**Leisure Pedagogy**
Component	Subject component, Optional component

Cycle	Major disciplines
Module	Conceptual foundations of primary education 31 academic credits
Academic credits	5
Course / competence description	The purpose of this course is to improve the following areas of subject competence: • Competence area for Theoretical knowledge in the field of teaching primary school subjects (1,2,3) • Competence area for Methodological skills in the field of education of primary school students (5) • Competence area for Professional values (12,13,14) Pre-service teachers are introduced to the organization of leisure activities of primary school children. The historical, cultural, pedagogical, and legal foundations of this activity are considered.
Learning outcomes	**Pre-service teachers demonstrating competence can:** • describe the historical, cultural, pedagogical, legal foundations of leisure activities, organizational forms of occupation of primary school children (recreation, summer/winter camp, summer school, etc.), models of their leisure behavior; • explain pedagogical, psychological, organizational, and managerial aspects of leisure activities of primary school students; • apply the basic strategies and technologies for organizing leisure activitiesforf primary school children; • organize leisure activities for younger students.

Course title	**Ethnopedagogy**
Component	Subject component, Optional component
Cycle	Major disciplines
Module	Conceptual foundations of primary education 31 academic credits
Academic	5

credits	
Course / competence description	The purpose of this course is to improve the following areas of subject competence: • Competence area for Theoretical knowledge in the field of teaching primary school subjects (1,2,3) • Competence area for Methodological skills in the field of education of primary school students (5) • Competence area for Professional values (12,13,14) Pre-service teachers are introduced to the origins of folk educational traditions, their essence, features, and practical significance, the influence of folk pedagogy on modern educational paradigms, and the culture of interethnic relations.
Learning outcomes	**Pre-service teachers demonstrating competence can:** • Form Kazakh national values in children of primary school age; • Apply knowledge of public diplomacy, public etiquette in the classroom in order to form ethnic identity • apply folk traditions, folk art in the formation of students' culture of interethnic relations, ethnopedagogical means, and methods of • education; • organize ethno-pedagogical interaction in the teaching staff.

Language education in primary school 31 academic credits

This module is aimed at mastering pre-service teachers' knowledge on the basics of language theory for communication purposes, speech, mental and aesthetic development. It provides knowledge and skills for pre-service teachers to determine the goals and objectives of language teaching, content, methods, and organizational forms of learning, highlighting methodological conditions for achieving the goals.

Course title	**Methodic of language education of primary school children**
Component	Subject component, University Component
Cycle	Major disciplines

Module	Language education in primary school 31 academic credits
Academic credits	6
Course / competence description	The purpose of this course is to improve the following areas of pedagogical competence: • Competence area for pedagogy and didactics (1, 2) During the course, pre-service teachers study the basics of language education by younger students. They learn the methodology and technologies for teaching the native language of younger students.
Learning outcomes	**Pre-service teachers demonstrating competence can:** • plan and implement the process of language education of primary school students, reasonably defining the tasks and content of teaching the native language at each stage of training, using appropriate teaching methods and forms of organization of activities; • identify the causes of difficulties in mastering the native language and work to overcome them; • form skills of listening-speaking, reading-writing in the native language; • state and predict the achievements of students in the study of their native language, using criteria-based assessment.

Course title	**Methodic of teaching literacy and calligraphy**
Component	Subject component, University Component
Cycle	Major disciplines
Module	Language education in primary school 31 academic credits
Academic credits	5
Course / competence description	The purpose of this course is to improve the following areas of pedagogical competence: • Competence area for pedagogy and didactics (1, 2)

	This discipline is aimed at forming pre-service teachers' knowledge on the foundations of literacy and the basics of calligraphy.
Learning outcomes	**Pre-service teachers demonstrating competence can:** ● plan and implement the process of language education in the pre-letter, letter and post-letter period; reasonably defining the tasks and content of learning in each of the 3 periods of literacy training, using appropriate teaching methods and forms of organization of students' activities; ● form and develop first-graders calligraphic writing skills. ● form students' skills of self-assessment and mutual assessment

Course title	**Methodic of teaching literary reading**
Component	Subject component, University Component
Cycle	Major disciplines
Module	Language education in primary school 31 academic credits
Academic credits	5
Course / competence description	The purpose of this course is to improve the following areas of pedagogical competence: • Competence area for pedagogy and didactics (1, 2) This discipline is aimed at providing pre-service teachers with knowledge and skills to master the basics of children's literature.
Learning outcomes	**Pre-service teachers demonstrating competence can:** • use modern technologies of literary education in organizing the activities of primary school students, • reasonably define the tasks and content of the work, • apply teaching methods and forms of organization of activities corresponding to the tasks and age characteristics of primary school students.

