

CATALOG OF ELECTIVE DISCIPLINES

7M09 - Veterinary

(Code and classification of the field of education)

7M091 - Veterinary

(Code and classification of the direction of training)

0841

(Code in the International Standard Classification of Education)

M138 - Veterinary Science

(Code and classification of the educational program group)

7M09102 - Veterinary Sanitation

(Code and name of the educational program)

Master

(Level of preparation)

set of 2024

Developed

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Reviewed

at the meeting of the Commission on Academic Quality of the Faculty of Veterinary Medicine and Agricultural Management by protocol No. 3 of January 09, 2024.

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Approved

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The microbiological control of meat and poultry products

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

Short description of discipline

The discipline studies the order and methods of periodic monitoring of bacteriological indicators.

Conducting microbiological analysis of animal meat and wild professional animals.

Undergraduates possess methods of sanitary and bacteriological research of meat of animals and birds.

Possess methods of bacteriological research for the isolation of bacteria and the study of microbial diagnostics. Determination of the total number of bacteria. Relatively acceptable norms of inhibitory substances and contamination of food products by microorganisms.

Establish microbiological criteria for food safety

Purpose of studying of the discipline

Research of methods and organization of microbiological research of livestock and poultry products.

Learning Outcomes

ON3 Conduct basic and applied scientific research in the field of veterinary sanitation, sanitary microbiology.

ON4 Analyze and solve the theoretical and applied problems of veterinary sanitation of products of animal and vegetable origin.

ON5 Use rapid methods to assess the safety of products and raw materials of animal origin.

Learning outcomes by discipline

-know the methods of microbiological research

-to conduct basic and applied research on sanitary microbiology. To develop new and improve existing methods of indication and identification of microorganisms. Solve the problems of accelerated safety assessment of products and raw materials of animal origin.

Prerequisites

Bachelor

Postrequisites

Epizootological monitoring of infectious diseases of animals and birds

Microbiological indicators of quality and safety of vegetable products

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

Short description of discipline

The discipline studies methods of microbiological research in plant products, canned vegetable products. Study and identification of groups of lactic acid and acetic acid bacteria, yeast and fungal spores as the most characteristic representatives of the epiphytic microflora of vegetables. Determination of the amount of coliform bacteria in salads and cut vegetables selected at the main stages of production. Pollutants of biological nature. Mycotoxins, toxins. Monitors microbiological contamination of vegetable products. Sanitary and microbiological indicators of vegetable safety.

Purpose of studying of the discipline

to study the methods, the organization of microbiological research and the assessment of the safety quality of vegetable products

Learning Outcomes

ON3 Conduct basic and applied scientific research in the field of veterinary sanitation, sanitary microbiology.

ON4 Analyze and solve the theoretical and applied problems of veterinary sanitation of products of animal and vegetable origin.

ON5 Use rapid methods to assess the safety of products and raw materials of animal origin.

Learning outcomes by discipline

-know the methods of microbiological research of crop products, the main ways of pollution; prevention of the accumulation of pollutants in foods of plant origin; biological safety, normal and pathogenic microorganisms of vegetables.

-be able to control the quality of vegetable products; choose research methods.

Prerequisites

Bachelor

Postrequisites

Epizootological monitoring of infectious diseases of animals and birds

Microbiology of milk and dairy products

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

Short description of discipline

Analyzes the achievements of domestic and foreign science and practice on hygiene and sanitation of milk and dairy products. Solves the sanitary and hygienic conditions for obtaining milk in farms. Prepares undergraduates, conducts a comprehensive assessment of veterinary and sanitary control of milk according to the chosen methodology and analyzes the results, checks the sanitary condition of retail outlets. Express methods for determining the mixture of milk from mastitis, the presence of antibiotics in it. Contamination of food products with nitrates and nitrites, toxic elements and radionuclides.

Purpose of studying of the discipline

to study the methods, organization of microbiological research and veterinary and sanitary control of the quality of milk, dairy products, in accordance with the requirements of the RK standard.

Learning Outcomes

ON3 Conduct basic and applied scientific research in the field of veterinary sanitation, sanitary microbiology.

ON4 Analyze and solve the theoretical and applied problems of veterinary sanitation of products of animal and vegetable origin.

ON5 Use rapid methods to assess the safety of products and raw materials of animal origin.

Learning outcomes by discipline

- know the hygienic conditions for obtaining milk; primary processing, storage and transportation of milk; express methods for determining the sanitary quality of harvested milk; factors affecting the accuracy of analyzes in determining the quality indicators of milk (antibiotics, nitrates and nitrites), veterinary and sanitary requirements for the procurement and sale of milk and dairy products.

Prerequisites

Bachelor

Postrequisites

Epizootological monitoring of infectious diseases of animals and birds

Patent and defence of intellectual property

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

Short description of discipline

Forms undergraduates to study the basic concepts of intellectual property, copyright and related rights, the patent system. Explains the procedure for registration and submission of documents. Know the formulas and essence of inventions. Selection of the necessary information for the creation of new technical solutions, samples, own inventions. Instills the skills of conducting patent and inventive activities on the problem being developed to obtain reliable data.

Know the main provisions of the law and patent law.

Purpose of studying of the discipline

Formation of knowledge on current, practically significant issues in the field of legal regulation of relations on the creation, use and protection of the results of intellectual work.

