NJSC SHAKARIM UNIVERSITY OF SEMEY

EDUCATIONAL PROGRAM

7M07 - Engineering, Manufacturing and Civil engineering
(Code and classification of the field of education)

7M072 - Manufacturing and processing
(Code and classification of the direction of training)

0720
(Code in the International Standard Classification of Education)

M111 - Food production
(Code and classification of the educational program group)

7M07201 - Technology of food products (by application)
(Code and name of the educational program)

Master
(Level of preparation)

Semey

Educational program

7M07 -- Engineering, manufacturing and construction industries
(Code and classification of the field of education)

7M072 - Industrial and manufacturing branches
(Code and classification of the direction of training)

0720
(Code in the International Standard Classification of Education)

M111 - Food production
(Code and classification of the educational program group)

7M07201 - Technology of food products (by application)
(Code and name of the educational program)

Master
(Level of preparation)

Semey 2024

PREFACE

Developed

The educational program 7M07201 - Technology of food products (by application) in the direction of preparation 7M072 - 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	Nurimkhan Gulnur	Dean of the Research School of Food Engineering
Educational program manager	Assirzhanova Zhanna	Senior Lecturer, Candidate of Technical Sciences
Member of the AC	Smolnikova Farida	Associate Professor, Candidate of Technical Sciences
Member of the AC	Kambarova Aray	Senior Lecturer, PhD
Member of the AC	Kazhibaeva Galiya	Candidate of Technical Sciences, Professor of the Department of “Technology of Food and Processing Production” NJSC “Kazakh Agrotechnical Research University named after S. Seifullin”
Member of the AC	Yessimbekov Zhanibek	Deputy Director of the Semipalatinsk Branch of the Kazakh Research Institute of Food and Processing and Food Industry LLP, PhD
Member of the AC	Kairatov Nurzhigit	masters student of MPP-301 group
Member of the AC	Zhienbaeva Enlik	masters student of MPP-301 group

Reviewing

Full name of the reviewer	Position, place of work
Zharykbasova Klara	Doctor of Technical Sciences, Vice-Rector for Academic Affairs Alikhan Bokeikhan University

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.

Content

1.Introduction

1.1.General data

The educational program 7M07201 "Technology of food products" implemented by the Shakarim University of Semey of the Research School of Food Engineering of the Department "of Food Technologyy" in the group of educational programs M111 - "Food production" - was developed taking into account the needs of the regional labor market.
The educational program regulates the goals, expected results, content, conditions and technologies for the implementation of the educational process, assessment of the quality of graduate training in this area of training and contains characteristics of the program and areas of professional activity of the graduate, learning outcomes and acquired competencies, the organization of the educational process that ensures the quality of training of students.

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 competitive specialists with skills in organizational and managerial, scientific and design activities in the field of food technology using theoretical, practice-oriented and scientific-educational approaches
2.2.Map of the training profile within the educational program	
Code and classification of the field of education	7M07 - Engineering, manufacturing and construction industries
Code and classification of the direction of training	7M072 - Industrial and manufacturing branches
Code in the International Standard Classification of Education	0720
Code and classification of the educational program group	M111 - Food production
Code and name of the educational program	7M07201 - Technology of food products (by application)
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 Technical Sciences in the educational program 7M07201 - Technology of food products (by application)
Name of professional standard	Production of meat and meat products Teacher (teaching staff) of higher and (or) postgraduate education institutions
Atlas of new professions	-
Regional standard	-
Name of the profession / list of positions of a specialist	May occupy primary positions: in scientific and pedagogical training - in research institutions, universities and colleges: laboratory head, leading specialist, researcher, teacher, production technologist, manager and specialist in the administrative apparatus of food production enterprises
OQF qualification level (industry qualification framework)	7
Area of professional activity	Master of Technical Sciences in the educational program 7M07201 "Technology of food products" can work as: in scientific and pedagogical training - in research institutions, universities and colleges: head of a laboratory, leading specialist, researcher, teacher, specialist a production technologist, a manager and a specialist in the administrative apparatus of food production enterprises.
Object of professional activity	The objects of professional activity of graduates of the magistracy in the scientific and pedagogical direction are universities, colleges; gymnasium; research institutes; research and production, agricultural, design, expert, administrative institutions; enterprises of the food and processing industry; branch laboratories, subdivisions, sections, sectors,