Course title	**Children's Literature and Text Analysis**

Component	Subject component, Optional Component
Cycle	Major disciplines
Module	Language education in primary school 31 academic credits
Academic credits	5
Course / competence description	The purpose of this course is to improve the following areas of subject competence: • Competence area for Theoretical knowledge in the field of teaching primary school subjects (1,3) The course introduces pre-service teachers to the main stages of the development of domestic and foreign children's literature, and important provisions of the scientific theory of this discipline. Much attention is paid to the practice-oriented analysis of works for children, taking into account the psychological and pedagogical characteristics of primary school students.
Learning outcomes	**Pre-service teachers demonstrating competence can:** • describe the classification of genres of children's folklore, theoretical foundations and structural and typological features of children's literature, content, artistic features of works of children's literature; • possess the skills of teaching and educating communication with the child about the works read, the skills of expressive reading of works of children's literature; • compare the main periods of the history of domestic and foreign children's literature and current trends in their development; • analyze works of art taking into account the general principles of philological analysis of the text; • evaluate the correspondence of the work to the psychological and age categories of young readers. • Create creative essays (essays) based on what they have read and teach this to students.

Course title	**Methods of teaching a foreign language in primary school**
Component	Subject component, Optional Component

Cycle	Major disciplines
Module	Language education in primary school 31 academic credits
Academic credits	5
Course / competence description	The purpose of this course is to improve the following areas of pedagogical competence: • Competence area for pedagogy and didactics (1, 2) This discipline is aimed at forming pre-service teachers' knowledge and skills on the foundations of teaching a foreign language in primary school.
Learning outcomes	**Pre-service teachers demonstrating competence can:** • to plan and implement the process of language education of primary school students on the basis of 4 types of speech activity (listening, speaking, reading, writing); • determine the objectives and content of teaching a foreign language to younger students use, according to the tasks set, various methods and technologies for teaching a foreign language to younger students · integrate knowledge with the native language, develop interest in multilingualism.

Course title	**Workshop on the formation of speech activity**
Component	Subject component, Optional Component
Cycle	Major disciplines
Module	Language education in primary school 31 academic credits
Academic credits	5
Course / competence description	The purpose of this course is to improve the following areas of pedagogical competence: • Competence area for pedagogy and didactics (1, 2) The discipline is aimed at the formation of pre-service teachers' speech activity.

Learning outcomes	**Pre-service teachers demonstrating competence can:** • select, create and creatively use didactic games and game exercises in order to develop all aspects of speech, the formation of diverse interests in children; • guide children's speech creativity (to invent fairy tales, create riddles, etc.); • control and improve one's own speech, use various dictionaries, reference books, and other textbooks.

Course title	**Basics of modern Kazakh/Russian language**
Component	Subject component, Optional Component
Cycle	Major disciplines
Module	Language education in primary school 31 academic credits
Academic credits	5
Course / competence description	The purpose of this course is to improve the following areas of pedagogical competence • Competence area for interaction (3,4) and • Competence area for professional values (13,14). During this course, pre-service teachers develop their communicative and linguistic competence in native language interaction and theoretical knowledge in the field of teaching disciplines in primary school. Pre-service teachers develop an understanding of the mother tongue as a means of communicating, thinking and expressing one's identity. They also learn to generalize theoretical knowledge about sections of the mother tongue and expand their communicative skills.
Learning outcomes	**Pre-service teachers demonstrating competence can:** • Understand the specificity and expressiveness of the mother tongue and its relationship to other languages • integrate and apply linguistic knowledge in phonetics, lexicology, syntax and other language domains • express information in writing and orally for interaction with pupils, parents, colleagues • solve pedagogical tasks in communicative-speech situations individually and in collaboration

Course title	**Pedagogical Rhetoric**
Component	Subject component, Optional Component
Cycle	Major disciplines
Module	Language education in primary school 31 academic credits
Academic credits	5
Course / competence description	The purpose of this course is to improve the following areas of pedagogical competence • Competence area for interaction (3,4) and • Competence area for professional values (13,14). The purpose of this course is to improve the following areas of pedagogical competence: Area of competence for interaction Area of competence for the working environment of teachers The course is aimed at forming the necessary level of professional communicative competence among students; preparing students for the successful assimilation of the basics of public speaking, business speech, effective communication techniques
Learning outcomes	**Pre-service teachers demonstrating competence can:** ● Understand the specificity and expressiveness of the mother tongue and its relationship to other languages ● integrate and apply linguistic knowledge in phonetics, lexicology, syntax and other language domains ● express information in writing and orally for interaction with pupils, parents, colleagues ● solve pedagogical tasks in communicative-speech situations individually and in collaboration

Course title	**Content and Language Integrated Learning (CLIL) in primary school**
Component	Subject component, Optional Component
Cycle	Major disciplines
Module	Language education in primary school 31 academic credits
Academic credits	5
Course / competence description	The purpose of this course is to improve the following areas of pedagogical competence: • Competence area for pedagogy and didactics (1, 2) The discipline is aimed at the formation of pre-service teachers' subject-language integrated learning CLIL (Content and Language Integrated Learning) in primary school.
Learning outcomes	**Pre-service teachers demonstrating competence can:** • use a second language as a tool for studying other subjects, thus forming the students' need for study, which will allow them to rethink and develop their communication skills, including in their native language.

