



EDUCATIONAL PROGRAM

7M01 - Pedagogical sciences

(Code and classification of the field of education)

7M015 - Teacher training in natural science subjects

(Code and classification of the direction of training)

0114

(Code in the International Standard Classification of Education)

M013 - Preparation of teachers of chemistry (kazakh, russian, english language)

(Code and classification of the educational program group)

7M01504 - Chemistry

(Code and name of the educational program)

Master

(Level of preparation)

Semey

Educational program

7M01 – Pedagogical sciences
(Code and classification of the field of education)

7M015 - Training of teachers in Natural science subjects
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PREFACE

Developed

The educational program 7M01504 - Chemistry in the direction of preparation 7M015 - Training of teachers in Natural science subjects on the basis of the State Compulsory Standards of Higher and Postgraduate Education approved by the Order of the Ministry of Science and Higher Education of the Republic of Kazakhstan dated July 20, 2022 No 2 (as amended by the order) was developed by the Academic Committee dated 20.02.2023 No 66).

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Full name of the reviewer	Position, place of work
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Reviewed

At the meeting of the Quality Assurance Commission Natural and Mathematical of the faculty Record N3 "09" January 2024 y.

At the meeting of the Commission on Academic Quality
Recommended for approval by the Academic Council of the University
Protocol No. 1 "06" June 2024.

Approved

at a meeting of the University Academic Council by protocol No. 6/1 of January 19, 2024.

at a meeting of the University Academic Council by protocol No. 11 of June 28, 2024.

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1.Introduction

1.1.General data

The Department of Natural Science Disciplines of the Faculty of Natural Mathematics trains masters in the educational program 7M01504- Chemistry.

Training of masters in the educational program 7M01504- Chemistry is conducted on a full-time basis on the basis of the educational program of higher education in the scientific and pedagogical direction with a training period of at least two years.

Upon completion of training for graduates of the educational program 7M01504- Chemistry is awarded the academic degree of Master of Pedagogical Sciences.

When implementing the educational program, it is planned to use artificial intelligence tools in the educational process, thereby developing digital competencies among students in a rapidly changing technological environment.

The educational program provides for the education of a student with special educational needs in the conditions of a higher educational institution, as well as his socialization and integration into society.

1.2.Completion criteria

The main criterion for the completion of the educational process for the preparation of masters of the scientific and pedagogical direction is the development of at least 88 credits of theoretical training, including 6 credits of pedagogical practice, 13 credits of research practice, as well as at least 24 credits of research work of a master`s student, including internships and the completion of a master`s thesis, at least 8 credits of the final attestations. A total of 120 credits.

