

APPROVED BY  
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## **DESCRIPTOR OF THE STUDY FIELD OF VETERINARY MEDICINE**

### **CHAPTER I**

#### **GENERAL PROVISIONS**

1. The Descriptor of the Study Field of Veterinary Medicine (hereinafter referred to as the “Descriptor”) shall govern the special requirements applied to the study programmes of the study field of veterinary medicine.

2. The Descriptor has been prepared in accordance with the Law on Higher Education and Research of the Republic of Lithuania, the Law on Veterinary Activities of the Republic of Lithuania, and the Law on the Recognition of Regulated Professional Qualifications of the Republic of Lithuania, taking into account Resolution No 535 of the Government of the Republic of Lithuania of 4 May 2010 “On the Approval of the Descriptor of the Lithuanian Qualifications Framework”, Order No V-2212 of the Minister of Education and Science of the Republic of Lithuania of 21 November 2011 “On the Approval of the Descriptor of Study Cycles”, Order No V-501 of the Minister of Education and Science of the Republic of Lithuania of 9 April 2010 “On the Approval of the Descriptor of General Requirements for Degree-Awarding First Cycle and Integrated Study Programmes”, Order No V-826 of the Minister of Education and Science of the Republic of Lithuania of 3 June 2010 “On the Approval of the Descriptor of General Requirements for Master’s Study Programmes”, Order No V-2463 of the Minister of Education and Science of the Republic of Lithuania of 15 December 2011 “On the Approval of Recommendations for Developing the Descriptor of a Study Field or Study Fields”, Directive 2013/55/EU of the European Parliament and of the Council, Evaluation of Undergraduate Veterinary Training and the recommendations of the European Association of Establishments for Veterinary Education.

3. Study programmes for the study field of veterinary medicine can be carried out in colleges of higher education as first cycle professional Bachelor’s studies or as integrated studies at universities.

4. This Descriptor aims to:

4.1. define the profile, cycles of study and forms of study programmes for the study field of veterinary medicine, the objectives and content of individual cycles of study, the scope of studies, the learning outcomes, the competencies of specialists and professional roles;

4.2. inform students, social partners and other stakeholders about the knowledge and abilities that are acquired during veterinary medicine studies;

4.3. assist higher education institutions in designing, improving and updating study programmes for the study field of veterinary medicine;

4.4. provide guidelines for experts who assess study programmes in the study field of veterinary medicine.

5. The Descriptor is applicable to the following branches of the study field of veterinary medicine, which is ascribed to the field of biomedical sciences and the group of study fields of agricultural and veterinary science: pre-clinical veterinary medicine and veterinary medicine, which consists of clinical veterinary medicine and clinical veterinary dentistry.

6. Upon completion of studies in the study field of veterinary medicine, the following qualifications and qualification degrees are conferred:

6.1. completion of at least five years of integrated university studies in veterinary medicine results in conferment of the qualification of veterinary surgeon and a Master's qualification degree of veterinary medicine certified by a Master's diploma issued by the higher education institution;

6.2. completion of higher education college studies in the study field of veterinary medicine results in conferment of the qualification of veterinarian assistant and a professional Bachelor's degree of pre-clinical veterinary medicine certified by a professional Bachelor's diploma issued by the higher education institution.

7. The framework for study programmes in the study field of veterinary medicine must comply with the general legislative requirements for degree-awarding first and second cycle programmes and integrated study programmes.

8. Higher education college studies in the field of veterinary medicine may provide for dual study programmes (the major field/branch of study and the minor field/branch of study), upon completion of which a dual qualification degree is conferred (for the major field/branch of study and the minor field/branch of study). Veterinary medicine may only be the major field of study.

9. The descriptor for a study programme according to which a dual professional Bachelor's qualification degree can be conferred must specify the opportunities for the selection of studies provided by the higher education institution: the procedures and principles for selecting a minor field/branch of study or an exact list of minor fields/branches of study or a specific minor field/branch of study. The requirements for the implementation of studies of minor fields/branches of study must be approved by the academic council of the higher education institution.

10. Integrated study programmes for the study field of veterinary medicine are designed to prepare students for independent research or practical work which require scientific knowledge and analytical skills to carry out.

11. Veterinary physicians who have completed integrated studies can pursue the qualification of veterinary medicine practice (specialty) veterinary physician by enrolling in veterinary medicine residency.

12. The professional Bachelor's qualification degree that is awarded meets level 6 of the Lithuanian Qualifications Framework and the European Qualifications Framework for lifelong learning, while a Master's qualification degree meets level 7.

13. Practical training is allocated to subjects (modules) in the field of study. The overall volume of practical training must make up at least 18 credits in an integrated study programme and at least 30 credits in a programme of higher education college studies. Practical training can be a separate subject or module of study or a constituent part of a subject or module.

14. At least 15 credits must be given for defence of the final thesis (project) and final examinations in an integrated study programme; at least 9 credits must be given for said in a programme of higher education college studies. If a dual professional Bachelor's qualification degree is being awarded, final theses (projects) must be provided for in the major field/branch of study and the minor field/branch of study, as must final examinations (when such is established by normative legal acts), giving them a total of at least 12 credits in a programme of higher education college studies.

15. Studies in the study field of veterinary medicine can only be organised as full-time studies.

16. While studying at a distance, distance learning should not make up more than one-third of the volume of study subjects and credits; abilities which require group work, direct reciprocity and practical skills cannot be developed via distance learning.