Course title	**A younger schoolchild in the world of a foreign language and culture**
Component	Subject component, Optional Component
Cycle	Major disciplines
Module	Language education in primary school 31 academic credits
Academic credits	5
Course / competence description	The purpose of this course is to improve the following areas of pedagogical competence: • Competence area for pedagogy and didactics (1, 2) This discipline is aimed at forming pre-service teachers' knowledge and skills on the foundations of teaching a

	foreign language through culture and culture through language.
Learning outcomes	**Pre-service teachers demonstrating competence can:** • plan and implement the process of language education, reasonably defining the tasks and content of learning at each initial stage of learning, using appropriate teaching methods and forms of organization of students' activities; • form and develop the basics of children's linguistics among primary school students.

Research and creativity in primary education 34 academic credits

This module is aimed at developing pre-service teachers' intellectual abilities, digital literacy in the process of cognitive activity, and involvement in research and creativity of primary school students. The module implements STEAM education in primary school and ensures the development and deepening of integration in the field of the basics of natural sciences and creativity. Particular attention is paid to pre-service teachers' specific teaching methods in primary education, including the development of integrated lessons in an ungraded school.

Course title	**Methods of teaching mathematics with a practical course on solving problems**
Component	Subject component, University Component
Cycle	Major disciplines
Module	Research and creativity in primary education 34 academic credits
Academic credits	6
Course / competence description	The purpose of this course is to improve the following areas of subject competence: • Competence area for Theoretical knowledge in the field of teaching primary school subjects (3,2) • Competence area for Methodological skills in the field

of education of primary school students (1)

During the course pre-service teachers obtain knowledge and skills in the field of teaching methods of mathematics and practical problem solving, mastering mathematical concepts and facts. They learn to analyze theoretical and practical information of the main mathematical fields, develop logical and algorithmic thinking of students, and acquire skills development of mathematical education and functional literacy of younger schoolchildren.

Learning outcomes	**Pre-service teachers demonstrating competence can:** • know the continuity of basic mathematical concepts with the course • of elementary mathematics; • possess analysis and proof in solving problems; • use information sources, formulate the result; • make: graphs, tables, diagrams in solving problems; • analyze and be able to solve creative, logical, practical tasks • use formative assessment as a learning tool; • Develop summative assessment tasks for students with different abilities.

Course title	Methodic of teaching natural science and knowledge of the world in primary school
Component	Subject component, University Component
Cycle	Major disciplines
Module	Research and creativity in primary education 34 academic credits
Academic credits	6
Course / competence description	The purpose of this course is to improve the following areas of subject competence: • Competence area for Theoretical knowledge in the field of teaching primary school subjects (1,2) • Competence area for Methodological skills in the field of education of primary school students (4,6)

	Pre-service teachers apply theoretical knowledge in the field of natural science and knowledge of the world in the development of teaching methods in primary school. Pre-service teachers develop methodological skills in the field of education of primary school students, and form understanding on universal methods of cognition of the surrounding world and the laws of modern natural science. Pre-service teachers study methods, forms, and techniques of conducting classes of knowledge of the world and natural science in elementary grades
Learning outcomes	**Pre-service teachers demonstrating competence can:** • use the educational material of the studied discipline to form a holistic view of the surrounding world in primary school students; • establish interdisciplinary connections related to the knowledge of the world and the basics of natural science; • compile didactic material on the subject adapted for study in elementary grades; • conduct outdoor excursions for practical learning of the subject; • organize the training of primary school students using a children's experiment, introducing them to research activities; • use formative assessment as a learning tool; • Develop summative assessment tasks for students with different abilities.