	departments under local, regional and republican management structures, control and analytical service institutions, standardization and certification centers, etc.
Types of professional activity	Graduates of the Master s degree in the educational program 7M07201 "Technology food products" can perform the following types of professional activities: with scientific and pedagogical training: - conduct scientific and experimental research, carry out design and survey work, scientific and organizational activities at food production enterprises; - to carry out scientific and pedagogical activities in universities, colleges and other educational institutions of the education system; - methodical, working as methodologists in education departments. A master s student who has completed a specialized master s degree can engage in scientific and pedagogical activities only if he has mastered a cycle of disciplines of a pedagogical profile and has passed pedagogical practice. This cycle is mastered during an additional academic period, at the end of which he is issued a corresponding certificate to the main one diploma.
2.5.Graduate Model	Upon completion of the educational program, a graduate of OP 7M07201-Food Technology should have the following competencies: 1. General cultural: - ability for abstract thinking, analysis, synthesis; - ability for professional growth, for independent learning of new research methods; - ability to practically use skills and abilities in organizing research work and in managing a team. 2. General professional: - ability for professional operation of modern technological equipment and scientific instruments in accordance with the field of training; - ability to use modern information technologies for collecting, processing and disseminating scientific information in the field of food technology, ability to use databases, software products and Internet resources to solve problems of professional activity; 3. Professional: - ability to plan, organize and conduct research work in the field of food technology, be able to correctly process the results of experiments and make reasonable conclusions and findings; - the ability to create and improve technologies for the production of food products; - the ability to develop and improve technological processes for the production of food products of plant and animal origin - the ability to design and carry out complex studies to analyze the quality characteristics of food products - the ability to present the results of the work performed in the form of scientific and technical

	reports, reviews, scientific reports and publications using modern information technology capabilities; - the ability to organize, plan and manage production; process current production information, analyze the data obtained and use them in product quality management - the ability to conduct pilot industrial development of technologies; - the ability to control and identify raw materials, finished products, and protect intellectual property rights

3.Modules and content of the educational program

Модуль 1. 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

Teaching practicum

Modern technologies and methods for analyzing food products, modeling technological processes

Brief description of the module content

This module will enable students to acquire skills in analyzing food raw materials, developing product technology and modeling technological processes, applying modern methods of scientific research, processing and interpreting experimental data.

Module disciplines

Engineering of low-waste industries

Innovations in food packaging

Microstructural, physico-chemical analysis of food products

Industrial processing of secondary raw materials

Development of technology for products for gerodietetic nutrition

Green skills technologies in food engineering

Modern methods of analysis of food raw materials and products

Modern mini-processing complexes

Technology of gluten-free products

Waste-free technologies in the poultry processing industry

Methodology of scientific research

Methods of scientific research

Methods of experimental data processing

Modeling of technological processes of food production

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

Organization and planning of experiments

Simulation modeling systems

Technology of protein texturates

Technology of artificial food products

Fundamental and applied research in science

Innovation in technology, food security, intellectual property protection

Brief description of the module content

The disciplines of this module are aimed at acquiring the knowledge necessary for the formation of scientific and methodological approaches in the master`s student in solving professional issues in the study of innovative technologies, food safety of raw materials and products, will allow students to acquire skills in processing vegetables, fruits, grain, meat, milk, fish, and the use of methods for protecting intellectual property

Module disciplines

Genetically modified food products, methods of genetic engineering

Intellectual property protection

Innovative technologies processing - meat, milk, fish

Quality control and safety of food raw materials

International law in intellectual property

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

Fundamentals of HACCP

Patenting

Food safety of raw materials and products

Modern technologies for processing vegetables, fruits, grain

Technology of biologically active substances and biologically active additives

Practice research

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

Final Assessment

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 «7M07201 - Technology of food products (by application)»