Learning Outcomes

ON2 Own a methodology and algorithm for planning and organizing research and teaching activities.

ON3 Conduct basic and applied scientific research in the field of veterinary sanitation, sanitary microbiology.

ON4 Analyze and solve the theoretical and applied problems of veterinary sanitation of products of animal and vegetable origin.

Learning outcomes by discipline

- concepts of intellectual property, industrial property, invention, useful model, industrial prototype, trademark (sign of service), name of place of origin commodity, know-how, analogue, prototype, licence contract; order of filing of an application on delivery of patent on invention, useful model, industrial prototype, plant-breeding achievement; order of filing of an application on registration commodity sign (sign of service); order of conclusion of the licensed treaty.

- integrates knowledge in research activity sent to the всестороннее study of object, process or phenomenon, their structure and connections, and also receipt and introduction in practice useful for man of results

Prerequisites

Bachelor

Postrequisites

Veterinary and sanitary examination at especially dangerous diseases of animals and birds

Current problems in epizootology

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

Short description of discipline

Consider modern problems of veterinary epizootology. Monitor and forecast infectious diseases of mammals, birds, fish and bees. To study epizootological geography and principles of epizootological zoning. Predict the prevalence of infectious diseases in the regions of Abay and East Kazakhstan regions. Analyze the influence of modern environmental conditions on the manifestation of the epizootic process. To study the spread of infectious diseases in the countries of near and far abroad. Conduct an analysis of the protection of the territory of the Republic of Kazakhstan from the introduction of infectious diseases.

Purpose of studying of the discipline

to study the state, problems, methods of prevention, the development of veterinary and sanitary measures to prevent animal diseases and the production of animal products and feeds of high sanitary quality in the Republic of Kazakhstan, countries of near and far abroad.

Learning Outcomes

ON3 Conduct basic and applied scientific research in the field of veterinary sanitation, sanitary microbiology.

ON4 Analyze and solve the theoretical and applied problems of veterinary sanitation of products of animal and vegetable origin.

ON5 Use rapid methods to assess the safety of products and raw materials of animal origin.

Learning outcomes by discipline

- be able to carry out activities for the prevention of animal diseases and the prevention of human infection with zoonoses and the use of modern methods and means.

- have the skills to apply innovative methods of research and organization of veterinary and sanitary measures.

- to know modern veterinary and sanitary equipment.

Prerequisites

Bachelor

Postrequisites

Veterinary and sanitary examination at especially dangerous diseases of animals and birds

Modern problems of veterinary hygiene

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

Short description of discipline

To consider modern problems of environmental protection, soil, water, feed production, animal transportation. Know the components of sanitary and hygienic and technological processes in the production of milk, beef, pork and other types of products on an industrial basis. To master ways to protect veterinary surveillance facilities from infection and spread of infectious and non-contagious animal diseases, protection of the population from diseases dangerous to humans and animals.

Purpose of studying of the discipline

to study the state, problems, methods of prevention, the development of veterinary and sanitary measures to prevent animal diseases and the production of animal products and feeds of high sanitary quality in the Republic of Kazakhstan, countries of near and far abroad.

Learning Outcomes

ON3 Conduct basic and applied scientific research in the field of veterinary sanitation, sanitary microbiology.

ON4 Analyze and solve the theoretical and applied problems of veterinary sanitation of products of animal and vegetable origin.

ON5 Use rapid methods to assess the safety of products and raw materials of animal origin.

Learning outcomes by discipline

-to have skills in the field of ideological knowledge of veterinary sanitation and hygiene; in the field of modern economic system, organization and management of veterinary medicine and agriculture

-to be able to use the achievements of the basic sciences for solving specific research, information retrieval and methodological tasks in veterinary hygiene.

Prerequisites

Bachelor

Postrequisites

Veterinary and sanitary examination at especially dangerous diseases of animals and birds

Modern problems of Veterinary Public Health

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

Short description of discipline

Studies problems, methods of prevention, development of veterinary and sanitary measures to prevent animal diseases and obtaining animal products and feed of high sanitary quality. The current state of veterinary medicine in Kazakhstan and abroad. Development prospects. State veterinary control over the safety of products. Modern problems of veterinary hygiene, epizootology, sanitary parasitology, veterinary radiobiology. Legislative and regulatory documents on veterinary sanitation

Purpose of studying of the discipline

to study the state, problems, methods of prevention, the development of veterinary and sanitary measures to prevent animal diseases and the production of animal products and feeds of high sanitary quality in the Republic of Kazakhstan, countries of near and far abroad.

Learning Outcomes

ON3 Conduct basic and applied scientific research in the field of veterinary sanitation, sanitary microbiology.

ON4 Analyze and solve the theoretical and applied problems of veterinary sanitation of products of animal and vegetable origin.

ON5 Use rapid methods to assess the safety of products and raw materials of animal origin.

Learning outcomes by discipline

be able to use the achievements of the basic sciences for solving specific research, information retrieval and methodological tasks in veterinary sanitation.

have the skills of computer collection, storage, processing and implementation of information on scientific research conducted in the field of veterinary sanitation; systematic updating of knowledge in the process of professional activity, ensuring the active search and use of new information.

