The list of academic disciplines of the university component

6B08 - Agriculture and bioresources
(Code and classification of the field of education)

6B082 - Animal production
(Code and classification of the direction of training)

0811
(Code in the International Standard Classification of Education)

B078 - Livestock
(Code and classification of the educational program group)

6B08201 - Technology of livestock products production
(Code and name of the educational program)

bachelor
(Level of preparation)

set of 2023

Semey 2023

Developed
By the Academic Committee of the EP
The head of the AC Yessengulova N.
EP Manager Nussupov A.

Reviewed
At the meeting of the Commission on Quality Assurance of Veterinary Medicine and Agricultural Management
Recommended for approval by the Academic Council of the University
Protocol № 4.1 "06" April 2023
Chairman of the Commission Jamanova G.

Approved at the meeting of the Academic Council of the University Protocol No. 8 "25" April 2023.

Approved
at the meeting of the Academic Council of the University
Protocol № 1 "01" of September 2023
Chairman of the Academic Council of the University Orynbekov D.

Bases of economics, law and ecological knowledge

Discipline cycle	General educational disciplines
Course	1
Credits count	5
Knowledge control form	Examination

Short description of discipline

The integrated discipline includes the main issues and principles in the field of fundamentals of law and anti- corruption culture, economics, entrepreneurship and leadership, ecology and life safety. Features of the use of regulatory legal acts, the ability to use the business, ethical, social, economic, entrepreneurial and environmental standards of society. Specifics of environmental-legal, economic, entrepreneurial relations, leadership qualities and principles of combating corruption.

Purpose of studying of the discipline

It consists in studying the basic patterns of the functioning of living organisms, the biosphere as a whole and the mechanisms of their sustainable development under the conditions of anthropogenic impact and emergency situations; in understanding the concept of corruption, the legitimacy of the fight against it, the content of the state penal policy; in the formation of students` basic fundamental stable knowledge on the basics of economic theory, in instilling the skills and abilities of economic thinking; in introducing students to the theory and practice of entrepreneurship, to the basics of creating their own business; in the formation of theoretical knowledge and practical skills for the development and improvement of leadership qualities.

Learning Outcomes

ON 1 Demonstrate socio-cultural, economic, legal, environmental knowledge, communication skills, apply information technology, taking into account modern trends in the development of society.

Learning outcomes by discipline

* analyzes the issues of safety and conservation of the natural environment as the most important priorities of life;*
* demonstrates knowledge of the fundamentals of nature management and sustainable development, assesses the impact of man-made systems on the environment;*
* shows knowledge of the main regulatory legal acts of the Republic of Kazakhstan, their understanding and application;*
* shows knowledge of the patterns of development of economic processes, clearly formulates his own position, finds and clearly sets out arguments in its defense;*
* is able to characterize the types of entrepreneurial activity and the entrepreneurial environment, draw up a business plan, create an entrepreneurial structure and organize its activities;*
* knows the fundamental provisions about the role of leadership in managing large and small social groups.*

Prerequisites

School course

Postrequisites

Basic and profile disciplines of the EP

ntroduction to the specialty

Discipline cycle	Basic disciplines
Course	1
Credits count	3
Knowledge control form	Examination

Short description of discipline

The discipline provides basic concepts about the branches of animal husbandry in order to create an initial idea of the future professional activity, the relationship of the educational program with other sciences, the prospects for the development of the specialty. Contribution of domestic scientists and practitioners to the development of the foundations of science, theory and practice of animal husbandry. Familiarization with zootechnical sciences: private zootechnics, genetics, feeding, hygiene of keeping and breeding farm animals.

Purpose of studying of the discipline

To acquaint students with the specifics of the specialty Technology of production of livestock products in the field of agriculture, to teach them the types and breeds of animals in the farm, as well as methods of their cultivation, methods of obtaining products, methods of care, etc.

Learning Outcomes

ON 2 Apply modern methods and techniques of keeping, feeding, breeding and efficient use of animals, rationally use feed, hayfields, pastures and other forage lands and own various methods of harvesting and storing feed.
ON 5 Predict the consequences of changes in feeding, breeding and keeping of animals, determine modern technologies for the production of livestock products and reasonably make specific technological decisions.
ON 6 To use the biological characteristics of animals that have a decisive influence on the technology of production of animal products.

