



NJSC SHAKARIM UNIVERSITY OF SEMEY

# **DEVELOPMENT PLAN EDUCATIONAL PROGRAM**

8D07201 - Technology of food products

Semey

**NON-PROFIT JOINT-STOCK COMPANY "UNIVERSITY OF SEMEY NAMED BY SHAKARIM"**

**APPROVED**

Member of the Board – Vice-Rector for Academic Affairs  
issues \_\_\_\_\_ I.A.Oralkanova

« 26 » \_\_\_\_\_ 2023 y.

**EDUCATIONAL PROGRAM DEVELOPMENT PLAN**

8D07201- Technology of food products

for 2023-2027

Semey-2023 y.

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**1. Passport of the Development Plan of the EP of doctoral studies 8D07201- Technology of food products  
(name of EP)**

1	Basis for development	Shakarim University's strategic plan for 2021-2025. Faculty Work Plan
2	Developed by the Academic Committee of the EP	<p>Manager AC: Nurymkhan G.N. - Dean of the Faculty of Engineering and Technology</p> <p>EP Manager: Amirkhanov K.Zh., Doctor of Technical Sciences, Professor</p> <p>Members of the AC: Almagul Nurgazezova Nurgazezovna Nurgazozova, PhD candidate of technical sciences, associate professor, Idyryshev Berik Arystanbekuly, lecturer, Mayzhanova Aigul Omarbekovna, doctoral student, Raimkhanova Guldana, doctoral student</p> <p>Employer: Zharykbasova Klara Sauykovna, PhD, Vice-Rector for Educational and Methodological Work, Alikhan Bukeykhan University, Isimbekov Zhanibek Serikbekovich, PhD, Deputy Director of SF MSHE of Processing and Food Industry.</p> <p>(in accordance with order No. 99 dated 29.03.2023).</p>
3	Implementation timeframe	2023 to 2027.
4	Expected results of realization	Preparation of competitive scientific and pedagogical personnel, who are proficient in modern methods and means of research and are capable of solving modern problems of science and production, satisfying the needs of society, as well as developing innovative technologies and solving the problems of industrial-innovative development of the country, the individual, the 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 is 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 educational program of doctoral studies is 3 years.

The EP "8D07201- Food Technology" is developed by the Academic Committee.  
code and name of the EP

Considered at the meeting of the Quality Assurance Commission of the Faculty of Engineering and Technology (Minutes № 4/6 of 10.04.2023).

Approved at the meeting of the Academic Council of the University (Minutes No. 8 of 25.04.2023).

The main criterion for the completion of the educational process is the mastering of at least 180 credits, with the award of the degree of Doctor of Philosophy (PhD) in the educational program 8D07201- Food Technology.

The history of training of scientific and pedagogical staff at the Faculty of Engineering and Technology begins from the 90s of the last century. After independence, postgraduate studies, doctoral studies and dissertation council for the defense of candidate and doctoral dissertations were opened.

After the transition to three-level training, PhD-doctoral training was organized, and since 2016 the Dissertation Council for the defense of doctoral and PhD theses on the specialties 8D07201- "Technology of Food Products" and 8D07202 - "Food Safety" has been functioning.

The specialty "Technology of food products" provides training at three levels of bachelor-master-doctor PhD.

The uniqueness of the doctoral program 8D07201- "Technology of food products" is a traditionally formed system of training of highly qualified and competitive in the domestic and international labor market scientific and pedagogical staff with professional and scientific competencies and skills to implement them in practical and scientific activities. As well as the presence of a dissertation council on the specialty 8D07201- "Technology of food products" 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 retention of teaching staff. The development plan of the program is carried out in accordance with the strategic development of the University and the main national priorities of science and technology development.

## 2.2 Information on students

School year Basis of learning	2023-2024 academic year	2024-2025 academic year	2025-2026 academic year
Grant	2	2	-
Treaty	-	-	-
Total	2	2	-

## 2.3 Internal and external conditions for EP development

For the training of students on EP 8D07201-Technology of food products, the department has modern educational and scientific laboratories, technical means of training. Doctoral students also use the material and technical base of the departments of the 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 laboratories "Food Technology", "Food Expertise", "Food Safety", "Laboratory of Food Biotechnology", "Laboratory of Biopreparations".