Prerequisites

Bachelor

Postrequisites

Veterinary and sanitary examination at especially dangerous diseases of animals and birds

Theoretical bases of programming of veterinary events

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

Short description of discipline

The discipline teaches the use of informatics and computerization in the management of agricultural processes. Decipher the basic concepts; coding of information of different types, types of data structures, units of processing, storage and accumulation of information. Electronic and calculation tables. Local and global computer networks. Fundamentals of automated search and selection of information. Obtaining and analysis of results, methods of information protection.

Solve professional problems, calculations using modern methods, work with technical and reference literature, scientific and technical documentation.

Purpose of studying of the discipline

taking of information to магистрантов on the technical and programmatic equipments of realization of informative processes

Learning Outcomes

ON2 Own a methodology and algorithm for planning and organizing research and teaching activities.

ON3 Conduct basic and applied scientific research in the field of veterinary sanitation, sanitary microbiology.

ON4 Analyze and solve the theoretical and applied problems of veterinary sanitation of products of animal and vegetable origin.

Learning outcomes by discipline

-able to draw conclusions and argue the results, work on a PC and solve professional problems, calculations using modern techniques, work with technical and reference books, scientific and technical documentation.

-practical skills in the field of modern problems of veterinary sanitation necessary in the practice of the veterinary sanitary doctor; possession of computer methods for collecting, storing, processing and selling information; possession of innovative methods of research and production organization

Prerequisites

Bachelor

Postrequisites

Veterinary and sanitary examination at especially dangerous diseases of animals and birds

Theory and methods of experimental research

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

Short description of discipline

The discipline considers the theory, methods and planning models that allow for research work in veterinary medicine. Information retrieval, types and sources of information. Use of modern laboratory and technological equipment. Organization and formulation of modern methods used in veterinary medicine. Status and prospects. To be able to analyze and draw up the received information and analyses. Implementation of research results: patenting, mathematical statistics, approbation, inventions and innovative projects. Rules for writing a scientific article, etc.

Purpose of studying of the discipline

The purpose of studying the discipline:

Master the methodology, logic and planning of scientific research in veterinary medicine, setting and conducting scientific experiment.

Learning Outcomes

ON2 Own a methodology and algorithm for planning and organizing research and teaching activities.

ON3 Conduct basic and applied scientific research in the field of veterinary sanitation, sanitary microbiology.

ON4 Analyze and solve the theoretical and applied problems of veterinary sanitation of products of animal and vegetable origin.

Learning outcomes by discipline

ON2 Own a methodology and algorithm for planning and organizing research and teaching activities;

ON3 Conduct fundamental and applied scientific research in the field of veterinary sanitation;

ON5 Analyze and solve the theoretical and applied problems of veterinary sanitation of products of animal and vegetable origin;

-basic principles and features of scientific researches in various fields; veterinary-sanitary and biotechnological methods.

-can use the fundamental sciences in practical work to solve research, information retrieval, methodological tasks in various branches of veterinary medicine and animal husbandry; use modern laboratory and technological equipment; to plan, organize and conduct experiments, production work in the field of veterinary and sanitary research.

Prerequisites

Bachelor

Postrequisites

Veterinary and sanitary examination at especially dangerous diseases of animals and birds

Veterinary and sanitary examination at especially dangerous diseases of animals and birds

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

Short description of discipline

VSE carcasses and animal organs during forced slaughter. Visualize the organoleptic indicators of the meat of a fallen, sick or animal killed in agony. Describe infectious and endangered diseases in which the slaughter of animals for meat is prohibited. To study the bacteriological examination of the products of slaughter of animals and birds, provided for by the relevant instructions, as well as the rules of veterinary examination and slaughter animals. To study the features of the veterinary and sanitary examination of slaughter products and contagious diseases suspicious for the disease. Describe the requirements for personal hygiene of workers involved in the processing of sick animals and poultry.

Purpose of studying of the discipline

To study the features of expertise in especially dangerous diseases of animals and birds.

Learning Outcomes

ON3 Conduct basic and applied scientific research in the field of veterinary sanitation, sanitary microbiology.

ON5 Use rapid methods to assess the safety of products and raw materials of animal origin.

ON6 Analyze the results of sanitary and epidemiological monitoring of infectious diseases of animals and birds.

Learning outcomes by discipline

-to know the features of VSE carcasses of organs with forced slaughter, diseases of infectious etiology.

-able to carry out a veterinary and sanitary examination of products of slaughter in especially dangerous animal diseases.

-to develop new and improve existing methods of indication and identification of microorganisms and parasites. To solve the problems of the rapid assessment of the safety of products, raw materials of animal origin in especially dangerous diseases.

Prerequisites

The microbiological control of meat and poultry products

Postrequisites

Veterinary and sanitary control in the objects of veterinary supervision

Modern problems of veterinary-sanitary examination

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

Short description of discipline

The discipline studies modern equipment used for slaughter and processing of animals and birds and the introduction of new technological processes for the organization of slaughter, integrated processing of livestock based on innovative technologies.

It prepares undergraduates who own the methods of veterinary and sanitary examination, including the detection of xenobiotics, preservatives, aflatoxins, infectious and parasitic diseases of animals, birds, fish, and to give an objective assessment of the safety and quality of animal products.

Carries out monitoring and forecasting of invasive diseases in the Republic of Kazakhstan, near and far abroad countries. Studies the prevalence and seasonal-age dynamics of invasive diseases in Kazakhstan. Considers natural focal invasive diseases. It prepares undergraduates who own modern parasitological methods of research on the prevention of invasive diseases among mammals, birds, fish and bees. Objects of veterinary control and supervision develop schemes for the elimination and protection of the territory of the Republic of Kazakhstan from the introduction of invasive diseases.