Course title	**Development of the research activity in the primary school students**
Component	Subject component, University Component
Cycle	Major disciplines
Module	Research and creativity in primary education 34 academic credits
Academic credits	5

Course / competence description	The purpose of this course is to improve the following areas of pedagogical competence: • Competence area for Research (9,10,11) During the course, pre-service teachers are able to organize creative and research activities of primary school students as well as critically evaluate various studies. They create educational and methodological content for primary school, learn to work in a team, and demonstrate research skills.
Learning outcomes	**Pre-service teachers demonstrating competence can:** • define and describe the scientific apparatus of pedagogical research • classify the methods of scientific research and use them in teaching activities with primary school students • create a scientific research individual and group project together with students in accordance with the developed criteria • interpret and present the results of the study and teach these skills to students in the framework of children's projects • observe ethical standards of research, the principle of academic integrity

Course title	**Creating projects in elementary grades**
Component	Subject component, University Component
Cycle	Major disciplines
Module	Research and creativity in primary education 34 academic credits
Academic credits	5
Course / competence description	The purpose of this course is to improve the following areas of pedagogical competence: • Competence area for Research (9,10,11) Pre-service teachers learn to create and manage individual and collective project activities, focusing on inclusive, integrated and activity-based approaches to learning, relying on the interests and abilities of primary school

	children. They can direct their research needs to create a creative product.
Learning outcomes	**Pre-service teachers demonstrating competence can:** ● organize the activities of primary school students to create a project taking into account their age characteristics; ● apply knowledge on the methodology of scientific and pedagogical research for the organization of school projects; ● plan and prepare the project in accordance with the requirements for scientific work ● develop criteria and evaluate the scientific work of primary school children, using self-assessment and peer-assessment methods; ● comply with ethical standards and principles of scientific research

Course title	**Art education in primary school**
Component	Subject component, University Component
Cycle	Major disciplines
Module	Research and creativity in primary education 34 academic credits
Academic credits	5
Course / competence description	The purpose of this course is to improve the following areas of subject competence: • Competence area for Theoretical knowledge in the field of teaching primary school subjects (2,3) • Competence area for Methodological skills in the field of education of primary school students (4,5,7) • Competence area for Research (9,10) • Competence area for Professional values (12,13) Pre-service teachers can use various types of art, taking into account national and regional characteristics, as a means for teaching disciplines in primary school. They support the development of the child's independence, taking into account his/her personal development. By

	studying and researching the educational process of primary school, pre-service teachers create educational and methodological content using various types of art technologies. They use art technologies to integrate and differentiate the educational process.
Learning outcomes	**Pre-service teachers demonstrating competence can:** ● integrate art technologies into the educational process of primary ● school using interdisciplinary connections ● prepare teaching material for primary school using creative tasks ● prove their point of view in achieving learning goals ● comply with the norms and principles of copyright and data protection

Course title	**Visual arts and work in elementary school**
Component	Subject component, University Component
Cycle	Major disciplines
Module	Research and creativity in primary education 34 academic credits
Academic credits	5
Course / competence description	The purpose of this course is to improve the following areas of subject competence: ● Competence area for Theoretical knowledge in the field of teaching primary school subjects (1,2) ● Competence area for Methodological skills in the field of education of primary school students (4,7,8) ● Competence area for Research (9,10) ● Competence area for Professional values (13,14,15) During the course, pre-service teachers learn about the integration of fine arts and artistic work ensuring the development of the creative abilities and artistic skills of students.
Learning outcomes	**Pre-service teachers demonstrating competence can:** ● apply safety regulations in creative work; ● Apply the knowledge of the principles of teaching the

theory and practice of art;

- solve artistic tasks based on the creation of a model made of paper, fabric, natural materials;
- select teaching methods and didactic material for the development of creative abilities of primary school students

Course title	**Digital learning and media literacy in primary education**
Component	Subject component, Optional component
Cycle	Major disciplines
Module	Research and creativity in primary education 34 academic credits
Academic credits	4
Course / competence description	The purpose of this course is to improve the areas of pedagogical and subject competence: • Competence area for pedagogy and didactics (1, 2) • Competence area for Methodological skills in the field of education of primary school students (6) • Competence area for Theoretical knowledge in the field of teaching primary school subjects (3) The course promotes pre-service teachers' understanding on media literacy as part of an information culture that promotes the safety and emotional, mental and physical well-being of the child. The course develops pre-service teachers' digital skills for teaching primary school students
Learning outcomes	**Pre-service teachers demonstrating competence can:** • Develop and use digital resources, educational content for conducting lessons in primary grades • understand, reproduce and use media texts • evaluate and critically analyze information in order to develop students' media literacy • develop critical thinking in primary school students • conduct lessons using ICT in accordance with hygienic requirements

Course title	**STEAM-education of primary school children**
Component	Subject component, Optional component
Cycle	Major disciplines
Module	Research and creativity in primary education 34 academic credits
Academic credits	4
Course / competence description	The purpose of this course is to improve the following areas of subject competence: • Competence area for Theoretical knowledge in the field of teaching primary school subjects (1,3) • Competence area for Methodological skills in the field of education of primary school students (6) • Competence area for Research (9) This course develops pre-service teachers' skills to integrate subjects, aiming to develop the intellectual abilities of primary school students necessary for a comfortable sense of self in the modern world.
Learning outcomes	**Pre-service teachers demonstrating competence can:** • apply knowledge about STEAM education of primary school students for their intellectual and creative development; • use forms and methods of teaching aimed at the development of critical thinking; • be able to work with practical material developing technical and creative thinking in children of primary school age; • Develop a group interdisciplinary project or research paper for younger students, combining theoretical and applied skills in science and art.

