NJSC SHAKARIM UNIVERSITY OF SEMEY

EDUCATIONAL PROGRAM

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)

7M09101 - Veterinary medicine
(Code and name of the educational program)

Master
(Level of preparation)

Semey

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Master
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Semey 2023

PREFACE

Developed

The educational program 7M09101 - Veterinary medicine in the direction of preparation 7M091 - Veterinary on the basis of the State Compulsory Standards of Higher and Postgraduate Education approved by the Order of the Ministry of Science and Higher Education of the Republic of Kazakhstan dated July 20, 2022 No 2 (as amended by the order) was developed by the Academic Committee dated 20.02.2023 No 66).

Members of the Academic Committee	Full name	Academic degree, academic title, position	Signature
Head of the Academic Committee	Yessengulova Nurlygul	dean of the Faculty of Veterinary Medicine and agricultural management	
Educational program manager	Bilyalov Yermekkazy	senior lecturer of the Department of Veterinary Medicine, Ph. D.	
Member of the AC	Akhmetzhanova Aizhan	acting head of the Department of Veterinary Medicine	
Member of the AC	Zaikovskaya Olga	senior lecturer of the Department of Veterinary Medicine, Ph. D.	
Member of the AC	Rakishev Zhanat	Head of the RSU "Territorial Inspection of the Abai region of the Committee for Veterinary Control and Supervision of the Ministry of Agriculture of the Republic of Kazakhstan "	
Member of the AC	Baluanov Ayan	Head of the testing laboratory of the Semipalatinsk regional branch of the Republican state-owned enterprise "Republican Veterinary Laboratory" of the Committee for Veterinary Control and supervision of the Ministry of Agriculture of the Republic of Kazakhstan	
Member of the AC	Turarbekova Madina	master s student	
Member of the AC	Omirbekov Ulan	master s student	

Reviewing

Full name of the reviewer	Position, place of work	Signature
Amangaliuly Yerkebulan	Republican state institution "Republican anti-epizootic detachment" of the committee of veterinary control and supervision of the Ministry of Agriculture of the Republic of Kazakhstan, branch of the Abay region	

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 G.I. Dzhamanova

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.R.

Content

1.Introduction

1.1.General data

The educational program implemented by the Department of Veterinary Medicine in the specialty 7M09101-Veterinary Medicine of the Faculty of Veterinary Medicine and Agromanagement of NJSC Shakarim University of Semey was developed taking into account the principles of the position of the university based on the requirements of regulatory documents of the Ministry of Science of Higher Education of the Republic of Kazakhstan. The educational program regulates the goals, expected results, semantic content, conditions and assessment of the quality of undergraduate training in the direction of technology for the implementation of the educational process. Represents professional activities and the purpose of the master`s course and the system of documents for organizing the educational process. In this regard, the implementation of the program will allow in the future to conduct expert events in scientific, pedagogical, managerial and research areas with an in-depth explanation of the qualifications of the specialty. In addition, the program is implemented in close cooperation with leading foreign organizations. The content of the educational program is compiled using a curriculum developed in a modular format.

1.2.Completion criteria

The main criterion for the completion of the educational process for the preparation of masters of the scientific and pedagogical direction is the development of at least 88 credits of theoretical training, including 6 credits of pedagogical practice, 13 credits of research practice, as well as at least 24 credits of research work of a master`s student, including internships and the completion of a master`s thesis, at least 8 credits of the final attestations . A total of 120 credits.

1.3.Typical study duration: 2 years

2.PASSPORT OF THE EDUCATIONAL PROGRAM

2.1.EP purpose	The purpose of the educational program is an in-depth study of the theoretical and practical justification of veterinary measures for the diagnosis, treatment and prevention of animals based on modern achievements of veterinary medicine.
2.2.Map of the training profile within the educational program	
Code and classification of the field of education	7M09 - Veterinary
Code and classification of the direction of training	7M091 - Veterinary
Code in the International Standard Classification of Education	0841
Code and classification of the educational program group	M138 - Veterinary Science
Code and name of the educational program	7M09101 - Veterinary medicine
2.3.Qualification characteristics of the graduate	
Degree awarded / qualification	Master of Veterinary Sciences in the educational program
Name of the profession / list of positions of a specialist	In the development of scientific, practical and pedagogical studies carried out in the preparation of undergraduates on the basis of the program, theoretical and practical qualifications were acquired in areas related to the branches of veterinary medicine, corresponding to the needs of the state and the market; - Training of specialists with high professional potential, including those with a sufficient civic position, a high culture of professional communication, able to formulate and solve modern scientific and practical problems in science and production, teach in higher educational institutions, successfully carry out research and management activities in various structures veterinary medicine; - To give undergraduates broad knowledge about the patterns of occurrence and spread of infectious animal diseases, modern diagnostic methods, means and methods of dealing with them;
OQF qualification level (industry qualification framework)	7
Area of professional activity	Maintaining legal documentation of various organizational and managerial activities related to the areas of professional educational activities, in order to master the basic principles of applying modern achievements in scientific and pedagogical research work in veterinary and pedagogical practice;
Object of professional activity	Objects of professional activity of graduates of the master`s program in the educational program "Veterinary Medicine": -pedagogical activity in higher, secondary special, vocational and technical educational institutions, scientific activity in institutes and research and production centers. - all types of farm animals, birds, fish, honey bees and their products; - equipment and devices for carrying out preventive, health-improving measures against various diseases;

	- work with biological preparations for the treatment and destruction of infected animals;
Types of professional activity	Conducting an examination and justification for the implementation of topical issues in the preparation of research projects in all areas of veterinary medicine in accordance with the goals and objectives of basic professional education. - All subjects of agricultural production for all types of activities related to veterinary and sanitary measures; - places for quality control of biological preparations, biocombines, circuses, hippodromes, laboratories, zoos, meat processing plants and transportation; - organizations of veterinary, biological profiles and research institutes; military veterinary service; - protection of the territory of the state from the import of pathogens common to humans and animals, as well as dangerous zoonoses through imported products and raw materials of animal origin; - planning and organization of veterinary activities for the organization of general and preventive measures against infectious animal diseases; - production activities in organizations of secondary, higher and additional professional education in technical and agricultural areas, research, design organizations and in production;
Graduate Model	The Master of Veterinary Sciences on the basis of the development of the educational program 7M09101 veterinary medicine can independently carry out project technological activities along with scientific and pedagogical production management and organizational activities.

3.Modules and content of the educational program

Модуль 1.Sociolinguistic and scientific-pedagogical activity

Theory and methods of experiment

Discipline cycle	Basic disciplines
Discipline component	Electives
SubjectID	31993 (3023877)
Course	1
Term	1
Credits count	5
Lections	15hours
Practical and seminar classes	30hours
Laboratory works	0hours
Independent work of a student under the guidance of a teacher	35hours
Independent work of the student	70hours
Total	150hours
Knowledge control form	Examination

Short description of discipline

Based on the basic requirements of science, the student learns to determine the tasks of his research work and theoretically form and consolidate a system of methodological thinking. At the same time, he logically builds the position of the scientific theoretical principle, formulates search sequences in the analysis of experimental methods. Based on these basic principles, it is possible to determine the flexibility in the formation of a research form of using modern scientific achievements of veterinary medicine for purposes.

Purpose of studying of the discipline

The purpose of studying the discipline is in-depth theoretical and practical training of a specialist with a high level of professional training in various areas of veterinary medicine, biology, medicine and biotechnology. When studying the discipline, students must master the methods of experiment, questions of the organization of scientific research, planning of scientific research, methods of organization and methodology of research, methods of evaluation and analysis of the results of scientific research.

Learning Outcomes

ON2 Conduct fundamental and applied scientific research in the field of veterinary medicine.
ON3 Master the methodology of using modern complex methods of diagnosing animal diseases.

