



EDUCATIONAL PROGRAM

8D07 - Engineering, Manufacturing and Civil engineering
(Code and classification of the field of education)

8D072 - Manufacturing and processing
(Code and classification of the direction of training)

0720
(Code in the International Standard Classification of Education)

D111 - Food production
(Code and classification of the educational program group)

8D07202 - Food Safety
(Code and name of the educational program)

Doctor of philosophy (PhD)
(Level of preparation)

Educational program

8D07 -- Engineering, manufacturing and construction industries
(Code and classification of the field of education)

8D072 - Industrial and manufacturing branches
(Code and classification of the direction of training)

0720
(Code in the International Standard Classification of Education)

D111 - Food production
(Code and classification of the educational program group)

8D07202 - Food Safety
(Code and name of the educational program)

Doctor of philosophy (PhD)
(Level of preparation)

PREFACE

Developed

The educational program 8D07202 - Food Safety in the direction of preparation 8D072 - Industrial and manufacturing branches 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).

Members of the Academic Committee	Full name	Academic degree, academic title, position
Head of the Academic Committee	Nurumkhan Gulnur	dean of the Faculty
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Member of the AC	Kasymov Samat	head of the Department
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Member of the AC	Yesimbekov Zhanibek	Deputy director of Semey branch of LLP "Kazakh scientific research institute of food and processing industry", PhD
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Full name of the reviewer	Position, place of work
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Reviewed

at a meeting of the Academic Quality Committee of the Faculty of Engineering and Technology Protocol No. 3 dated 15.01.2024

at a meeting of the Academic Quality Committee of the Research School of Food Engineering Recommended for approval by the Academic Council of the University Protocol No. 1 , dated 06.06.2024

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 "Food Technology" of the Research School of Food Engineering of the NAO of Shakarim Semey University trains doctoral students in the educational program 8D07202 - «Food safety»

The purpose of the educational program in the specialty "Food safety" is to provide conditions for obtaining a full-fledged high-quality professional education, acquiring research, general cultural and professional competencies in the field of quality control and food safety of food products.

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 completing the educational process for the preparation of 8D07202 - «Food safety» is the development of at least 45 credits of theoretical training, as well as at least 10 credits of pedagogical practice, 10 credits of research practice, 123 credits of research work (other types of educational / scientific work), at least 12 credits for writing and defending a doctoral thesis. A total of 180 credits.

1.3.Typical study duration: 3 years.

2.PASSPORT OF THE EDUCATIONAL PROGRAM

2.1.EP purpose	Provision of conditions for obtaining high-quality professional education, acquisition of research, General cultural and professional competencies in the field of quality control and food safety
2.2.Map of the training profile within the educational program	
Code and classification of the field of education	8D07 - Engineering, manufacturing and construction industries
Code and classification of the direction of training	8D072 - Industrial and manufacturing branches
Code in the International Standard Classification of Education	0720
Code and classification of the educational program group	D111 - Food production
Code and name of the educational program	8D07202 - Food Safety
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	Doctor of philosophy PhD in the educational program 8D07202 - «Food safety»
Name of professional standard	Professional standard: Teacher (faculty) of higher and (or) postgraduate education organizations
Atlas of new professions	-
Regional standard	-
Name of the profession / list of positions of a specialist	<p>May hold positions:</p> <ul style="list-style-type: none"> • general manager; • Director (head) of the organization; * Deputy Director (head) of the organization for scientific work; • scientific Secretary; • head of the food industry research laboratory; • in research and production and methodological centers; • in state-owned enterprises of the MES system and the Ministry of agriculture of the Republic of Kazakhstan; in expert and design institutions; * head and leading specialist in research institutes, SPC, sanitary supervision enterprises, institutions of state bodies that control food safety, food production facilities, structural divisions of the Ministry of agriculture; * teacher in higher and secondary educational institutions of food profile; * expert in projects carried out on a tender basis and in various food and agricultural funds, etc.
OQF qualification level (industry qualification framework)	8
Area of professional activity	The field of Professional activity of the PhD doctor is all branches of the processing industry, food certification enterprises, sanitary supervision enterprises, institutions of state bodies that control food safety, research organizations, as well as firms of various forms of ownership, higher education