Purpose of studying of the discipline

to study the current problems of veterinary-sanitary examination

Learning Outcomes

ON3 Conduct basic and applied scientific research in the field of veterinary sanitation, sanitary microbiology.

ON5 Use rapid methods to assess the safety of products and raw materials of animal origin.

ON6 Analyze the results of sanitary and epidemiological monitoring of infectious diseases of animals and birds.

Learning outcomes by discipline

-know the modern equipment used at enterprises for the processing of slaughter animals in different countries of the world and the veterinary and sanitary requirements for them.

-use modern methods and technologies of slaughter and processing of animals and birds used in various countries of the world.

Prerequisites

The microbiological control of meat and poultry products Microbiological indicators of quality and safety of vegetable products

Postrequisites

Veterinary and sanitary control in the objects of veterinary supervision

Modern problems of sanitary parasitology

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

Short description of discipline

Carries out monitoring and forecasting of invasive diseases in the Republic of Kazakhstan, near and far abroad countries. Studies the prevalence and seasonal-age dynamics of invasive diseases in Kazakhstan. Considers natural focal invasive diseases. It prepares undergraduates who own modern parasitological methods of research on the prevention of invasive diseases among mammals, birds, fish and bees. Objects of veterinary control and supervision develop schemes for the elimination and protection of the territory of the Republic of Kazakhstan from the introduction of invasive diseases.

Carries out monitoring and forecasting of invasive diseases in the Republic of Kazakhstan, near and far abroad countries. Studies the prevalence and seasonal-age dynamics of invasive diseases in Kazakhstan. Considers natural focal invasive diseases. It prepares undergraduates who own modern parasitological methods of research on the prevention of invasive diseases among mammals, birds, fish and bees. Objects of veterinary control and supervision develop schemes for the elimination and protection of the territory of the Republic of Kazakhstan from the introduction of invasive diseases.

Purpose of studying of the discipline

to study the current problems of sanitary parasitology

Learning Outcomes

ON3 Conduct basic and applied scientific research in the field of veterinary sanitation, sanitary microbiology.

ON5 Use rapid methods to assess the safety of products and raw materials of animal origin.

ON6 Analyze the results of sanitary and epidemiological monitoring of infectious diseases of animals and birds.

Learning outcomes by discipline

-have the skills to apply innovative methods of research and organization of health and sanitary services.

-develop new and improve existing methods of display and identification of parasites. To solve the problems of an accelerated assessment of the safety of products, raw materials of animal origin.

Prerequisites

The microbiological control of meat and poultry products

Postrequisites

Veterinary and sanitary control in the objects of veterinary supervision

Veterinary and sanitary measures for infectious diseases of bees and fish

Discipline cycle	Profiling discipline
Course	1
Credits count	5

Knowledge control form

Examination

Short description of discipline

The discipline considers the development of beekeeping in Kazakhstan, East Kazakhstan region, classification infectious diseases of bees and fish according to international rules. Develops literary skills. Instills the skills of analytical abilities in the field of studying the epizootic situation in beekeeping and fish farms. Forms the ability of students to conduct early diagnosis, make timely decisions in the event of a disease and organize veterinary and sanitary measures to prevent infectious diseases among fish and bees. Considers issues that ensure the quality of beekeeping and fish farming products.

Purpose of studying of the discipline

To develop the skills of drawing up and conducting veterinary and sanitary measures and developing an algorithm of actions for infectious diseases of bees and fish.

Learning Outcomes

ON3 Conduct basic and applied scientific research in the field of veterinary sanitation, sanitary microbiology.

ON5 Use rapid methods to assess the safety of products and raw materials of animal origin.

ON6 Analyze the results of sanitary and epidemiological monitoring of infectious diseases of animals and birds.

Learning outcomes by discipline

Prerequisites

The microbiological control of meat and poultry products

Postrequisites

Veterinary and sanitary control in the objects of veterinary supervision

Veterinary and sanitary measures for especially dangerous infectious diseases of animals and birds

Discipline cycle

Profiling discipline

Course

1

Credits count

5

Knowledge control form

Examination

Short description of discipline

Classification of infectious diseases of animals and birds. Study and analysis of the epizootic situation of especially dangerous infectious diseases in Kazakhstan, in the countries of near and far abroad.

Prevention, treatment, diagnosis, neutralization, removal and destruction of animals and birds infected with especially dangerous diseases. Ensuring the safety of products and raw materials of animal origin, feed. Planning, conducting and evaluating veterinary and sanitary measures. Socio-economic damage in high-risk infections.

Purpose of studying of the discipline

to develop the skills of drawing up and conducting veterinary and sanitary measures and developing an algorithm of actions for especially dangerous infectious diseases of animals and birds.

Learning Outcomes

ON3 Conduct basic and applied scientific research in the field of veterinary sanitation, sanitary microbiology.

ON5 Use rapid methods to assess the safety of products and raw materials of animal origin.

ON6 Analyze the results of sanitary and epidemiological monitoring of infectious diseases of animals and birds.

