

NJSC «S.Seifullin Kazakh Agro Technical Research University»

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Approved
Dean of the Faculty
Veterinary and animal husbandry
Technology

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DEVELOPMENT PLAN
EDUCATIONAL PROGRAMS
BACHELOR'S 6B09102 - FOOD SAFETY,
FOR 2023-2027 ACADEMIC YEARS

Considered at an extended meeting of the Department of Veterinary Sanitation
Protocol № 15A from 03.05.2023.

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1. Passport

The development plan of the educational program – 6B09102 "Food safety" for 2023-2028

1	The grounds for developing a development plan for the EP	The strategy and topics of the EP development plan in accordance with the educational policy of the Republic of Kazakhstan, the purpose of which is to train specialists of a new formation who are competitive in the labor market, have broad fundamental knowledge and practical experience, possess modern methods of diagnosis and treatment of animal diseases, taking into account the requirements of employers
2	The main developers of the EP development plan	Abdrakhmanov Sarsenbay Kadyrovich, D.V.N., Professor; Maykanov Balgabai Sadepovich, D.B.N., Professor; Adilbekov Zhanat Shabanbayevich, Ph.D., Associate Professor; Balji Yuriy Alexandrovich, Ph.D., Associate Professor; Mustafina Raykhan Khusainovna, PhD, senior lecturer. Employers: Abdulkhalikov Sembai Bagdatshauly, General Director, RSU Republican Antiepzootic Detachment of the Ministry of Agriculture of the Republic of Kazakhstan; Sarsebekov Lukman Toleuuly, Director of Production LLP "Tselinaya Delicatessen Factory" in Astana.
3	Deadlines for the implementation of the EP	2023-2028 yy.
4	Volume and sources of financing	Financing from the state budget, attraction of external sources of financing
5	Expected final results of the implementation of the EP development plan	Training of highly qualified specialists in the field of veterinary medicine in accordance with the requirements of domestic and international standards

2. Analytical justification of the program

Updated content of the EP; high quality of graduate training; implementation of the EP with the addition of in-depth training, taking into account the cognitive ability and needs of students.

2.1. Information about the educational program. The relevance of the developed educational program (OP) lies in the fact that it is harmonized with the requirements of a standard curriculum and the competencies of a first-day graduate (veterinary specialist) The World Organization for Animal Health (OIE-OIE), which provides an opportunity to integrate the EP into the international veterinary educational space. The importance of the EP for the national economy is determined by the fact that it trains specialists for the labor market to ensure the veterinary, biological, food and food security of the country.

Educational programs contain theoretical training, including the study of cycles of general education, basic and core disciplines; additional types of training, professional practice, physical education, etc.; intermediate and final certification. The volume of the EP is 300 credits, including 260 credits of theoretical training, 26 credits of professional practice, 8 credits of physical education, 6 credits of final certification.

2.2. Information about students. Currently, 326 students are studying in the specialty 6B091 "Veterinary Medicine" EP 6B09102 "Food safety", of which 268 are in the state language and 58 students in Russian. According to the general education grant, there are 297 students and 29 students on a contractual basis. According to the educational program 7M09102 "Safety and quality of livestock products" (master's degree), 12 undergraduates are studying. According to the educational program 8D09102 – "Sanitary and environmental safety of food products" (doctoral studies), 3 doctoral students are studying.

Information about students in the 2023-2024 academic year

№ p/p	Indicators	2023-2024
6B09102 «Food Safety»		
1	The contingent of students, total:	326
2	The number of students enrolled in state grants	297
3	The number of students studying in the state language	268
4	The number of students on a paid basis	29

2.3. Internal conditions for the development of the EP. To implement the educational program, the department has appropriate material and technical support, including: a veterinary clinic, a food safety laboratory, a parasitological museum of the faculty, as well as specialized classrooms in the disciplines: veterinary and sanitary expertise, veterinary hygiene and sanitation, pathological anatomy of animals, veterinary epidemiology, veterinary and sanitary control at the border and transport, food safety products, parasitology and invasive diseases, internal diseases of animals. Specialized classrooms are equipped with appropriate equipment and devices, in particular an automatic analyzer-Eh by the tensiometric method (ionomer I-160 MI), an EVLISE humidity analyzer, a voltammetric analyzer TA-Lab extended configuration (Laptop HP A1E29EA 635 Athlon), an attachment to a voltammetric