Course title	**Cognitive development and critical thinking of primary school children**
Component	Subject component, Optional component
Cycle	Major disciplines

Module	Research and creativity in primary education 34 academic credits
Academic credits	4
Course / competence description	The purpose of this course is to improve the following areas of subject and pedagogical competence: • Competence area for interaction (4) • Competence area for methodological skills and professional values (5,6,14) Pre-service teachers have a holistic view of critical thinking as a cognitive skill, demonstrate critical thinking skills, and are able to develop critical thinking through various strategies in different disciplines, as well as in extracurricular activities of primary school students.
Learning outcomes	**Pre-service teachers demonstrating competence can:** • describe the cognitive skills of primary school students; • apply information in new situations, including in changing conditions; argue and critically comprehend various ideas; • use strategies for developing critical thinking of primary school students in their own teaching; • create and present a new vision of objects and phenomena to solve creative situations; • demonstrate teamwork skills.

Course title	**Theater pedagogy**
Component	Subject component, Optional component
Cycle	Major disciplines
Module	Research and creativity in primary education 34 academic credits
Academic credits	4

Course competence description	The purpose of the course: improving subject competencies in the field of • Competence area for Theoretical knowledge and for Methodological skills and professional development (2, 7,12,13,14, 15) Pre-service teachers are able to create a favorable psychological climate in the educational environment and maintain a creative atmosphere in the classroom and extracurricular activities. They demonstrate lifelong learning skills.
Learning outcomes	**Pre-service teachers demonstrating competence can:** ● correlate common and distinctive features in theater and school pedagogy ● dramatize the training material ● support and develop the acting qualities of oneself and students ● create a theatrical performance together with children ● use the means of theatrical art in extracurricular and leisure activities

Course title	**Robotics in elementary school**
Component	Subject component, Optional component
Cycle	Major disciplines
Module	Research and creativity in primary education 34 academic credits
Academic credits	4

Course / competence description	The purpose of this course is to improve the following areas of subject competence: • Competence area for Theoretical knowledge in the field of teaching primary school subjects (1) • Competence area for Methodological skills in the field of education of primary school students (5) • Competence area for Research (9) This course develops pre-service teachers' skills in using information and communication technologies as a tool in professional activities, training, and everyday life.
Learning outcomes	**Pre-service teachers demonstrating competence can:** ● Demonstrate the basic knowledge of design, physics, engineering, etc. for teaching younger students; ● apply the principles of operation and design of robotic devices; ● use design skills and basic programming skills; ● apply different programming languages; ● work with circuits and electronics; ● analyze and use knowledge about the safety of life when working with electricity.

Interdisciplinary professional skills 16 academic credits

The module develops pre-service teachers' competences for the professional development as primary school teachers and reflects the peculiarities of primary school teacher training and is focused on the development of flexible professional skills and values.

Course title	**Features of the educational process in an ungraded primary school**
Component	Subject component, University component
Cycle	Major disciplines
Module	Interdisciplinary professional skills 16 academic credits
Academic credits	5
Course / competence description	The purpose of this course is to improve the following areas of subject competence: • Competence area for Theoretical knowledge in the

	field of teaching primary school subjects (1, 3)
	• Competence area for Methodological skills in the field of education of primary school students (4, 6,7)
	• Competence area for Professional values and development (12, 14)
	This course develops pre-service teachers' competences in the organization of training in an ungraded school conditions and class-settings.
Learning outcomes	**Pre-service teachers demonstrating competence can:** • take into account the age and individual characteristics of students in pedagogical interaction in an ungraded primary school • plan and implement the pedagogical process in an ungraded primary school, taking into account differentiated and inclusive approaches to learning; • apply active teaching and assessment methods in classes of different ages, taking into account personality-oriented and inclusive approaches. • develop various lesson models that contribute to the realization of the set goals and learning outcomes by all students • organize and manage the pedagogical process in an ungraded primary school, while showing leadership qualities

Course title	**Distance learning in primary schools**
Component	Subject component, University component
Cycle	Major disciplines
Module	Interdisciplinary professional skills 16 academic credits
Academic credits	3
Course / competence description	The purpose of this course is to improve the following areas of subject competence: • Competence area for Theoretical knowledge in the field of teaching primary school subjects (3) • Competence area for Methodological skills in the field of education of primary school students (4)