Prerequisites

Bachelor

Postrequisites

Nontraditional treatments for non-communicable animal diseases

Foreign language (professional)

Discipline cycle	Basic disciplines
Discipline component	University component
SubjectID	32879 (3023911)
Course	1
Term	1
Credits count	3
Practical and seminar classes	30hours
Independent work of a student under the guidance of a teacher	20hours
Independent work of the student	40hours
Total	90hours
Knowledge control form	Examination

Short description of discipline

Mastery of general cultural, professional and special competencies for the implementation of professional activities, involving teaching free reading of original literature of the relevant branch of knowledge in a foreign language; development of oral communication skills in monological and dialogical form in the specialty; development of written scientific communication skills on topics related to the scientific work of a graduate student, as well as familiarization with the forms and types of international cooperation in the scientific field.

Purpose of studying of the discipline

The purpose of studying the discipline "Foreign language (professional)" in the master`s degree program is the systematic deepening of communicative competence within the framework of international standards of foreign language education on the basis of further development of skills and abilities of active language proficiency in the professional activity of the future master.

Learning Outcomes

ON1 Apply fundamental scientific, pedagogical, managerial, communicative knowledge and skills in professional activities.

Prerequisites

Masters degree course

Postrequisites

Final examination

History and philosophy of science

Discipline cycle	Basic disciplines
Discipline component	University component
SubjectID	32880 (3023910)
Course	1
Term	1
Credits count	5
Lections	15hours
Practical and seminar classes	30hours
Independent work of a student under the guidance of a teacher	35hours
Independent work of the student	70hours
Total	150hours
Knowledge control form	Examination

Short description of discipline

The discipline is aimed at studying the culture of scientific thinking, forms analytical capabilities and research skills, provides theoretical and practical knowledge necessary for a future scientist. Explores the historical evolution of the sciences and the philosophical perspectives they form. The origins of modern science, its social and institutional connections are described. General philosophical issues related to thought experiments, confirmation and refutation of theories, the origin and application of quantitative and high-quality research methods are considered.

Purpose of studying of the discipline

the formation of an interdisciplinary worldview among undergraduates, based on a deep understanding of the history and philosophy (theory) of scientific thinking, as part of a universal culture.

Learning Outcomes

ON1 Apply fundamental scientific, pedagogical, managerial, communicative knowledge and skills in professional activities.

Prerequisites

Masters degree course

Postrequisites

Final examination

Tertiary education

Discipline cycle	Basic disciplines
Discipline component	University component
SubjectID	32877 (3023913)
Course	1
Term	1
Credits count	3
Lections	15hours
Practical and seminar classes	15hours
Independent work of a student under the guidance of a teacher	20hours
Independent work of the student	40hours
Total	90hours
Knowledge control form	Examination

Short description of discipline

The course is aimed at studying the main directions, principles and patterns of higher education. During the course of the course, the basic concepts of modern pedagogy, concepts and theories of teaching and upbringing, didactics of higher education will be considered. The master`s student will master the skills of designing the organization of the educational process, techniques of individual and group reflection, will be able to correctly formulate pedagogical goals, apply educational technologies in the educational process. in the process, to design work programs of disciplines.

Purpose of studying of the discipline

The purpose of mastering the discipline is to master the system of knowledge about higher education, its content, structure, principles of educational process management and mastering modern technologies in the field of management and organization of the educational process

Learning Outcomes

ON1 Apply fundamental scientific, pedagogical, managerial, communicative knowledge and skills in professional activities.

Prerequisites

Masters degree course

Postrequisites

Practice pedagogical

Psychology of management

Discipline cycle	Basic disciplines
Discipline component	University component
SubjectID	32878 (3023912)
Course	1
Term	1
Credits count	3

Lections	15hours
Practical and seminar classes	15hours
Independent work of a student under the guidance of a teacher	20hours
Independent work of the student	40hours
Total	90hours
Knowledge control form	Examination

Short description of discipline
The content of the course is aimed at mastering the approaches and directions of management psychology, psychological laws of management, features of planning and solving management problems. Students will get acquainted with the psychological methods of resolving conflict situations, master the ways of motivating work, the methods of using effective management styles. Skills will be formed to analyze the psychological causes underlying the decline in the effectiveness of the management process.

Purpose of studying of the discipline
The purpose of the discipline "Psychology of Management" is the formation of scientifically based ideas about the system of mental phenomena, psychological variables of behavior and conscious human activity in modern conditions and allows undergraduates to form skills of applying the acquired psychological knowledge in educational activities

Learning Outcomes
ON1 Apply fundamental scientific, pedagogical, managerial, communicative knowledge and skills in professional activities.

Prerequisites

Postrequisites

Practice pedagogical

Discipline cycle	Basic disciplines
Discipline component	University component
SubjectID	32216 (3023876)
Course	2
Term	1
Credits count	6
Pedagogical practics	180hours
Total	180hours
Knowledge control form	Total mark on practice

Short description of discipline
Pedagogical practice is significant for undergraduates in mastering and consolidating pedagogical flexibility in the conduct of the higher educational process. At the same time, the master`s student forms theoretical knowledge on the principle of a pedagogical approach in the main specialty and practical experience in the formation of pedagogical skills. As well as mastering professional and pedagogical skills to promote the manifestation of mental abilities in practical search.

Purpose of studying of the discipline
Students are preparing to develop the full content of scientific and pedagogical activity from the point of view of pedagogical and research potential. In this regard, during the pedagogical practice, he gets acquainted with the content of the educational process and the proposed ideas. At the same time, during the training process, he learns the features of the use of innovative technologies in the pedagogical activity of a teacher.

Learning Outcomes
ON1 Apply fundamental scientific, pedagogical, managerial, communicative knowledge and skills in professional activities.
ON3 Master the methodology of using modern complex methods of diagnosing animal diseases.
ON5 Analyze and solve theoretical and applied problems of veterinary medicine, provide veterinary preventive measures to animals and birds.

Prerequisites
Theory and methods of experiment

Postrequisites
Research practice

Модуль 2.Fundamentals of modern methodology in veterinary medicine

Veterinary Ortopediy

Discipline cycle	Basic disciplines
Discipline component	Electives
SubjectID	32198 (3023883)
Course	1
Term	1
Credits count	5
Lections	15hours
Practical and seminar classes	30hours
Laboratory works	0hours
Independent work of a student under the guidance of a teacher	35hours
Independent work of the student	70hours
Total	150hours

Knowledge control form	Examination

Short description of discipline
Veterinary orthopedics teaches methods for determining and verifying the anatomical and topographic structure of the bone apparatus and hooves of animals in the sequence of biomechanical movements in them. It also teaches to consistently describe hoof diseases known in veterinary practice. Students master the techniques of restoring hoof deformity. When identifying deviations in relation to the general orthopedic concept, it teaches the identification of etiopathogenetic and clinical signs depending on the setting of the limbs of animals with the disease.

Purpose of studying of the discipline
The purpose of the discipline is the theoretical and practical basis for detecting anomalies of the musculoskeletal system of animals and providing surgical care. At the same time, in the process of mastering basic skills, he develops the field of clinical thinking and learns the basics of surgical operations.

Learning Outcomes
ON3 Master the methodology of using modern complex methods of diagnosing animal diseases.
ON5 Analyze and solve theoretical and applied problems of veterinary medicine, provide veterinary preventive measures to animals and birds.
ON7 To form a therapeutic system based on the etiopathogenetic process in the body, taking into account the biological characteristics of animals and birds.