The equipment of training laboratories meets the safety requirements: there are laboratory passports, safety instructions, safety logs, primary fire extinguishing equipment. The level of modern equipment of training and laboratory premises is high enough, which fully corresponds to the goals and objectives of training specialists.

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

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

Realization of academic mobility of students and teaching staff, passing of scientific internships by students is carried out with such universities of RK as: ATS "Toraigyrov University", ATS "Kokshetau University named after Sh. Ualikhanov, NAO "Kazakh Agrarian-Technical University named after S. Seifullin". S Seifullin".

External partners: FGBNU "Federal Altai Scientific Center of Agrobiotechnology" Department "Siberian Research Institute of Cheese Making", Barnaul, Kemerovo State University, Kemerovo, Novosibirsk State Agrarian University, Novosibirsk, Plovdiv University of Food Technologies, Bulgaria.

## **2.4 Information on teaching staff implementing the educational program**

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

The realization of the educational program 8D07201-Technology of food products at the department is carried out by 9 teachers, including 2 professors, 7 associate professors. The tenure of the department is 65%.

Hiring and distribution of duties is carried out in accordance with the qualification requirements set for teaching staff by the legislative acts of the Republic of Kazakhstan. Annual attestation of full-time teaching staff at the meetings of the commission is carried out.

The University provides all the necessary conditions for quality work in a professional environment. Thus, sociological surveys are conducted annually, which help to identify pressing 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 salary of employees: for teaching in English; for internship or training abroad; for the quality of scientific results; for administrative functions; according to the results of the rating system of evaluation of the teacher's activity.

On the competence of teaching staff depends on the achievement of high results in the fulfillment of the mission, increasing the prestige of the university, its competitiveness. The teaching staff of EP 8D07201- "Technology of food products" has a necessary set of competencies required to assess the knowledge of students. The teaching staff of the department meet the qualification requirements for employees of the university. New competences of the teaching staff are acquired by means of professional development courses and internships. During the advanced training courses professional-pedagogical skills, communication skills, ICT skills, additional competence, etc. are acquired. For this purpose, the university also conducts in-house professional development courses, for example, in the summer period of 2021 professional development courses "Digital

technologies in the educational process of distance learning" were held, as well as annually, according to the general university plan, the teaching staff, who need to improve their professional skills, are sent to the courses.

<b>№</b>	<b>Indicators</b>	<b>unit</b>	<b>2023-2024 academic year</b>	<b>2024-2025 academic year</b>	<b>2025-2026 academic year</b>
1	Share of teaching staff with academic degrees in the OPs	%	100	100	100

### **2.5 Characterization of the achievements of the EP**

The achievements of EP 8D07201-Technology of Food Products include the systematic training of scientific and pedagogical staff and the defense of doctoral dissertations:

In December 2022, 2 dissertations on EP "Technology of food products" were defended at the meetings of the dissertation council:

- Dissertation work of Kambarova Arai Saginbekovna on the theme: "Improvement of technology of meat pate with multicomponent additive". Scientific adviser - Candidate of Technical Sciences, Associated Professor A.N. Nurgazezova.

- Dissertation work of Kabdylzhar Baktybaly Kabyltaykyzy on the theme "The use of chicken meat and bone raw material in the composition of meat product of oily consistency". Scientific adviser - Doctor of Technical Sciences, Professor A.K. Kakimov.

The scientific project on grant financing of the Ministry of National Economy of the Republic of Kazakhstan on the theme: "Development of biosensor for determination of high cumulative xenobiotics in milk and dairy products on the basis of regional monitoring of food safety. Scientific supervisor - Doctor of Science, Professor Kakimov A.K. and a joint project with LLP "Kazakh Scientific Research Institute of Food and Processing Industries" on "Development of resource-saving technology of processing of secondary raw materials of cattle and poultry in the production of meat products of functional orientation". Head - Doctor of Technical Sciences, Professor Kakimov A.K.