Name of discipline	Cycle/ Component	Term	Number of credits	Total hours	Lec	SPL	LC	IWST	IWS	Knowledge control form
Модуль 1. 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
Teaching practicum	BS/US	3	6	180						Total mark on practice
Modern technologies and methods for analyzing food products, modeling technological processes										
Engineering of low-waste industries	BS/CCh	1	5	150	15		30	35	70	Examination
Innovations in food packaging	BS/CCh	1	5	150	15	15	15	35	70	Examination
Microstructural, physico-chemical analysis of food products	BS/CCh	1	5	150	15	15	15	35	70	Examination
Industrial processing of secondary raw materials	BS/CCh	1	5	150	15		30	35	70	Examination
Development of technology for products for gerodietetic nutrition	BS/CCh	1	5	150	15		30	35	70	Examination
Green skills technologies in food engineering	BS/CCh	1	5	150	15		30	35	70	Examination
Modern methods of analysis of food raw materials and products	BS/CCh	1	5	150	15	15	15	35	70	Examination
Modern mini-processing complexes	BS/CCh	1	5	150	15		30	35	70	Examination
Technology of gluten-free products	BS/CCh	1	5	150	15		30	35	70	Examination
Waste-free technologies in the poultry processing industry	AS/CCh	2	5	150	15	15	15	35	70	Examination
Methodology of scientific research	AS/CC	2	5	150	15	15	15	35	70	Examination
Methods of scientific research	AS/CCh	2	5	150	15	30		35	70	Examination
Methods of experimental data processing	AS/CCh	2	5	150	15	15	15	35	70	Examination
Modeling of technological processes of food production	AS/CCh	2	5	150	15	15	15	35	70	Examination
The research work of a student, including an internship and the implementation of a master s thesis (I)	AS/US	2	11	330						Total mark on practice
Organization and planning of experiments	AS/CCh	2	5	150	15	30		35	70	Examination
Simulation modeling systems	AS/CCh	2	5	150	15	15	15	35	70	Examination
Technology of protein texturates	AS/CCh	2	5	150	15	15	15	35	70	Examination
Technology of artificial food products	AS/CCh	2	5	150	15	15	15	35	70	Examination
Fundamental and applied research in science	AS/CCh	2	5	150	15	30		35	70	Examination
Innovation in technology, food security, intellectual property protection										

Genetically modified food products, methods of genetic engineering	AS/CCh	3	5	150	15	15	15	35	70	Examination
Intellectual property protection	AS/CCh	3	5	150	15	15	15	35	70	Examination
Innovative technologies processing - meat, milk, fish	AS/US	3	5	150	15	15	15	35	70	Examination
Quality control and safety of food raw materials	AS/CCh	3	5	150	15	30		35	70	Examination
International law in intellectual property	AS/CCh	3	5	150	15	15	15	35	70	Examination
The 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
Fundamentals of HACCP	AS/CCh	3	5	150	15	30		35	70	Examination
Patenting	AS/CCh	3	5	150	15	15	15	35	70	Examination
Food safety of raw materials and products	AS/CCh	3	5	150	15	30		35	70	Examination
Modern technologies for processing vegetables, fruits, grain	AS/CCh	3	5	150	15	15	15	35	70	Examination
Technology of biologically active substances and biologically active additives	AS/CCh	3	5	150	15	15	15	35	70	Examination
Practice research	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 Assessment										
Master`s dissertation		4	8	240						

NON -PROFIT LIMITED COMPANY «SHAKARIM UNIVERSITY OF SEMEY»

EDUCATIONAL PROGRAM DEVELOPMENT PLAN
7M07201 Technology of food products
2024-2026

Semey 2024

Content

1. Passport of the Development Plan of the Bachelor's EP 7M07201 - "Technology of food products"

1	Basis for development	The development program of the NAO "Shakarim Semey University" for 2023-2029. Action plan for the implementation of the University Development Program for 2023-2029. School work plan
2	Implementation deadlines	2024-2026
3	Expected results of implementation	Training of scientific, scientific and pedagogical personnel of a new formation capable of solving modern problems of science and production caused by the needs of the state and the market, scientific and practical activities of the university, as well as developing breakthrough technologies and solving problems of industrial and innovative development of the country, personality, formation of competitiveness of graduates in this educational program

2. Analytical justification of the EP

2.1 Information about the educational program

The educational program 7M07201 Technology of food products implemented by the Shakarim University of Semey, Research School of Food Engineering, Department of "Food Technology" in the group of educational programs M111 - "Food Production" - was developed taking into account the needs of the regional labor market.