Prerequisites
Bachelor

Postrequisites
Biotechnology in animal husbandry

Veterinary Ophthalmology

Discipline cycle	Basic disciplines
Discipline component	Electives
SubjectID	32199 (3023882)
Course	1
Term	1
Credits count	5
Lections	15hours
Practical and seminar classes	30hours
Laboratory works	0hours
Independent work of a student under the guidance of a teacher	35hours
Independent work of the student	70hours
Total	150hours
Knowledge control form	Examination

Short description of discipline
Veterinary ophthalmology allows you to master the skills of procedures and work with the organs of vision. Based on the biological characteristics of animals, methods of examination of the functional capabilities of the organ of vision and its anatomical structure are studied. Forms skills for the development of pathological processes in eye diseases and the use of therapeutic and surgical techniques. Teaches to develop a plan of modern measures for the prevention and treatment of diseases of the visual organs.

Purpose of studying of the discipline
The purpose of the subject is to form prerequisites for the acquisition of theoretical and practical knowledge on the provision of ophthalmological services to animals. At the same time, it teaches the realization of surgical needs related to ophthalmological diseases in animals.

Learning Outcomes
ON3 Master the methodology of using modern complex methods of diagnosing animal diseases.
ON7 To form a therapeutic system based on the etiopathogenetic process in the body, taking into account the biological characteristics of animals and birds.
ON9 Analyze the results of therapeutic and preventive measures of animal and bird diseases.

Prerequisites
Bachelor

Postrequisites
Practical therapy in veterinary medicine

Veterinary office-work

Discipline cycle	Basic disciplines
Discipline component	Electives
SubjectID	32127 (3023878)
Course	1
Term	1
Credits count	5
Lections	15hours
Practical and seminar classes	30hours
Laboratory works	0hours
Independent work of a student under the guidance of a teacher	35hours

Independent work of the student	70hours
Total	150hours
Knowledge control form	Examination

Short description of discipline
Veterinary records management meets the basic requirements for the registration of veterinary accompanying and mandatory documents in the implementation of veterinary and sanitary measures, transportation of animals and products of animal origin in compliance with the requirements of the legislation of the Republic of Kazakhstan. In the process of training and paperwork, in addition to the main legislative documents, the student learns to make out economic, statistical, accounting and other data related to the production necessity.

Purpose of studying of the discipline
The purpose of mastering the subject is to teach formality in veterinary activities on the basis of legal principles corresponding to the type of veterinary field. In this regard, in the course of theoretical and practical training, the student learns how to keep records of the types of veterinary services in the treatment and prevention of animals at the level of veterinary biological science. He also learns to describe the importance of relevance and potential practical value in the development of conceptual projects related to the problem in the relevant field.

Learning Outcomes
ON1 Apply fundamental scientific, pedagogical, managerial, communicative knowledge and skills in professional activities.
ON5 Analyze and solve theoretical and applied problems of veterinary medicine, provide veterinary preventive measures to animals and birds.

Prerequisites
Bachelor

Postrequisites
Modern problems of veterinary medicine

GIS technology in epizootology

Discipline cycle	Basic disciplines
Discipline component	Electives
SubjectID	32200 (3023905)
Course	1
Term	1
Credits count	5
Lections	15hours
Practical and seminar classes	30hours
Independent work of a student under the guidance of a teacher	35hours
Independent work of the student	70hours
Total	150hours
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.
The system structure teaches how to work with a geographical Web server system.

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
ON1 Apply fundamental scientific, pedagogical, managerial, communicative knowledge and skills in professional activities.
ON4 Possess epizootological analysis, diagnosis and treatment of non-infectious and invasive diseases. Determine the causes of death of animals.
ON6 To apply veterinary legislation in practice as a regulatory legal act, depending on the types of veterinary activities.
ON9 Analyze the results of therapeutic and preventive measures of animal and bird diseases.

Prerequisites
Bachelor

Postrequisites
Diagnosis and prevention of rare and exotic parasitic diseases of animals

Regional epizootology

Discipline cycle	Basic disciplines
Discipline component	Electives
SubjectID	32201 (3023906)
Course	1
Term	1
Credits count	5
Lections	15hours
Practical and seminar classes	30hours

Independent work of a student under the guidance of a teacher	35hours
Independent work of the student	70hours
Total	150hours
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 dissplina 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
ON2 Conduct fundamental and applied scientific research in the field of veterinary medicine.
ON4 Possess epizootological analysis, diagnosis and treatment of non-infectious and invasive diseases. Determine the causes of death of animals.
ON6 To apply veterinary legislation in practice as a regulatory legal act, depending on the types of veterinary activities.
ON9 Analyze the results of therapeutic and preventive measures of animal and bird diseases.

Prerequisites
Bachelor

Postrequisites
Veterinary entomology and entomological methods of research

Organization of scientific researches and technique of writing of the master thesis

Discipline cycle	Basic disciplines
Discipline component	Electives
SubjectID	32202 (3023879)
Course	1
Term	1
Credits count	5
Lections	15hours
Practical and seminar classes	30hours
Laboratory works	0hours
Independent work of a student under the guidance of a teacher	35hours
Independent work of the student	70hours
Total	150hours
Knowledge control form	Examination

Short description of discipline
The researcher has the opportunity to develop a research plan and organize activities and analysis of the results, as well as refer to relevant scientific papers and justify them. In addition, according to the basic requirements for writing a master`s thesis, students learn to formulate research results with appropriate descriptions and their general semantic content in accordance with the main goals and objectives of the specialty and research work.

Purpose of studying of the discipline
To master research methods in order to formulate a research plan based on the principles of solving professional problems suitable for the subject program of mastering. It is also possible to analyze the compatibility of positions with modern technologies with a systematic expansion of the volume of theoretical and practical knowledge acquired during education. At the same time, they learn to analyze the results of research and further realize the needs of their implementation in the field of production.

Learning Outcomes
ON1 Apply fundamental scientific, pedagogical, managerial, communicative knowledge and skills in professional activities.
ON2 Conduct fundamental and applied scientific research in the field of veterinary medicine.
ON8 Be able to adequately understand the legal principles of protecting the population from diseases of zooanthroponosis and conduct propaganda work on veterinary education of the population.

Prerequisites
Bachelor

Postrequisites
Problems of diseases of a noncontagious etiology

Surgical diseases of cats and dogs

Discipline cycle	Basic disciplines
Discipline component	Electives
SubjectID	32207 (3023881)
Course	1
Term	1
Credits count	5
Lections	15hours

Practical and seminar classes	30hours
Laboratory works	0hours
Independent work of a student under the guidance of a teacher	35hours
Independent work of the student	70hours
Total	150hours
Knowledge control form	Examination

Short description of discipline
Purpose of studying of the discipline
Purpose of studying of the discipline: to give students the sum of practical and theoretical skills of recognizing pathological processes in the body of a sick animal, the causes and conditions for their manifestation, the essence of diseases, the measures of their prevention and control.
Learning Outcomes
ON3 Master the methodology of using modern complex methods of diagnosing animal diseases.
ON8 Be able to adequately understand the legal principles of protecting the population from diseases of zooanthroponosis and conduct propaganda work on veterinary education of the population.
ON9 Analyze the results of therapeutic and preventive measures of animal and bird diseases.
Prerequisites
Bachelor
Postrequisites
Kinologia and felinology

Epizootological monitoring of infectious diseases of animals and birds

Discipline cycle	Basic disciplines
Discipline component	Electives
SubjectID	32203 (3023904)
Course	1
Term	1
Credits count	5
Lections	15hours
Practical and seminar classes	30hours
Independent work of a student under the guidance of a teacher	35hours
Independent work of the student	70hours
Total	150hours
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
ON4 Possess epizootological analysis, diagnosis and treatment of non-infectious and invasive diseases. Determine the causes of death of animals.
ON5 Analyze and solve theoretical and applied problems of veterinary medicine, provide veterinary preventive measures to animals and birds.
ON6 To apply veterinary legislation in practice as a regulatory legal act, depending on the types of veterinary activities.
Prerequisites
Bachelor
Postrequisites
Modern problems of veterinary medicine

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

Discipline cycle	Profiling discipline
Discipline component	University component
SubjectID	32215 (3023901)
Course	1
Term	2
Credits count	11
The research work	330hours
Total	330hours

Knowledge control form	Total mark on practice

Short description of discipline
The discipline covers master`s studies – reflects the main expected results from the sections of education and research and describes the degree of mastering the internship. Teaches the compilation of educational methods and argumentation of the results obtained in research work. In the general pedagogical scientific aspect, it teaches the ability to systematize and transmit cognitive data. In this regard, its own logic of organizing research work is being formed. It also forms the skills of making expeditionary, search strategic plans.