Learning outcomes by discipline

Prerequisites

The microbiological control of meat and poultry products

Postrequisites

Veterinary and sanitary control in the objects of veterinary supervision

Veterinary and sanitary measures for especially dangerous infectious diseases of birds

Discipline cycle

Profiling discipline

Course

1

Credits count

5

Knowledge control form

Examination

Short description of discipline

The discipline studies the classification, diagnosis, and complex of sanitary and preventive measures of infectious diseases of birds common in the world, Kazakhstan, and the East Kazakhstan region. Forms the ability to monitor the epizootic situation, skills of conducting diagnostic studies, planning and implementing plans for preventive and health measures in accordance with the veterinary rules of the Republic of Kazakhstan. Develops the analytical abilities of students, allowing them to prevent disease in the shortest possible time and prevent socio-economic damage from particularly dangerous bird infections.

Purpose of studying of the discipline

to develop skills in drawing up and conducting veterinary and sanitary measures and developing an algorithm of actions in case of especially dangerous infectious diseases of birds.

Learning Outcomes

ON3 Conduct basic and applied scientific research in the field of veterinary sanitation, sanitary microbiology.

ON5 Use rapid methods to assess the safety of products and raw materials of animal origin.

ON6 Analyze the results of sanitary and epidemiological monitoring of infectious diseases of animals and birds.

Learning outcomes by discipline

Prerequisites

The microbiological control of meat and poultry products

Postrequisites

Veterinary and sanitary control in the objects of veterinary supervision

GIS technology in epizootology

Discipline cycle	Profiling discipline
Course	1
Credits count	5
Knowledge control form	Examination

Short description of discipline

Geographical information system (GIS) in epizootology is distinguished by its veterinary significance. GIS technology allows computer automation to constantly get acquainted with program data, systematizing epizootological information and long-term statistical data. In the GIS structure, students are trained on an electronic map and the requirements for the introduction of cause-and-effect relationships in relation to the disease and the dynamics of the spread of infectious diseases in animals.

Purpose of studying of the discipline

The purpose of the discipline is to study the theoretical and practical justifications for the diversity of infectious diseases, their decline and disappearance. In this regard, for geoinformation analysis, they learn to collect and analyze data for systematic input into cartographic monitoring in automatic mode.

Learning Outcomes

ON3 Conduct basic and applied scientific research in the field of veterinary sanitation, sanitary microbiology.

ON5 Use rapid methods to assess the safety of products and raw materials of animal origin.

ON6 Analyze the results of sanitary and epidemiological monitoring of infectious diseases of animals and birds.

Learning outcomes by discipline

Owns the use of geographic information systems technology to systematize predictive control regarding the spread and danger of the epizootic process. They will learn to give recommendations on the use of the results of veterinary practical research in GIS technology. Complies with safety requirements and acquires skills in a biological laboratory working with dangerous pathogens.

Prerequisites

The microbiological control of meat and poultry products

Postrequisites

Veterinary and sanitary control in the objects of veterinary supervision

Regional epizootology

Discipline cycle	Profiling discipline
Course	1
Credits count	5
Knowledge control form	Examination

Short description of discipline

Regional epizootology monitors and analyzes infectious diseases among animals and birds. Depending on the nosological forms of the infectious source, territorial security and the possibility of its spread are indicated, as well as their own predictive prescriptions for buffer zones. In this regard, students will acquire the skills of drawing up plans for the prevention of infectious diseases. During the training, the skills of predicting abiotic objects with a high probability of infection are acquired.

Purpose of studying of the discipline

The purpose of the discipline is to study the occurrence of infectious diseases between animals in each locality related to the ecological system, as a veterinary and geographical basis of infectious connections. At the same time, the historical and genetic relationship of infectious diseases with the environment is being investigated.

Learning Outcomes

ON3 Conduct basic and applied scientific research in the field of veterinary sanitation, sanitary microbiology.

ON5 Use rapid methods to assess the safety of products and raw materials of animal origin.

ON6 Analyze the results of sanitary and epidemiological monitoring of infectious diseases of animals and birds.

Learning outcomes by discipline

He will learn to analyze the patterns of development of the epizootic process in relation to the specifics of the territorial spread of infectious diseases, to manage the processes of spread and disappearance. Interpretation of the results of modern diagnostic tests, masters the situations of treatment of infected animals and their further interaction with them, using complex epizootological measures, masters the development and prevention of infectious processes in sick animals.

Prerequisites

The microbiological control of meat and poultry products

Postrequisites

Veterinary and sanitary control in the objects of veterinary supervision

Epizootological monitoring of infectious diseases of animals and birds

Discipline cycle	Profiling discipline
Course	1
Credits count	5
Knowledge control form	Examination

Short description of discipline

The discipline teaches the conditions for the penetration of a pathological factor into the animal's body, which is of particular importance in infectious diseases of animals and birds, with the sources of its origin. In this regard, he is mastering the study of etiopathogenetic processes in relation to the nosological form of an infectious disease. It also evaluates the epizootological situation associated with the disease and predicts relapses, summarizes basic territorial information and plans veterinary and sanitary measures against it.

Purpose of studying of the discipline

The purpose of the discipline is to study the theoretical and practical foundations of epizootological and infectious diseases associated

with the spread of infectious diseases of animals and birds and their species. They also learn to identify an infectious disease and draw up an action plan to combat it. At the same time, they learn to draw up documents based on the legislative principles of epizootological observation and supervision.

Learning Outcomes

ON3 Conduct basic and applied scientific research in the field of veterinary sanitation, sanitary microbiology.

