



School of Agricultural and Natural Sciences

Programme Title:

Integrated Master's Program in Veterinary

Qualification Awarded:

Master's in Veterinary

Programme Credits:

Total of 307 ECTS credits:

- Specialty (veterinary) - 231 credits
- General and / or free components - 76 credits

Language of Instruction:

Georgian

Objectives of the Programme:

The aim of the Integrated Master's Program in Veterinary will equip graduates to:

- know the biological characteristics of animals and their applications in practice;
- know of animal diseases and relevant biological specificities: aetiology, pathogenesis and their clinical manifestations;
- know and use the methods, tools and principles of diagnostics, treatment and prevention of animal's different diseases;
- be able to accomplish diagnostic manipulations and to use appropriate devices;
- be able to conduct surgery manipulations;
- know the biotechnology of animal breeding and methods of artificial insemination;
- know the groups of pharmaceuticals, the mechanism of their action and the peculiarities of application;
- know preventive principles, tools and actions against infectious diseases;
- know husbandry, stock-breeding and nutrition issues of breeding;
- know specificities of veterinary-sanitary examinations of animal products and be aware of the issues related to the food safety;
- be aware of the veterinary legislation and possess skills of professional ethics;
- know to use biomedical principles in clinical and scientific research.

In order to achieve the above goals, the Integrated Master's Program in Veterinary focuses on proper planning and implementation of theoretical and practical teaching. This implies the realization of the practice in parallel with theoretical study of the subjects. Students will be engaged in the interactive learning and use their knowledge to perform various practical tasks. This will facilitate the development of students' practical (clinical, industrial and scientific research) skills and study the subjects that are covered by the program, which in turn will result



into the supply of labour market by competent and qualified specialists for the. Additionally, the program will give graduates a good base for continuing to study in doctoral program and to develop a possible scientific career.

Career Options:

The graduates of the Integrated Master's Program of Veterinary have wide employment perspectives.

After the completion of the Program, the graduate will be to pursue career in the following state and private sectors:

Veterinary:

- Veterinary clinics and laboratories: prevention, diagnosis and treatment of animal diseases (outpatient and inpatient);
- Livestock and poultry farms, beekeeping and fish farms: prevention, diagnosis and treatment of diseases;
- Pharmaceutical enterprises, veterinary pharmacies: drug production, testing, control, storage and delivery.
- Zoo shops, zoos, vivarium, aquariums, tarriers, hippodromes, animal shelters: consumer counseling, animal supervision, diagnosis, treatment and prevention of animal diseases;
- Cosmetics: animal grooming and cosmetic interventions;
- Slaughterhouses: ex pre and post slaughter sections examination, checking the Hazard assessment and Critical Control Points System (HACCP) and others;
- Relevant state agencies: develop and implement mechanisms of veterinary surveillance within and outside the country for the purpose of ensuring animal health and welfare.

Education and research institutions with a veterinary direction:

- Scientific-research institutions: scientific activities;
- Educational institutions: pedagogic activities.

Experimental medicine:

- Medical Research Laboratories, Centers and Institutes: work on various directions of the experimental medicine.

Livestock:

- Livestock and poultry farms, beekeeping and fisheries farms, cynology services: animal breeding, reproduction, feeding, animal welfare, etc.

Food Safety:

- Slaughterhouses, meat and meat-foods processing facilities , fish and fish-foods processing facilities and more.



Environment:

- Protected Areas: Monitoring of animal species, monitoring and preventing epidemiological / epizootic situations.

Admission Prerequisites:

Admission to the programme is carried out in accordance with the Law of Georgia on Higher Education and in accordance with the provisions of the unified national examinations approved by Order N19/N of 18 February 2011.

To facilitate the mobility of high school graduates and prospective students, it is permissible to enrol in an educational programme without passing unified national examinations, in accordance with the rules and terms defined by the Ministry of Education and Science of Georgia, for those that are:

- foreign citizens or persons without citizenship, who received complete general education or its equivalent abroad;
- Georgian citizens who received complete general education abroad or its equivalent and during the last two years of complete general education had been studying abroad;
- foreign citizens, who have studied/ are studying and have received credits/qualifications abroad from a Higher Educational Institution recognized by the legislation of that country;
- Georgian citizens, who, for the term defined by the Ministry of Education and Science of Georgia, lived/are living, studied/are studying and have received credits/qualifications abroad from a Higher Educational Institution recognized by the legislation of that country.