analyzer -TA Ozone, an ELISA analyzer (Uniplan photometer), SomatosMini somatic cell analyzer, automatic device for determining the melting point of Opti Melt, bidistillator, electric distiller, luminometer LUM-1, luminometer SSP, automatic polarimeter, digital refractometer 30 PX, pH meter+pH titers Metrohm 827, pH meter (pH-milk, pH-cheese, pH-meat), potentiometer "Expert-pH" (meat), microwave oven (cabinet), ultrasonic milk quality analyzer EkoMilk Total, ultrasonic milk quality analyzer Lactane 1-4, complex for the determination of protein / nitrogen by the Kjeldahl method "Keltran" with an automatic titration unit, laboratory homogenizer, cryoscan-Mini cryoscan, laboratory reductase thermostat LTR-24, heating plate, analytical scales, laboratory scales MWP-1200, hygrometer of psychrometric type VIT, aspiration psychrometers, bellows aspirator AM-0059, high-precision pH analyzer of liquids PH-200, hygrographs M-21A IT-5TR "Termit", sound level meter Benetech GM1356, aneroid meteorological barometer BAMB-1 Testo 608-H1/H2, etc. (used during laboratory and practical training in the discipline).

Educational and methodological documents on the EP have been developed in accordance with existing regulatory documents such as state mandatory education standards, working curricula, academic calendars, and EEMCDs have been developed in all areas of study. There are relevant enterprises of this industry with which contracts have been concluded to carry out diploma theses.

Special attention is paid to such issues as increasing the level of teaching staff, their completion of advanced training courses in domestic universities, universities of the near and far abroad, research institutions and Republican veterinary laboratories, as well as the invitation of leading specialists of the Ministry of Agriculture of the Republic of Kazakhstan, scientists from higher educational institutions of the near and far abroad.

Strengths:	Weaknesses:
<p>1. Compliance of the content of the educational programs of the State Educational Institution with modern requirements of science and consumers, as well as their regular updating, due to constant changes in the needs of the graduate's competence, processes and economic integration.</p> <p>2. Step-by-step planning of the process of mastering educational programs, according to the trajectory independently chosen by students in accordance with the rules of the credit system of education.</p> <p>3. The combination of theoretical and practical training, independent work in educational programs, as well as the availability of compulsory and elective disciplines, including components for preparing for professional activity, the development of intellectual skills, creative abilities and personality of the student.</p> <p>4. Development and introduction into the educational process of innovative forms, methods of mastering</p>	<p>1. There is an insufficient number of interuniversity student exchange programs and teacher internships.</p> <p>2. A small percentage of teaching staff who speak foreign languages.</p>

educational programs, multimedia tools that provide training for highly qualified specialists.	
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5. Improvement of the intra-university quality management system, the presence of structures for monitoring and monitoring the effectiveness of students' development of educational programs;

6. Entering the European Educational Space;

7. Academic mobility of students and teaching staff

8. Interdisciplinary communication.

9. Provision of computers and Internet access, updating of the library fund.

2.4. Characteristics of the surrounding society. According to OP 6B09102 "Food Safety" (Bachelor's degree), employers are:

1. The first head of the Akmola regional Territorial Inspection of the Committee for Veterinary Control and Supervision of the Ministry of Agriculture of the Republic of Kazakhstan - Abdrakhmanov M.A.;

2. The first head of the Karaganda regional territorial Inspection of the Committee for Veterinary Control and Supervision of the Ministry of Agriculture of the Republic of Kazakhstan - Beketbayev E.M.

3. The first head of the Republican state Institution "Republican antiepidemiological detachment" of the KVKN of the Ministry of Agriculture of the Republic of Kazakhstan - S.M. Abdukhalikov.

4. Director of production of "Factory of Virgin delicacies" LLP, Astana - Sarsebekov L.T.

5. General Director of the RSE at the National Veterinary Reference Center – M.A. Berdikulov

6. General Director of the Republican Veterinary Laboratory of the RSE on PCV, T.A. Elshibaev.

9 contracts have been concluded with organizations, enterprises and business entities, where students, undergraduates and doctoral students practice. Below is the list:

1. Akmola Regional Territorial Inspection of the Veterinary Control and Supervision Committee of the Ministry of Agriculture of the Republic of Kazakhstan;

2. Karaganda Regional Territorial Inspection of the Veterinary Control and Supervision Committee of the Ministry of Agriculture of the Republic of Kazakhstan.

3. Republican state institution "Republican Antiepidemiological detachment" of the Ministry of Agriculture of the Republic of Kazakhstan.