The grant of postdoctoral study of Dzhumazhanova Madina Muratovna AR14973033 on a theme: "Development of technology of drinking yogurt with encapsulated probiotic cultures" on specialty 8D07201 - "Technology of food products" was won. Scientific supervisor - Candidate of Technical Sciences, Assoc. Professor Kakimova Zh.Kh.



Almost all doctoral students to the defense have published scientific articles in peer-reviewed journals Scopus and Web of Science, in journals from the List of QAC MSHE RK and patents for utility models.

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

### **3. main objectives of the EP development plan**

One of the requirements to the plans of EP development is their compliance with the mission, strategic goals and objectives of the university, the presence of a section on the improvement of activities.

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

The development plan and objectives 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 its social mobility and sustainability in the labor market.

The main objectives of the EP development plan are:

1. Preparation of scientific and pedagogical staff meeting 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 professional foreign language and digital technology.
4. Improvement of material and technical base and research potential of EP 8D07201-Technology of food products.

### **4. risk analysis of the EP**

1. Decrease in the contingent of doctoral students.
2. Insufficient level of academic mobility of students and faculty.
3. Insufficient number of teachers who speak foreign languages.
4. Moral and material deterioration of scientific instruments and facilities for research performance
5. Insufficient number of scientific publications of teaching staff in peer-reviewed foreign journals.
6. Low level of foreign language skills of applicants entering the doctoral program.

№	Name of risks	Remedial actions
1	Decrease in the contingent of students under the OP	Strengthening career guidance work among graduates of the university's master's program.
2	Insufficient language proficiency to implement trilingual education	Creation of conditions for enhanced language training of teaching staff by means of compulsory attendance of foreign language courses. Organization of foreign language courses for the preparation of applicants
3	Decrease in the employment rate	Targeted distribution of doctoral students
4	Insufficient development of external and internal academic mobility of students and teaching staff	Conclusion of agreements and memorandums with leading universities of the Republic of Kazakhstan, near and far abroad
5	The risk of reducing the degree of teaching staff in the PPC of EP	Timely defense of dissertations by doctoral students and systematic work of the dissertation council

### 5. Action plan for the development of the OP

№	Criteria	Expected results	unit	2023-2024	2024-2025	2025-2026
<b>Orientation 1. Educational and methodological support</b>						
1.1	Updating the educational program on the basis of professional standards, taking into account the recommendations of employers	Examination of the Educational Program "Technology of Food Products" in order to improve practice-orientedness and development of professional competencies of graduates	fact.	-	-	1

1.2	Monitoring and updating catalogs of elective disciplines in accordance with the development of key and professional competencies and labor market demands	Improving the quality of the content of educational programs through the inclusion of elective courses aimed at the development of key and professional competencies of graduates in accordance with the demands of the labor market.	fact.	-	-	1
1.3	Introduction of modern teaching technologies into the educational process, promoting the development of cognitive activity and communicative ability of students	Improving the quality of teaching of academic disciplines, taking into account the novelty and variety of forms of work that promote the development of cognitive activity Improving the quality of teaching of academic disciplines, taking into account the novelty and diversity of forms of work that contribute to the development of cognitive activity.	fact.	-	-	1
1.3.1	Introduction of massive open online courses (MOOCs) on the educational program into the educational process	Introduction in the educational process of disciplines improvement of the quality of teaching of educational 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 and expertise of educational programs implementation	Improving the quality of implemented educational programs taking into account market demands and employers' recommendations	unit	-	-	1

