MINISTRY OF EDUCATION AND SCIENCE OF THE REPUBLIC OF KAZAKHSTAN

M. AUEZOVSOUTHKAZAKHSTAN STATE UNIVERSITY

« APPROVE»

Rector\_\_\_\_\_\_\_\_\_\_\_\_

Doctor of History, academician D.P.Kozhamzharova

«\_\_\_»\_\_\_\_\_\_\_\_\_\_20\_\_\_.

**EDUCATIONAL PROGRAM**

6В08210 –Production technology of livestock products

|  |  |
| --- | --- |
| Registrationnumber |  |
| Code and classification of education sphere | 6В08 Agricultureand bio resources |
| Codeandclassificationoftraining direction | 6В082 Livestock |
| Group of educational programs | В078 Livestock |
| Type of EP | The current |
| The level ofISCE | 6 |
| The level ofNQF | 6 |
| The level ofSQF | 6 |
| Languageoflearning | Kazakh, Russian, English |
| Training period | 4 years |
| Form of training | Full-time, вечерняя, DLS |
| Laborcontentof EP | 241 credits |
| Distinctivefeaturesof EP | The use of dual training system |
| Universitypartner(CEP) | - |
| Universitypartner(DDEP) | - |
| Socialpartner(DE) | - |

Shymkent, 2020

Implementators:

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EP reviewed by the Committee on innovative learning technologies and methodological support HS «Agricultural sciences », minutes № dated « » 20 .

Chairman MC (committee) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Abdullayeva G. A.

signature

Reviewed and recommended for approval at the meeting of the educational-methodical councilM. Auezov SKSU.

minutes№\_\_\_dated\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

Approved by the decision of the University’s Academic Council

minutes№\_\_\_\_\_ dated«\_\_\_\_» \_\_\_\_\_\_\_\_\_\_201\_\_.

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**Introduction**

1. **Application area**

Intended to implement the training of bachelors in the educational program(further - EP) *«*6В08210 –Production technology of livestock products *»* in RSE on REM M. Auezov South-Kazakhstan State University MESRK.

1. **Regulatory documents**

The Law of the Republic of Kazakhstan «On Education» (with amendments and additions as of 04.07.2018.);

Model rules for the activities of educational organizations implementing educational programs of higher and (or) postgraduate education, approved by order of the Minister of Education and Science of the Republic of Kazakhstan from October 30, 2018 №595 (Registered in the Ministry of Justice of the Republic of Kazakhstan on October 31, 2018 № 17657);

State obligatory standards of higher and postgraduate education, approved by order of the Minister of Education and Science of the Republic of Kazakhstan from October 31, 2018 № 604;

Rules for the organization of the educational process on the credit technology of education, approved by order of the Minister of Education and Science of the Republic of Kazakhstan fromApril20, 2011 № 152 with amendments and additions from October 12, 2018№563;

Professional standard. "Breeding birds". Order of the Board of the National chamber of entrepreneurs of the Republic of Kazakhstan "Atameken" No. 339 dated 11.12.2018 y.

Professional standard. "Selection activities (breeding) in animal husbandry".Order of the Board of the National chamber of entrepreneurs of the Republic of Kazakhstan "Atameken" No. 263 dated 26.12.2019 y.

Professional standard. "Breeding of dairy camels" Order of the Board of the National chamber of entrepreneurs of the Republic of Kazakhstan "Atameken" No. 263 dated 26.12.2019y.

1. **The concept of the educational program**

The purpose of the educational program is coordinated with the university’s mission and aims at preparing the country's intellectual elite, possessing advanced knowledge of entrepreneurial skills, fluent in three languages, demonstrating conceptual, analytical and logical thinking skills, creative approach in professional activities, able to work in a national and international team, assimilating lifelong learning strategies.

The educational program is harmonized with the 6th level of the National Qualifications Framework of the Republic of Kazakhstan, with Dublin descriptors, 1 cycle of the Qualification Framework of the European Higher Education Area (EHEA), alsowith the 6th level of the European Qualification Framework for Lifelong Learning.

The educational program is focused on professional and social order through the formation of the professional competencies, associated with the necessary types of research, practical and business activities, adjusted to the requirements of the stakeholders.

*The uniqueness of the EP* 6В08210»Production technology of livestock products» It is to acquire advanced knowledge and professional competences in the field of livestock productionand scientific research, is determined by the results of training which are formed on the basis of Dublin descriptors.

The educational program is aimed at achieving the learning outcomes through the organization of educational process with the application of the principles of the Bologna Process, student-centered learning, accessibility and inclusiveness.

Learning outcomes of the program are achieved through the following training events:

- classroomlessons: lectures, seminars, practical and laboratory classes – conducted in the light of innovative learning technologies, use of the latest achievements of science, technology and information systems;

- extracurricular activities: student’s independentwork, including under the guidance of a teacher, individual advices;

- conducting professional practices, execution of course works and dissertations (projects).

The university has adopted measures to maintain academic integrity and academic freedom, protection from any kind of intolerance and discrimination against students.

The quality of the EP is ensured by the involvement of stakeholders in its development and evaluation, systematic monitoring and review of its content.

**4.Admission requirements**

Established according to the Model Rules for admission to studies in educational institutions, implementing educational programs of higher and postgraduate education orderMESRK №600 from 31.10.2018

**1. EDUCATIONAL PROGRAM PASSPORT**

**1.1The purpose and objectives of the educational program**

The purpose ofEP: providing high-quality education based on active learning technologies, ensuring the competitiveness of graduates in the labor market on the basis of their social order employers.

The objectives ofEP:

**-**development of students of high moral and personal qualities, the formation of general cultural and professional competences, development of cognitive activity, decision making responsibility,including professional ones, taking into account their social consequences, independence and creativity.

- to ensure the formation of competencies necessary for the implementation of professional activities in the field of production technology of livestock products, poultry farming, beekeeping and fish farming;

-provide practical and scientific orientation of training (on the dual education system) in the field of production technology of livestock products, poultry farming, beekeeping and fish farming;

-formation of a graduate with a broad outlook, low motivation to build a career inAIC, fluent in the state, Russian and one of the foreign languages;

-provide a phased adequate control of the level of competence,to allow the possibility of their quickest employment in the specialtyor continue their studies at subsequent levels of education.

**1.2 List of qualifications and positions**

A graduate according to EP is awarded a degree «Bachelor of agriculture» according to the educational program 6В08210 –Production technology of livestock products.

Bachelors on education program« Production technology of livestock products»may hold primary positions-farm manager, zootechnician, chief livestock specialist, section manager, poultry technician, poultry technologist, zoologist, animal physiologist, specialist in the field of reproduction and / or commercial cultivation of fish and other aquaticanimals, a specialist in the production of fish feed and other aquaticanimals (feed production technologist), beekeeper, operators laughter line, teachers in agricultural colleges, in accordance with the qualification requirements of the Qualification directory of managers positions, professionals and other employees, approved by order of the Minister of Labor and Social Protection of the population of the Republic of Kazakhstan dated May 21, 2012 № 201.

**1.3 The graduate’squalification characteristics of the educational program**

**1.3.1 The sphere of professional activity** The field of professional activity isthe state institutions of the Ministry of Agriculture, livestock farms of various forms of ownership, poultry farms, racecourses, breeding farms and breeding plants, zoos, scientific laboratories, reserves, distribution firm for the dissemination of advanced technologiesand vocational schools.