4. LLP "Tselinaya Delicatessen Factory", Astana.

5. RSE on the REO "National Reference Center for Veterinary Medicine".

6. RSE on the REO "Republican Veterinary Laboratory" CVK&N Ministry of Agriculture of the Republic of Kazakhstan.

7. Municipal state enterprise on the right of economic management "Astana vetservice" of the Akimat of Astana city

8. Astana Laboratory of Agricultural Products LLP of the Ministry of Agriculture of the Republic of Kazakhstan.

9. SSP on the REO Stepnogorsk Veterinary Station at the Department of Veterinary Medicine of the Akmola region.

The department conducts dual training classes, according to the schedule of classes approved by the director of the Department, field classes are conducted in two disciplines: "Veterinary epidemiology" 4th year (teachers Beisenbayev K.K., Bakishev T.G.), "Food safety" 4th year (teachers Mustafina R.H., Zhanabayeva D.K.).

Undergraduates and doctoral students undergo research internships in the neighboring countries (Omsk State Agrarian University, Kazan State Academy of Veterinary Medicine named after N.E. Bauman, Novosibirsk State University, (Russia) and abroad (Istanbul Agrarian University (Republic of Turkey), Uppsala Agrarian University (Kingdom of Sweden), Xinjiang University (China) and Warsaw Agrarian University).

Opportunities for graduates of the specialty, as well as emerging threats.

<p>Opportunities:</p> <ol style="list-style-type: none"> 1. After mastering the bachelor's degree programs, graduates have the opportunity to continue their education in the educational programs of higher education. 2. The ability of educational programs to bring them to a new high-quality level, including the international level. 3. Cooperation of agricultural universities of the republic in the training of specialists, exchange of experience in improving the effectiveness of educational programs. 	<p>Risks:</p> <ol style="list-style-type: none"> 1. The weakness of employers is to formulate requirements for the competence of a graduate, which often differ from the content of the mastered educational programs. 2. The high cost of educational services compared to the average market price offered by competing universities.
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2.5. Information about teaching staff implementing educational programs.

The implementation of the educational program 6B09102 "Food safety" in the specialty "Veterinary Medicine" is carried out by a teaching staff of 25 people.

The list of the teaching staff of the department involved in the implementation of the EP

Academic year	Total teaching staff	Professors	Docents	Associate Professors профессоров	Senior Lecturers		Assistants		Degree,%
					with a degree	without degree	with a degree	without degree	
2023-2024	25	2	7	2	11	1	-	2	84

There are 2 Doctors of Sciences, 12 candidates of Sciences, 8 Phd, 3 Masters of Sciences in the staff of the teaching staff of the department implementing the EP.

During the reporting period, the average age of teachers has been stable at the level of 42-45 years. 80% can teach classes in Kazakh, 10% in English. The leading teachers of the department annually take various advanced training courses.

The degree of the department is 84%, which tends to grow annually.

Employees of the department annually take advanced training courses in leading scientific centers of this profile in the Republic, Russian Federation, Ukraine and foreign countries (Turkey, Sweden, Georgia, Germany, People's Republic of China, Poland). For the period from 2019 to 2024. teachers of the department "Veterinary Sanitation" have undergone advanced training in universities of the Republic of Kazakhstan (KazNAU, KSU), far abroad (Istanbul Agricultural University (Republic of Turkey), Uppsala Agricultural University (Kingdom of Sweden), Xinjiang University (China) and Warsaw Agrarian University Professor Abdrakhmanov S.K., associate professors Adilbekov Zh.Sh., Baldzhi Yu.A., Bainiyazov A.A., senior lecturers Zhanabayeva D.K., Yesembekova G.N., Murzakayeva G.K., Paritova A.Y., Mustafina R.Kh., Tokayeva M.O., Akhmetov A.N., Aitkozhiba B.Zh., Ashimova K.K., Tleulesov R.B. et al.

2.6. Characteristics of achieving EP. The department conducts scientific research on six grant funding projects, 1 international (PRC) and two commercialization projects, in which students are directly involved. The topics of their diploma theses correspond to this area of scientific research. Students of specialty 6B091 "Veterinary Medicine", OP 6B09102 "Food Safety" annually participate in the Republican Subject Olympiad held on the basis of the Kazakh National Research University in Almaty. In the 2022-2023 academic year, 4th year students Nesipbay A., Yanushko E., Nugmanova M. participated in the XI-Republican Subject Olympiad, which was held on April 17-18, 2023 and took 2nd place in the team, as well as in the individual competition Nesipbay A. took 2nd place.