Learning outcomes by discipline

1 estimation of body size and mass of cattle;
2 knowledge of methods of calculation of dairy and meat products of cattle;
3 know the factors affecting dairy productivity of cattle;

Prerequisites

School course

Postrequisites

The methodology of experimental business and the basics of patenting

Educational practice

Discipline cycle	Basic disciplines
Course	1
Credits count	2

Knowledge control form	Total mark on practice

Short description of discipline
The main purpose of the the knowledge is to consolidate educational practice acquired in the course of lectures, independent work of and laboratory classes students, and to obtain fundamentala competenciese. Content: methods and techniques of the experiment, accounting of experimental data. Working with animals. Familiarization with the sciences: private animal science, genetics, feeding, hygiene of keeping and breeding farm animals. Biological aspects in the production technology of animal products.

Purpose of studying of the discipline
The main purpose of the educational practice is to consolidate the knowledge acquired in the course of lectures, laboratory classes and independent work of the student, and to obtain fundamental competencies. Successfully completed educational practice contributes to easier assimilation of material in special disciplines that form a fundamental part of the professional cycle.

Learning Outcomes
ON 6 To use the biological characteristics of animals that have a decisive influence on the technology of production of animal products.
ON 9 Apply modern research methods in the field of animal husbandry, scientific and technical information, domestic and foreign experience in animal husbandry and solve problems at a professional level in various branches of animal husbandry.

Learning outcomes by discipline
1. Demonstrates the knowledge acquired in the course of lectures, laboratory classes
2. Evaluates the technique of the experiment.
3. Plans for feeding, hygiene of keeping and breeding of farm animals

Prerequisites
ntroduction to the specialty

Postrequisites
Production practice I

Forage production

Discipline cycle	Basic disciplines
Course	2
Credits count	5
Knowledge control form	Examination

Short description of discipline
Examines the basics of creating and strengthening the forage base on the basis of rational use and improvement of natural and field forage lands, information about the bioecological features of plants of hayfields and pastures, technology for improving forage lands. The discipline studies methods of determining the yield and nutritional value of feed, the process and methods of harvesting hay, silage and haylage; technology of feed preparation, determination of the quality of yield of fodder crops.

Purpose of studying of the discipline
Acquisition of knowledge about the patterns of development and life of forage plants, the relationship of plants with the environment, methods and techniques for creating optimal conditions for the growth of forage crops and obtaining feed based on them.

Learning Outcomes
ON 2 Apply modern methods and techniques of keeping, feeding, breeding and efficient use of animals, rationally use feed, hayfields, pastures and other forage lands and own various methods of harvesting and storing feed.

Learning outcomes by discipline
1. To determine the characteristics of the forage base based on the natural use and severity of field forage lands
2. Analyze information about the bioecological features of plants of hayfields and pastures
3. Develop methods for determining the yield and nutritional value of feed

Prerequisites
School course

Postrequisites
Feeding of agricultural animals

Biology of individual animal development

Discipline cycle	Basic disciplines
Course	2
Credits count	5
Knowledge control form	Examination

Short description of discipline
The discipline studies the processes of animal ontogenesis. At the same time, all stages of ontogenesis are studied: prenatal and postnatal. The course examines the structure and development of germ cells, the process of gamete fertilization, zygote fragmentation, the formation of blastula, morula, blastocysts, gastrum, lactation, the development of axial organs, the formation of fetal membranes and placenta, features of mammalian embryogenesis, general patterns of genetic and hormonal regulation of individual development of the organism, critical periods of development.

Purpose of studying of the discipline
Presentation to students of the morphology of the modern level of biology of personal development, which is extremely necessary and important for biological science and practice, mastering it. Creating conditions for further higher education for students, the development of creative opportunities, activity and innovation

Learning Outcomes
ON 6 To use the biological characteristics of animals that have a decisive influence on the technology of production of animal products.

Learning outcomes by discipline
6.To use the biological characteristics of animals that have a decisive influence on the technology of production of animal products.
1. Determination of the stages of ontogenesis in the body of animals;
2. the use of histological preparations, mannequins, stages of ontogenesis, distinguishing projects, drawings, microphotos and acquired knowledge of the discipline in the study of other disciplines;

3. Working under a microscope, reading histological preparations

Prerequisites

School course

Postrequisites

Basic and profile disciplines of the EP

Genetic

Discipline cycle	Basic disciplines
Course	2
Credits count	5
Knowledge control form	Examination

Short description of discipline

The discipline introduces the basics of heredity and variability of organisms, the main provisions of genetics, Mendel`s laws, the chromosomal theory of heredity. Gives an idea of the cytological foundations of heredity, the patterns of inheritance in remote and intraspecific hybridization. Examines the provisions on the molecular foundations of heredity, the main types of variability, polyploidy and its role in breeding and evolution, genetic evaluation of populations and individuals by offspring.