1.3.2 Theobjectsofprofessionalactivityofbachelorsare:areainproductiontechnologyoflivestockproducts(organization of reproduction and breeding business, raising and fattening animals, fodder production),primary processing of livestock raw materials,organization of sales of manufactured products and export,carrying out selection breeding works, exhibitions and auctions of farm animals,birds, aquaculture and bees.

**1.3.3 Subjects of professional activity:**all types of livestock and poultry, game animals, bees, fish; technological processes for the production and primary processing of livestock products; animal feed and feed additives.

**1.3.4 Types of professional activity**

Bachelors on education program 6В08210 -Production technology of livestock productscan perform the following professional activities:

* organizational and technological:organization, planning innovative production technology of livestock products, management in the system of production of high-quality environmentally pure products; organization of keeping animals in accordance with the zoo hygienic requirements, organization of fodder production; measures for the prevention of domestic infectious and non-contagious animal diseases, feed quality assessment and rationed feeding of farm animals and birds;
* production and management: zootechnical and breeding records of animals; breeding work, marketing and sales of livestock products;
* project: development and preparation of selection and breeding plans, participate in the development of construction documents for the construction of livestock and poultry;
* scientific-research: creation,improvement of new breeds of different species of farm animals and birds; biotechnology reproduction of the herd; zootechnical analysis of the composition of feed and feed additives, development of animal feed recipes for farm animals and birds.
* educational (pedagogical): teaching activity in secondary vocational and basic vocational education institutions on specialty profile.

**2. Learning outcomes of EP**

The result of the implementation of the EP provisions in the direction of training6В082 «Livestock» (Bachelor's degree) is the formation of the bachelor of the modern type, with fundamental training, with broad competence in his profession to work in the subjects of the agro-industrial complex of the Republic of Kazakhstan.

**LO1**Fluently communicate in a professional environment and society in Kazakh, Russian and English languages.

**LO2** Demonstrate scientific, mathematical, social, socio-economic knowledge in professional activities, methods of ecologicalical data processing, theoretical and experimental research, regulatory documents and elements of economic analysis.

**LO3** Possess informational and computational literacy, the ability to generalize, analyze and perceive information, set goals and choose ways to achieve it.

**LO4** Ability to use knowledge of biological features, physiological and biochemical methods for monitoring metabolic processes in animals, the basics of heritability and variability, methods of genetic research in animal husbandry to classify vertebrates and invertebrates;

**LO5** The ability to use advanced technologies for production of livestock products, apply modern methods and techniques for keeping, feeding, breeding and effective use of animals, production technology (meat, milk, eggs, etc.) and primary processing of raw materials and animal products, the ability to assess the quality of products, the role of microorganisms in agricultural production, expertise and commodity research of raw materials of animal origin, the implementation of promising and competitive products;

**LO**6 Effectively manage the processes of content, feed preparation and feeding,breeding and reproduction, productive, sporting and decorative animals, according to their destination based on modern knowledge of the behavior and physiology of animals and innovative technologies; be able to organize a set of preventive measures to preserve and ensure the health of animals, poultry, etc., in order to improve their productive qualities.

**LO7** Possess economic means assessing the effectiveness of livestock production, poultry farming, fish farming, beekeeping, consumption rates of raw materials and the calculation model used by the means of production, human resource management.

**LO8** To organize breeding work with agricultural animals in breeding enterprises and commodity farms, to master the methods of selection and breeding work and their planning, artificial insemination and obstetrics, methods of biotechnology, to evaluate animals of different types, breeds, types, lines by origin and quality of offspring. ensure the preservation of the gene pool of breeds and populations;

**LO9** Have knowledge of the basics of accounting, forms of statistical reporting on livestock and breeding accounting, be able to organize the identification of animals, using special software and web services (ICI, IAS), while being able to work with the above materials in online mode .

**LO10** Constructively engage in negotiations related to supplies, orders and product sales, be able to reasonably logically give correct arguments and clearly build oral and written speech,usethe regulatory and legal acts in his activities.

**LO11** Use research, entrepreneurial and work skills for cost-effective production of livestock and poultry products.

**LO12** Work effectively, individually and as a team member, properly to defend his point of view, to adjust his actions and use a variety of methods.

**3 Graduate competence of EP**

**3.1**Successfulcompletionoftrainingaccordingto EP contributestotheformationofthefollowinggraduatecompetencies:

keycompetences(KC)

* professionalcompetences (PC).

***Keycompetences(KC):***

*in the field ofnativelanguage*(KC1)

- ability to express concepts, thoughts, facts and opinions in written and oral forms (listening, speaking, readingandwriting), as well as interact appropriately and creatively in all the diversity of social and cultural contexts: while studying, at work, at home and at leisure time;

*in the field of foreign languages*(KC2)

- ability to master basic communication skills in a foreign language - comprehension, expressing and interpreting concepts, facts and opinions in the professional field, both orally and in writing (listening, speaking, reading, writing) in an appropriate range of social and cultural contexts, mediation proficiency and intercultural understanding;

*fundamental mathematical, natural scientific and technical training* (KC3)

- the ability and willingness to apply the educational potential, experience and personal qualities acquired during the study of mathematical, natural science, technical disciplines at the university, identify ways to control and assess the solution of professional applications, the development of mathematical and natural science thinking;

*computercompetences*(KC4)

- the ability to confidently and critically use modern information and digital technologies for work, leisure and communications, mastering the skills of using, restoring, valuation, storage, production, presentation and exchanging information through a computer, communication and participation in collaborating networks via the Internet in the field of professional activities;

*social competences*(KC5)

- the ability to possess social and ethical values based on public opinion, traditions, customs, norms and to be guided by them in his professional activities; to know the culture of people of Kazakhstan and to keep their traditions; observe the principles of the legal system and the legislation of Kazakhstan, including in the field of education; know the trends of social development of society; be able to properly navigate in different social situations; be able to find compromises, relate hisown point of view with the opinion of the collective; have business ethics, ethical and legal standards of behavior; aspire to professional and personal growth; work in a team, correctly defend his point of view, offer new solutions; demonstrate tolerance towards other individuals;

*economic, managerial and entrepreneurial*(KC6)

- the ability to know and understand the objectives and methods of state regulation of the economy, the role of the public sector in the economy; know the basics of economic knowledge; possess skills of critical thinking, interpretation, creativity of analysis, drawing conclusions, assessing; conduct projects in order to achieve professional goals, manage staff, demonstrate entrepreneurial skills and professional counseling; plan and carry out experiments for the production of animal products.

*cultural training* (KC7)

- the ability to know and understand the traditions and culture of Kazakhstan people, is tolerant to the traditions and culture of other nations of the world, aware of the attitudes of tolerant behavior; is not liable to prejudices, has a high spiritual qualities, it is shaped like an intelligent person

*additional competencies* (KC8)

- ability to master the skills of critical thinking, interpretation, creativity analysis, drawing conclusions, evaluation; have creativity and an active lifestyle;make professional decisions under uncertainty and risk.