Purpose of studying of the discipline
To master the methodology of research in order to formulate a research plan based on the principles of solving professional problems suitable for the subject program of mastering. It is also possible to analyze the compatibility of positions with modern technologies with a systematic expansion of the volume of theoretical and practical knowledge acquired at this stage of education. At the same time, they learn to analyze the results of research and further realize the needs of their implementation in the field of production.

Learning Outcomes
ON2 Conduct fundamental and applied scientific research in the field of veterinary medicine.
ON5 Analyze and solve theoretical and applied problems of veterinary medicine, provide veterinary preventive measures to animals and birds.
ON9 Analyze the results of therapeutic and preventive measures of animal and bird diseases.

Prerequisites
Theory and methods of experiment

Postrequisites
Clinical Anatomy (Sectional Course)

Diagnosis of non-communicable diseases of young animals

Discipline cycle	Profiling discipline
Discipline component	Electives
SubjectID	32128 (3023893)
Course	2
Term	1
Credits count	5
Lections	15hours
Practical and seminar classes	30hours
Independent work of a student under the guidance of a teacher	35hours
Independent work of the student	70hours
Total	150hours
Knowledge control form	Examination

Short description of discipline
The subject teaches a detailed consideration of the etiopathogenetic factors taken into account in the assessment of non-communicable diseases of young animals - from the embryonic and postembryonic points of view. In this regard, the veterinary conditions imposed on the female animal during the embryonic development of the offspring are discussed. The etiological consequences of factor diseases are also being studied according to the anatomical, physiological and biological characteristics of young animals after their birth. At the same time, methods of differentiation in the diagnosis of systemic diseases are being studied.

Purpose of studying of the discipline
According to the purpose of the subject - based on the basic principles, they teach accurate recognition of syndromic indicators related to the type of nosological disease and methods of rational examination in its diagnosis. Scientifically give clues to their classification according to the main factors of common diseases. In this regard, a comprehensive treatment system will be drawn up, mastered on the basis of the prescribed medical recommendation.

Learning Outcomes
ON3 Master the methodology of using modern complex methods of diagnosing animal diseases.
ON5 Analyze and solve theoretical and applied problems of veterinary medicine, provide veterinary preventive measures to animals and birds.
ON7 To form a therapeutic system based on the etiopathogenetic process in the body, taking into account the biological characteristics of animals and birds.

Prerequisites
Biotechnology in animal husbandry

Postrequisites
Clinical Anatomy (Sectional Course)

Modern methods of treatment and prevention of parasitosis of birds

Discipline cycle	Profiling discipline
Discipline component	Electives
SubjectID	32218 (3023895)
Course	2
Term	1
Credits count	5
Lections	15hours
Practical and seminar classes	15hours

Laboratory works	15hours
Independent work of a student under the guidance of a teacher	35hours
Independent work of the student	70hours
Total	150hours
Knowledge control form	Examination

Short description of discipline
During the treatment of parasitic diseases of birds, they are trained to familiarize themselves with advanced technologies of modern therapeutic, preventive measures through information messages and their expertise. The analysis of the ways of bird damage, the mechanisms of the spread of the disease is carried out, taking into account the epizootic conditions of helminthic diseases, the prognosis of appropriate measures is studied. Characteristics of the use of rationality of advanced veterinary measures in relation to invasive diseases are provided.

Purpose of studying of the discipline
The purpose of the course is to teach high-tech veterinary principles of prevention and treatment of bird parasitosis. In this regard, the use of advanced models of the spread of parasitic diseases among birds and related therapeutic measures are being studied.

Learning Outcomes
ON5 Analyze and solve theoretical and applied problems of veterinary medicine, provide veterinary preventive measures to animals and birds.
ON7 To form a therapeutic system based on the etiopathogenetic process in the body, taking into account the biological characteristics of animals and birds.
ON9 Analyze the results of therapeutic and preventive measures of animal and bird diseases.

Prerequisites
Modern problems of veterinary medicine

Postrequisites
Forensic examination of diseases and death of animals

Hematologic parameters of animals

Discipline cycle	Profiling discipline
Discipline component	Electives
SubjectID	32221 (3023898)
Course	2
Term	1
Credits count	5
Lections	15hours
Practical and seminar classes	15hours
Laboratory works	15hours
Independent work of a student under the guidance of a teacher	35hours
Independent work of the student	70hours
Total	150hours
Knowledge control form	Examination

Short description of discipline
The functions in maintaining homeostatic stability in accordance with the genotype of the animal are hematological and physico-biochemical processes. With the development of methods of mathematical modeling of the sequence of hematological indicators, the characteristics of the phenomena in it are studied. The morphophysiological picture of blood is mastered, the assessment of animal health by clinical and immunological examination. Based on the data obtained, the skills of drawing up a special plan of measures for treatment and prevention are acquired.

Purpose of studying of the discipline
When examining an animal, morphobiochemical blood parameters are checked and evaluated to determine and evaluate the physiological and clinical state of the animal`s body. In this regard, they learn to give the correct answer to the relative compatibility of blood composition indicators that have diagnostic significance.

Learning Outcomes
ON2 Conduct fundamental and applied scientific research in the field of veterinary medicine.
ON4 Possess epizootological analysis, diagnosis and treatment of non-infectious and invasive diseases. Determine the causes of death of animals.
ON7 To form a therapeutic system based on the etiopathogenetic process in the body, taking into account the biological characteristics of animals and birds.

Prerequisites
Modern problems of veterinary medicine

Postrequisites
Clinical Anatomy (Sectional Course)

Clinical Anatomy (Sectional Course)

Discipline cycle	Profiling discipline
Discipline component	Electives
SubjectID	32226 (3023909)
Course	2
Term	1

Credits count	5
Lections	15hours
Practical and seminar classes	30hours
Independent work of a student under the guidance of a teacher	35hours
Independent work of the student	70hours
Total	150hours
Knowledge control form	Examination

Short description of discipline
He studies the causes and mechanisms of typical pathological processes and reactions. Characteristics and sequence of the morphological picture of the disease. Study of complications and outcomes of diseases. Study of the pathomorphism of diseases. Pathological processes developing as a result of diagnostic and therapeutic procedures. Intravital and post- mortem diagnostics of pathological processes using morphological methods. Autopsy of corpses and pathomorphological diagnostics of diseases of farm animals, recording of autopsies, selection and forwarding of pathological material for laboratory research.

Purpose of studying of the discipline
Acquire the skills of autopsy of dead and dead animals, in order to draw up a conclusion about the causes of death of the animal.

Learning Outcomes
ON2 Conduct fundamental and applied scientific research in the field of veterinary medicine.
ON3 Master the methodology of using modern complex methods of diagnosing animal diseases.
ON5 Analyze and solve theoretical and applied problems of veterinary medicine, provide veterinary preventive measures to animals and birds.

Prerequisites
Modern problems of veterinary medicine

Postrequisites
Research practice

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

Discipline cycle	Profiling discipline
Discipline component	University component
SubjectID	32223 (3023902)
Course	2
Term	1
Credits count	4
The research work	120hours
Total	120hours
Knowledge control form	Total mark on practice

Short description of discipline
The discipline covers master`s studies – reflects the main expected results from the sections of education and research and describes the degree of mastering the internship. They are trained in the compilation of educational methods and argumentation of the results obtained in research work. Students are taught the ability to systematize and convey cognitive sensations. In this regard, its own logic of organizing research work is being formed. It also forms the skills of making expeditionary, search strategic plans.