ON5 Use rapid methods to assess the safety of products and raw materials of animal origin.

ON6 Analyze the results of sanitary and epidemiological monitoring of infectious diseases of animals and birds.

Learning outcomes by discipline

He is proficient in analyzing the patterns of the development of the infectious process among animals and managing the processes of the emergence, spread and disappearance of infectious diseases of animals. Interpretation of the results of modern diagnostic tests to detect the infectious process. Masters the requirements for isolation and destruction of infected animals. Has the ability to draw up a plan for the prevention of the epizootic process, taking into account the intensity of the spread of the disease.

Prerequisites

The microbiological control of meat and poultry products

Postrequisites

Veterinary and sanitary control in the objects of veterinary supervision

Veterinary and sanitary control in the objects of veterinary supervision

Discipline cycle	Profiling discipline
Course	2
Credits count	5
Knowledge control form	Examination

Short description of discipline

The discipline studies the control and supervision of meat and milk processing enterprises, livestock facilities, vehicles, sanitary control of the movement of veterinary drugs, feed, etc., located on the territory of the Republic of Kazakhstan.

Explains the methods of veterinary supervision of the Agro-industrial complex and the execution of acts of inspection of supervised veterinary facilities.

Considers veterinary and sanitary examination as the main method of veterinary and sanitary supervision at slaughterhouses and dairy enterprises, markets, which forms students' skills in assessing the quality of activities in veterinary facilities.

Purpose of studying of the discipline

to study the main veterinary and sanitary activities carried out in veterinary facilities, farms and enterprises and their compliance with regulatory documents.

Learning Outcomes

ON2 Own a methodology and algorithm for planning and organizing research and teaching activities.

ON7 Improve sanitary and hygienic assessment of life support systems, animals and environmental safety.

ON8 To assess the compliance of the objects of state veterinary and sanitary control and supervision with the requirements of legislation in the field of veterinary medicine.

Learning outcomes by discipline

Prerequisites

Modern problems of veterinary hygiene The microbiological control of meat and poultry products

Postrequisites

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

Biological safety assessment of exotic plant and animal products

Discipline cycle	Profiling discipline
Course	2
Credits count	5
Knowledge control form	Examination

Short description of discipline

Undergraduates should be able to conduct sampling to determine the freshness indicators of exotic fruits, berries and vegetables using the method of luminescent analysis. To study the assortment and characteristics of imported products, regulatory requirements for them, types of risks associated with the shelf life and storage conditions. To improve methods of veterinary and sanitary control of imported exotic products, taking into account their diversity. Biological and radiation safety assessment of exotic plant products.

Purpose of studying of the discipline

exoticalyq̇ esimdik zhane mal sharuashylyfẏ ñimderin veterinary medicinelyq̇-sanitarylyq̇ bagalau boyinsha sonmalardẏ alu, organolepticalq̇ zhane zertkhanalyq̇ zertteuler zhyrgizu̇ erezhelerin okyp bilu.

Learning Outcomes

ON4 Analyze and solve the theoretical and applied problems of veterinary sanitation of products of animal and vegetable origin.

ON7 Improve sanitary and hygienic assessment of life support systems, animals and environmental safety.

ON8 To assess the compliance of the objects of state veterinary and sanitary control and supervision with the requirements of legislation in the field of veterinary medicine.

Learning outcomes by discipline

Prerequisites

Veterinary and sanitary examination at especially dangerous diseases of animals and birds

Postrequisites

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

Veterinary sanitation facilities for handling of meat and milk

Discipline cycle	Profiling discipline
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Course	2
Credits count	5
Knowledge control form	Examination

Short description of discipline

The discipline studies the correct choice of a construction site for a meat and milk processing enterprise. To be able to carry out sanitary control at enterprises for the production of meat and milk. Studying the sanitary and hygienic condition of meat and milk according to the state standard. Justify the conditions for obtaining high quality meat and milk. Carry out disinfection, deratization and disinsection. Develops and implement measures to protect territories from the introduction of pathogens of infectious and parasitic diseases.

Purpose of studying of the discipline

To study the procedure and methods for conducting industrial veterinary and sanitary control at the enterprises of the meat and dairy industries

Learning Outcomes

*ON2 Own a methodology and algorithm for planning and organizing research and teaching activities.
ON7 Improve sanitary and hygienic assessment of life support systems, animals and environmental safety.
ON8 To assess the compliance of the objects of state veterinary and sanitary control and supervision with the requirements of legislation in the field of veterinary medicine.*

Learning outcomes by discipline

Prerequisites

Veterinary and sanitary examination at especially dangerous diseases of animals and birds

Postrequisites

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

Veterinary and sanitary control of food quality

Discipline cycle	Profiling discipline
Course	2
Credits count	5
Knowledge control form	Examination

Short description of discipline

The discipline helps to master theoretical knowledge and practical skills of veterinary and sanitary control of various animal and bird feeds. Masters the skills of laboratory control of the purity of juicy, concentrated, dried and other various types of animal feed. The ability to give a conclusion when creating veterinary and sanitary remarks to consumers when receiving technical waste of feed and low-quality products based on current regulatory requirements to ensure the exclusion of cases of poisoning of animals.

Purpose of studying of the discipline

The study of veterinary and sanitary examination of various animal and poultry feeds.