***Professional competences(PC ):***

PC*1*-the ability to develop optimal technology of production and primary processing of livestock products: to make rations of feeding, efficient use of feed and feeding grounds, possess different methods of preparation and feed storage, know the systems and methods of keeping livestock and poultry, taking into account the biological and economic characteristics of animals and poultry, for the production of ecologically clean agricultural products;

PC*2*- the ability to ensure rational reproduction of animals, to know the features of breeding, genetics, breeding and artificial insemination, to master the methods of reproduction of farm animals, to use modern methods of evaluating the breeding and productive qualities of farm animals and poultry, to develop comprehensive plans for breeding work in livestock and poultry;

PC*3* the ability to analyze and plan technological processes as objects of management, the current state of production, the tasks and methods of their scientific and practical solutions, determine the goal and objectives of production activities, choose methods and solutions, plan and organize implementation, know resource-saving technologies for the production of environmentally safe livestock products;

PC*4*-the ability of the organization to the work of the group of performers, management decision-making under conditions of different opinions, own methods of integrated assessment and effective use of technologies of animal husbandry and the modern animal gene pool;

PC*5*- ability to keep accurate records of productivity of different species of animals, to issue accounting documentation of structural division of the industry, know the principles of accounting according to IAS, the method of determining the quantitative and qualitative indicators of the efficiency of different types of animals, know the requirements for the quality of livestock products and the ways of its improvement, sanitary requirements and standards of quality and safety of food raw materials and food products;

PC*6* - ability to apply modern methods of livestock research,own methods of collecting, analyzing and interpreting the results of scientific research, implement the achievements of science and best practices of animal husbandry in production, using modern information technology;

**3.2 Matrix of correlation of learning outcomes for the EP in general with the formed competencies of the modules**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **LO 1** | **LO2** | **LO3** | **LO4** | **LO5** | **LO6** | **LO7** | **LO8** | **LO9** | **LO10** | **LO11** | **LO12** |
| KC1 | + |  |  |  |  |  |  |  |  | + |  | + |
| KC2 | + |  |  |  |  |  |  |  |  |  |  |  |
| KC3 |  | + |  |  |  |  |  |  |  |  |  |  |
| KC4 |  |  | + |  |  |  |  |  |  |  | + |  |
| KC5 |  |  |  |  |  |  |  |  |  | + |  | + |
| KC6 |  |  |  |  | + |  | + |  |  |  | + |  |
| KC7 |  |  |  |  |  |  |  |  |  |  |  | + |
| KC8 |  |  |  |  | + |  |  |  |  |  |  |  |
| PC1 |  |  |  | + |  | + |  |  |  |  |  |  |
| PC2 |  |  |  |  |  |  |  | + |  |  |  |  |
| PC3 |  |  |  |  | + | + |  |  |  | + |  |  |
| PC4 |  |  |  |  | + |  | + | + |  |  |  |  |
| PC5 |  |  |  |  |  | + |  | + | + |  |  |  |
| PC6 |  |  |  |  |  |  |  | + |  |  | + |  |

**4.SUMMARY TABLE, REFLECTING THE AMOUNT OF CREDITS MASTERED BY THE MODULES OF THE EDUCATIONAL PROGRAM**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Course of Study | Semester | The number of mastered modules | Number of studied  disciplines | | | Amount of credits | | | | | | Total hours | Amount | |
| OC | HSK | EC | Theoretical education | Physical  training | Training practice | Internship  Undergraduate practice | final examination | KZ |  | exam | Dif. offset |  |
| 1 | 1 | 3 | 4 | - | 4 | 29 | 2 |  |  |  | 31 | 930 | 6 | 2 |  |
| 2 | 5 | 5 | 2 | 1 | 27 | 2 | 1 |  |  | 30 | 900 | 6 | 2 |  |
| 2 | 3 | 6 | 2 | 2 | 4 | 28 | 2 |  |  |  | 30 | 900 | 6 | 2 |  |
| 4 | 6 | 2 | 3 | 4 | 25 | 2 |  | 3 |  | 30 | 900 | 6 | 3 |  |
| 3 | 5 | 5 | - | 4 | 4 | 27 |  |  | 3 |  | 30 | 900 | 6 | 2 |  |
| 6 | 4 | - | 3 | 2 | 27 |  |  | 3 |  | 30 | 900 | 4 | 1 |  |
| 4 | 7 | 2 | - | 1 | 3 | 20 |  |  |  |  | 20 | 600 | 4 | - |  |
| 8 | 4 | - | 2 | 3 | 17 |  |  | 3 |  | 20 | 600 | 4 | 1 |  |
| 9 | 1 | - | 1 | 1 | - |  |  | 8 | 12 | 20 | 600 | - | 2 |  |
| **Total** |  |  | **13** | **18** | **26** | **200** | **8** | **1** | **20** | **12** | **241** | **7230** | **42** | **15** |  |