Purpose of studying of the discipline
To master the methodology of research in order to formulate a research plan based on the principles of solving professional problems suitable for the subject program of mastering. It is also possible to analyze the compatibility of positions with modern technologies with a systematic expansion of the volume of theoretical and practical knowledge acquired at the bar level of education. At the same time, they learn to analyze the results of research and further realize the needs of their implementation in the field of production.

Learning Outcomes
ON1 Apply fundamental scientific, pedagogical, managerial, communicative knowledge and skills in professional activities.
ON2 Conduct fundamental and applied scientific research in the field of veterinary medicine.
ON5 Analyze and solve theoretical and applied problems of veterinary medicine, provide veterinary preventive measures to animals and birds.
ON8 Be able to adequately understand the legal principles of protecting the population from diseases of zooanthroponosis and conduct propaganda work on veterinary education of the population.

Prerequisites
Theory and methods of experiment

Postrequisites
Clinical Anatomy (Sectional Course)

Forensic examination of diseases and death of animals

Discipline cycle	Profiling discipline
Discipline component	University component
SubjectID	32224 (3023907)
Course	2
Term	1
Credits count	5
Lections	15hours

Practical and seminar classes	30hours
Independent work of a student under the guidance of a teacher	35hours
Independent work of the student	70hours
Total	150hours
Knowledge control form	Examination

Short description of discipline
In cases of illness or forced slaughter and death of an animal and non–compliance with quarantine requirements related to criminal and civil proceedings in relation to veterinary objects and professional offenses, purchase and sale, as well as raw substances and products of animal origin, misuse of breeding animals, illegal hunting, animal cruelty, etc. conducts forensic veterinary medical inspection with the preparation of the methodology of veterinary collegial examination.

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 Master the methodology of using modern complex methods of diagnosing animal diseases.
ON4 Possess epizootological analysis, diagnosis and treatment of non-infectious and invasive diseases. Determine the causes of death of animals.
ON6 To apply veterinary legislation in practice as a regulatory legal act, depending on the types of veterinary activities.

Prerequisites
Modern problems of veterinary medicine

Postrequisites
Research practice

Research practice

Discipline cycle	Profiling discipline
Discipline component	University component
SubjectID	32227 (3023900)
Course	2
Term	2
Credits count	13
Working practice	390hours
Total	390hours
Knowledge control form	Total mark on practice

Short description of discipline
Research practice provides for the preparation of descriptive reporting in order to formulate the main section of the study and the obtained result of the work in relation to the planned periods of the master`s research practice. In addition, a master`s student in the educational process of mastering this discipline masters in- depth knowledge in the formulation of the acquired knowledge about educational technology and individual work with scientific and methodological and information and legal justifications.

Purpose of studying of the discipline
The purpose of the practice is to be able to understand the theoretical and practical provisions based on the results of research related to the field of research work, learn to master the prerequisites for its practical application. In this regard, the master`s student learns to give a consistent concept to the results, providing them on the basis of the knowledge gained.

Learning Outcomes
ON2 Conduct fundamental and applied scientific research in the field of veterinary medicine.
ON3 Master the methodology of using modern complex methods of diagnosing animal diseases.
ON6 To apply veterinary legislation in practice as a regulatory legal act, depending on the types of veterinary activities.

Prerequisites
Theory and methods of experiment

Postrequisites
Final examination

Модуль 3.Current problems in the field of veterinary medicine

Veterinary entomology and entomological methods of research

Discipline cycle	Profiling discipline
Discipline component	Electives
SubjectID	32210 (3023887)
Course	1
Term	2
Credits count	5
Lections	15hours
Practical and seminar classes	30hours
Independent work of a student under the guidance of a teacher	35hours

Independent work of the student	70hours
Total	150hours
Knowledge control form	Examination

Short description of discipline
Veterinary entomology develops in close connection with biological sciences and other branches of entomology, studies the spread of insects in the biological environment and their benefits and harm to animals, it studies the issues of the causative agent of animal diseases, the carrier of pathogens of various infectious and invasive diseases, and also considers their biological feature in reducing the quality of animal products.

Purpose of studying of the discipline
The purpose of the discipline is an in- depth study of fundamental knowledge in the structure of biological systems, anatomy and physiology of insects. At the same time, the main biological and ecological features, harmful effects on agriculture and some useful activities are also taught. They are also taught how to handle them.

Learning Outcomes
ON2 Conduct fundamental and applied scientific research in the field of veterinary medicine.
ON3 Master the methodology of using modern complex methods of diagnosing animal diseases.
ON8 Be able to adequately understand the legal principles of protecting the population from diseases of zooanthroponosis and conduct propaganda work on veterinary education of the population.
ON9 Analyze the results of therapeutic and preventive measures of animal and bird diseases.

Prerequisites
Regional epizootology

Postrequisites
Diagnosis and prevention of rare and exotic parasitic diseases of animals

Clinical and biophysical methods for diagnosing diseases of the reproductive organs

Discipline cycle	Profiling discipline
Discipline component	Electives
SubjectID	32208 (3023885)
Course	1
Term	2
Credits count	5
Lections	15hours
Practical and seminar classes	30hours
Independent work of a student under the guidance of a teacher	35hours
Independent work of the student	70hours
Total	150hours
Knowledge control form	Examination

Short description of discipline
Allows you to learn how to work with modern devices for diagnosing diseases of the genital organs of animals and determining the functionality of the organ. In this direction, it makes it possible to conduct a biophysical examination based on the anatomical and physiological structure of the penis, depending on the timing of its anatomical and physiological maturation. The identification of the consequences of impotence and pathological processes in the genitals of animals, the identification of therapeutic and preventive measures.

Purpose of studying of the discipline
In order to teach the subject, the theoretical and practical foundations of biophysical tests used in assessing the functional states of the reproductive system associated with the growth and reproduction of animals are mastered. At the same time, in the process of teaching biophysical methods, the prerequisites for conducting clinical diagnostic and therapeutic and preventive measures are assimilated.

Learning Outcomes
ON3 Master the methodology of using modern complex methods of diagnosing animal diseases.
ON5 Analyze and solve theoretical and applied problems of veterinary medicine, provide veterinary preventive measures to animals and birds.
ON7 To form a therapeutic system based on the etiopathogenetic process in the body, taking into account the biological characteristics of animals and birds.

Prerequisites
Nontraditional treatments for non-communicable animal diseases

Postrequisites
Practical therapy in veterinary medicine

Modern problems of veterinary medicine

Discipline cycle	Profiling discipline
Discipline component	University component
SubjectID	32147 (3023880)
Course	1
Term	2
Credits count	5
Lections	15hours
Practical and seminar classes	30hours

Independent work of a student under the guidance of a teacher	35hours
Independent work of the student	70hours
Total	150hours
Knowledge control form	Examination

Short description of discipline
The course aims to systematize and supplement the knowledge available to undergraduates of methodology and methods of research and presentation of results in the dissertation.

Purpose of studying of the discipline
The purpose of the discipline "modern problems of veterinary medicine" is to study the achievements of many veterinary sciences, to consider various problems of veterinary science at the present time, to demonstrate ways to solve them. Mastering modern diagnostic, therapeutic and preventive measures.

Learning Outcomes
ON3 Master the methodology of using modern complex methods of diagnosing animal diseases.
ON5 Analyze and solve theoretical and applied problems of veterinary medicine, provide veterinary preventive measures to animals and birds.
ON7 To form a therapeutic system based on the etiopathogenetic process in the body, taking into account the biological characteristics of animals and birds.