In accordance with the requirements of the labor market and at the suggestion of employers, new elective disciplines are being introduced into work curricula and catalogs of elective disciplines.

Currently, in connection with the state program for the intensive development of the livestock and poultry industry, there is a need for veterinarians. In the Republic of Kazakhstan, according to the latest statistical information, the current need for veterinary specialists is within 8,000 in this profile.

After graduating from the university, graduates are employed in all business entities, veterinary laboratories and other veterinary facilities throughout the region of the Republic.

3. Characteristics of the problems that the EP development plan is aimed at solving, and justification for the need to solve them.

Educational programs were created to train personnel to carry out professional activities in the field of ensuring the quality and safety of food products of animal and plant origin. Trained personnel in the educational program must be able to carry out veterinary and sanitary supervision at veterinary facilities, carry out veterinary

activities, determine the quality and safety of food products, provide veterinary care to animals, as well as possess the skills of scientific, production and organizational and management activities.

4. The main goals and objectives of the Development Plan with indications of the timing and stages of its development. The development plan for the educational program 6B09102 “Food Safety” was developed based on requests from employers. The goal of the educational program 6B09102 “Food Safety” is to train highly qualified specialists in the area of ensuring the quality and safety of food products, which is currently relevant and a priority. In this regard, the content of the educational program is aimed at obtaining knowledge and practical skills for carrying out veterinary and sanitary examination of livestock and crop products in accordance with the requirements of the Eurasian Economic Union and the WTO, as well as the recommendations of international veterinary organizations (OIE (OIE-OIE), FAO, WHO, etc.).

The main objectives of the Development Plan are the following:

№	Task name	Stages of development	Development timeframe
1	increasing the level of quality of education in accordance with the requirements of domestic and world standards	during the educational process	the entire period of study
2	formation of theoretical and practical knowledge, skills and abilities necessary for their implementation in further professional activities, as well as for transition to the second stage	in senior years	the entire period of study
3	consultation with employers and research institute scientists when choosing relevant and practically significant topics for dissertations.	consultations with employers and stakeholders	At the final stage of specialty training.

5. Measures to reduce the impact of risks for the EP. Increasing the number of students, fully providing educational and methodological literature, concluding agreements with business entities for internships and further employment, timely planned purchase of modern equipment, instruments and reagents. Involvement in research work, the work of scientific clubs, increasing the activity of students in the social, cultural and sports life of the university. Functioning of the Food Safety Laboratory. Currently, agreements have been concluded with the Xinjiang Agricultural University, Istanbul Agrarian University, Uppsala University, Giessen University, Warsaw University of Natural Sciences, etc. to attract leading professors to give lectures and conduct laboratory and practical classes. In addition, there are agreements with neighboring universities (Novosibirsk, Omsk, Troitsk, Voronezh, Moscow, Saratov, Kazan, Irkutsk, etc.).

6. Action plan for the development of EP.

Plan for the development of an educational program in the specialty of bachelor's, master's and doctoral studies.

№	Name of events	Implementation deadlines	responsible	Expected results	Resource support
1	Formation of a commission to update educational programs	April 2023	Adilbekov Zh.Sh., Abdrakhmanov S.K., Bainiyazov A.A., Yeseneeva S.S., Mustafina R.Kh.	The team of authors will be determined by order of the university rector.	
2	Updating the goals and objectives of educational programs	May-June 2023	Adilbekov Zh.Sh., Abdrakhmanov S.K., Bainiyazov A.A., Yeseneeva S.S., Mustafina R.Kh.	According to modern requirements, the goals and objectives of educational programs will be developed	
3	Determination of competencies of bachelor's, master's and doctoral studies and specialty disciplines	May-June 2023	Adilbekov Zh.Sh., Abdrakhmanov S.K., Bainiyazov A.A., Yeseneeva S.S., Mustafina R.Kh.	The competencies of bachelor's, master's, doctoral and specialty disciplines will be determined	
3.1	Updating and supplementing the common position on competencies of educational programs with employers	June 2023	Adilbekov Zh.Sh., Abdrakhmanov S.K., Bainiyazov A.A., Yeseneeva S.S., Mustafina R.Kh.	Common positions on EP competencies will be developed with employers	
3.2	updating the general position on the competencies of the educational program of specialty disciplines with employers	June 2023	Adilbekov Zh.Sh., Abdrakhmanov S.K., Bainiyazov A.A., Yeseneeva S.S., Mustafina R.Kh.	Common positions on the competencies of EP disciplines will be developed with employers	
3.3	Formation and coordination of EP competencies and specialty disciplines with Dublin descriptors	June 2023	Adilbekov Zh.Sh., Abdrakhmanov S.K., Bainiyazov A.A., Yeseneeva S.S., Mustafina R.Kh.	The competencies of EP disciplines will be formed in accordance with the Dublin descriptors	
4	Formation of an educational program in	June 2023	Adilbekov Zh.Sh., Abdrakhmanov S.K., Bainiyazov	The educational program is formed in accordance with	