**5. Information about the disciplines**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Module name** | **Cycle** | **HSC / EC** | **Component Name** | **Discipline Summary**  **(30-50 words)** | **Number of credit** | **Formed LO**  **(codes)** |
| Module of the social science | GED | OC | Contemporary History of Kazakhsta | Knowledge of the classification of conceptual foundations of national history , origins of interpretation,continuity of the Kazakh statehood and topical problems of the history of modern Kazakhstan.  Ability to analyze the activities of the national professional class in shaping the ideology of the liberation movement and the stages of the socio-economic modernization of Kazakhstan.Characterize the creation of a democratic state of law .  Evaluation of the contribution of the First President to the theory and practice of government controll. | 5 | LO1,  LO2 |
| GED | OC | Philosophy | Covers the basics of the emergence of philosophy are considered, revealed features of occurrence of a culture of thinking, concepts are revealed «philosophy» «world outlook», essence and content of the concepts «existence», «consciousness». It considertheratiooftheconceptsof «knowledge» and «creativity», the essence and the content of the category of the philosophy of freedom are revealed,develop skills to highlight the essence of the philosophical problems, critical thinking, skills in the study of philosophical aspects, problems of practice and knowledge. | 5 | LO1,  LO2 |
| Module of socio-political knowledge | GED | OC | Social and Political Studies | Theories of sociology, social structure and stratification of society are studied, the role and place of politics in society is explained, the main stages of the formation and development of political science are reviewed, including youth policy, the role of politics in the system of public life, the essence of the state is revealed, reveals the relationship of state and civil society. Develop the skills of sociological research, analysis of the socio-political information | 4 | LO2, LO12 |
| GED | HSC / EC | Ecology and Fundamentals of Life Safety | Knowledge of the basic concepts and laws of ecology; the basic laws of the functioning of living organisms, ecosystems of various organizations, the biosphere as a whole and their sustainability;to address environmental issues of agro-industrial complexes,use personal protective equipment in emergencies and to provide pre-hospital medical assistance to the victims; | 3 | LO2,  LO6  LO9 |
|  | GED | HSC / EC | Fundamentals of entrepreneurship skills and anti-corruption culture | Formation of knowledge about the organization of the company, running a business. Develops skills in business planning, production and sales, market analysis;calculation of profits, revenue, profitability, solvency, liquidity of the company.  Considers the essence, factors of corruption. Generates anticorruption outlook, culture. It imparts the skills of critical analysis of corruption phenomena. | 3 | LO2,  LO7, LO11 |
|  | GED | HSC / EC | Fundamentals of Economics and Law | It examines the role of the state in the development of the market, competition, demand, supply. Instills cost calculation skills, income indicators of the circuit and the turnover of capital. It allows to critically explore the markets of production factors, income factor. Generates knowledge on the law. Instills legitimacy of skills in analysis of the events, the ability to access regulations acts. It increases the level of legal awareness and legal culture. |  | LO2,  LO7 |
|  | GED | OC | Cultural Studies and Psychology | Understanding the socio-ethical values of society as a product of integration processes in the systems of basic knowledge of the disciplines of the socio-cultural-psychological module; analyze the characteristics of psychological institutions in the context of their role in the modernization of Kazakhstan's society;to form programs for solving conflict situations in society, including in professional society; be able to correctly express and defend their own opinion of social importance. | 4 | LO10, LO12 |
| Module of communicative mobility | GED | OC | Kazakh (Russian) language | -Development of cognitive and communicative activities in the Russian (Kazakh) language in the areas of interpersonal, social, intercultural communication.  - Instilling the ability to discuss ethical, cultural, socially meaningful rules in discussions, ability to work in a team, interact in a team, flexibility, creativity.  - Development of practical skills for interpreting text information, explaining their stylistic, genre specificity in various areas of communication. | 10 | LO1 |
| GED | OC | Foreign language | Teaching a foreign language is the formation of the intercultural and communicative competence of students in the process of foreign language education at a sufficient level (А2),level of basic sufficiency (B1), basic standard(В2). Depending on the student’s level of training at the time of admission, he may achieve level C1 if the student’s language level at the start is higher than level B1. | 10 | LO1 |
| GED | OC | Physical training/ | Knowledge of total values, norms and knowledge created and used by society for the purposes of physical and intellectual development of human capabilities, improving its motor activity and the formation of a healthy lifestyle, social adaptation by means of physical education, physical fitness and physical development. | 8 | LO2 |
| PD | HSC | Professional Kazakh (Russian) language | - Development of skills to elicit the necessary information from the text, its interpretation in educational and professional communication.  - Development of the ability to establish contacts at a professional level, competently build communications, based on the goals and the communicative situation.  - Instilling capacity of creativity, innovation, collegiality in the process of building a program of speech behavior in Russian (Kazakh) language in the field of professional communication. | 3 | LO1 |
| PD | HSC | Professionally-oriented foreign language | Development of skills to evoke the necessary information from the text, its interpretation in educational and professional communication. Development of the ability to establish contacts at a professional level, competently build communications, based on the goals and the communicative situation. | 3 | LO1 |
| PD | EC | Kazakh alphabet based on latin graphics | Formation of Kazakh sounds taking into account the peculiarities of their pronunciation, the study of the phonetic features of Kazakh words and phrases based on the Latin alphabet.Development of literacy skills based on the Latin alphabet. The ability to read texts in the Kazakh language using Latin graphics. | 3 | LO1 |
| PD | EC | Academic writing | Formation of scientific knowledge about society as an integral and self-developing socio-cultural system about the sociological approach to the individual, laws and forms of regulation of social behavior. Studies the language competence, the possession of which allows the researcher to read, understand and write scientific texts |  | LO1 |
| PD | EC | Mukhtarology | Biography, life and work of the writer M. O. Auezov. Creativity of the writer. The writer's legacy. Influence of the writer's creativity on the upbringing of the younger generation. |  | LO1 |
| PD | EC | Abay studies | Biography, life and work of the poet and writer Abay Kunanbayev. His work. The writer's legacy. Influence of the writer's creativity on the upbringing of the younger generation. |  | LO1 |
| PD | EC | Actual Problems and Modernization of National Awareness | Knowing the significance of the modernization program, the implementation of projects began immediately. By decree of the President of the Republic of Kazakhstan N. A. Nazarbayev, the national Commission for the implementation of the program for the modernization of public consciousness was created, which launched a multi-faceted work on all six projects. |  |  |
| GED | OC | Information and Communication Technologies (in English) | Use information resources for finding and storing information;know what economic and political factors have contributed to the development of information and communication technologies; features of information systems | 5 | LO3,  LO1 |
| Bases of natural -biological sciences | PD | EC | Biochemistry of animal metabolism | Knowledge and understanding of the biochemical processes occurring in the body of animals, the patterns of functions when interacting with the external environment, animals welfare technologies, knowledge of methods of regulation of metabolic processes occurring in the body.Formation of scientific understanding of the structure, physical and chemical properties of bio-organic substances. | 5 | LO2  LO4 |
| PD | EC | Immunology | Knowledge and understanding of immunology and organ-tissue structure of the immune system of animals and birds, immunocompetent cells and their receptors, mechanisms of regulating immune processes at the organism and cellular levels, antigens and antibodies their interaction, the main complex of histocompatibility and its biological the significance, genetic diversity and features of the formation of antigen-recognizing t-and B-lymphocyte receptors, methodological bases for assessing the immune status, has an idea of immunosuppressed individuals pathological conditions |  | LO2  LO4 |