Enrolment in educational programs is also possible through mobility, in accordance with the Rule of Transfer Between High Educational Institutions defined by the Order N10/N of February 4, 2010 by the Minister of Education and Science of Georgia.

Learning Outcomes (Competences)

After completion of the Integrated Master's Program, graduates will own general and specific competencies listed below:

General Competences:

Graduates will be able to:

- apply abstractive thinking, analysis and synthesis;
- professionally write and communicate in native language;
- write and communicate scientific material in foreign (English) languages;
- adapt and act in unfamiliar and changing environments;
- work in a group;
- continuously learn and deepen the knowledge;



- use modern information and communication technologies;
- plan a research, conduct it, analyze the results and draw conclusions;
- process scientific literature, write and form a master thesis;
- appreciate and respect differences and cultural diversity.

Specific Competences:

Graduates will be able to:

- effectively communicate with patients, patient's owners and colleagues;
- carry out practical procedures and manipulations;
- make diagnosis;
- assist in emergency/urgent hospital conditions;
- prescribe pharmaceuticals and give recipe;
- make a justified plan for disease treatment;
- make a justified plan of preventive measures;
- use of veterinary legislation and ethical principles;
- determine animal infertility and organize artificial insemination (or fertilization);
- determine the safety of the products based on animal origin;
- compose balanced ration of animal feed;
- use principles of biomedical sciences and carry out scientific research.

Competences developed in the Integrated Master's in Veterinary Programme are evaluated in accordance with the six criteria for the first level of Higher Education set by the National Qualification Framework:

Knowledge and Understanding:

- graduates of the programme will have knowledge of the biological (genetic, biochemical, immunological, physiological, morphological, behavior and etc.) peculiarities of different species of animals;
- knowledge of the responsive and defend mechanisms of the animal organisms to the external and internal biological aggression and ability to manage it;
- awareness of the importance of knowledge of the normal biological/ physiological referentials in the process of evaluating animal health and diagnosis;
- knowledge of the typical pathological processes of animals - etiology, pathogenesis, clinical manifestations, compensatory mechanisms, peculiarities of pathological changes originating in cells, tissues and organs;
- knowledge of the etiology, pathogenesis, clinical manifestations, diagnostic methods and their peculiarities of infectious, parasitic and internal diseases;
- knowledge about the treatment and prevention issues of infectious, parasitic and internal diseases;
- knowledge of animal breeding biotechnology;



- knowledge of aetiology, pathogenesis, clinical manifestations, diagnostic, treatment and preventive of animal reproductive diseases and infertility. knowledge of the rules to how get anamnesis from patient's owner, how get epizootic data and carry out it's processing.
- knowledge of the physical, instrumental and laboratory examination methods and their application for diagnostics;
- knowledge of main groups of medications, their mechanisms of action, indications and contraindications, side effects, usage rules
- (route of application, dosage, duration/longevity and interval);
- families of animals and their economic importance in the production of products;
- knowledge of breeding techniques, maintenance and storage systems, types of productivity and their formation and evaluation principles;
- knowledge of the relevant nutritional characteristics of animals of different types, sex, age and physiological conditions;
- knowledge of food safety issues;

Applying Knowledge to Practice:

Graduates will be able to:

- use physical, instrumental and laboratory examination methods of animals;
- take biological and pathological material from sick animals, process, send to the laboratory for analysis, conduct various types of laboratory analysis;
- gather anamnesis from patient's owner;
- take autopsies, take the pathological material, process, fix, transport and send to the laboratory, macro and micromorphological study of the organs;
- conduct forensic expertise, correct assessment of the situation in the disputed issues and set up a further action plan;
- conduct veterinary examination before and after the slaughtering;
- Provide emergency veterinary aid;
- diagnose, treat and prevent of infectious, parasitic and internal diseases;
- medicate and carry out surgical treatment;
- write diagnosis, treatment and prophylaxis of reproductive organs;
- determine the causes of animal infertility, treatment and prophylaxis
- apply different types of medicinal substances to animals (through skin, subcutaneous, muscle, vein, etc.);
- set up preclinical and clinical trials of veterinary medications;
- select the appropriate medications and subscribe in accordance with diagnosis;
- prepare daily food rations for different animals, preservation of food preparation preparations and nutrition feeding;
- use the veterinary legislation.