Prerequisites
Veterinary office-work

Postrequisites
Diagnosis of non-communicable diseases of young animals

Biotechnology in animal husbandry

Discipline cycle	Profiling discipline
Discipline component	Electives
SubjectID	32209 (3023886)
Course	1
Term	2
Credits count	5
Lections	15hours
Practical and seminar classes	30hours
Independent work of a student under the guidance of a teacher	35hours
Independent work of the student	70hours
Total	150hours
Knowledge control form	Examination

Short description of discipline
The discipline studies modern areas of biotechnology related to the purposeful construction of new combinations of genetic material capable of reproducing in a cell in vitro, in vivo and synthesizing a specific product. The discipline studies the achievements of biotechnological science and can create new directions in animal husbandry and the production process, using knowledge of the biological foundations and methods of biotechnology to improve the production process in animal husbandry.

Purpose of studying of the discipline
The purpose of the discipline is to analyze the genetic potential of modern works in the breeding and reproduction of farm animals on theoretical grounds. At the same time, he learns to build a consistent basis for the future expected results of the practical implementation of high-tech achievements.

Learning Outcomes
ON2 Conduct fundamental and applied scientific research in the field of veterinary medicine.
ON5 Analyze and solve theoretical and applied problems of veterinary medicine, provide veterinary preventive measures to animals and birds.

Prerequisites
Veterinary office-work

Postrequisites
Hematologic parameters of animals

Veterinary arachnology and acarological research methods

Discipline cycle	Profiling discipline
Discipline component	Electives
SubjectID	32211 (3023888)
Course	1
Term	2
Credits count	5
Lections	15hours
Practical and seminar classes	30hours
Independent work of a student under the guidance of a teacher	35hours
Independent work of the student	70hours
Total	150hours

Knowledge control form	Examination

Short description of discipline
Veterinary arachnology studies the specifics of the transmission of infectious and invasive diseases, which is caused by the defeat of living arthropods by parasites. The preliminary conditions for reducing the productivity of animals to a large extent are also considered, despite the fact that they are not directly susceptible to death. In this regard, veterinary arachnology teaches to describe the scientific basis of measures to combat direct and indirect effects on productive animals.

Purpose of studying of the discipline
The purpose of the subject on the basis of veterinary arachnology and acarology is to study the biological processes of insects living in the body of mammals and birds. In parallel, the harmful effects of these insects on the animal body and the environment are being studied. The theoretical and practical foundations of measures to combat these insects are also taught.

Learning Outcomes
ON2 Conduct fundamental and applied scientific research in the field of veterinary medicine.
ON3 Master the methodology of using modern complex methods of diagnosing animal diseases.
ON5 Analyze and solve theoretical and applied problems of veterinary medicine, provide veterinary preventive measures to animals and birds.

Prerequisites
Epizootological monitoring of infectious diseases of animals and birds

Postrequisites
Diagnosis and prevention of rare and exotic parasitic diseases of animals

Domestic non-communicable diseases of cats and dogs

Discipline cycle	Profiling discipline
Discipline component	Electives
SubjectID	32214 (3023891)
Course	1
Term	2
Credits count	5
Lections	15hours
Practical and seminar classes	30hours
Independent work of a student under the guidance of a teacher	35hours
Independent work of the student	70hours
Total	150hours
Knowledge control form	Examination

Short description of discipline
The discipline studies etiopathogenic factors of non- communicable diseases occurring in dogs and cats. It also teaches pathophysiological recognition of manifestations of clinical symptoms arising from the pathological process and the identification of nosological cognitive disorders. In this regard, they teach differentiation by clinical signs of the results of morphobiochemical analysis in the diagnosis and classification of diseases and give therapeutic characteristics of the treatment and prevention of diseases.

Purpose of studying of the discipline
In order to study the subject, the student masters the prerequisites necessary for the systematization of the relevant symptomatic grounds, etiological factors of non-communicable diseases associated with carnivorous pets. In this regard, the therapeutic principles of mastering therapeutic and preventive measures based on nosological knowledge will be studied.

Learning Outcomes
ON2 Conduct fundamental and applied scientific research in the field of veterinary medicine.
ON3 Master the methodology of using modern complex methods of diagnosing animal diseases.
ON9 Analyze the results of therapeutic and preventive measures of animal and bird diseases.

Prerequisites
Surgical diseases of cats and dogs

Postrequisites
Parasitology and parasitic diseases of cats and dogs

Kinologia and felinology

Discipline cycle	Profiling discipline
Discipline component	Electives
SubjectID	32212 (3023889)
Course	1
Term	2
Credits count	5
Lections	15hours
Practical and seminar classes	30hours
Independent work of a student under the guidance of a teacher	35hours
Independent work of the student	70hours
Total	150hours
Knowledge control form	Examination

Short description of discipline
The discipline studies the development of domestic animals, the principles of various veterinary and zoopsychological requirements in

their development. It determines the needs of research in the development of the biological potential of the animal. Teaches to solve problems that arise during breeding work in the process of their cultivation. At the genetic level, the ways of assimilation of certain habits and skills in an animal are being improved, methods of treatment and prevention of various diseases are being studied.

Purpose of studying of the discipline

The purpose of the subject is to study the zootechnical and zoopsychological foundations from a theoretical and practical point of view in order to realize the biological importance of animal husbandry for the benefit of humanity. At the same time, skills related to the improvement of methods of new models of tricks used to form special skills in animals are being studied.

Learning Outcomes

ON3 Master the methodology of using modern complex methods of diagnosing animal diseases.
ON6 To apply veterinary legislation in practice as a regulatory legal act, depending on the types of veterinary activities.
ON8 Be able to adequately understand the legal principles of protecting the population from diseases of zooanthroponosis and conduct propaganda work on veterinary education of the population.

Prerequisites

Surgical diseases of cats and dogs

Postrequisites

Parasitology and parasitic diseases of cats and dogs

Nontraditional treatments for non-communicable animal diseases

Discipline cycle	Profiling discipline
Discipline component	Electives
SubjectID	32206 (3023892)
Course	1
Term	2
Credits count	5
Lections	15hours
Practical and seminar classes	30hours
Independent work of a student under the guidance of a teacher	35hours
Independent work of the student	70hours
Total	150hours
Knowledge control form	Examination

Short description of discipline

The physicobiological mechanisms of action of various factors in the treatment of animals by non-traditional methods (needles, weak currents, laser radiation, cold, pressure burns, irritants, etc.) that affect biological points in the animal`s body are described. In this regard, biochemical and biophysical formations of morphological structure resulting from the influence of a factor on a biological point form systemic and positive aspects in the body of animals as a whole.

Purpose of studying of the discipline

For the purposes of the subject, the prerequisites of non-traditional treatment based on the therapeutic principles of the treatment of non-communicable diseases are studied. In this regard, it is necessary to learn how to justify the effectiveness of the appropriate treatment of the etiopathogenetic process. In addition, theoretical and practical characteristics of pharmacobiochemical processes are taught.

Learning Outcomes

ON2 Conduct fundamental and applied scientific research in the field of veterinary medicine.
ON3 Master the methodology of using modern complex methods of diagnosing animal diseases.
ON9 Analyze the results of therapeutic and preventive measures of animal and bird diseases.

Prerequisites

Theory and methods of experiment

Postrequisites

Practical therapy in veterinary medicine

Problems of diseases of a noncontagious etiology

Discipline cycle	Profiling discipline
Discipline component	Electives
SubjectID	32213 (3023890)
Course	1
Term	2
Credits count	5
Lections	15hours
Practical and seminar classes	30hours
Independent work of a student under the guidance of a teacher	35hours
Independent work of the student	70hours
Total	150hours
Knowledge control form	Examination

Short description of discipline

Currently, due to the intensive development of animal husbandry, in the process of achieving high rates of animal products, infectious etiological diseases occur in animals. In this regard, new approaches to the modern solution of urgent problems are being considered, they are being studied in separate branches of veterinary science. In parallel with the justification of the consequences of etiological

factors, they teach the assessment of animal health depending on the indicators of immunological resistance of the organism.