| PD | HSC | Microbiology of animal products | Knowledge of the role of microorganisms in nature, their morphology, physiology, biochemistry, classification, practical use of the beneficial properties of microorganisms in agricultural production,external factors affecting the vital activity of microorganisms, mastering the methods of studying microbiological processes in the digestion of ruminants, during the process of feed preparation,microbiology of milk, dairy products, meat and leather raw materials. | 4 | LO2,  LO3,  LO6 |
| PD | EC | Systematics of the animal world | Knowledge of the classification of vertebrate and invertebrate organisms. General characteristics. Differences of parasitic forms from free-living protozoa. Structural features.Embryonic development of unicellular and multicellular.The information accumulation by human about the systematics of the animal world.Questions about the origins of unicellular and multicellular organisms. Characteristic units. Systematicsofmammals. | 4 | LO2  LO4 |
| PD | EC | Zootechnics fundamentals | Knowledge of performing work on the care of farm animals. Determine the main breeds, taking into account the productivity of farm animals; evaluate farm animals by origin, Constitution, exterior and interior, productivity and quality of offspring; select different types of feed and evaluate their quality; carry out a set of protective measures against diseases and deaths; the main types and breeds of farm animals; the direction of their productivity; the basics of breeding and feeding of farm animals; the basics of zoo hygiene and veterinary medicine. |  | LO2  LO4 |
|  | PD | EC | Morphology of farm animals | The concept of morphology and its place among biological disciplines. Basics of general cytology (the study of the cell). The value of cytology as the science of the laws governing animal organisms cells. The concept of the cell - the smallest structural and functional unit of an organism.General scheme of the cell structure. | 4 | LO3,  LO4 |
| PD | EC | Fundamentals of Livestock | Knowledge: specific features of the structure of the body of farm animals; basic patterns of embryonic development, physiological processes and body functions of farm animals taking into account the influence of environmental conditions, technologies of keeping, feeding and exploitation; physiological constants, zootechnical requirements for the mechanization of livestock; mechanization of the basic production processes on animal farms; origin and evolution, - rock formation, methods of breeding and selection; the Constitution, ontogenesis and the methods of evaluation of animal productivity; breeding and productive qualities of animals, methods of their assessment. |  | LO2,  LO4 |
| PD | EC | The system of biological management of mammalian development | Knowledge and understanding of the morphological and physiological features of farm animals, poultry, fish, etc.; mastering the theoretical knowledge in the field of anatomy and physiology of mammals, homeostatic mechanisms of their regulation. The adaptive capacity of the organism to changing environmental conditions, as well as on behavioral responses and, consequently, on productivity. | 4 | LO2,  LO4 |
| PD | EC | Phylogeny of animals | Knowledge of the development of the science of animal phylogeny. Elements of the evolution of the nervous system. Regulation of vital functions of the body. Improving regulatory mechanisms in the process of evolution. Characteristics of humoral mechanisms of regulation. The main features of the evolution of hormonal regulatory mechanisms. Mastering methods for studying the functions of the endocrine glands.Evolution of the internal environment of the organism. The main mechanisms for maintaining the constancy of the internal environment of the body. The concept of homeostasis. |  | LO4 |
|  | BD | HSC | Educational practice | Familiarization with the organizational structure and economics of livestock, poultry, beekeeping and fish farms;production technology of livestock products. | 1 | LO3,  LO4 |
| Feed production and animal feeding | BD | HSC | Livestock feeding of animals | Knowledge and understanding of the biological basis of complete feeding of agricultural animals, chemical composition of feed and the physiological significance of individual substances.The balance of substances and energy in the body of an animal and methods for their resolution, the formation of skills to determine the norms of feeding and preparation of diets for feeding agricultural animals and poultry. | 8 | LO5  LO6 |
| Ch.D | EC | Advanced feed preparation technology | Knowledge and understanding of innovative technologies for feed production, feed preparation and feeding, supporting the genetically determined productivity of farm animals and poultry, ensuring normal physiological status, effective use of feed means and rations in order to obtain high productivity and economic return of livestock and poultry production. | 4 | LO5,  LO6 |
| Ch.D | EC | Forage production with the basics of agronomy | Knowledge and understanding of the cultivation of forage plants on arable land, hayfields and pastures; to study the bio-morphological features of hayfields and pastures; to give recommendations on the rational use of land, conservation and increase of soil fertility; to justify ways to increase the yield of natural forage land and field forage, with an assessment of their nutritional value; to familiarize with modern technologies for harvesting high-quality feed, rational use of seed and natural forage land; understand and use methods of critical analysis of technological solutions in animal husbandry; |  | LO5,  LO6 |
| PD | EC | Mechanization and automation in animal husbandry | Knowledge of the main technological processes in animal husbandry, mechanization of feed preparation, metering and mixing of animal feed, machines and mechanisms for the distribution of feed inside the farm, the mechanization of farms with water supply and pastures, provision of microclimate in livestock buildings, mechanization of manure harvesting.Mechanization of milking cows, the primary processing of milk, the mechanization of shearing, poultry technological processes. | 3 | LO6 |
| PD | EC | Machines and devices for the processing of livestock products | Technological equipment for processing meat and milk. Means of transportation, recording and storage of milk. The equipment for packaging and pre-packaging of meat, milk and dairy products. Technological equipment for processing meat and milk.Technologies and equipment of lines for slaughter of livestock and poultry, for primary processing of meat, products of slaughter of livestock and poultry. |  | LO6 |
| Previous treatment and quality of animal raw material | Ch.D | EC | Technology of animal products processing | Knowledge and understanding of the technology of primary processing of animal raw materials, the basic methods of technology slaughter of different animal species; determining the quality of carcasses, meat species identification, the requirements for the control and high-quality slaughter cutting carcasses of various animals; processing offal products and industrial raw materials; primary processing technology of beekeeping and fish farming products. | 4 | LO5,  LO10 |
| Ch.D | EC | Commodity research of Karakul | Knowledge of primary processing of Karakul smushkas, properties bossanova cover skins. Classification of Karakul curls, properties of curls, main commodity qualities of skins, features of sorting of Karakul of different colors, colors, intra-breed types of sur color. Technology of packaging, storage and transportation of Karakul skins, features of sorting of dry-salted and fermented Karakul, preparation of lots for auction. |  | LO5,  LO10 |
| PD | EC | Merchandising and expertise of animal primary goods | Knowledge and basic concepts on the preparation of different types of animal raw materials, classification, structure of wool, leather, fur and sheepskin-fur coat materials, the difference in their commercial properties depending on individual and biological variability, season of the year, conditions of detention, animals feeding, as well as the primary technology and conditions of storage of animal raw materials prior to delivery to the processing enterprises | 4 | LO5, LO10, LO11 |
| PD | EC | Commodity science of additional types of animal raw materials | Knowledge of the main properties and indicators of the assortment of additional types of animal raw materials; indicators of identification of additional types of animal raw materials; regulatory documents that determine the quality, labeling, packaging, transportation and storage of additional types of animal raw materials; the procedure for organizing and conducting commodity expertise, conformity assessment and other types of evaluation of additional types of raw materials at all stages of commodity movement. |  | LO5, LO10, LO11 |
| BD | HSC | Technological Practice I | Possession of skills for assessing the exterior and interior of the productivity of various species of birds, bees and fish; Mastering the practical skills of feeding, breeding and keeping birds, bees and fish;Practical acquaintance with breeds and crosses of birds, bees and fish. | 3 | LO3,  LO4,  LO11 |