Learning Outcomes

*ON2 Own a methodology and algorithm for planning and organizing research and teaching activities.
ON3 Conduct basic and applied scientific research in the field of veterinary sanitation, sanitary microbiology.
ON7 Improve sanitary and hygienic assessment of life support systems, animals and environmental safety.*

Learning outcomes by discipline

Prerequisites

Veterinary and sanitary examination at especially dangerous diseases of animals and birds

Postrequisites

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

Veterinary-sanitary supervision of food trade in the markets

Discipline cycle	Profiling discipline
Course	2
Credits count	5
Knowledge control form	Examination

Short description of discipline

The discipline studies conducting a forensic veterinary and sanitary examination in case of violations of feeding, exploitation and maintenance of animals.

When buying and selling animals, conduct a forensic veterinary examination to prevent infectious diseases. Judicial veterinary and sanitary examination of meat and meat products in case of violation of meat processing technology (imported raw materials). He studies toxicology, thanatology, traumatology. Considers procedural issues, documentation on forensic examination

Purpose of studying of the discipline

o study the state of state veterinary supervision over the quality and safety of food products in the territory of the Semey region

Learning Outcomes

*ON2 Own a methodology and algorithm for planning and organizing research and teaching activities.
ON7 Improve sanitary and hygienic assessment of life support systems, animals and environmental safety.
ON8 To assess the compliance of the objects of state veterinary and sanitary control and supervision with the requirements of legislation in the field of veterinary medicine.*

Learning outcomes by discipline

Prerequisites

Veterinary and sanitary examination at especially dangerous diseases of animals and birds

Postrequisites

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

Veterinary legislation and sanitary standards

Discipline cycle	Profiling discipline
Course	2
Credits count	5
Knowledge control form	Examination

Short description of discipline

To study the hygienic requirements for the safety and nutritional value of food products. Master uniform sanitary-epidemiological and hygienic requirements for livestock products. To study veterinary terms and definitions, research methodology, regulatory and technical documentation, veterinary norms and rules of the Republic of Kazakhstan. Radiation indicators of food safety. Uniform sanitary requirements for the importation of imported goods into the territory of the member states of the customs union. Marking. Application area. Ingredients

Purpose of studying of the discipline

Learn the basic rules of the Veterinary legislation and sanitary standards.

Learning Outcomes

ON4 Analyze and solve the theoretical and applied problems of veterinary sanitation of products of animal and vegetable origin.

ON7 Improve sanitary and hygienic assessment of life support systems, animals and environmental safety.

ON8 To assess the compliance of the objects of state veterinary and sanitary control and supervision with the requirements of legislation in the field of veterinary medicine.

Learning outcomes by discipline

Prerequisites

Veterinary and sanitary examination at especially dangerous diseases of animals and birds

Postrequisites

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

Clinical Anatomy (Sectional Course)

Discipline cycle	Profiling discipline
Course	2
Credits count	5
Knowledge control form	Examination

Short description of discipline

The purpose of the subject is to assess the condition of an animal in relation to its biological characteristics and physiological state from the point of view of clinical anatomy and veterinary assessment is studied. In this regard, they learn to determine the necessary prerequisites for the development of the animal and the corresponding needs of veterinary measures.

Purpose of studying of the discipline

The purpose of the subject is to assess the condition of an animal in relation to its biological characteristics and physiological state from the point of view of clinical anatomy and veterinary assessment is studied. In this regard, they learn to determine the necessary prerequisites for the development of the animal and the corresponding needs of veterinary measures.

Learning Outcomes

ON3 Conduct basic and applied scientific research in the field of veterinary sanitation, sanitary microbiology.

ON8 To assess the compliance of the objects of state veterinary and sanitary control and supervision with the requirements of legislation in the field of veterinary medicine.

ON9 Use modern methods of forensic examination of the death of animals.

Learning outcomes by discipline

Prerequisites

Veterinary and sanitary measures for especially dangerous infectious diseases of animals and birds

Postrequisites

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

Quality and safety control of livestock products

Discipline cycle	Profiling discipline
Course	2
Credits count	5
Knowledge control form	Examination

Short description of discipline

The discipline considers issues of veterinary and sanitary quality, safety of livestock products and raw materials.

Normative and technical documentation. Be able to determine the structure of muscle tissue and the tissue complex of meat carcasses.

The undergraduate must own the methodology of sampling for laboratory analysis, the technology of harvesting, storage and sale, apply innovative methods of quality control of livestock products. Contaminants and types of falsifications, methods of their detection and safety.

Purpose of studying of the discipline

Mastering theoretical knowledge, acquiring skills in the field of veterinary and sanitary quality control of raw materials and products of animal origin.

Learning Outcomes

ON4 Analyze and solve the theoretical and applied problems of veterinary sanitation of products of animal and vegetable origin.

ON7 Improve sanitary and hygienic assessment of life support systems, animals and environmental safety.

ON8 To assess the compliance of the objects of state veterinary and sanitary control and supervision with the requirements of legislation

in the field of veterinary medicine.

Learning outcomes by discipline

Prerequisites

Veterinary and sanitary examination at especially dangerous diseases of animals and birds

Postrequisites

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

Oncopathology

Discipline cycle	Profiling discipline
Course	2
Credits count	5
Knowledge control form	Examination

Short description of discipline

In modern conditions, the problem of oncological diseases among animals is also relevant in veterinary practice. In this regard, the achievements of science and technology in the field of diagnostics and early detection of the dynamics of oncological pathogenetic processes in the animal body are studied in veterinary medicine. As one of these etiopathogenetic important factors, he masters the study of new scientific research in order to identify genetic abnormal predisposition, heredity and biases in breeding conditions.