Purpose of studying of the discipline

The purpose of this course is to ensure the disclosure of the content of the basic principles, laws and concepts of each section of the course and the development of genetic thinking skills for conscious perception and mastering the methods of genetics.

Learning Outcomes

ON 8 To use the laws, methods and techniques of genetics, breeding and biotechnology, to offer and defend their point of view when choosing modern genetic and biotechnological methods in breeding work.

Learning outcomes by discipline

1) To know the regularities of the manifestation of the fundamental properties of life – heredity and variability – at various levels of the organization of living systems.

2) apply knowledge about genetic patterns in solving genetic problems, forecasting and explaining the results of various types of crosses, solving practical problems in the field of breeding, biotechnology, genetic engineering, medicine, nature protection and human health, medical and genetic counseling, genetic control of biosafety of new products and industries.

3) Possess - various methods of solving genetic problems; the most important methods of genetic analysis.

Prerequisites

School course

Postrequisites

Production practice I

World of Abai

Discipline cycle	Basic disciplines
Course	2
Credits count	3
Knowledge control form	Examination

Short description of discipline

The discipline is aimed at studying historical facts, the philosophical and artistic foundations of the works of Abay Kunanbaev, Shakarim Kudaiberdiev, which form worldview and aesthetic values, the student`s ability to express his opinion, practical skills and perception of such human qualities as morality, honesty, artistic character. The genius of the writers of Kazakh literature and the role of M. Auezov in the study and popularization of Abai`s heritage, the significance of his works for history, literature and science are determined.

Purpose of studying of the discipline

Formation of the meaning of philosophical and ideological being, understanding of the problems raised in the works of Abai Kunanbayuly, Shakarim Kudaiberdiuly, Mukhtar Auezov and application of the acquired knowledge in the practice of everyday life.

Learning Outcomes

ON 1 Demonstrate socio-cultural, economic, legal, environmental knowledge, communication skills, apply information technology, taking into account modern trends in the development of society.

Learning outcomes by discipline

1) Analyzes the philosophical and artistic foundations of works, historical facts related to the creative heritage of Abai Kunanbayev, Shakarim Kudaiberdiyev, Mukhtar Auezov

2) Uses in practice the humanistic ideas of Abai`s philosophical and artistic works

3) Assesses the place and significance of Abai`s works in the history of literature and science

Prerequisites

The module of socio-political knowledge (sociology, political science, cultural studies, psychology)

Postrequisites

Basic and profile disciplines of the EP

Feeding of agricultural animals

Discipline cycle	Basic disciplines
Course	2
Credits count	10
Knowledge control form	Examination and term work/Project

Short description of discipline

The value of the constituent parts of the feed in the organization of complete feeding of animals. Evaluation of the nutritional value of feed by digestible nutrients. Classification of feed and their characteristics. Pasture use. Green conveyor. Fundamentals of silo technology. Evaluation of the quality of grain feed. Types of feed.

Purpose of studying of the discipline
Training of highly professional specialists in the field of feeding farm animals who possess modern technologies of feed production, storage and rational use of feed
Learning Outcomes
ON 2 Apply modern methods and techniques of keeping, feeding, breeding and efficient use of animals, rationally use feed, hayfields, pastures and other forage lands and own various methods of harvesting and storing feed.
Learning outcomes by discipline
1 about the digestion of feed;
2 Determination of feed fertility;
3 classification of feed.
Prerequisites
Forage production
Postrequisites
Cultivation and selection of farm animals

Basics of veterinary

Discipline cycle	Basic disciplines
Course	2
Credits count	3
Knowledge control form	Examination

Short description of discipline
It is aimed at applying the basics of veterinary medicine in the work of a livestock production technologist. The course examines the organization of veterinary measures in our country, the basic concepts of pathophysiology and pathanatomy, clinical diagnostics and pharmacology, methods and methods of general and special animal studies, feed toxicosis of farm animals, prevention of non-infectious diseases, infectious and invasive diseases in farm animals and poultry.
Purpose of studying of the discipline
Identification of the pathological process in the animal`s body, the causes and conditions of their origin, the basis of the disease, measures to prevent and combat them
Learning Outcomes
ON 4 To organize and carry out sanitary and preventive work to prevent the main diseases of animals, rational reproduction of animals.
Learning outcomes by discipline
1. Investigates the organization of veterinary events in our country
2. Assesses the prevention of non-communicable diseases
3. Recognizes infectious and invasive diseases in farm animals
Prerequisites
Anatomyofanimals
Postrequisites
Cultivation and selection of farm animals

Production practice I

Discipline cycle	Basic disciplines
Course	2
Credits count	5
Knowledge control form	Total mark on practice