| Breeding and selection of farm animals | PD | HSC | Breeding and selection of livestock | Knowledge and understanding of the main methods of breeding and breeding farm animals, principles of evaluation, selection and matching, theoretical foundations of breeding,principles of organization of breeding work aimed at improving the productive qualities of a specific herd, analyzing the results obtained. | 6 | LO6,  LO8  LO9 |
| PD | HSC | Basics of heritability and variability of farm animals | Knowledge of the laws of inheritance of traits and personality manifestations of variability, with its practical use in animal husbandry and in the system of biological sciences. The study of the chromosomal theory of heredity and sexgenetics.Genetic bases of ontogenesis and methods of genetic research in animal husbandry. | 4 | LO2,  LO4 |
|  | Ch.D | HSC | Animals proceeding of biotechnology | Knowledge of the basic directions of development of animal biotechnology, animal reproduction biotechnology, based on laboratory business in biotechnology, breeding and genetic aspects, the cellular basis of biotechnology and cellular technology in animal husbandry, embryotransplantation in livestock.Knowledge of innovative technologies synchronization hunting of donors and recipients, methods for leaching animal embryos, cryopreservation of gametes and embryos. | 4 | LO4,  LO8,  LO11 |
| Ch.D | EC | Complex basics of animal productivity judging practice | Competence of the basics of a comprehensive assessment of animal productivity, selection, followed by matching, defining of their classiness. Characteristics of the class of elite, the first and second class of animals by inductance, culling animals. Identification of queens and manufacturers of improvers, ordinary and improvers. | 4 | LO8,  LO9 |
|  | Ch.D | EC | Horse breeding, production technology of horse meat and kumys | Ability to evaluate the Constitution and exterior of a horse, recognize its flaws and shortcomings, determine the color and age of the horse, weigh and determine the category of fatness of the horse, master the technology of production of kumiss, technology of feeding and fattening horses, organize a breeding company, conduct a bonitirovku breeding horses on a set of characteristics, keep zootechnical |  | LO8,  LO9 |
| PD | HSC | Artificial insemination of animals and obstetrics | Knowledge of methods of artificial insemination of animals, techniques for obtaining sperm from producers, assessment of the quantity and quality of spermaproducts. Technology of preparation of the point and tools for artificial insemination of animals. Artificial insemination technologies for different animal species. Tribal accounting. Methods for determining pregnancy of animals. Technologies for preparing for a breeding company and providing obstetric care in case of pathological childbirth. | 4 | LO8,  LO9 |
|  | BD | HSC | Breeding activities in animal husbandry | The significance of tagging and identification of breeding animals and materials in breeding work. Rules and techniques for tagging breeding animals. Methods of accounting for productive, reproductive and breeding qualities of animals of different species. Procedure for maintaining documentation of zootechnical and breeding records. Current forms of zootechnical and breeding accounting. Instructions on the evaluation of the animals. Modern technologies of production of livestock products; breeding business. Procedure for registering events in the life of breeding animals. Breeding characteristics of animals. | 3 | LO8,  LO9 |
|  | BD | HSC | Technological Practice II | Mastering practical skills in the technology of production and processing of livestock products;determining thequality of products;on keeping zootechnical documentation; on conducting zootechnical works. | 3 | LO9,  LO11,  LO12 |
|  | BD | HSC | Technological Practice ІІІ | Mastering the practical skills of artificial insemination of animals, mastering the skills of the inseminating technician, taking account of agricultural animals and birds, assessing animals, evaluating productive and breeding qualities, evaluated by the quality of offspring; conducting work on the registration of agricultural animals and birds. | 3 | LO8  LO11,  LO12 |
|  | Ch.D | HSC | Technological Practice ІV | Mastering the practical skills of the manager - technologist of livestock on the organization and conduct of agricultural operations;breeding works: work on registration of farm animals, birds, fish, bees. participation in the lambing company. | 3 | LO6,  LO7  LO11,  LO12 |
| Basics of organization production and professional business in animal husbandry | PD | EC | Introduction to the specialty | Competence of the history and development of zootechnical science, achievements in the field of technology production of livestock products on the basis of scientific and technical information, of domestic and foreign experience. Modern trends, directions and patterns of development of animal production science; study of the methodology of scientific knowledge; study of foreign and domestic advanced technologies for the production of livestock products. | 3 | LO2,  LO3,  LO5 |
| PD | EC | Content and language integrated learning | Knowledge and the formation of linguistic competence, which implies the possession of the student to a foreign language at a level that allows him to communicate in a foreign language within a given thematic field. Knowledge and the formation of linguistic competence, which implies the possession of the student to a foreign language at a level that allows him to communicate in a foreign language within a given thematic field. |  | LO1,  LO3 |
| PD | EC | Research techniques | Fundamentals of conducting research investigation. [Organization of science in the Republic of Kazakhstan.Fundamentals of scientific and technical information, independently obtain new knowledge by conducting experiments on animals Planning to conduct scientific research work, the purpose and objectives.Internet service.Information search: types and methods of conducting.](file:///C:\\Documents%20and%20Settings\\User\\Рабочий%20стол\\Биотехнология%20%20жив%202012-2013%20учебный%20год\\БиотЖивотноводства%202%20кр%20Рус2012\\БиотЖив2кредит\\ЛЕКЦИЙ.doc" \l "_Toc336099784#_Toc336099784)Methods of setting zootechnical experiments. Methods for comparing the performance of control and experimental groups. | 5 | LO3,  LO11 |
| PD | EC | Meat technology | Knowledge in the field of meat and meat products technology, product range, features of the chemical composition of raw materials, production technology aimed at maintaining quality characteristics or obtaining new types of products from raw materials of animal origin. Technological processes of meat processing that ensure the production of products that meet the quality requirements. |  | LO3,  LO11 |
| PD | EC | Veterinary medicine fundamentals | Knowledge of pathological processes in animals. The concept of disease and the light of the teachings of I.I. Mechnikov, I.M.Sechenov, I.G1.Pavlova.The protective barriers of the body. Achievements of veterinary science and best practices in the fight against non-communicable diseases.Features of the prevention of these diseases in industrial livestock. The concept of injury and trauma. | 4 | LO6 |
|  | PD | EC | Karakul breeding | Knowledge of products and biological features of the Karakul sheep breed; production technologies of Karakul breeding: smusic Karakul, broadtail, rennet, wool, lamb, mutton. Classification of Karakul curls, selection and selection by selected characteristics. Features breeding and breeding work with spuskovymi different types and colors of the Karakul breed |  | LO7, LO11 |
| Ch.D | EC | Fundamentals of farming | Knowledge of a brief history and current state of agriculture in the Republic of Kazakhstan and the CIS countries as well as their products; volumes and prospects for increasing production. Organization, farm planning. Ways to optimize and improve the profitability of the farm. Advanced farming practices. The structure of the farm. | 5 | LO5,  LO7,  LO10 |
| Ch.D | EC | Basics of entrepreneur activity | Knowledge and understanding of the theory and practice of the formation and development of agribusiness, organizational and legal foundations of agribusiness as an integral part of market reforms in the economy. The study of the history of development of business, legal form entrepreneur tion activities in agriculture, agro –industrial complex of Kazakhstan and its development prospects, the issues of business planning, marketing, leasing, crop insurance, evaluation of economic efficiency of agricultural enterprises. |  | РО7,  РО11 |
| Ch.D | HSC | Zoohygiene and bases of livestock objects projection | Knowledge of basic sanitary and hygienic requirements for livestock buildings and businesses;to the soil and its sanitary protection; to feed and feeding of farm animals.Water and its sanitary - hygienic requirements. Hygiene of water supply, watering of farm animals. Hygiene maintenance of farm animals in the period of summer. | 4 | LO5,  LO6 |
| Technology of livestock production and poultry farming | PD | EC | Poultry farming, technology of poultry products | Knowledge of the exterior and constitution of birds of different directions of productivity. Egg productivity. Meat productivity. Artificial incubation. Technology production of geese meat, ducks, turkeys and quails. The value of the environment for the realization of the genetic capabilities of poultry. The value of complete feeding of poultry to increase its productivity, improve quality and reduce production costs. | 5 | LO4,  LO5,  LO6, LO12 |