The educational program is implemented on the basis of the following basic documents:

1. License for conducting educational activities KZ38LAA00018432 dated June 25, 2020, Order No. 274 of June 25, 2020
2. State Mandatory Standard of Higher and Postgraduate Education of July 20, 2022 №2.

The direction of training is scientific and pedagogical. The duration of the Master's degree program is 2 years.

The main criterion for completing the educational process is the completion of at least 120 credits, with the award of a master's degree in technical sciences in the educational program 7M07201 Technology of food products.

The purpose of the educational program is to train competitive specialists who possess the skills and abilities of organizational and managerial, scientific and design activities in the field of food technology using theoretical, practice-oriented and scientific and educational approaches.

The uniqueness of the program lies in the opportunity for students to participate in scientific programs, start-up projects, and realize their creative potential through scientific research, creative projects, and sports events.

2.2 Information about students

Academic year Basis of study	2024-2025 academic year	2025-2026 academic year
Grant	5	5
Contract	-	-
Total	5	5

2.3 Internal and external conditions for EP development

The department has created favorable and optimal conditions for the development and implementation of 7M07201 Technology of food products Master's degree programs, such as:

- highlyqualifiedteachingstaff;
- high material and technical equipment of the EP;
- closecooperationwithemployers;
- modern educational and methodological base, with students ' access to information and analytical resources.

resources of the global scientific world;

- use of modern and interactive TSO;
- academic mobility (external and internal);
- high-quality professional infrastructure (educational resources);
- for conducting laboratory and practical classes, there are educational laboratories equipped with special equipment and materials

The availability of high-quality professional infrastructure (educational resources) necessary for the implementation of the EP is a guarantee of training highly qualified specialists of modern times.

On the basis of the agreement on the establishment of a branch of the department, a branch of the department operates on the basis of the SF LLP "Kazakh Research Institute of Processing and Food Industry".

Implementation of academic mobility of students and teaching staff, passing scientific internships by students is carried out with such universities of the Republic of Kazakhstan as: NAO "Kazakh Agrotechnical University named after S. Seifullin", Almaty Technological University, NAO "Toraigyrov University".

With external partners such as: Kemerovo State University, Kemerovo, Federal Altai Scientific Center of Agrobiotechnology, Siberian Research Institute of Cheesemaking, Barnaul, Novosibirsk State Agrarian University, Novosibirsk.

One of the tasks of the department is to develop a joint educational program with leading universities, the implementation of which is aimed at integration into the international scientific space through academic exchange of teachers and students, as well as obtaining two diplomas.

Thus, in 2023, on the basis of a memorandum concluded with the Northwestern University of Agriculture and Forestry (Xianyang, People's Republic of China), it is planned to implement an academic mobility program for students and teaching staff in the EP “7M07201- Technology of food products”.

2.4 Information about teaching staff implementing the educational program

No	Indicators	ofUnited.	2024-2025 academic year	2025-2026 academic year
1	Share of teaching staff with an academic degree in the OP	%	100	100
2	Including the share of teaching staff with an academic degree in the OOD cycle	%	100	100

Faculty members of the Department have the opportunity to improve their skills in leading research centers of the Republic of Kazakhstan and abroad.

The faculty publishes scientific articles not only in industry journals of the Republic of Kazakhstan, but also in journals and impact factors included in the Web of Science and Scopus database.

All teachers have a basic education in their specialty.

In general, the personnel potential of the department allows us to properly ensure the training of specialists in accordance with the requirements.

2.5 Characteristics of the OP's achievements

The educational program 7M07201 "Technology of food products" in 2021 successfully passed an independent specialized accreditation in the accreditation body of the Independent Agency for Accreditation and Rating (hereinafter-NAAR). On April 16, 2021, by the decision of the NAAR Accreditation Council, the educational program of the specialty was accredited and awarded a certificate for a full term of 5 years.