Short description of discipline
Consolidation of knowledge gained in the course of training, based on the study of work experience at a functioning agricultural enterprise, as well as mastering production skills. Practical work on feed preparation technologies, assessment of feed nutrition by digestible nutrients, classification of feeds and their characteristics, organization of fish cultivation and rearing, fish feeding, non-infectious, infectious and invasive diseases, basics of diagnostics and measures for the prevention of diseases of animals and humans.
Purpose of studying of the discipline
Consolidation of knowledge gained in the course of training, based on the study of work experience at a functioning enterprise, as well as mastering production skills.
Learning Outcomes
ON 2 Apply modern methods and techniques of keeping, feeding, breeding and efficient use of animals, rationally use feed, hayfields, pastures and other forage lands and own various methods of harvesting and storing feed.
ON 3 To recommend modern information technologies in the production and processing of livestock products, scientific achievements in assessing the quality of feed and products, in standardization and certification of livestock products, to argue the need for mechanization and automation of technological processes.
Learning outcomes by discipline
1. Demonstrates work on feed preparation technologies
2. Evaluates the nutritional value of feed by digestibility of nutrients
3. Recognizes the classification of feeds and their characteristics
Prerequisites
Educational practice
Postrequisites
Internship II

Zoohyena

Discipline cycle	Basic disciplines
Course	3

Credits count	5
Knowledge control form	Examination

Short description of discipline

The course is aimed at studying the interaction of an animal organism with the external environment. The discipline studies the hygiene of the air environment, soil hygiene, hygiene of water and animal watering, hygiene of feed and feeding, hygiene of animal transportation, hygiene of rational care of farm animals, hygiene of pasture keeping of farm animals, occupational hygiene and personal hygiene of livestock workers, zoohygienic requirements in animal husbandry industries.

Purpose of studying of the discipline

Learning Outcomes

ON 2 Apply modern methods and techniques of keeping, feeding, breeding and efficient use of animals, rationally use feed, hayfields, pastures and other forage lands and own various methods of harvesting and storing feed.

Learning outcomes by discipline

1. Examines the hygiene of the air environment
2. Assesses the hygiene of water and animal drinking
3. Compares the hygiene of pasture keeping of farm animals

Prerequisites

Basics of veterinary

Postrequisites

Breeding business in animal husbandry

Cultivation and selection of farm animals

Discipline cycle	Basic disciplines
Course	3
Credits count	10
Knowledge control form	Examination

Short description of discipline

The course is aimed at developing principles and methods for improving the qualities of animals. Examines the history of the origin and evolution of farm animals, exterior and interior features and constitution, productivity accounting, indicators of growth and development of animals, animal assessment by origin and quality of offspring, classification of breeds, methods of breeding farm animals in conditions of intensification, forms and principles of selection and selection.

Purpose of studying of the discipline

The purpose of studying the discipline is to acquire deep theoretical knowledge of the basics of zootechnical science and practice in the context of breeding and breeding of farm animals, detailed mastery, generalization and systematization of the knowledge gained for implementation in the practice of animal husbandry

Learning Outcomes

ON 2 Apply modern methods and techniques of keeping, feeding, breeding and efficient use of animals, rationally use feed, hayfields, pastures and other forage lands and own various methods of harvesting and storing feed.
ON 8 To use the laws, methods and techniques of genetics, breeding and biotechnology, to offer and defend their point of view when choosing modern genetic and biotechnological methods in breeding work.

Learning outcomes by discipline

1. Explores the history of the origin and evolution of farm animals
2. Assesses the exterior and interior features of animals
3. Compares the growth and development indicators of animals

Prerequisites

Feeding of agricultural animals

Postrequisites

Breeding business in animal husbandry

Technology of livestock products production

Discipline cycle	Profiling discipline
Course	3
Credits count	5
Knowledge control form	Examination

Short description of discipline

The discipline is aimed at mastering the economic prerequisites for the organization and production of products obtained from the main types of farm animals bred on farmers, as well as in peasant, cooperative, joint-stock and personal subsidiary farms of the Republic of Kazakhstan, the CIS and abroad. The course studies the issues of production technology of individual subsectors of animal husbandry: cattle breeding, sheep breeding, horse breeding, camel breeding, poultry breeding, pig breeding, fish farming, rabbit breeding, animal husbandry, beekeeping, maral breeding, karakul breeding.

Purpose of studying of the discipline

To give students the necessary amount of knowledge, skills, and skills in mastering the technology of milk production, beef, pork, sheep breeding, horse breeding, poultry farming and other livestock industries in different types of agricultural enterprises

Learning Outcomes

ON 2 Apply modern methods and techniques of keeping, feeding, breeding and efficient use of animals, rationally use feed, hayfields, pastures and other forage lands and own various methods of harvesting and storing feed.
ON 5 Predict the consequences of changes in feeding, breeding and keeping of animals, determine modern technologies for the production of livestock products and reasonably make specific technological decisions.