<b>1.5</b>	Development and implementation of elective courses in English	Introduction of disciplines in English into the educational process	unit	-	-	1
<b>1.6</b>	Holding 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
<b>1.7</b>	Publication of educational, educational-methodical and scientific literature on the implemented OPs	Improvement of teaching and methodological support for the disciplines of the implemented educational programs	unit	-	1	1
<b>1.8</b>	Conclusion of agreements with foreign and domestic partner universities in order to develop academic exchange of students of all levels and faculty members	Creation of a base of foreign and domestic partner universities for the development of academic exchange of students of all levels and teaching staff	unit	-	-	-
<b>1.9</b>	Inviting students from partner universities to study for a semester, short-term internships, practical training.	Development of international recognition of educational programs, implementation of programs of academic mobility of students	man.	-	1	1
<b>1.10</b>	Participation of faculty and students in international academic exchange programs	Development of international cooperation with foreign universities implementing educational programs of in the direction	man.	-	1	1
<b>1.11</b>	Development of outgoing academic mobility of teaching staff and students of in the direction	Improvement of the educational program on the basis of using the experience of similar programs in the leading universities of RK.	man.	-	-	1

<b>Orientation 2. Faculty members</b>						
<b>2.1</b>	Professional development and training of scientific and pedagogical staff for the implementation of educational programs once every 5 years	Share of faculty members who have undergone advanced training at the national level at least 20%	man.	1	1	1
<b>2.2</b>	Professional development, retraining, internship of teaching staff at the international level	Completion of at least 2 teachers of the program of professional development, retraining, internship of teaching staff at the international level	man.		-	1
<b>2.3</b>	Promotion of faculty publications in international editions indexed by Web of Science and Scopus databases	Increase in the share of faculty members who have published the results of scientific research in publications indexed by Web of Science and Scopus databases - at least 30% of the total number of faculty members	%	30	35	40
<b>2.4</b>	Involvement of practitioners in teaching and research activities	Participation of practitioners in the implementation of educational programs (at least 20% of specialists)	%	20	20	20
<b>Orientation 3: Internationalization of educational programmes</b>						
<b>3.1</b>	Conclusion of agreements on international cooperation with foreign universities	Realization of joint projects, preparation of scientific publications with foreign partners, creation of bases for scientific internships of students	unit		1	1
<b>3.2</b>	Attracting foreign students to study in the educational program "Technology of Food Products"	Increase in the number of foreign students	man.	-	-	-

3.3	Organization of joint scientific-practical activities with international partners	Improving the efficiency of scientific and scientific-methodological activities of teaching staff, exchange of experience with foreign partners	unit	-	1	1
3.4	Inviting foreign specialists to give lectures and consultations on master's projects and dissertations	Improvement of the content component of educational programs on the basis of introducing the experience of foreign specialists in the implementation of educational programs	unit	-	-	1
3.5	Expansion of cooperation with advanced 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	man.	-	-	1
<b>Orientation 4: Logistics and digitalization</b>						
4.1	Step-by-step equipping of classrooms with technical means of education (projectors, panels, interactive and multimedia boards, multifunctional devices, web camera, screen for projector, etc.)	Equipping classrooms assigned to the department with technical means of education (projectors, panels, interactive and multimedia boards, multifunctional devices, web camera, screen for projector, etc.).	unit	-	-	1
4.2	Automation of the educational process (testing, session management, student contingent movement, dean's office, department, faculty workload, timetable, library, syllabus)	Information management based on the automation of the educational process (testing, session management, student contingent movement, dean's office, department, faculty workload, schedule, library, syllabus)	fact.	-	-	-

4.3	Replenishment of the full-text database of the results of scientific research of faculty and students, teaching staff (articles, monographs, etc.).	Increase in the number of results of scientific works of scientists, research of faculty members and students, faculty members (articles, monographs, etc.).	unit.		1	1
4.4	Expanding the collection of scientific and educational literature, including on electronic media for the educational programs being implemented	Ensuring the implementation of educational programs on the basis of modern educational and information resources, including electronic media	%	-	20	25
4.5	Monitoring of the content and improvement of the Faculty's website	Formation of the faculty website on various aspects of the implementation of educational programs.	%		100	100

Head of Department \_\_\_\_\_

**Kakimova J.H.**

**REVIEWED**

at the meeting of the Quality Assurance Commission of the Faculty of Engineering and Technology

Minutes of the meeting No. 5 "May 23", 2023.

Chairperson QAC \_\_\_\_\_ Abdilova G.B.

**AGREED**

Dean of Faculty \_\_\_\_\_ Nurymkhan G.N.

«26 » may of 2023