	The purpose of the course is to increase pre-service teachers' subject competences in the field of theoretical and methodological knowledge. Pre-service teachers gain knowledge on a methodology for evaluating and teaching subjects as well as technologies for teaching primary school students offline and online, including in an ungraded school. They know how to create educational content for teaching online, taking into account inclusive and personality-oriented approaches, as well as learn use interdisciplinary knowledge for interactive interaction in remote mode, aimed at the support and well-being of students, taking into account age characteristics.
Learning outcomes	**Pre-service teachers demonstrating competence can:** ● design and conduct lessons online, taking into account inclusive and personality-oriented approaches ● choose and apply active methods for distance learning focused on learning support ● choose effective forms of assessment in the mode of distance learning, in accordance with the requirements for criteria assessment ● observe network etiquette in the school community ● change the content and course of the lesson in changing conditions, achieving the planned learning outcomes for all students

Course title	**Safe school environment and child welfare**
Component	Subject component, Optional component
Cycle	Major disciplines
Module	Interdisciplinary professional skills 16 academic credits
Academic credits	5
Course / competence description	The purpose of this course is to improve the following areas of subject competences: ● Competence area for Professional values and development (12, 13, 14, 15) Pre-service teachers have a holistic view on well-being in the school environment, and they can model strategies and

	technologies for solving specific pedagogical tasks. They are able to use knowledge, forms, methods, and technologies of teaching in accordance with the conditions of a particular school and the capabilities of students, taking into account inclusive and personality-oriented approaches. They understand the value of childhood, and the importance of love and care for the well-being of primary school students. Pre-service teachers are also able to reflect and critically evaluate their own professional values, and demonstrate leadership qualities and strives for lifelong learning.
Learning outcomes	**Pre-service teachers demonstrating competence can:** ● solve pedagogical situations in a reasoned manner based on positive pedagogy and an inclusive approach to education ● apply pedagogical techniques for support and success in teaching and educating students, as well as for collaboration with parents and colleagues ● observe pedagogical ethics and tact in professional activity ● create a favorable climate and solve pedagogical conflicts on the basis of pedagogical cases, as well as within the framework of pedagogical practice ● apply knowledge about the rights and responsibilities of children and respect the rights of the child in the school environment ● demonstrate some skills aimed at lifelong learning

Course title	**Prevention of school bullying**
Component	Subject component, Optional component
Cycle	Major disciplines
Module	Interdisciplinary professional skills 16 academic credits
Academic credits	5
Course / competence description	The purpose of this course is to improve the following areas of subject competences: ● Competence area for Theoretical knowledge in the field of teaching primary school subjects (2) ● Competence area for Professional values and development (12, 13, 14)

The course is aimed at creating a prosperous environment, developing pre-service teachers' respectful relationships in the team, and creating a favorable climate. Pre-service teachers understand the value of childhood, the importance of love and care for the well-being of primary school students. They show tact and adhere to pedagogical ethics. They prevent any manifestations of bullying and create a favorable psychological climate within the educational environment, while building trust and relationships with parents and students.

Learning outcomes	**Pre-service teachers demonstrating competence can:** ● identify the signs and prevent bullying based on pedagogical cases and practice at school ● create a favorable psychological climate in the classroom, showing empathy and emotional intelligence ● broadcast readiness to help students cope with aggression, including online (cyberbullying) ● discuss school conflicts, demonstrating tact and pedagogical ethics ● create clear and uniform pedagogical requirements for the prevention of school conflicts

Course title	**Tutoring in primary education**
Component	Subject component, Optional component
Cycle	Major disciplines
Module	Interdisciplinary professional skills 16 academic credits
Academic credits	3
Course / competence description	The purpose of this course is to improve the following areas of subject competences: ● Competence area for Methodological skills in the field of education of primary school students (4) ● Competence area for Research (9) ● Competence area for Professional values and development (12, 13, 14) The course is aimed at mastering pre-service teachers'

	competences to create an environment for children with versatile needs (intellectual, physical, behavioral, as well as talented and those having learning difficulties). Pre-service teachers learn to take into account inclusive, integrated approaches to teaching and educating young students, as well as to cooperate with parents and colleagues for the well-being and development and support of each student.
Learning outcomes	**Pre-service teachers demonstrating competence can:** ● Summarizes the policy of the state and the results of current research on the problem of integration and inclusiveness in primary education ● Reflects on the value of childhood and how to take into account different needs in one's own teaching ● Discusses student's problems with specialists of different profiles, while observing pedagogical ethics and tact ● Characterizes the needs of students in terms of differentiated, integrated and personality-oriented approaches ● Creates an individual trajectory for each student with special educational needs with the help of specialists and provide support within the framework of their qualifications