1.3.Typical study duration: 2 years

2.PASSPORT OF THE EDUCATIONAL PROGRAM

2.1.EP purpose	Training of highly qualified specialists in accordance with the competencies of this EP, focused on research activities in the field of education
2.2.Map of the training profile within the educational program	
Code and classification of the field of education	7M01 - Pedagogical sciences
Code and classification of the direction of training	7M015 - Training of teachers in Natural science subjects
Code in the International Standard Classification of Education	0114
Code and classification of the educational program group	M013 - Preparation of teachers of chemistry (kazakh, russian, english language)
Code and name of the educational program	7M01504 - Chemistry
2.3.Distinctive features of the OP (double degree/joint, OVPO-partner, Double major, innovative)	-
2.4.Qualification characteristics of the graduate	
Degree awarded / qualification	Master of education under the educational program 7M01504- Chemistry
Name of professional standard	-
Atlas of new professions	-
Regional standard	-
Name of the profession / list of positions of a specialist	<input checked="" type="checkbox"/> teacher of chemistry at universities and colleges; <input checked="" type="checkbox"/> лаборант laboratory assistant in educational organizations and research institutions ; <input checked="" type="checkbox"/> the educational master; <input checked="" type="checkbox"/> должностные officials in educational organizations (Director of a general educational institution, deputy directors for educational work, etc.); <input checked="" type="checkbox"/> методолог methodologist in educational organizations; <input checked="" type="checkbox"/> специалист in the field of pedagogical sciences; <input checked="" type="checkbox"/> специалист specialist in research institutions
OQF qualification level (industry qualification framework)	7
Area of professional activity	<input checked="" type="checkbox"/> research institutions; <input checked="" type="checkbox"/> middle schools, and secondary professional education institutions; <input checked="" type="checkbox"/> state educational authorities; <input checked="" type="checkbox"/> organizations of various forms of ownership that use methods of teaching chemistry in their work.
Object of professional activity	<input checked="" type="checkbox"/> apply modern pedagogical technologies in teaching chemistry; <input checked="" type="checkbox"/> plan and implement research work in the field of pedagogical sciences; <input checked="" type="checkbox"/> conducting scientific and pedagogical activities in general education organizations; <input checked="" type="checkbox"/> organizational and management; <input checked="" type="checkbox"/> social and pedagogical; <input checked="" type="checkbox"/> educational
Types of professional activity	<input checked="" type="checkbox"/> apply modern pedagogical technologies in teaching chemistry; <input checked="" type="checkbox"/> plan and implement research work in the field of

	<p>pedagogical sciences;</p> <ul style="list-style-type: none"> ☒ conducting scientific and pedagogical activities in general education organizations; ☒ organizational and management; ☒ social and pedagogical; ☒ educational
<p>2.5. Graduate Model</p>	<p>As a result of mastering the master`s program, the graduate must develop general cultural, personal, interdisciplinary and professional competencies. A graduate who has mastered the master`s program should have the following general cultural competencies:</p> <ul style="list-style-type: none"> - the ability to abstract thinking, analysis, synthesis; - readiness for an objective assessment of the personal level of claims, to bear social and ethical responsibility for the decisions made; - readiness for communication in oral and written forms in Russian and foreign languages to solve the problems of professional activity; - readiness for self-development, self-realization, use of creative potential. <p>A graduate who has mastered the master`s program must have personal competencies:</p> <ul style="list-style-type: none"> - the ability to independently control the course of their intellectual development and achieve the heights of professional skill and creativity; - willingness to enter into communication on cognitive, business, personal motives; - Ability to demonstrate leadership skills. <p>A graduate who has mastered the master`s program must have interdisciplinary competencies:</p> <ul style="list-style-type: none"> - the ability to solve chemical problems of a theoretical and applied nature, to carry out statistical processing of the results of research activities; - readiness to plan the educational process, in accordance with the content of the chemistry course, to select material, methods, techniques, means for meaningful activities and organization of the developing environment and use it as a means of educating the personality of students at different levels of education; - the ability to integrate knowledge, understanding and the ability to solve problems in new or unfamiliar situations in contexts and within broader (or interdisciplinary) areas related to the field of study. <p>A graduate who has mastered the master`s program must have professional competencies corresponding to the type (types) of professional activity, to which (which) the master`s program is oriented:</p> <ul style="list-style-type: none"> - the ability to generalize and critically evaluate the results obtained by domestic and foreign researchers, identify promising areas, draw up a research program; - the ability to justify the relevance, theoretical and practical significance of the chosen topic of scientific research; - the ability to conduct independent research in accordance with the developed program; - the ability to present the results of the study to the

	scientific community in the form of an article or report.
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3. Modules and content of the educational program

Sociolinguistic and scientific-pedagogical activity

Brief description of the module content

Promotes the formation of sociolinguistic competence and the application of fundamental scientific, pedagogical, managerial, communication knowledge and skills in professional activities

Module disciplines

Foreign language (professional)

History and philosophy of science

Higher Education Pedagogy

Psychology of management

Pedagogical practice

Applied Chemistry

Brief description of the module content

This module provides for the study of modern chemistry teaching technologies in higher education, methods and functions of research management in secondary education. The issues of the application of new information technologies in education management, the school control system, and the certification of teaching staff will also be considered and analyzed. The module is also devoted to the study of the chemical and ecological properties of the lithosphere, hydrosphere, and atmosphere: composition and structure, natural and anthropogenic factors affecting their condition, and methods of soil purification.