	institutions.
Object of professional activity	<ul style="list-style-type: none"> - higher education institutions (Shakarim State University, Kazakh national agrarian University, S. Seifullin Kazakh state agrarian and technical University, West Kazakhstan agrarian and technical University named after S. Seifullin).Zhangirkhana, Kokshetau state University named after sh.Ualikhanov); - research institutes (Kazakh research Institute of agriculture and crop production, Kaznii of soil science and Agrochemistry named after U.Ospanova, Kazakh research Institute of potato and vegetable economy, the Kazakh research Institute of rice, Kazakh research Institute of grain farming them.And.And.Of Kazakhstan; Pavlodar agricultural research Institute, Karaganda Institute of Sire, etc.); - scientific production and methodological centers (Scientific-production centers of the Agency for land management, Agency GU "RSMC agrochemical service", etc.); - the state enterprise system to the MES and the Ministry of agriculture; expert and design companies, - agricultural formations, committees, firms, etc. of various forms of ownership. - enterprises that produce and control food products, institutions of state bodies that control food safety.
Types of professional activity	<p>Graduates of the educational program 8D07202 - «Food safety» can perform the following types of professional activities:</p> <ul style="list-style-type: none"> - sanitary and epidemiological, industrial and technological, organizational and managerial, experimental research, educational (scientific and pedagogical). - sanitary-hygienic: - industrial-technological: - organizational and management: - experimental research: - educational (scientific and pedagogical).
2.5.Graduate Model	<p>The main professional competencies for graduates of the OP "8D07202 Food safety"</p> <p>The field of professional activity of the PhD doctor is all branches of the food industry, food certification enterprises, sanitary supervision enterprises, institutions of state bodies responsible for food safety control, research organizations, as well as firms of various forms of ownership, higher education institutions.</p> <p>The graduate of the OP "8D07202 Food Safety" has the following competencies :</p> <ul style="list-style-type: none"> - Apply knowledge of general and theoretical technology and techniques, applied technology and techniques for the analysis, synthesis and evaluation of phenomena, methodological and regulatory materials on technological preparation of production, to ensure the safety of food raw materials and food products -Have an understanding of the scientific foundations

of food safety

- Be able to analyze foreign methods and means to ensure continuous improvement of the effectiveness of the international food safety management system
- Apply the general principles of planning and implementation of the HACCP system
- To understand about the genetic toxicity of substances, about the toxicological and hygienic problems that arise in the food industry
- Identify the threats of preliminary measures identified through the analysis of hazards that threaten the safety of food products in production
- To monitor compliance with the technological process; to take part in the implementation of measures to ensure the safety of food production
- Apply knowledge about the history and origin of the food safety management system, the hazard analysis system and control critical points, about the activities of the Codex Alimentarius Commission
- To participate in the development of high-quality and safe packaging materials and their application in technological and sanitary modes of processing products and requirements for their quality
- To use knowledge of fundamental sciences in the design and development of food safety management systems; to be able to organize research activities to study the physico-chemical, toxicological, microbiological properties in food products, methods of their processing
- Analyze and apply modern foreign methods of analysis and means of ensuring food safety
- Implement a food quality and safety system based on the HACCP system.

3. Modules and content of the educational program

Theory and practice of food production

Brief description of the module content

He is able to apply knowledge of general and theoretical technology and engineering, applied technology and engineering for the analysis, synthesis and evaluation of phenomena, methodological and regulatory materials on technological preparation of production, to ensure the safety of food raw materials and food products

Module disciplines

Academic writing

Research methods

Innovative knowledge

Brief description of the module content

The functions of science. Scientific knowledge, its principles, laws of acquisition, levels of knowledge. The logic of scientific research. The hypothesis of the study. A systematic approach in science and technology. The information approach in the study. Modeling. Transformation of information in the process of research. The problem of choice in scientific research. Planning and management of scientific research. Analysis and presentation of research results

Module disciplines

Scientific Basics of Food Safety

Analysis and improvement of the food safety management system

International safety of technological process and production

Designing and developing of the system of safety management of food products

Production environment and potential sources of hazards

Food Safety Management System Certification

GMO system and safety of food products

Pedagogical practice

Research practice

Modern food safety management systems

Brief description of the module content

Scientific work, the totality of which consists in independent research outlining scientifically based technical, economic or technological solutions, the development or implementation of theoretical provisions of which can be classified as a new scientific achievement. Creating a food security management system is a strategic decision that will help the organization improve overall food security work.