Purpose of studying of the discipline

The purpose of the subject is to provide a theoretical basis for modern models in solving the actual problem of non-communicable diseases of farm animals. In this regard, they learn to implement appropriate justifications for the practical solution of these prerequisites.

Learning Outcomes

ON3 Master the methodology of using modern complex methods of diagnosing animal diseases.
ON7 To form a therapeutic system based on the etiopathogenetic process in the body, taking into account the biological characteristics of animals and birds.

Prerequisites

Theory and methods of experiment

Postrequisites

Diagnosis of non-communicable diseases of young animals

Modern methods of diagnostics, treatment and prevention in obstetrics

Discipline cycle	Profiling discipline
Discipline component	Electives
SubjectID	32196 (3023884)
Course	1
Term	2
Credits count	5
Lections	15hours
Practical and seminar classes	30hours
Independent work of a student under the guidance of a teacher	35hours
Independent work of the student	70hours
Total	150hours
Knowledge control form	Examination

Short description of discipline

In the conditions of intensive development of animal husbandry, he teaches the use of achievements of veterinary medicine used for the diagnosis, treatment of obstetric animals diseases with the maximum use of modern technologies. Teaches the use of technologies to stimulate synchronization of the sexual cycle of the donor and recipient. Allows you to master the skills of using advanced methods of reproduction of genetically potential animals. Studies ways to preserve hygienic independence in obstetrics and breeding work with animals.

Purpose of studying of the discipline

The purpose of the discipline is to teach the theoretical and practical foundations of obstetric and diagnostic prerequisites related to the physiological state of animals. At the same time, the rules of obstetric care are studied as necessary and modern advanced methods of treatment and prevention of obstetric and gynecological diseases.

Learning Outcomes

ON2 Conduct fundamental and applied scientific research in the field of veterinary medicine.
ON3 Master the methodology of using modern complex methods of diagnosing animal diseases.
ON6 To apply veterinary legislation in practice as a regulatory legal act, depending on the types of veterinary activities.

Prerequisites

Theory and methods of experiment

Postrequisites

Problems of diseases of a noncontagious etiology

Practical therapy in veterinary medicine

Discipline cycle	Profiling discipline
Discipline component	Electives
SubjectID	32220 (3023897)
Course	2
Term	1
Credits count	5
Lections	15hours
Practical and seminar classes	15hours
Laboratory works	15hours
Independent work of a student under the guidance of a teacher	35hours
Independent work of the student	70hours
Total	150hours
Knowledge control form	Examination

Short description of discipline

Based on the practical principles formed on the basis of the principles of veterinary therapy, the veterinarian forms his own experience in the treatment, prevention of animals in accordance with modern requirements. Teaches to describe the rationality of treatment and formulate the rationale for treatment, identifying the etiopathogenetic factor, by appropriate diagnostic differentiation of the nosological form of the disease before treatment. It is based on the stimulation of cellular and humoral factors to increase the resistance of the body.

Purpose of studying of the discipline
The purpose of the discipline is to provide a clinical and pharmacological justification of a theoretically proposed therapeutic measure suitable for the nosological type of animal disease related to veterinary therapy. In this regard, in the treatment of the disease, they learn to build a comprehensive treatment system depending on the etiopathogenetic state. At the same time, the student learns to follow the characteristics necessary to maintain the normal physiological state of the animal`s body.
Learning Outcomes
ON2 Conduct fundamental and applied scientific research in the field of veterinary medicine.
ON5 Analyze and solve theoretical and applied problems of veterinary medicine, provide veterinary preventive measures to animals and birds.
ON6 To apply veterinary legislation in practice as a regulatory legal act, depending on the types of veterinary activities.
ON7 To form a therapeutic system based on the etiopathogenetic process in the body, taking into account the biological characteristics of animals and birds.
Prerequisites
Problems of diseases of a noncontagious etiology
Postrequisites
Research practice

Diagnosis and prevention of rare and exotic parasitic diseases of animals

Discipline cycle	Profiling discipline
Discipline component	Electives
SubjectID	32217 (3023894)
Course	2
Term	1
Credits count	5
Lections	15hours
Practical and seminar classes	15hours
Laboratory works	15hours
Independent work of a student under the guidance of a teacher	35hours
Independent work of the student	70hours
Total	150hours
Knowledge control form	Examination

Short description of discipline
Studies parasitic diseases of animals that occur during life in conditions other than the environment adapted to climatic and biogeocenotic conditions of growth or natural habitat. Drawing up plans to prevent the spread of diseases. Various checks concerning the occurrence of these diseases, especially among wild animals, are being investigated and methods of conducting special veterinary measures are being studied. As a result of the training, prerequisites are formed for acquaintance with exotic invasive, tropical animal diseases.
Purpose of studying of the discipline
The purpose of the subject is veterinary therapeutic measures for the treatment and prevention of rare invasive diseases among animals. At the same time, rational ones are described. modern methods of treatment and prevention.
Learning Outcomes
ON2 Conduct fundamental and applied scientific research in the field of veterinary medicine.
ON4 Possess epizootological analysis, diagnosis and treatment of non-infectious and invasive diseases. Determine the causes of death of animals.
ON5 Analyze and solve theoretical and applied problems of veterinary medicine, provide veterinary preventive measures to animals and birds.
Prerequisites
Veterinary entomology and entomological methods of research
Postrequisites
Oncopathology

Domestic non-communicable diseases of birds

Discipline cycle	Profiling discipline
Discipline component	Electives
SubjectID	32222 (3023899)
Course	2
Term	1
Credits count	5
Lections	15hours
Practical and seminar classes	15hours
Laboratory works	15hours
Independent work of a student under the guidance of a teacher	35hours
Independent work of the student	70hours
Total	150hours
Knowledge control form	Examination

Short description of discipline

The discipline studies the clinical, pathological, anatomical data of non-infectious diseases occurring in birds, in connection with the biological characteristics and sexual maturity of the bird and the purpose of its maintenance. Teaches to substantiate the etiology-pathogenetic features of the disease based on the diagnosis. He studies the main problems of considering the processes of polyethological development, designing types of tests using methods in its isolation. Poultry farming studies the mechanisms of reducing resistance and the occurrence of concomitant diseases.

Purpose of studying of the discipline

For the purposes of the subject, the principles of the application of appropriate veterinary measures for non-infectious diseases of birds are taught. In addition, they learn therapeutic techniques and study methods used in the prevention and treatment of diseases associated with the biological characteristics of birds.

Learning Outcomes

ON5 Analyze and solve theoretical and applied problems of veterinary medicine, provide veterinary preventive measures to animals and birds.
ON7 To form a therapeutic system based on the etiopathogenetic process in the body, taking into account the biological characteristics of animals and birds.
ON9 Analyze the results of therapeutic and preventive measures of animal and bird diseases.

Prerequisites

Modern methods of treatment and prevention of parasitosis of birds

Postrequisites

Forensic examination of diseases and death of animals

Oncopathology

Discipline cycle	Profiling discipline
Discipline component	Electives
SubjectID	32225 (3023908)
Course	2
Term	1
Credits count	5
Lections	15hours
Practical and seminar classes	30hours
Independent work of a student under the guidance of a teacher	35hours
Independent work of the student	70hours
Total	150hours
Knowledge control form	Examination

Short description of discipline

The discipline studies the classification of tumors. Gives an assessment of epithelial tumors without specific localization (organ-nonspecific). Tumors of exo - and endocrine glands, as well as epithelial integuments (organ-specific). The features of melanin-forming tissue tumors are studied. Tumors of the nervous and muscular systems and membranes of the brain. mesenchymal tumors. Tumors of the blood system. Teratoma. Forms and features of the manifestation of tumors. Methods of pathohistological technique for the diagnosis of malignant and benign tumors.