Module disciplines

Management of research activities in organizations of secondary education

Methodology and modern technologies of teaching General and inorganic chemistry

Structural and substantive aspects of textbooks by chemical disciplines

Methods of solving chemical problems in higher education

Methodology for constructing tasks on functional literacy of students in chemistry lessons

Methods for solving chemical problems of increased complexity

Environmental and chemical aspects of the study of the atmosphere

Environmental and chemical aspects of the study of the lithosphere

Chemico-ecological aspects of hydrosphere studies

Selected chapters of General chemistry

Modern biochemistry radiation problems

Methodological aspects of the study of chemical disciplines

Brief description of the module content

This module examines the essence and purpose of pre-profile and profile training, general provisions and organization of pre-profile and profile training. Studying the discipline in this module allows you to master methodological approaches to the choice of teaching methods and the use of basic organizational forms of teaching chemistry in the framework of pre-profile and profile elective courses. When studying the courses, students form systematic knowledge about the techniques, stages, strategies of chemistry teaching technologies, about the organization of educational and cognitive activities of students using modern chemistry teaching technologies.

Module disciplines

Modern interactive methods of teaching in a secondary school

The modular technology of training of chemical disciplines in the university

Modern technologies of teaching chemistry in universities

Theoretical and applied aspects of modern organic chemistry and biochemistry

Methodological aspects of teaching the organic chemistry and the high molecular compounds chemistry

The research work of a student, including an internship and the implementation of a master's thesis

Scientific-methodical bases of pre and profile training of students in chemistry

Methodological aspects of teaching of Physical Chemistry and Electrochemistry

Design of research activity of chemistry teacher

Actual problems of modern chemistry

Innovation technologies in teaching chemistry

Methods of development of electronic textbooks on chemical disciplines

Methodological aspects of the study course "Structure of Matter"

Methodological aspects of the study courses "Catalysis" and "Colloid Chemistry"

Methodical aspects of studying of a course "General chemical technology"

Methodological aspects of teaching analytical chemistry and chemistry of rare elements

Methodological aspects of teaching the history of chemistry

Модуль 4. Didactic monitoring

Brief description of the module content

This module examines issues related to the motivation of students to fill gaps in the study of the curriculum. During the study of disciplines, undergraduates develop skills in developing criteria for student academic achievement, evaluating types of educational activities. This module provides for the organization of design and research activities of students in general education institutions. Undergraduates develop a holistic and scientifically based approach to solving a complex of organizational and managerial, educational and methodological, informational, didactic and psychological and pedagogical tasks

Module disciplines

Methods of evaluation and self-esteem of students in the learning process

Criteria-based assessment of students' achievements

Organization of pedagogical scientific research

Research activities of students in chemistry

The research work of a student, including an internship and the implementation of a master's thesis II

Research practice

The research work of a student, including an internship and the implementation of a master's thesis III

Final certification

Brief description of the module content

Writing and defending a master's thesis.

Module disciplines

Master's dissertation

4. Summary table on the scope of the educational program

«7M01504 - Chemistry»