	accordance with professional standards		A.A., Yeseneeva S.S., Mustafina R.Kh.	professional standards	
5	Drawing up an academic calendar and a working curriculum for the specialty in accordance with the developed educational programs	June 2023	Adilbekov Zh.Sh., Abdrakhmanov S.K., Bainiyazov A.A., Yeseneeva S.S., Mustafina R.Kh.	An academic calendar and curriculum for the specialty has been compiled in accordance with the developed EP	
6	Consideration of the updated educational program at an extended meeting of the department with the participation of employers	June 2023	Department of Veterinary Sanitation, employers	EP will be considered at an extended meeting of the department with the participation of employers	
7	Registration of updated educational programs in the UHEP	August 2023	Adilbekov Zh.Sh., Kabzhanova A.M., Mustafina R.Kh.	The EP will be reviewed and approved by the Faculty Academic Council	

7. Mechanism for implementing the EP development plan. Carry out targeted work to increase the number of grants in the specialty "Veterinary Medicine". To implement the educational program, department staff have developed catalogs of elective disciplines with the direct participation of employers. Trips for students to basic farms and higher educational institutions in near and far abroad countries will be organized. Leading scientists from near and far abroad will be invited to conduct lectures and practical classes for students. Dual training agreements have been signed, where practical classes will be conducted on the basis of the Republican State Enterprise at the Republican Veterinary Laboratory, National Reference Center for Veterinary Medicine in Astana. When organizing the "Graduate Fair", employers from various forms of economic entities of veterinary institutions from other regions of the Republic of Kazakhstan will be invited.

8. Assessment of the socio-economic efficiency of the implementation of the EP development plan.

Socio-economic effect from the implementation of the EP development plan.

As a result of the implementation of educational programs on farms, scientific developments and recommendations of scientists from the department will be introduced, and targeted work will be carried out to implement the state program "With a diploma to the village", i.e. explanatory work among graduates of the faculty.

9. Model of a graduate of this EP.

As a result of training, the graduate must:

Have effective communication and social skills, including the ability to:

- work with scientists from other institutions in joint projects and participate in events (interpersonal competence);
- demonstrate teamwork skills, demonstrate competence in negotiations and the ability to demonstrate organizational skills (interpersonal competence);
- integrate with other organizations in different cultural contexts (interpersonal competence);

- present work in an accessible form (interpersonal competence);
- perceive innovations and changes positively (interpersonal competence);

Know and understand the basics of veterinary legislation of the Republic of Kazakhstan (instrumental competence);

- compliance with the rules of speech culture (interpersonal competence);
- organization, planning and direct implementation of a set of works on technology, hygiene and veterinary and sanitary examination of livestock, poultry, fish farming and beekeeping products, to ensure the quality and safety of products during production, processing, storage and transportation; classification of diseases, the specifics of their etiology and symptoms, modern methods of diagnosis, prevention and treatment of animals (subject-specific competence);

Have skills:

- carrying out professional activities, including using modern scientific and information technologies (instrumental and subject-specific competencies);

- public speaking (instrumental competence);

- performing motivational, diagnostic, correctional, communicative methodological work in the conditions of using modern scientific achievements;

- application of information and telecommunication technologies in professional activities at the level of a qualified user (subject-specific competence);

- use of methods and techniques for the development of creative thinking in professional activities (subject-specific competence);

- determining the quality and safety of livestock, poultry, fish and beekeeping products during production, processing, storage, transportation, as well as contamination with foreign substances;

- clinical examination of animals, diagnosis, therapeutic procedures; treatment and prevention of non-contagious diseases of animals, birds and fish; drawing up a plan of treatment and preventive measures (systemic, subject-specific competencies).

Be competent:

- in the field of quality and safety of food products, veterinary and sanitary control and supervision during the production, storage and transportation of livestock products and raw materials of animal origin, as well as in the diagnosis, treatment and prevention of contagious and non-contagious diseases.

Head of the department



Adilbekov Zh.Sh.