Module disciplines

Statistics and experimental design using R

Doctoral student research work, including internship and doctoral dissertation I

Doctoral student research work, including internship and doctoral dissertation II

Doctoral student research work, including internship and doctoral dissertation III

Doctoral student research work, including internship and doctoral dissertation IV

Doctoral student research work, including internship and doctoral dissertation V

Doctoral student research work, including internship and doctoral dissertation VI

Final certification

Brief description of the module content

Writing and defending a doctoral dissertation

Module disciplines

Doctorly dissertation orau translation

4. Summary table on the scope of the educational program

«8D07202 - Food Safety»

Name of discipline	Cycle/ Component	Term	Number of credits	Total hours	Lec	SPL	LC	IWST	IWS	Knowledge control form
Theory and practice of food production										
Academic writing	BS/CC	1	5	150	15	30		35	70	Examination
Research methods	BS/US	1	5	150	30	15		35	70	Examination
Innovative knowledge										
Scientific Basics of Food Safety	BS/US	1	5	150	45			35	70	Examination
Analysis and improvement of the food safety management system	AS/CCh	2	5	150	30	15		35	70	Examination
International safety of technological process and production	AS/CCh	2	5	150	30	15		35	70	Examination
Designing and developing of the system of safety management of food products	AS/CCh	2	5	150	30	15		35	70	Examination
Production environment and potential sources of hazards	AS/CCh	2	5	150	30	15		35	70	Examination
Food Safety Management System Certification	AS/CCh	2	5	150	30	15		35	70	Examination
GMO system and safety of food products	AS/CCh	2	5	150	30	15		35	70	Examination
Pedagogical practice	BS/US	3	10	300						Total mark on practice
Research practice	AS/US	5	10	300						Total mark on practice
Modern food safety management systems										
Statistics and experimental design using R	BS/US	1	3	90	15	15		20	40	Examination
Doctoral student research work, including internship and doctoral dissertation I	AS/US	1	15	450						Total mark on practice
Doctoral student research work, including internship and doctoral dissertation II	AS/US	2	20	600						Total mark on practice
Doctoral student research work, including internship and doctoral dissertation III	AS/US	3	20	600						Total mark on practice
Doctoral student research work, including internship and doctoral dissertation IV	AS/US	4	30	900						Total mark on practice
Doctoral student research work, including internship and doctoral dissertation V	AS/US	5	20	600						Total mark on practice
Doctoral student research work, including internship and doctoral dissertation VI	AS/US	6	18	540						Total mark on practice
Final certification										
Doctorly dissertation orau translation		6	12	360						

NON -PROFIT LIMITED COMPANY «SHAKARIM UNIVERSITY OF SEMEY»

EDUCATIONAL PROGRAM DEVELOPMENT PLAN

8D07202 - Food safety
for the years 2024-2027

Semey 2024.

Content

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2.3	Internal and external conditions of EP development	5
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1. Passport of the Development Plan for Doctoral Studies EP 8D07202 - Food safety

1	The basis for the development	Development program of the Non -Profit Limited Company «Shakarim University of Semey» for 2023-2029. Faculty work plan
2	Terms of implementation	2024-2027 гг.
3	Expected results of implementation	Training of competitive scientific and pedagogical personnel who possess modern methods and means of research and are able to 1. to use innovative modern technologies in professional activity, to comply with the principles of the food quality assessment system and food safety; 2. critically analyze and experimentally evaluate the content and specific features of the food safety quality assessment system in accordance with current standards, as well as the principles of HACCP and environmental safety.