Name of discipline	Cycle/ Component	Term	Number of credits	Total hours	Lec	SPL	LC	IWST	IWS	Knowledge control form
Sociolinguistic and scientific-pedagogical activity										
Foreign language (professional)	BS/US	1	3	90		30		20	40	Examination
History and philosophy of science	BS/US	1	5	150	15	30		35	70	Examination
Higher Education Pedagogy	BS/US	1	3	90	15	15		20	40	Examination
Psychology of management	BS/US	1	3	90	15	15		20	40	Examination
Pedagogical practice	BS/US	3	6	180						Total mark on practice
Applied Chemistry										
Management of research activities in organizations of secondary education	BS/CCh	1	5	150	15	30		35	70	Examination
Methodology and modern technologies of teaching General and inorganic chemistry	BS/CCh	1	5	150	15	30		35	70	Examination
Structural and substantive aspects of textbooks by chemical disciplines	BS/CCh	1	5	150	15	30		35	70	Examination
Methods of solving chemical problems in higher education	AS/CCh	2	5	150	15	30		35	70	Examination
Methodology for constructing tasks on functional literacy of students in chemistry lessons	AS/CCh	2	5	150	15	30		35	70	Examination
Methods for solving chemical problems of increased complexity	AS/CCh	2	5	150	15	30		35	70	Examination
Environmental and chemical aspects of the study of the atmosphere	AS/CCh	2	5	150	15	30		35	70	Examination
Environmental and chemical aspects of the study of the lithosphere	AS/CCh	2	5	150	15	30		35	70	Examination
Chemico-ecological aspects of hydrosphere studies	AS/CCh	2	5	150	15	30		35	70	Examination
Selected chapters of General chemistry	AS/CCh	3	5	150	15	30		35	70	Examination
Modern biochemistry radiation problems	AS/CCh	3	5	150	15	30		35	70	Examination
Methodological aspects of the study of chemical disciplines										
Modern interactive methods of teaching in a secondary school	BS/CCh	1	5	150	15	30		35	70	Examination
The modular technology of training of chemical disciplines in the university	BS/CCh	1	5	150	15	30		35	70	Examination
Modern technologies of teaching chemistry in universities	BS/CCh	1	5	150	15	30		35	70	Examination
Theoretical and applied aspects of modern organic chemistry and biochemistry	AS/CCh	2	5	150	15	30		35	70	Examination
Methodological aspects of teaching the organic chemistry and the high molecular compounds chemistry	AS/CCh	2	5	150	15	30		35	70	Examination
The research work of a student, including an internship and the	AS/US	2	11	330						Total mark on practice

implementation of a master s thesis I										
Scientifically-methodical bases of pre and profile training of students in chemistry	AS/CCh	2	5	150	15	30		35	70	Examination
Methodological aspects of teaching of Physical Chemistry and Electrochemistry	AS/CCh	3	5	150	15	30		35	70	Examination
Design of research activity of chemistry teacher	AS/CCh	3	5	150	15	30		35	70	Examination
Actual problems of modern chemistry	AS/CCh	3	5	150	15	30		35	70	Examination
Innovation technologies in teaching chemistry	AS/CCh	3	5	150	15	30		35	70	Examination
Methods of development of electronic textbooks on chemical disciplines	AS/CCh	3	5	150	15	30		35	70	Examination
Methodological aspects of the study course "Structure of Matter"	AS/CCh	3	5	150	15	30		35	70	Examination
Methodological aspects of the study courses "Catalysis" and "Colloid Chemistry"	AS/CCh	3	5	150	15	30		35	70	Examination
Methodical aspects of studying of a course "General chemical technology"	AS/CCh	3	5	150	15	30		35	70	Examination
Methodological aspects of teaching analytical chemistry and chemistry of rare elements	AS/CCh	3	5	150	15	30		35	70	Examination
Methodological aspects of teaching the history of chemistry	AS/CCh	3	5	150	15	30		35	70	Examination
Модуль 4. Didactic monitoring										
Methods of evaluation and self-esteem of students in the learning process	BS/CCh	1	5	150	15	30		35	70	Examination
Criteria-based assessment of students` achievements`	BS/CCh	1	5	150	15	30		35	70	Examination
Organization of pedagogical scientific research	BS/CCh	1	5	150	15	30		35	70	Examination
Research activities of students in chemistry	AS/US	2	5	150	15	30		35	70	Examination
he research work of a student, including an internship and the implementation of a master s thesis II	AS/US	3	4	120						Total mark on practice
Research practice	AS/US	4	13	390						Total mark on practice
The research work of a student, including an internship and the implementation of a master s thesis III	AS/US	4	9	270						Total mark on practice
Final certification										
Master`s dissertation		4	8	240						