Ability to Make Conclusion:

Graduates will be able to:

- assess the health status as a result of physiological, instrumental and laboratory examination of the patients, conduct differential diagnosis and final diagnosis based on the results obtained;
- make conclusions based on anamnesis;
- make conclusions based on the results obtained from different types of laboratory assays;
- make conclusions post-mortem;
- form opinions, based on the provided information, and use alternative and additional resources for finding appropriate solution;
- take part in discussing industry/field-specific issues regulated by relevant legislative acts;
- discuss the topical issues of the veterinary medicine, establish argumentative conclusions about the selected diagnostic method, interpretation of the obtained results and the use of selected medicines and prophylactic drugs, as well as surgical intervention.
- write report related to a particular field in the industry and make conclusions within its competence;
- plan scientific experiments, perform research, analyze the results and draw up conclusions.

Communication Skills:

Graduates will be able to:

- present their own work and opinions in front of a professional audience;
- participate in debates, discussions and public talks regarding professional issues;
- write and deliver oral presentation of Georgian and English languages;
- work in a team ;
- Ability to participate in the discussion, inquiry all the necessary information to make a diagnosis, explain the disease after to the patient's owner and provide detailed information about the treatment;
- Ability to share a variety of issues (including information about existing problems and information about the experience) with
- colleagues and patients' owners.

Ability to Learn:

After successful completion of the programme, graduates will be able to identify the learning tasks and methods, independently conduct the learning process, identifies the updated scientific literature, thoroughly process and deepen the knowledge, by the new information received from their study, write publications, to formulate hypothesis and to find the effective ways to solve the problem.



Values:

Graduate of the Program will:

- be aware of the importance of its profession for animal and human health;
- keep professional ethic rules;
- be aware of the concept of veterinary deontology and collegiality in professional activities;
- be aware of the need to fulfil all the norms of bioethics when working with patients (from the beginning of the examination until the end of the treatment);
- understand the need to have experimental veterinary knowledge for further solutions of the clinical and preventive veterinary problems, the importance of knowledge of inclusive veterinary issues, inadequate / qualified diagnostics and effective treatment of hazardous diseases, knowledge of preventive veterinary diseases in preventing the spread of epidemic / epizootic explosions and protecting population from zoonotic infections;
- be aware of the conduct of veterinary prophylactic measures before and after the slaughter of animals and preventing the spread of infectious diseases in the population.
- be aware the importance of the veterinary legislation in the management of professional activities.

Learning and Teaching Methods

In order to achieve learning outcomes, the purpose of each study course is to determine the appropriate learning and teaching methods. The verbal method, discussions / debates, demonstration method, group work, case-studies, brainstorming, inductive method, deductive method, role and situational games, practical and laboratory studies and analysis.

Within the framework of academic freedom, the lecturer is entitled to specify and use methods that are not included in the program and/or not use any of the learning and teaching methods from the program, based on the course content.

The following evaluating tools are used in order to measure the learning outcomes: homework assignments, tests, practical exams, presentation, discharge of completed works, reports, projects and more. According to the training courses, learning and teaching methods are written in syllabus.

Knowledge Assessment System

Student's knowledge is assessed by a score system out of 100 points. The assessment is multicomponent and meets the rules of calculating higher educational program credits, approved by the Order N3 issued on 5 January 2007 by the Minister of Education and Science of Georgia.

During the assessment of student's knowledge, all the academic staff and any invited personnel are obliged to use the above-mentioned rule. Following scheme is used to assess the knowledge:



1. Five types of positive assessment:

- (A) Excellent – score between 91-100;
- (B) Very good – score between 81-90;
- (C) Good – score between 71-80;
- (D) Satisfying – score between 61-70;
- (E) Sufficient – score between 51-60.

2. Two types of negative assessment:

- (FX) Fail to pass – score between 41-50, which means that the student needs to work more and he or she is able to redeliver exam after the independent preparation;
- (F) Fail – score 40 and below, which means that work done by students is not sufficient and he or she must study the course again.

During the assessment of study outcomes forming and summary assessment forms are used. These include, but are not limited to: homework tasks, laboratory work, tests, oral and written exams, presentations, essays, projects.

Study plan (Curriculum)

Curriculum and semester plan are available. The description of the study components is described in the syllabi.

Human and Material resources

Agricultural University of Georgia employs outstanding academic and invited personnel with successful experience (see annex) for its educational programmes. Educational programmes are financially and materially supported. For implementation of the programmes university allocates relevant financial resources. Programmes are also supported materially. Educational programmes are taught at Kakha Bendukidze University Campus, which is equipped with all the necessary inventory and other resources needed for high quality education.