| PD | EC | Breeding birds | Knowledge of advanced technologies of production and processing of poultry products and their management; optimal and cost-effective feeding of birds and selection work in this industry; types, breeds, lines and crosses of poultry; evaluate the quality and safety of poultry products; waste-free production technology, methods of utilization and processing of manure for fertilizers, as well as for biofuels. |  | LO4,  LO5,  LO6, LO12 |
| PD | EC | Sheep breeding, production technology of sheep wool | Knowledge of the origin, agronomic and biological features of the constitution, the exterior and interior of sheep;technology for the production of sheep products: wool, lamb, milk, a lambskin, sheepskin; breed characteristics of sheep,mastering knowledge of organization and planning methodsof selection and breeding work, the basics of herd reproduction, sheep valuation. | 6 | LO6 |
| PD | EC | Tribal business in sheep breeding | Competence of the organization of breeding work with families, lines, herds and breeds. The concept of the breeding business as an integrated system of zootechnical, breeding -genetic and organizational events aimed at improving productive and breeding qualities of animals. Development features of sheep breeding at the present stage. The role of breeding in the reproduction process. |  | LO5  LO6 |
| PD | EC | Cattle production technology of milk and beef | Competence of the livestock industry development in the national economy. Thestudy of growth patterns and development of livestock, features and directions of productivity, cattle breeds; meat and milk production technology; zootechnical management accounting and planning of milk and meat productivity, feeding technology and maintenance of livestock, taking into account gender and age groups;evaluation of dairy and meat indicators of the animal, the valuation of cattlecattle grading. | 5 | LO5  LO6 |
|  | PD | EC | Breeding in cattle breeding | Knowledge of the organization of breeding work with families, lines, herds and breeds. The concept of breeding as an integral system of zootechnical, selection and genetic and organizational measures aimed at improving the productive and breeding qualities of animals. Features of development of meat and dairy cattle breeding at the present stage. The role of breeding work in the breed-forming process. |  | LO5  LO6 |
| Ch.D | EC | Camel breeding, production technology of shubat, camel meat and wool | The knowledge of exterior, interior, and biological characteristics of camels; the types, species and interspecific hybrids of camels; camel breeds; reproduction and breeding camels; the performance and use of camels; camel meat productivity, milk yield of camels. Wool productivity of camels; basics of feeding and keeping camels; feeding of young animals; selection and breeding work in camel breeding .; state measures on camel breeding; selection achievements in camel breeding. | 5 | LO8,  LO9 |
| Ch.D | EC | Breeding camel milk | Knowledge of productive-biological characteristics of Bactrian camels and dromedaries; the biological characteristics of digestion of adult camels and calves; hygienic requirements for food; technologies of grazing camels. basis of preparation and feeding of all age groups of camels; milking technology of camel female (manual, machine); the technology of pasture and pasture-housing camels; to support the work on delivery of breeding stock. |  | LO8,  LO9, |
| Technology of processing and quality of products animal | Ch.D | EC | Dairy business | Knowledge and understanding of milk production planning;organization of the technological process of milk production, the composition and properties study of milk of various agricultural animals, recording for milk production. Technologyproduction of milk and dairy products. Mastering the methods of processing, storage, transportation andthe milk delivery conditions. conditions. | 4 | LO3,  LO5, |
| Ch.D | EC | Quality and safety of animal products | Competenceon the basic concepts of quality and safety of livestockproducts, thevalue of quality and safety indicators of livestock products;the quality and safety assessmentof livestock products and their expertise; regulatory requirements and documentation for quality and safety; control system using modern achievements of science and advanced technology. |  | LO5 |
| Ch.D | HSC | Processing technology of animal products | Knowledge of the technology of processing animal products, assessing the quality of animal raw materials and products of its processing. Justification of methods, system and modes of storage of agricultural products; implementation of technologies for processing of livestock products, developing plans and schedules for processing agricultural products. | 4 | LO5, |
| Additional sectors of livestocks | Ch.D | EC | Fur farming | Competence and a sense of animal breeding objects, animal breeds, vices of fur bearing animals, breeding work in animal reproduction, animal breeding techniques, organization of animal breeding farms;  feeding features of fur animals, features of private fur farming, the characteristic properties of fur semi finished product, packaging, storage and labeling of fur raw materials. | 3 | LO4, LO5, LO6, |
| Ch.D | EC | Rabbit breeding | Knowledge and understanding of the main methods of breeding and selection of rabbits, the principles of evaluation, selection and selection, the theoretical basis of breed formation, the principles of organization of breeding and breeding work aimed at improving the productive qualities and feeding of rabbits, rabbit breeds, characteristics of the properties of semi-finished fur rabbits, the formation of skills for organizing rabbit farms; packing, storage, labeling of fur raw materials. |  | LO4, LO5, LO6, |
| Ch.D | EC | Pond and decorative fish farming | Competence of species of farmed fish and their biological characteristics; fish breeding technologies: breeding, feeding, feeding regulations zoohygienic requirements, disease prevention system. Mastering the methods of fertilizing fish and collecting their eggs, artificially cultivating of sturgeon eggs, harvesting live food and processing ponds for fish breeding,fishing skills, accounting and sampling farmed fish. | 4 | LO4,  LO6, |
| Ch.D | EC | Technology of fish and fish products | Knowledge of production processes and obtaining commercial fish in a fish farm. Technological schemes for the production of cold and hot smoked fish; salted, dried, dried fish and frozen fish; chemical composition, nutritional and nutritional value of fish meat, physical, chemical and biochemical processes that occur in fish during cooling, freezing, salting, cold and hot Smoking, canned food production. |  | LO4,    LO6 |
| Ch.D | EC | Beekeeping | Knowledge of the history of beekeeping. Current state of beekeeping. The future of beekeeping in Kazakhstan. Biology of bee families. Digestion of bees. The breath of the bees. Blood circulation of bees. Feeding bees. Recognize diseases and pests of honeybees. Organization of crop pollination and evaluation of bee pollination efficiency. Features of the external and internal structure of bees. | 4 | LO4,  LO8, |
| Ch.D | EC | Technology of honey and bee products | Knowledge of the process of processing nectar into honey and its maturation, chemical composition, physical properties, varieties, storage and methods for analyzing the quality of honey; the process of processing raw wax and obtaining, using pollen, bee milk, propolis, bee venom; the basics of beekeeping. Get and store honey correctly, distinguish its varieties, humidity, determine the adulteration and naturalness of honey; process wax raw materials, determine the quality of artificial wax; get pollen, propolis, Royal jelly, bee venom; make honey and wax balance apiary. |  | LO4,  LO8 |
| Module acquisition of new professional competencies | PD | EC | Minor program | Additional educational **program Minor**( **Minor**) - a set of disciplines and (or) modules and other types of educational work, defined by the student for study in order to form additional competencies | 12 | ER 2  ER3  ER11 |
| Module final certification | CH.D | HSC | Predegree or Industrial practice | Collection of materials on the production activities of the enterprise base, the materials on the topic of the thesis. Description of the thesis object characteristics, the production sector, as well as the equipment used (power equipment performance, the operating principle, the advantages of this or that type of equipment);conducting scientific researcher work, the use of the methods of experimental work in the scientific and economic experiments. | 8 | LO3, LO4,  LO7,  LO11 |
| CH.D | EC | Writing and defence of degree work (project) or preparing and passing a graded exam/ | Toconduct analyze on the state of the question. Justify the relevance and novelty of decisions. To conduct an analytical review on the topic of the thesis, to present the methodology and the results of their own research; describe the environmental safety measures of the object under the study, life safety techniques, draw conclusions and summary; as well as production proposals. Justify and prove the effectiveness of the technical solutions. | 12 | LO4,  LO7,  LO11, LO12 |