Non -Profit Limited Company «Shakarim University of Semey»

EDUCATIONAL PROGRAM DEVELOPMENT PLAN

"7M01504 - Chemistry"
(code and name of EP) for 2024-2026

Semey 2024

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1 Passport of the Development Plan of EP "7M01504 – Chemistry "

1	The basis for the development	Development program of the Non -Profit Limited Company «Shakarim University of Semey» for 2023-2029 School work plan
2	Terms of implementation	2024-2026
3	Expected results of implementation	In connection with the improvement of the quality of education, the preparation of a competent, adaptable to the changing conditions of the labor market, competitive, innovation-oriented specialist, approaches to the design of educational programs are changing in the Kazakh higher education system. New conditions change not only the role of education in society, but also its goals, objectives and content, which dictates the need for constant updating of programs, teaching materials.

2 Analytical justification of the EP

2.1 Information about the educational program:

The educational program has been developed in accordance with the National Qualifications Framework and Professional Standards, according to the Dublin Descriptors and the European Qualifications Framework. The typical period of mastering the master's degree program is 2 years.

EP 7M01504 - Chemistry was developed by the Academic Committee.

The main criterion for the completion of the educational process is the development of at least 120 credits, with the award of a Master of Pedagogical Sciences degree in the educational program 7M01504 - Chemistry.

2.2 Information about students in the EP

Academic year	2024-2025 Academic year	2025-2026 Academic year
The basis of training		
Grant	7	8
Contract	2	2
Total	9	10

2.3 Internal and external conditions for the development of EP

The OP 7M01504 - Chemistry includes components for preparation for professional activity. This is reflected in the subject matter and the list of tasks of laboratory and practical classes, in the list of types and forms of performing tasks of independent work of the student. Various forms of classes (traditional and frontal and demonstration experiments, case methods and project methods of teaching, problem-based and step-by-step, modular methods of teaching), the implementation of master's theses, the passage of professional practices also form professional qualities. The activation of cognitive and scientific and creative activities is facilitated by the participation of undergraduates in seminars, round tables and conferences.

The curricula of the courses, the content of lectures, practical and laboratory classes are adjusted taking into account the updating of the library fund, the requirements of internal and external regulatory documents and development concepts education. OP training sessions are held in 14 classrooms. The practical training of students of the OP is carried out through industrial practices and research work, which are the most important link in the system of professional training of future specialists. The practices are focused on deepening, systematization, generalization and concretization of theoretical knowledge acquired at the university, on improving professionally significant skills and abilities.

The University has concluded cooperation agreements on the implementation of programs of external academic mobility of students with 30 universities of foreign countries, as well as internal academic mobility of students with 19 universities of the Republic of Kazakhstan.

The general control over the process of employment of graduates of the university is conducted by the head of the Career and Employment Department. Every year, the university appoints those responsible for employment at the faculty level and at the level of graduate departments. Also, the university holds a university-wide job fair with the participation of employers in various fields of activity. According to the OP "7M01504 - Chemistry", specialists are graduated annually, the percentage of employment is 100%.

2.4 Information about teaching staff implementing the educational program

№	Indicators	Ed.ed.	2024-2025 Academic year	2025-2026 Academic year
1	The share of teaching staff with a degree in OP	%	100	100
2	Including the share of teaching staff with a degree	%	100	100

2.5 Characteristics of the achievements of the OP

- ✓ the demand for specialists with higher pedagogical education in the region;
- ✓ the share of graduates who studied under the state order, employed in the specialty is 100%;
- ✓ sufficient level of settlement; the share of full-time teaching staff with academic degrees and titles is 100 %;
- ✓ high lecturing skills and mentoring and the availability of basic education of teaching staff;
- ✓ the use of innovative teaching methods by teachers in training sessions;
- ✓ the presence of continuity in two stages of bachelor's – master's degree;
- ✓ formation of practical skills of students taking into account the real needs of employers;
- ✓ availability of educational laboratories equipped with laboratory equipment and instruments;
- ✓ the information and library fund in the specialty is completed, all disciplines are provided with educational, methodical and scientific literature;
- ✓ active participation of teaching staff and students in cultural events.
- ✓