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. A typical period of mastering an educational program is 3 years.

The main criterion for the completion of the educational process is the development of at least 180 credits, with the award of the degree of Doctor of Philosophy (PhD) in the educational program 8D07202 - Food safety

The main criterion for the completion of the educational process for the preparation of 8D07202 -

«Food safety» is the development of at least 45 credits of theoretical training, including at least 10 credits of pedagogical practice, 10 credits of research practice, 123 credits of research work (other types of educational / scientific work), at least 12 credits for writing and defense of a doctoral dissertation. A total of 180 credits.

Typical training period: 3 years.

DB cycle (VC, KV) – 25 credits

PD cycle (VC, KV)- 20 credit

NIRD -123 credits

Final certification of- 12 credits

The uniqueness of the doctoral program 8D07202 - Food safety is the traditionally formed system of training highly qualified and competitive in the domestic and international labor market scientific and pedagogical personnel with professional and scientific competencies and skills of their implementation in practical and scientific activities. As well as the presence of a dissertation council in the specialty 8D07202 - Food safety since 2016.

The advantage of this educational program is the availability of sufficient material and technical base, highly qualified teaching staff with sufficient scientific and pedagogical experience, high degree of teaching staff. The EP development plan is implemented in accordance with the strategic development of the University and the main national priorities for the development of science and technology.

2.2 Information about doctoral students

Academic year The basis of training	2024-2025 academic year	2025-2026 academic year	2026-2027 academic year	2027-2028 academic year
Grant	2	1	2	2
Contract	-	-	-	-
Total	2	1	2	2

2.3 Internal and external conditions for the development of OP

For the development and implementation of the educational program 8D07202 - Food safety, the department has created favorable and optimal conditions such as:

modern educational and scientific laboratories, technical training facilities. Doctoral students also use the material and technical base of the departments of faculties, the Scientific Center for Radioecological Research and the Scientific Center «Agrotechnopark».

The department has 8 lecture halls (214, 301, 306, 308, 310, 314, 318) and 10 laboratories (205, 206, 207, 208, 215, 305, 307, 309, 311). Lecture halls are equipped with interactive whiteboards and monitors, laboratories with modern instruments and equipment.

Laboratory classes and scientific research of students are conducted in the educational laboratories "Food Technology", «Food examination», «Food safety», «Laboratory of food Biotechnology», «Laboratory of biological products».

The equipment of educational laboratories meets the safety requirements: laboratory passports, safety instructions, a safety magazine, primary fire extinguishing means are available. The level of equipment with modern equipment of educational and laboratory facilities is quite high, which fully corresponds to the goals and objectives of training specialists.

On the basis of the contract, a branch of the department operates on the basis of the SF LLP «Kazakh Research Institute of Processing and Food Industry».

The teaching staff of the department have personal computers and free Internet access.

2.4 Information about teaching staff implementing the educational program

Teaching staff for students includes teachers with academic degrees. The teaching staff of this EP meets the qualification requirements for licensing educational activities and has full knowledge, owns modern teaching methods, which allows you to organize an effective educational process. Consequently, the teaching staff ensures the full quality of the educational program.

The implementation of the educational program 8D07201 - Food Technology at the department is carried out by 9 teachers, including 2 professors, 7 associate professors. The degree of the department is 100%.

Recruitment and distribution of responsibilities is carried out in accordance with the qualification requirements put forward to the teaching staff by the legislative acts of the Republic of Kazakhstan. Certification of full-time teaching staff is carried out annually at the meetings of the commission.

The University by all means of teaching staff provides all the necessary conditions for high-quality work in a professional environment. Thus, sociological surveys are conducted annually to help identify urgent problems and find ways to solve them.

Professional and personal development of the teaching staff, independent professional development, acquisition of knowledge on the taught course of disciplines implementing the EP is stimulated by the following types of incentives and allowances to the official salary of employees: for teaching in English; for internships or studying abroad; for the quality of scientific results; for performing administrative functions; according to the results of a rating system for evaluating the activity of a teacher.