Course title	**Modern technologies in primary education**
Component	Subject component, Optional component
Cycle	Major disciplines
Module	Interdisciplinary professional skills 16 academic credits
Academic credits	3
Course / competence description	The purpose of this course is to improve the following areas of subject competences: ● Competence area for Theoretical knowledge in the field of teaching primary school subjects (2) ● Competence area for Methodological skills in the field of education of primary school students (4) ● Competence area for Research (9) ● Competence area for Professional values and

	development (12, 13, 14)
	The course focuses on the formation of pre-service teachers' subject competences related to the use of various teaching technologies for primary school students, as well as an understanding of modern approaches to primary education. Pre-service teachers get acquainted with learning technologies, including alternative approaches to teaching through the study of best practices and scientific research in the field of education. In pedagogical practice and practical classes, they are able to apply some strategies in using the technological process of some of the studied modern educational technologies.
Learning outcomes	**Pre-service teachers demonstrating competence can:** ● identify health-saving, gaming, information and communication, project activities and explain their differences by key features ● apply some technological processes in practical classes to achieve learning outcomes for each student ● argue for the choice of technologies to create a prosperous and inclusive, safe school environment and support continuing education ● design a lesson fragment based on the studied pedagogical technologies and play it in a simulation lesson. ● demonstrate teamwork skills in designing lesson fragments and the ability to present a lesson fragment as a teacher

FINAL ATTESTATION 8 academic credits

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.

Final attestation work *(Oral Exam, Written Exam, Diploma work, Research project, Development project, Organisational project, Strategic project, Art project)*

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	ECTS
COMPULSORY COMPONENT (CYCLE OF GENERAL EDUCATION STUDIES)	**56**
MANDATORY STUDIES	**51**
Module of historical and philosophical competencies	**10**
History of Kazakhstan 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).	5
Philosophy 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.	5
Module of socio-political knowledge (sociology, political studies, cultural studies, psychology)	**8**
Sociology 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.	2
Political studies 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,	2

ideology; development, modernization; conflicts and crises. World politics, modern international relations.	
Cultural studies 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".	2
Psychology 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	2
Instrumental and communication module	**25**
Russian /Kazakh language 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.	10
Foreign language 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.	10
Information and communication technologies 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.	5

Smart technology. E-technologies. E-business. E-learning. E-government. ICT in industries. Prospects of ICT development.	
Health Promotion module	**8**
Physical education 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.	8
OPTIONAL COMPONENT	**5**
Basics of Law and Anti-Corruption Culture The study of the discipline is aimed at considering the issues of the main branches of law, which give a general idea of the role of legislative norms, and also provides for the study of the formation of anti-corruption worldview and legal culture of students	5
Basics of Economics and Business The discipline forms an economic way of thinking, theoretical and practical skills in organizing successful entrepreneurial activities of enterprises in a competitive environment	5
When studying this discipline, students will master the methodology and practice of effective management of behavior and interaction of people through the use of leadership qualities, styles, methods of influence at the level of the enterprise, region and country as a whole	5
Ecology and Basics of Life Safety The discipline will study the current state and negative factors of the environment, bioecology, biosphere and humanity, security problems in the "Human-environment" system, natural man-made and military emergencies, ensuring the safety of human interaction with the environment; identification of harmful and dangerous factors	5
Basics of Research and Academic Writing The discipline is aimed at the study of research methods and academic writing in the field of study. Students will study the conceptual apparatus and basic stages of research activities, classification of methods, areas of their application. Students will acquire skills of quantitative and qualitative analysis of scientific research and will be able to present their results in the form of publications and presentations in the academic environment.	5
Total academic credits	**56**

4.4 Progression of the studies

Modules and courses	BA degree, 4 academic years							
	1. year		2. year		3. year		4. year	
	1 sem	2 sem	3 sem	4 sem	5 sem	6 sem	7 sem	8 sem
PEDAGOGICAL COMPONENT								
SUPPORTING LEARNERS AS INDIVIDUALS – 17 academic credits								
Psychology in Education and Concepts of Interaction and Communication 4 academic credits			4					
Educational Science and Key Theories of Learning 3 academic credits			3					
Inclusive Educational Environment 3 academic credits					3			
Age and Physiological Features of the Development of Children 3 academic credits			3					
Teaching Planning and Individualization of Learning 4 academic credits						4		
TEACHING AND ASSESSMENT FOR LEARNING – 9 academic credits								
Teaching Methods and Technologies 5 academic credits				5				
Assessment and Development 4 academic credits					4			
TEACHER AS A REFLECTIVE PRACTITIONER – 9 academic credits								

Pedagogical Research 4 academic credits			4					
Research, Development and Innovation 5 academic credits							5	

TEACHER AS A FACILITATOR OF LEARNING (PEDAGOGICAL PRACTICE) – 29 academic credits