3 The main objectives of the EP development plan

The goals and objectives of the development of OP 7M01504 - Chemistry in accordance with the mission of the university are:

- ✓ training of biology masters with theoretical and practical knowledge in the field of modern areas of biological sciences and methods of teaching biology, able to apply the acquired competencies in teaching activities;
- ✓ provision of professional training and personal development of a teacher who is able to carry out the process of socio-pedagogical education and upbringing of a child at a high level;
- ✓ filling the labor market with competitive teachers focused on professional growth, civic values, social responsibility and competencies in accordance with the requirements of this field of training;
- ✓ fulfillment of the social order of the society for the development and formation of specialists in demand in the system of biological education;
- ✓ improving the quality of education in accordance with the requirements of national and international standards based on the formation of students' motivation for professional improvement and self-realization;
- ✓ mastering key, subject and professional competencies for subsequent successful professional activity;
- ✓ formation of readiness of undergraduates to organize and conduct research activities in the field of biological education.

4 EP risk analysis

№	Name of risks	Measure to eliminate
1	Outdated educational and laboratory facilities	Creation of modern educational, research and laboratory facilities on the basis of public and private
2	Weak practical skills of students in the use of modern methods	partnerships, purchase of modern laboratory equipment.
3	of scientific research.	To practice the introduction of modern techniques and methods of scientific research in biology.
4	Insufficient development of external and internal	Intensification of international scientific cooperation
5	academic mobility of undergraduates and teaching staff	To increase the stability of teaching staff through the admission of young
6	The risk of reducing the settlement of PPS in the PLO	specialists to the PhD program.

5. Action plan for the development of the EP

№	Criteria	Expected results	unit of measurement	2024-2025	2025-2026

1.1	Updating the educational program based on professional standards, taking into account the recommendations of employers	Conducting an examination of OP 7M01504 - Chemistry in order to improve the practice orientation and development of professional competencies of graduates	fact.	1	1
1.2	Monitoring and updating catalogs of elective disciplines in accordance with the development of key and professional competencies, the demands of the labor market	Improving the quality of the content of educational programs by including elective courses aimed at developing the key and professional competencies of graduates in accordance with the demands	fact.	1	1
1.3	Introduction of modern learning technologies into the educational process, contributing to the development of cognitive activity, communicative ability of students	Improving the quality of teaching academic disciplines, taking into account the novelty and variety of forms of work that contribute to the development of cognitive activity of students.	fact.	All disciplines by components by choice	All disciplines by components by choice
1.3.1	Introduction of mass open online courses (MOOCs) in the educational process according to the educational program 7M01504 - Chemistry	Improving the quality of teaching academic disciplines, taking into account the novelty and variety of forms of work that contribute to the development of cognitive activity	unit	-	-
1.4	Involvement of social partners and employers in the development, examination and implementation of educational programs	Improving the quality of implemented educational programs taking into account market demands and recommendations of employers	unit	1	1
1.5	Development and implementation of elective courses in English	Introduction of disciplines in English into the educational process	unit	-	-
1.6	Conducting seminars and round tables on the application of innovative technologies in the educational process	Introduction of innovative technologies in the educational process	unit	1	1