The competence of the teaching staff determines the achievement of high results in fulfilling the mission, increasing the prestige of the university, its competitiveness. The teaching staff of EP 8D07202- "Food safety" has the necessary set of competencies necessary to assess the knowledge of students. The teaching staff of the department meet the qualification requirements declared to the employees of the university. New competencies of teaching staff are acquired through advanced training courses, internships. During the advanced training, professional and pedagogical skills, communication skills, ICT skills,

additional competence, etc. are acquired. For this purpose, the university also conducts intra-university advanced training courses, for example, in the summer of 2023, advanced training courses "Management in education. Development of author's programs", as well as annually, according to the general university plan, teaching staff who need to improve their professional skills are sent to courses.

№	Indicators	Ед.изм.	2024-2025 academic year	2025-2026 academic year	2026-2027 academic year	2027-2028 academic year
1	The share of teaching staff with an academic degree in EP	%	100%	100%	100%	100%

2.5 Characteristics of the achievements of the EP

The achievements of EP 8D07202-Food safety include systematic training of scientific and pedagogical personnel and the defense of doctoral dissertations:

In November 2023, 2 dissertations on EP "Food Safety" were defended at the meetings of the dissertation Council:

- dissertation work of Botakoz Kulushtaeva on the topic: "Ensuring the safety of gluten-free bread with composite flour." Scientific consultant – Ph.D., associate professor G.N. Nurymkhan.

- dissertation work of Ryskul Ashakaeva on the topic "Development of a system for ensuring the quality and food safety of raw meat in sausage production technology." Scientific consultant – Ph.D., Professor B.K. Asenova.

A postdoctoral grant was won by Baykadamova Asemgul Madeniyetovna AR14973033 on the topic: "Ensuring the food safety of meat products of smeared consistency using meat and bone paste" in the specialty 8D07202 — "Food safety". Scientific supervisor - Doctor of Technical Sciences, Professor Kakimov A.K.

Almost all doctoral students have published scientific articles in peer-reviewed journals of the Scopus database and Web of Science, in journals from the List of the Committee for Quality Assurance in the Field of Science and Higher Education of the Ministry of Science and Higher Education of the Republic of Kazakhstan of the Ministry of Internal Affairs of the Republic of Kazakhstan and utility model patents.

The achievements of the EP also include the functioning on the basis of a contract of a branch of the department on the basis of the SF LLP "Kazakh Research Institute of Processing and Food Industry", where doctoral students conduct research and testing of the developed technologies.

3. Main objectives of the EP development plan

One of the requirements for the development plans of the University is their compliance with the mission, strategic goals and objectives of the university, the presence of a section on improving activities.

The analysis showed that the implementation of educational programs is carried out in accordance with the mission, development strategy of the university, vision and values of the organization of education.

The development plan and goals of the EP are developed in accordance with the educational policy of the Republic of Kazakhstan and the Academic Policy of the University. The tasks implemented within the framework of the EP are aimed at developing competencies and practical skills necessary for successful work in the chosen field of activity, possession of basic subject-specialized knowledge and personal qualities that contribute to his social mobility and stability in the labor market.

The main objectives of the EP development plan:

1. Training of scientific and pedagogical personnel that meet the requirements of the modern labor market.
2. Interaction of the university with employers, with leading research centers and universities for quality internship of doctoral students
3. Graduation of competitive specialists with knowledge of a professional foreign language and digital technology.
4. Improving the material and technical base and research potential of EP 8D07201-Food technology.

4. Risk analysis of EP

1. Reduction of the contingent of doctoral students.
2. Insufficient level of academic mobility of students and teaching staff.
3. Insufficient number of teachers who speak foreign languages.
4. Moral and material deterioration of scientific instruments and installations for research
5. Insufficient number of scientific publications of teaching staff in peer-reviewed foreign journals.
6. Low level of proficiency in foreign languages of applicants entering doctoral studies.