**AGREEMENT LIST**

On tducational6В08210 –Production technology of livestock products

Director of AID\_\_\_\_\_\_\_\_\_\_\_G.Omashova

signature

Head of SRM\_\_\_\_\_\_\_\_\_\_\_\_\_U.B.Nazarbek

signature

Headof DSP\_\_\_\_\_\_\_\_\_\_\_\_\_\_D.T.Bazhirov

Signature

**REVIEW**  
  
on the educational program

By 6B08210"Technology production of livestock products",

developed bya team of teachers of the department "Technology of livestock products" M. Auezov,SKSU

According to the established educational programs (OP) provides graduates work at the enterprises of state institutions Ministry of Agriculture, livestock, poultry, beekeeping and fish farming of various forms of ownership, breeding farms and breeding plants, zoos, scientific laboratories, reserves, livestock, poultry, beekeeping and fish companies, professional and technical educational institutions.

The activities of the specialist 6B08210 "Technology production of livestock products" for the educational program are the production of livestock products, while conducting breeding work, breeding highly productive animals, constant work to improve the quality of products, such as meat, milk, wool and other animal products. The latest are largely determined by the level of technology and zootechnical measures at livestock enterprises.

Graduates of the agrarian profile in the specialty 6B08210 - "Technology production of livestock products" mainly work in enterprises producing livestock products and are required to follow innovative technologies and the quality of their products.

The appropriateness and relevance of the specialty is that animal husbandry is the main sector of agriculture and provides the population of the republic with high-quality food (meat, milk, eggs, animal fats, honey, etc.), and industry - raw materials (wool, leather, fur, sheepskin, astrakhan) , hair, bristles, down, feather, dung, bird droppings). Moreover, without proper training of a specialist of this profile, it is impossible to competently perform works on the production of livestock products and carry out technological work on the production of meat, milk and other animal products, while simultaneously increasing the prospective production resources.

In the educational program, attention is concentrated to the peculiarities of studying basic, specialized and special disciplines. Based on this, the graduate is formed the relevant qualification knowledge and skills. In this regard, working in production, the student will be able to correctly navigate and plan the upcoming work. In theoretical and practical terms, to distinguish between the technology of production and processing, production methods, to carry out relevant work with instruments and equipment, adjustment and installation of programs, take into account the economic efficiency of production.

The educational program provides the student with the opportunity to independently study an analytical review of thematic literature in the language of production and media. To be able to use digital information technology and statistical processing of the obtained production data.To optimize the structure of livestock, poultry, beekeeping and aquaculture, as well as specialization in strict accordance with the conditions of the regions and the possibilities of breeding productive livestock in certain climatic conditions of the republic as a whole.

The implementation of the educational program is carried out mainly through the curriculum, educational and methodological, research and educational work.

This program defines the forms of conducting, the goals and objectives of the training and production practice, where mandatory reporting forms, evidence of daily arrivals and other formalities of presence in production were presented. The educational program is aimed at developing students' general and professional competencies, gaining practical experience and accomplish with the requirements.

The quality of the presented curriculum of the educational program is not in doubt. The structure of the educational program included and fully disclosed relevant problems of the modern educational process for the production of livestock products, poultry, beekeeping and aquaculture. The structure of the curriculum as a whole is logical and sequential. Sufficient attention is paid to the organization, evaluation and monitoring of independent work of students. Formation of professional competence is carried out thanks to the content, scope and logic of building individual trajectories of students. In the quality of elective courses in the curriculum there are disciplines of a methodical and practical nature aimed on applying of innovative technologies in the educational process.

In the educational program –6B08210 “Technology production of livestock products” all the processes of curriculum development are transparent, where students and employers - representatives of relevant research institutes and management (South-West NRI LP, department of agriculture and veterinary medicine) are fully involved. The faculty of the department actively develops cooperation with relevant research institutes, take part in various seminars, conduct joint research, consult on effective management and selection, production of animal products, poultry farming, beekeeping and aquaculture, which ultimately can lead to an increase in production and employment of graduates.

This educational program fully meets the requirements of the MES of the Republic of Kazakhstan on the development and level of training of students in 6B08210 - "Technology production of livestock products" and can be recommended for use in the educational process in higher educational institutions of the Republic of Kazakhstan.

Chief Scientific Secretary of LLP South-West Research

Institute of Livestock and Crop Production,

Candidate of Agricultural Sciences:

Ф.7.02-12

**Expert’sreport**  
on the educational program  
"Technology production of livestock products"  
by 6В08210 - "Technology production of livestock products"

Livestock is a traditional branch of agriculture in Kazakhstan. Ecological clean products, the availability of vast territories (182 million hectares) of natural grazing lands, the neighborhood with large importers (Russia, China) are the main advantages of domestic livestock farming. Therefore, the training of competitive specialists in this area of production is an urgent problem today.

Students majoring in the specialty 6В08210 - "Technology production of livestock products" should be prepared for the implementation of production activities in the agricultural formations of the livestock sector of different forms of ownership involved in the production and primary processing of livestock products, at enterprises for the production and storage of fodder, for expert evaluation of products and raw materials.

The educational program is designed in accordance with the goals and mission of the university, taking into account the requests of employers and students in this field of study, with a standard curriculum and model programs 6В08201 - Technology production of livestock products. It provides for the training of agrarian specialists whose functional duties are:

-organization and management of production livestock and poultry products;

- conducting zootechnical and breeding records of animals, birds;

- organization of production and procurement of feed, the calculation of feed requirements and chemical analysis of the composition and quality of feed;  
- primary processing of livestock products and raw materials;  
- marketing and sales of livestock products;  
- development and preparation of selection and breeding plans;  
 - participation in the development of design estimates for the construction of livestock facilities;

- participation in the development of design estimates documents during the construction of livestock facilities

- implementation of the functions of monitoring over the quality of products;

-conducting science and research development;

- conducting classes in secondary professional schools in the specialty profile.

For the development of key competencies and skills in the implementation of the above functions, the structure of the educational program provides 22% of general education, 53% basic, 25% major disciplines, of which 65% is a component chosen by students, as well as professional practice, which consists of the educational practice of students on the 1st course, industrial practice at the 2nd, 3rd and 4th courses and pre-diploma practice at the 4th year course. The total amount of student workload is 131 credits, which corresponds to the parameters of the credit system of education.

Also for the development of intellectual and academic skills reflecting the changing demands of society, including for the implementation of the presidential program for mastering three languages, the educational program provides for 50% of the disciplines in Kazakh, 30 in English and 20% in Russian.

The learning outcomes reflected in the educational program are harmonized with the Dublin descriptors and the national qualification framework.

The sphere of professional activity of the bachelor's specialty - 6В08210 - Technology production of livestock productsis the technology of producing livestock products, primary processing in farms of various forms of ownership and organizing the sale of livestock products produced, conducting breeding works, broods, exhibitions and auctions of farm animals and birds, organizing export and import of livestock products.

The developed program is fully corresponded with MC, MC-modular educational program on 6В08210 - "Technology production of livestock products."

A graduate of 6B08210 - Technology production of livestock products is awarded an academic degree - Bachelor of Agriculture of 6B08210 - Technology of production of livestock products.Graduates of this direction may hold the following positions: technologist-manager of the organization of livestock production, livestock breeder, inspector to evaluate livestock products, inspectors for breeding, inspector to assess animal raw materials.  
Considering the above, we propose to increase the number of students 6В08201 - "Technology production of livestock products" and provide their training according to the developed modular educational program, to which we give our conclusion.

Chairman of the expert committee

Dean of the Higher School of

Agricultural Sciences, c,b,s: Zhylkibaev A.K.

Members of the expert committee

associate Professor, c,t,s. Manabaev N.T.

senior Lecturer, Candidate of Agricultural Sciences: S. Tulemetova