Purpose of studying of the discipline

For the purposes of the discipline, the etiopathogenetic beginnings of cancer in animals are studied and the consequences of its development on the body are studied. At the same time, the identification of these threats during a preliminary dispensary examination and the environmental consequences of their occurrence are also being studied. In this regard, when identifying pathomorphological changes, modern methods of examination and advanced models of its prevention are also considered.

Learning Outcomes

ON3 Conduct basic and applied scientific research in the field of veterinary sanitation, sanitary microbiology.

ON9 Use modern methods of forensic examination of the death of animals.

Learning outcomes by discipline

He knows the methods of clinical examination and methods of preliminary prognostic examination of cancer patients arising from any pathogenic effects in animals. In oncological pathologies, they learn to give grounds for the use of a general clinic of pathophysiological phenomena in the animal's body and related veterinary medical therapy.

Prerequisites

Veterinary and sanitary examination at especially dangerous diseases of animals and birds

Postrequisites

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

The hygienic control in shops, markets and small retail outlets

Discipline cycle	Profiling discipline
Course	2
Credits count	5
Knowledge control form	Examination

Short description of discipline

Assess the sanitary condition of retail outlets. To study the sanitary and hygienic requirements for food trade places. Conduct sanitary and hygienic control in shops, markets and small retail outlets. Organize the work and equipment of markets. To assess the conduct of veterinary and sanitary control of canned meat, fish, boiled, semi-smoked, smoked, raw smoked sausages, fermented milk products. Explain the features of the current sanitary supervision of the trade and storage of food products in shops, markets and small retail outlets.

Purpose of studying of the discipline

Studying the procedure and methods for conducting sanitary and hygienic control in shops, markets and small retail outlets.

Learning Outcomes

ON2 Own a methodology and algorithm for planning and organizing research and teaching activities.

ON3 Conduct basic and applied scientific research in the field of veterinary sanitation, sanitary microbiology.

ON7 Improve sanitary and hygienic assessment of life support systems, animals and environmental safety.

Learning outcomes by discipline

Prerequisites

Veterinary and sanitary examination at especially dangerous diseases of animals and birds

Postrequisites

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

Forensic examination of diseases and death of animals

Discipline cycle	Profiling discipline
Course	2
Credits count	5
Knowledge control form	Examination

Short description of discipline

The discipline studies conducting a forensic veterinary and sanitary examination in case of violations of feeding, exploitation and maintenance of animals.

When buying and selling animals, conduct a forensic veterinary examination to prevent infectious diseases. Judicial veterinary and sanitary examination of meat and meat products in case of violation of meat processing technology (imported raw materials). He studies toxicology, thanatology, traumatology.

Purpose of studying of the discipline

The purpose of the subject is the pre-contractual directions of resolving disagreements between the parties related to the production necessity, taught on the basis of veterinary principles. In this regard, during the forensic veterinary examination, they learn to give a consistent interpretation of morphobiochemical changes, physiological, pathological processes in the body of animals. The ability to provide a theoretical concept suitable for the study of anatomical and morphological structures in animal organs is being studied. The paperwork on the case is also explained.

Learning Outcomes

ON3 Conduct basic and applied scientific research in the field of veterinary sanitation, sanitary microbiology.

ON8 To assess the compliance of the objects of state veterinary and sanitary control and supervision with the requirements of legislation in the field of veterinary medicine.

ON9 Use modern methods of forensic examination of the death of animals.

Learning outcomes by discipline

Owns the conduct of forensic examination for the purpose of legal substantiation of a specific situation related to production needs. In this regard, on the basis of veterinary medical science, they are trained to give a consistent characterization of pathological morphological manifestations that occur in animal organs. He will also master the plan of expert work and registration of acts in the conduct of the case.

Prerequisites

Veterinary and sanitary examination at especially dangerous diseases of animals and birds

Postrequisites

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

Ergonomics, ethology and hygiene in livestock and poultry

Discipline cycle	Profiling discipline
Course	2
Credits count	5
Knowledge control form	Examination

Short description of discipline

The discipline studies the patterns and features of genetically determined behavior (instincts) of animals in the conditions of industrial animal husbandry and poultry farming. Analysis and mechanisms of the act of behavior, individual features of the animal, which are manifested in its interaction with the outside world due to economically useful features. Optimal conditions for the use of animals with the selection of appropriate equipment maintenance methods. Equipment and means of mechanization that correspond to the functional and physiological characteristics of animals and birds.

Purpose of studying of the discipline

the study of patterns and characteristics of animal behavior in the conditions of industrial animal husbandry and poultry farming, in connection with its economically useful traits

Learning Outcomes

ON2 Own a methodology and algorithm for planning and organizing research and teaching activities.

ON3 Conduct basic and applied scientific research in the field of veterinary sanitation, sanitary microbiology.

ON7 Improve sanitary and hygienic assessment of life support systems, animals and environmental safety.

Learning outcomes by discipline

Prerequisites

Veterinary and sanitary examination at especially dangerous diseases of animals and birds

Postrequisites

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