Introduction to the teaching profession (1st year pedagogical practice) 2 academic credits		2						
Psychological and pedagogical assessment (2nd year pedagogical practice) 2 academic credits				2				
Pedagogical approaches (3rd year pedagogical practice) 6 academic credits						6		
Research and innovation in education (4th year pedagogical practice) 15 academic credits								15
Pre-Diploma Practice 4 academic credits								4

COMPULSORY COMPONENT

HISTORICAL AND PHILOSOPHICAL COMPETENCIES – 10 academic credits

History of Kazakhstan 5 academic credits	5							
Philosophy 5 academic credits	5							

SOCIO-POLITICAL KNOWLEDGE – 8 academic credits									
Sociology 2 academic credits			2						
Political studies 2 academic credits			2						
Cultural studies 2 academic credits			2						
Psychology 2 academic credits			2						
INSTRUMENTAL AND COMMUNICATION – 25 academic credits									
Russian /Kazakh language 10 academic credits	5	5							
Foreign language 10 academic credits	5	5							
Information and communication technologies 5 academic credits	5								
HEALTH PROMOTION – 8 academic credits									
Physical education 8 academic credits	2	2	2	2					
Optional Component – 5 academic credits									
Basics of Law and Anti-Corruption Culture			5						
Basics of Economics and Business									
Basics of Leadership									
Ecology and Basics of Life Safety									
Basics of Research and Academic Writing									
SUBJECT COMPONENT									
Conceptual foundations of mathematical education 4 academic credits	5								

Nature and society 5 academic credits		6						
Primary school pedagogy 5 academic credits			5					
Psychology of preschool and primary school age 5 academic credits			5					
Theory and technology of educational work in primary school 5 academic credits				5				
Global perspectives in education 5 academic credits				5				
Local history 5 academic credits								
Leisure pedagogy 4 academic credits								
Ethnopedagogy 5 academic credits								
Methodic of language education of primary school children 5 academic credits					6			
Methodic of teaching literacy and calligraphy 5 academic credits				5				
Methodic of teaching literary reading 5 academic credits				5				
Children's literature and text analysis 5 academic credits						15		
Methodic of								

teaching a foreign language in primary school 5 academic credits								
Workshop on the formation of speech activity 5 academic credits								
Basics of modern Kazakh/Russian language 5 academic credits								
Pedagogical rhetoric 5 academic credits								
Content and Language Integrated Learning (CLIL) in Primary school 5 academic credits								
Primary school student in the world of a foreign language and culture 5 academic credits								
Methods of teaching mathematics with a practical course on solving problems 6 academic credits					6			
Methodic of teaching natural science and 'learning the world' subjects in elementary school 6 academic credits					6			
Development of the Research Activity in the				5				

Primary School Students/Creating Projects in Elementary Grades 5 academic credits								
Visual arts and work in elementary school/Art Education in Primary School 5 academic credits							5	
Digital learning and media literacy in primary education 4 ECTS								
STEAM-education of primary school students 4 academic credits								
Cognitive development and critical thinking of primary school students 4 academic credits							12	
Theater pedagogy 4 academic credits								
Robotics in primary education 4 academic credits								
Specifics of the educational process in an ungraded primary school 5 academic credits					5			
Distance learning in primary schools 3 academic credits							3	
Safe school environment and child welfare 5								10

academic credits								
Prevention of school bullying 5 academic credits								
Tutoring in primary education 5 academic credits								
Modern technologies in primary education 5 academic credits								
FINAL ATTESTATION - 8 academic credits								
Final attestation								8
Academic credits in total	**32**	**28**	**31**	**29**	**30**	**30**	**33**	**27**

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 students' 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.

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 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
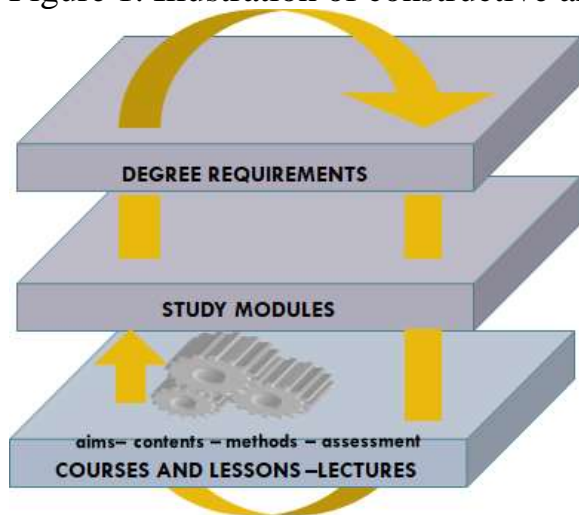
Research-based Initial Teacher Education

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).

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