№	Name of risks	Measures to eliminate
1	Reduction of the contingent of students in the EP	Strengthening career guidance
2	Insufficient level of language knowledge for the introduction of trilingual education	Creating conditions for enhanced language training of teaching staff, by mandatory attendance of foreign language courses. Organization of foreign language courses for the preparation of applicants
3	Decrease in the level of employment	Targeted distribution of doctoral students
4	Insufficient development of external and internal academic mobility of students and teaching staff	Conclusion of agreements and memoranda with leading universities of the Republic of Kazakhstan, near and far abroad
5	The risk of a decrease in the settlement of the PTS by EP	Timely defense of dissertations by doctoral students and systematic work of the dissertation council

5. Action plan for the development of EP

№	Criteria	Expected Results	Unit of measurement.	2024-	2025-	2026-	2027-
				2025	2026	2027	2028
Direction 1. Educational and methodological support							

1.1	Updating the educational program based on professional standards, taking into account the recommendations of employers	Conducting an examination of the Educational program «technology of food products» in order to increase the practice orientation and development of professional competencies of graduates	actual	-	+	-	+
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 key and professional competencies of graduates in accordance with the demands of the labor market.	actual	+	+	+	+
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.	actual	+	+	+	+
1.3.1	Introduction of mass open online courses (MOOCs) in the educational process according to the educational program	Introduction of disciplines into the educational process improving the quality of teaching academic disciplines, taking into account the novelty and diversity 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 of the implementation of educational programs	Improving the quality of educational programs implemented taking into account market demands and recommendations of employers	Unit	+	+	+	+
1.5	Development and implementation of elective courses in English		Unit	+	+	+	+
1.6	Conducting seminars and round tables on the application of innovative technologies in the educational process		Unit	1	1	2	2
1.7	Publication of educational, methodical and scientific literature on the implemented EP		Unit	1	2	2	2
1.8	Conclusion of contracts with foreign and domestic partner universities in order to develop academic exchange of students of all levels and teaching staff	Introduction of disciplines in English into the educational process	Unit	-	1	1	1
1.9	Inviting students from partner universities to study for a semester, short-term internships, internships, etc.		Person	-	1	1	1

1.10	Participation of teaching staff and students in international academic exchange programs		Person	1	1	1	1
1.11	Development of outgoing academic mobility of teaching staff and students in the direction of	Introduction of innovative technologies in the educational process	Person	1	1	1	1
Direction 2. Teaching staff							
2.1	Professional development and training of scientific and pedagogical personnel for the implementation of educational programs once every 5 years	The share of teaching staff who have passed advanced training at the national level is at least 20%	Person	2	2	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	Person	1	1	1	1
2.3	Promotion of publications of the works of teaching staff in international publications indexed by the Web of Science and Scopus databases	An 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	31	32	33

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	21	21
Direction 3. Internationalization of educational programs							
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	Unit	-	1	1	1
3.2	Attracting foreign students to study under the educational program "Food safety"	Increasing the number of foreign students	Person	-	-	1	1
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	1	1	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	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	Person	1	1	1	1
Direction 4. Logistics and digitalization							
4.1	Step-by-step equipping of classrooms with technical training tools (projectors, panels, interactive and multimedia whiteboards, multifunctional devices, webcam, projector screen, etc.)	Equipping classrooms assigned to the department with technical training tools (projectors, panels, interactive and multimedia boards, multifunctional devices, webcam, projector screen, etc.)	Unit	1	1	1	1
4.2	Automation of the educational process (testing, session management, student contingent movement, dean's office, department, teaching staff load, schedule, library, syllabuses)	Information management based on the automation of the educational process (testing, session management, student contingent movement, dean's office, department, teaching staff load, schedule, library, syllabuses)	actual	+	+	+	+
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	10	11	12	12

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	%	10	11	12	12
4.5	Monitoring the content and improvement of the faculty's website	Formation of the faculty's website on various aspects of the implementation of educational programs.	%	20	21	22	22

Head of the department *Kas* Kasymov S.K.

REVIEWED

at the meeting of the Commission on Academic Quality
of the Research School of Food Engineering

Protocol of the meeting No. 1 dated 06.06.2024

Chairman *Strelitskiy* Toleubekova S.S

AGREED

Dean *Nurymkhan* Nurymkhan G.N.

06.06.2024