The achievements of EP 7M07201 "Technology of food products" include the training of scientific and pedagogical personnel and the implementation of:

1. IRN BR21882447 "Development of a food safety system in long-term storage based on electrophysical and radiation treatment methods". Orynbekov D.R., Amirkhanov K.Zh., Asenova B.K., Smolnikova F.H., Nurgazezova A.N. Nurymkhan G.N., Baykadamova A.M., Atambayeva Zh.M.

2. M.M. Jumazhanov's postdoctoral grant AP14973033 "Development of drinking yogurt technology with encapsulated probiotic cultures". Scientific supervisor Candidate of Technical Sciences, Associate Professor Zh. Kh. Kakimova.

3. Postdoctoral grant A.M. Baykadamov AP14972876 "Technology of waste-free processing of meat and bone raw materials of cattle for use in the production of meat products and ensuring their food safety". Scientific supervisor: Doctor of Technical Sciences, Professor A.K. Kakimov.

The achievements of the EP also include the functioning of a branch of the department on the basis of the agreement on the establishment of a branch of the department on the basis of the SF LLP "Kazakh Research Institute of Processing and Food Industry".

Concluding a memorandum with the Northwestern University of Agriculture and Forestry (Xianyang, People's Republic of China), it is planned to implement an academic mobility program for students and teaching staff in the EP "7M07201 - Technology of food products".

3. Main objectives of the EP development Plan

The goals and objectives of the educational program are formulated taking into account the requirements and requests of potential consumers, and based on an assessment of the demand for the educational program, which are determined by the interests of potential employers, applicants, the potential of the university, the requirements of the state and society as a whole.

The main goal of the EP and its development is to train competitive specialists who possess the skills and abilities of organizational and managerial, scientific and design activities in the field of food technology using theoretical, practice-oriented and scientific and educational approaches.

The main objectives of the development plan EP 7M07201 "Technology of food products":

1. Training of highly sought-after personnel that meet the needs of the internal and external labor market.
2. Interaction of the university with employers in assessing the competencies of university graduates, satisfaction with the quality of graduate training
3. Increasing the research potential of EP 7M07201 "Technology of food products"

4. Risk analysis of the EP

№	Name of risks	Corrective measures
1	Decrease in the number of students enrolled in the	Development of a comprehensive plan for career guidance for

	EP	university undergraduate students. Attracting a contingent of students on a paid-contractual basis
2	Insufficient level of language knowledge to introduce trilingual education	Strengthening the language training of students and teaching staff through mandatory attendance at foreign language courses created both at the university and outside it
3	Insufficient development of external and internal academic mobility of students and teaching staff	Intensify work with foreign universities for the exchange of students and teaching staff on academic mobility
4	The risk of reducing the degree of teaching staff in the EP	Increasing degree of maturity by defending doctoral dissertations
5	An improving digital infrastructure could lead to rapid aging of the existing infrastructure	Timely planned purchase of modern equipment and instruments
6	Weak activity of teaching staff in publishing scientific works in journals with a high citation index	Publication plan for teaching staff of scientific articles in journals included in the Web of Science and Scopus databases, in scientific journals with an impact factor

5. Action plan for the development of the EP

№	Criteria	Expected results	Unit ed.	2024-2025 academic year		2025-2026 academic year	
				plan	Actual implementation	plan	Actual implementation
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 expert examination of the Educational program 7M07201 "Technology of food products"in order to increase practice orientation and develop professional competencies of graduates	fact.	-		-	
1.2	Monitoring and updating the catalogs of elective subjects in accordance with the development of key and professional competencies, labor market requirements	Improving the quality of educational programs content by including elective courses aimed at developing key and professional competencies of graduates in accordance with the requirements of the labor market.	fact.	-		-	
1.3	Introduction of modern learning technologies in the educational process that promote the development of cognitive activity, communication skills of students	Improving the quality of teaching academic subjects, taking into account the novelty and variety of forms of work that contribute to the development of cognitive activity.	fact.	-		+	
1.3.1	Introduction of mass open online courses (MOOCs) in the educational program 7M07201 "Technology of food products "	Introduction of disciplines into the educational process Improvement of the quality of teaching academic subjects, 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 of the implementation of educational programs	Improvement of the quality of educational programs implemented, taking into account market requests and recommendations of employers	unit	-		1	
1.5	Development and implementation of elective courses in English	Introduction of subjects in English units in the educational process.	unit	-		-	