Learning outcomes by discipline

1. Compares the products obtained from the main types of farm animals
2. Plans production technologies for individual subsectors of animal husbandry

3. Demonstrates the production of products in peasant farms and cooperatives

Prerequisites

Mechanization and automation of animal husbandry

Postrequisites

Commodity science and expertise of livestock raw materials

Internship II

Discipline cycle	Basic disciplines
Course	3
Credits count	5
Knowledge control form	Total mark on practice

Short description of discipline

Formation of professional abilities of a student in the conditions of production on the basis of the use of his theoretical knowledge in various situations characteristic of the future professional activity of a specialist. Practical work with mechanisms of agricultural machinery and equipment of livestock premises and farms, animal assessment, herd analysis by productivity and factors affecting it, with a breeding work plan, on the production technology of certain subsectors of animal husbandry, animal reproduction biotechnology.

Purpose of studying of the discipline

Formation of professional abilities of a student in the conditions of production on the basis of the use of his theoretical knowledge in various situations characteristic of the future professional activity of a specialist.

Learning Outcomes

ON 5 Predict the consequences of changes in feeding, breeding and keeping of animals, determine modern technologies for the production of livestock products and reasonably make specific technological decisions.
ON 8 To use the laws, methods and techniques of genetics, breeding and biotechnology, to offer and defend their point of view when choosing modern genetic and biotechnological methods in breeding work.

Learning outcomes by discipline

1. Assesses the student`s abilities based on the use of theoretical knowledge in various situations
2. Animal reproduction biotechnology is planned.
3. Demonstrates working with mechanisms of agricultural machinery and equipment of livestock premises

Prerequisites

Production practice I

Postrequisites

Internship III

Poultry breeding

Discipline cycle	Profiling discipline
Course	3
Credits count	8
Knowledge control form	Examination

Short description of discipline

This discipline is aimed at mastering the knowledge of breeding, feeding and keeping of poultry. Considers the biology of poultry, characteristics of breeds and breed groups, crosses, lines, breeding and breeding of poultry, egg incubation; poultry bonification, technology of keeping and feeding poultry, technology of industrial production of eggs and meat, organization of slaughter and primary processing of poultry.

Purpose of studying of the discipline

Formation of theoretical knowledge and practical skills in the maintenance, breeding, feeding of poultry, poultry production technology.

Learning Outcomes

ON 2 Apply modern methods and techniques of keeping, feeding, breeding and efficient use of animals, rationally use feed, hayfields, pastures and other forage lands and own various methods of harvesting and storing feed.
ON 5 Predict the consequences of changes in feeding, breeding and keeping of animals, determine modern technologies for the production of livestock products and reasonably make specific technological decisions.
ON 6 To use the biological characteristics of animals that have a decisive influence on the technology of production of animal products.

Learning outcomes by discipline

1. Assesses the feeding and maintenance of poultry
2. Plans to organize the slaughter and primary processing of poultry.
3. Demonstrates the technology of keeping and feeding poultry

Prerequisites

Technology and organization of production of national products

Postrequisites

Information technologies in animal breeding

Cattle breeding

Discipline cycle	Profiling discipline
Course	4
Credits count	8
Knowledge control form	Examination

Short description of discipline

The discipline focuses on the ability to understand and analyze the technology of production of livestock products. The article considers the exterior and constitutional indicators of cattle; systems, methods of keeping and feeding young animals; dairy, meat and by-products of cattle; herd reproduction; classification of cattle breeds; breeding by lines and families; selection and selection; current technologies

for milk and beef production.

Purpose of studying of the discipline

To prepare highly specialized specialists with knowledge on feeding, keeping and breeding of cattle, as well as milk and beef production technology, which are necessary not only in theoretical terms

Learning Outcomes

ON 2 Apply modern methods and techniques of keeping, feeding, breeding and efficient use of animals, rationally use feed, hayfields, pastures and other forage lands and own various methods of harvesting and storing feed.

ON 5 Predict the consequences of changes in feeding, breeding and keeping of animals, determine modern technologies for the production of livestock products and reasonably make specific technological decisions.

Learning outcomes by discipline

1. Demonstrates the ability to understand and analyze the technology of cattle production

2. Evaluates the exterior and constitutional indicators of cattle

3. Compares the classification of cattle breeds

Prerequisites

Breeding business in animal husbandry

Postrequisites

Undergraduate practice