1.7	Publication of educational, methodical and scientific literature on the implemented OP	Improvement of educational and methodological support in the disciplines of the implemented educational programs	unit	1	2
1.8	Conclusion of contracts with foreign and domestic partner universities in order to develop academic exchange of students	Creation of a database of foreign and domestic partner universities for the development of academic exchange of students of all levels and teaching	unit	10	10
1.9	Inviting students from partner universities to study for a semester, short-term internships, internships, etc.	Development of international recognition of educational programs, implementation of academic mobility programs for students	human	-	-
1.10	Participation of teaching staff and students in international academic exchange programs	Development of international cooperation with foreign universities implementing educational programs in the field of	human	-	-
1.11	Development of outgoing academic mobility of teaching staff and students in the direction of OP 7M01504 - Chemistry	Improvement of the educational program based on the use of the experience of implementing such programs in leading foreign universities	human	1	1
2.1	Professional development and training of scientific and pedagogical personnel for the implementation	The share of teaching staff who have passed advanced training at the national and international level is at least 20%	human	2	2
2.2	Advanced training, retraining, internships of teaching staff at the international level	Completion of at least 2 teachers of the advanced training program, retraining, internships of teaching staff at the international level	human	-	1

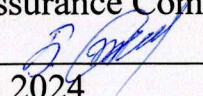
2.3	Promotion of publications of the works of teaching staff in international publications indexed by the Web of Science and Scopus databases	Increase in the share of teaching staff who have published the results of scientific research in publications indexed by the Web of Science and Scopus databases – at least 30% of the total number of teaching staff	%	30	30
2.4	Involvement of practical specialists in teaching and scientific activities	Participation in the implementation of educational programs of practitioners (at least 20% of specialists)	%	20	20
3.1	Conclusion of agreements on international cooperation with foreign universities	Implementation of joint projects, preparation of scientific publications with foreign partners, creation of bases for scientific internships of students	%	32	30
3.2	Attracting foreign students to study under the educational program 7M01504 - Chemistry	Increasing the number of foreign students	human	-	-
3.3	Organization of joint scientific and practical events with international partners	Improving the efficiency of scientific and methodological activities of teaching staff, exchange of experience with foreign partners	unit	-	1
3.4	Invitation of foreign specialists to give lectures and consultations on master's projects and dissertations	Improvement of the content component of educational programs based on the introduction of the experience of foreign specialists in the implementation of educational programs	unit	1	1
3.5	Expansion of cooperation with leading foreign scientific and educational organizations in order to attract the most qualified foreign specialists to the implementation of educational programs	Formation of key and professional competencies in accordance with the practice of leading universities	human	-	-

4.1	Step-by-step equipping of classrooms with technical training tools (panels, interactive and multimedia whiteboards, multifunctional devices, webcam, etc.)	Equipping classrooms assigned to the department with technical training tools (panels, interactive and multimedia whiteboards, multifunctional devices, a webcam, etc.)	unit	9	3
4.2	Automation of the educational process (testing, session management, movement of the contingent of undergraduates, dean's office, department, teaching staff load, schedule, library, syllabuses)	Information management based on the automation of the educational process (testing, session management, movement of the contingent of undergraduates, dean's office, department, teaching staff load, schedule, library, syllabuses)	fact.	All EIsO	All EIsO
4.3	Replenishment of the full-text database of research results of teaching staff and students, teaching staff (articles, monographs, etc.)	Increase in the number of results of scientific works of scientists, research of teaching staff and students, teaching staff (articles, monographs, etc.)	unit	4	3

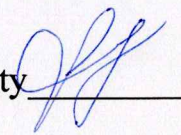
4.4	Expansion of the fund of scientific and educational literature, including on electronic media for implemented educational programs	Ensuring the implementation of educational programs based on modern educational and information resources, including on electronic media	%	100	100
4.5	Monitoring the content and improvement of the faculty's website	Formation of the faculty's website on various aspects of the implementation	%	100	100

Head of the department  Rakhimzhanova A.M., PhD

REVIEWED

at a meeting of the Quality Assurance Commission
 Chairman of the commission  Zheldybaeva B.S.
 Protocol No.6 dated June 06, 2024

AGREED

Dean of the Faculty  MukaevZh.T.
 "06"06 2024