1.6	Conducting seminars and round tables on the use of innovative technologies in the educational process	Introduction of innovative technologies in the educational process	unit	-		1	
1.7	Publication of educational,-methodical and scientific literature on implemented educational	programs Improvement of educational and methodical provision in the disciplines of implemented educational programs	unit	-		1	
1.8	Conclusion of contracts with foreign and domestic partner universities for the development of academic exchange of students of all levels and teaching staff	Creation of a database of foreign and domestic partner universities for the development of academic exchange of students of all levels and teaching staff	unit	-		-	
1.9	Invite 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.	people	-		1	
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 direction of Food technology	people	-		-	
1.11	Development of outgoing academic mobility of teaching staff and students in the direction of 7M07201 "Technology of food products"	Improvement of the educational program based on the use of experience in implementing similar programs in leading universities of the Republic of Kazakhstan	people	-		-	
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 completed advanced training at the national level is not less than 20%	people	-		-	

2.2	Completion of advanced training, retraining, internships of teaching staff at the international level	Completionof at least 2 teachersprofessional development programs, retraining, internships of teaching staff at the international level	pers.	-		-	
2.3	Promotion of teaching staff publications in international publications indexed by the Web of Science and Scopus databases	Increase in the share of teaching staff who have published research results in publications indexed by the Web of Science and Scopus databases – at least 30% of the total number of teaching staff	%	-		30	
2.4	Involvement of practical specialists in teaching and research activities	Participation of practical specialists in the implementation of educational programs (at least 20% of specialists)	%	-		-	
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	units.	-		-	
3.2	Attraction of foreign students to study under the educational program 7M07201 "Technology of food products"	Increase in the number of foreign students	people.	-		-	
3.3	Organization of joint scientific and practical events with international partners	Improvement of the effectiveness of scientific and methodological activities of teaching staff, exchange of experience with foreign partners	unit	-		-	
3.4	Inviting foreign specialists to give lectures and consultations on master's projects and dissertations	Improving the content component of educational programs by introducing the experience of foreign specialists in the implementation of educational programs	unit	-		1	

3.5	Expansion of cooperation with Leading foreign scientific and educational organizations in order to attract the most qualified foreign specialists to implement educational programs	Formation of key and professional competencies in accordance with the practice of leading universities	people	-		-	
Direction 4. Logistics and digitalization							
4.1	Step-by-step equipping classrooms with technical training tools (projectors, panels, interactive and multimedia whiteboards, multifunctional devices, web cameras, projector screens, etc.)	Equipping classrooms assigned to the department with technical training facilities (projectors, panels, interactive and multimedia whiteboards, multifunctional devices, web camera, projector screen, etc.)	unit	-		1	
4.2	Automation of the educational process (testing, session management, student movement, dean's office, department, teaching staff load, schedule, library, syllabuses)	Information management based on automation of the educational process (testing, session management, movement of the student body, dean's office, department, teaching staff load, schedule, library, syllabus)	fact	+		+	
4.3	Updating the full-text database of research results of teaching staff and students, teaching staff (articles, monographs, etc.)	Increasing the number of results of scientific works of scientists, research of teaching staff and students, teaching staff (articles, monographs, etc.)	unit	-		2	
4.4	Expansion of the fund of scientific and educational literature, including on electronic media for ongoing educational programs	Ensuring the implementation of educational programs based on modern educational and information resources, including on electronic media	%	-		10	

4.5	Monitoring the content and improvement of the faculty website	Formation of the faculty website on various aspects of the implementation of educational programs.	%	-		10	

Head of the department _____ **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 _____ Toleubekova S.S

AGREED
Dean _____ Nurymkhan G.N.
06.06.2024