Purpose of studying of the discipline

To study the features of the growth of mesenchymal tumors, tumors of the nervous and melanin- forming tissues, tumors of the hematopoietic and lymphatic tissues.

Learning Outcomes

ON2 Conduct fundamental and applied scientific research in the field of veterinary medicine.
ON4 Possess epizootological analysis, diagnosis and treatment of non-infectious and invasive diseases. Determine the causes of death of animals.

Prerequisites

Modern problems of veterinary medicine

Postrequisites

Research practice

Parasitology and parasitic diseases of cats and dogs

Discipline cycle	Profiling discipline
Discipline component	Electives
SubjectID	32219 (3023896)
Course	2
Term	1
Credits count	5
Lections	15hours
Practical and seminar classes	15hours
Laboratory works	15hours
Independent work of a student under the guidance of a teacher	35hours
Independent work of the student	70hours
Total	150hours
Knowledge control form	Examination

Short description of discipline
In the organs and tissues of the body of dogs and cats, pathogens of invasive diseases selectively accumulate in various organs and only in one organ, depending on the biological characteristics of adaptation to habitation. during the diagnosis of invasive diseases, special verification studies are carried out on various samples. The application of morphological, biological reference methods for the detection of invasive diseases of microscopic size and the isolation of their specific species is being studied.
Purpose of studying of the discipline
For the purposes of the subject, veterinary activities related to invasive diseases among carnivorous domestic animals are taught. In this regard, the spread of parasitic diseases, their biological features and vital activity in the body of animal pathogens are being studied.
Learning Outcomes
ON3 Master the methodology of using modern complex methods of diagnosing animal diseases.
ON5 Analyze and solve theoretical and applied problems of veterinary medicine, provide veterinary preventive measures to animals and birds.
ON7 To form a therapeutic system based on the etiopathogenetic process in the body, taking into account the biological characteristics of animals and birds.
Prerequisites
Domestic non-communicable diseases of cats and dogs
Postrequisites
Oncopathology

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

Discipline cycle	Profiling discipline
Discipline component	University component
SubjectID	32228 (3023903)
Course	2
Term	2
Credits count	9
The research work	270hours
Total	270hours
Knowledge control form	Total mark on practice

Short description of discipline
The discipline covers master`s studies – reflects the main expected results from the sections of education and research and describes the degree of mastering the internship. They are trained in the compilation of educational methods and argumentation of the results obtained in research work. Students are taught the ability to systematize and convey cognitive sensations. In this regard, its own logic of organizing research work is being formed. It also forms the skills of making expeditionary, search strategic plans.
Purpose of studying of the discipline
To master the methodology of research in order to formulate a research plan based on the principles of solving professional problems suitable for the subject program of mastering. It is also possible to analyze the compatibility of positions with modern technologies with a systematic expansion of the volume of theoretical and practical knowledge acquired at the bar level of education. At the same time, they learn to analyze the results of research and further realize the needs of their implementation in the field of production.
Learning Outcomes
ON1 Apply fundamental scientific, pedagogical, managerial, communicative knowledge and skills in professional activities.
ON3 Master the methodology of using modern complex methods of diagnosing animal diseases.
ON5 Analyze and solve theoretical and applied problems of veterinary medicine, provide veterinary preventive measures to animals and birds.
Prerequisites
Theory and methods of experiment
Postrequisites
Final examination

Final certification

Master`s dissertation

Credits count	8

4.Summary table on the scope of the educational program

«7M09101 - Veterinary medicine»

Name of discipline	Cycle/ Component	Term	Number of credits	Total hours	Lec	SPL	LC	IWST	IWS	Knowledge control form
Модуль 1.Sociolinguistic and scientific-pedagogical activity										
Theory and methods of experiment	BS/CCh	1	5	150	15	30	0	35	70	Examination
Foreign language (professional)	BS/US	1	3	90		30		20	40	Examination
History and philosophy of science	BS/US	1	5	150	15	30		35	70	Examination
Tertiary education	BS/US	1	3	90	15	15		20	40	Examination
Psychology of management	BS/US	1	3	90	15	15		20	40	Examination
Practice pedagogical	BS/US	3	6	180						Total mark on practice
Модуль 2.Fundamentals of modern methodology in veterinary medicine										
Veterinary Ortopediy	BS/CCh	1	5	150	15	30	0	35	70	Examination
Veterinary Ophthalmology	BS/CCh	1	5	150	15	30	0	35	70	Examination
Veterinary office-work	BS/CCh	1	5	150	15	30	0	35	70	Examination
GIS technology in epizootology	BS/CCh	1	5	150	15	30		35	70	Examination
Regional epizootology	BS/CCh	1	5	150	15	30		35	70	Examination
Organization of scientific researches and technique of writing of the master thesis	BS/CCh	1	5	150	15	30	0	35	70	Examination
Surgical diseases of cats and dogs	BS/CCh	1	5	150	15	30	0	35	70	Examination
Epizootological monitoring of infectious diseases of animals and birds	BS/CCh	1	5	150	15	30		35	70	Examination
The research work of a student, including an internship and the implementation of a master``s thesis I	AS/US	2	11	330						Total mark on practice
Diagnosis of non-communicable diseases of young animals	AS/CCh	3	5	150	15	30		35	70	Examination
Modern methods of treatment and prevention of parasitosis of birds	AS/CCh	3	5	150	15	15	15	35	70	Examination
Hematologic parameters of animals	AS/CCh	3	5	150	15	15	15	35	70	Examination
Clinical Anatomy (Sectional Course)	AS/CCh	3	5	150	15	30		35	70	Examination
The research work of a student, including an internship and the implementation of a master``s thesis II	AS/US	3	4	120						Total mark on practice
Forensic examination of diseases and death of animals	AS/US	3	5	150	15	30		35	70	Examination
Research practice	AS/US	4	13	390						Total mark on practice
Модуль 3.Current problems in the field of veterinary medicine										
Veterinary entomology and entomological methods of research	AS/CCh	2	5	150	15	30		35	70	Examination

Clinical and biophysical methods for diagnosing diseases of the reproductive organs	AS/CCh	2	5	150	15	30		35	70	Examination
Modern problems of veterinary medicine	AS/US	2	5	150	15	30		35	70	Examination
Biotechnology in animal husbandry	AS/CCh	2	5	150	15	30		35	70	Examination
Veterinary arachnology and acarological research methods	AS/CCh	2	5	150	15	30		35	70	Examination
Domestic non-communicable diseases of cats and dogs	AS/CCh	2	5	150	15	30		35	70	Examination
Kinologia and felinology	AS/CCh	2	5	150	15	30		35	70	Examination
Nontraditional treatments for non-communicable animal diseases	AS/CCh	2	5	150	15	30		35	70	Examination
Problems of diseases of a noncontagious etiology	AS/CCh	2	5	150	15	30		35	70	Examination
Modern methods of diagnostics, treatment and prevention in obstetrics	AS/CCh	2	5	150	15	30		35	70	Examination
Practical therapy in veterinary medicine	AS/CCh	3	5	150	15	15	15	35	70	Examination
Diagnosis and prevention of rare and exotic parasitic diseases of animals	AS/CCh	3	5	150	15	15	15	35	70	Examination
Domestic non-communicable diseases of birds	AS/CCh	3	5	150	15	15	15	35	70	Examination
Oncopathology	AS/CCh	3	5	150	15	30		35	70	Examination
Parasitology and parasitic diseases of cats and dogs	AS/CCh	3	5	150	15	15	15	35	70	Examination
The research work of a student, including an internship and the implementation of a master``s thesis III	AS/US	4	9	270						Total mark on practice
Final certification										
Master`s dissertation		4	8	240						