17. Applicants for first cycle and integrated study programmes in the study field of veterinary medicine must at least have a secondary education and shall be accepted according to their grades, entrance examinations or other criteria established by the higher education institution. The list of competitive subjects according to the field of study and the principles for selection ranking, as well as the minimum entrance rank and other criteria, having received the assessment of student representation, shall be established by the higher education institution and announced at least two years before the beginning of the corresponding school year.

18. The objective of the study field of veterinary medicine is to train highly qualified veterinary specialists who are capable of working in the private and the public veterinary service network and who are able – based on their qualification – to diagnose animal diseases, treat and care for sick animals, apply preventive measures, carry out disease and food control, perform research, convey knowledge, solve veterinary issues, and apply their skills and knowledge in independent activities and continued learning.

## **CHAPTER II**

### **CONCEPT AND SCOPE OF THE STUDY FIELD**

19. Veterinary medicine is a system of sciences which studies the body structure of agricultural animals, birds and other animals (dogs, cats, fur-bearing animals, wild animals, fish, bees, exotic animals, laboratory animals, etc.) and the processes that take place within, as well as

the causes and symptoms of diseases, methods of diagnosis and treatment, and the prevention and elimination of diseases.

20. Veterinary science includes animal anatomy (including histology and embryology), physiology, biochemistry, genetics, pharmacology and pharmaceuticals, toxicology, microbiology, immunology, epidemiology, professional ethics, obstetrics, pathology (including pathological anatomy), parasitology, clinical diagnostics, clinical medicine and surgery (including anaesthetics), pets, birds and other animals species, preventive medicine, radiology, reproduction and disorders thereof, state veterinary medicine and public health, veterinary legislation and forensic medicine, therapeutics, propaedeutics, animal production, animal nutrition, agronomy, agricultural economics, animal husbandry, veterinary hygiene, animal ethology and care, inspection and control of animal products, food hygiene and technology, and practical training (including practical training in food processing plants); it also includes general subjects: physics, chemistry, animal biology, plant biology and biomathematics.

21. The object of veterinary science includes quality and safety assessment of food and raw materials, public health, animal welfare, scientific veterinary research, animal disease control, treatment of sick animals, as well as other issues related to animal health.

22. The following areas of competence for veterinary specialists are distinguished:

22.1. general professional skills and qualities which encompass various characteristics of a veterinary physician or assistant;

22.2. the knowledge and understanding required for a veterinary specialist's career and further professional development in the relevant field of veterinary science in pursuit of individual goals;

22.3. practical veterinary competencies, including basic practical competencies acquired: at the moment of graduation and during the subsequent period of veterinary practice in improving professional abilities.

23. State veterinary medicine is the inspection of entities of veterinary control carried out by officers of an institution authorised by the state in accordance with statutory requirements, as well as the ongoing activities of officers of this institution at entities of veterinary control in order to ensure compliance with legislation.

24. Veterinary physicians can only engage in private veterinary practice if they have been issued a veterinary practice license by an institution authorised by the state. A veterinary physician who has received a veterinary pharmacy license for natural persons from an institution authorised by the state is permitted to engage in veterinary pharmaceutical activities in the procedure established by legislation. The activities of veterinary assistants are not subject to licensing. Veterinary assistants can work privately under the control of a private veterinary physician in accordance with the procedure established by the competent authority.

25. Privately employed veterinary physicians diagnose animal diseases and treat animals, with the exception of those who have diseases subject to quarantine or other restrictions, administer preventative vaccines to animals, and consult animal owners; they issue veterinary documents according to the procedure established by law; if they suspect an infectious animal disease, they immediately notify a state-authorised authority and take measures to prevent its spread; if they

identify a zoonosis or a contagious animal disease epizootiology, they perform the veterinary work specified by the competent authority and report to this authority about work that has been done related to the prevention and treatment of animal disease; and they improve their professional qualification.

26. Veterinary assistants can only carry out veterinary activities under the control of a veterinary physician, and can only perform procedures independently if said are specified in legislation.

27. Graduates of study programmes in the study field of veterinary medicine can work in both the public and private sectors.

28. In formulating the outcomes of a study programme, national and international research on the veterinary profession should be taken into account, and the content of curriculums should be geared towards the national and international needs and priorities defined by Lithuanian and EU strategic documents.

29. It is recommended that the organisers and implementers of study programmes in the study field of veterinary medicine be guided by the documents of the European Association of Establishments for Veterinary Education, the World Organisation for Animal Health, the Federation of Veterinarians of Europe, the Accreditation Committee for Veterinary Nurse Education, and the Veterinary European Transnational Network for Nursing Education and Training which govern the education and professional standards of veterinary specialists.

### **CHAPTER III**

#### **GENERAL AND SPECIAL LEARNING OUTCOMES**

30. First cycle higher education college studies prepare pre-clinical veterinary medicine specialists (veterinary assistants) for the practical work of veterinary assistants which is carried out at various companies and institutions which provide veterinary services.

31. Upon completion of higher education college studies in the study field of veterinary medicine, the following learning outcomes should be achieved:

31.1. Knowledge and the understanding and application thereof:

31.1.1. the ability to assess the limits of one's competency in the field of veterinary medicine and carry out the tasks that have been given and the obligations which have been assumed;

31.1.2. the ability to adapt to new situations, analyse and systematise information in the veterinary field, and assess and maintain the quality of one's work;

31.1.3. an understanding of the principles of biomedicine, social sciences and the humanities, and the ability to apply them in practice.

## 31.2. Research skills:

31.2.1. the ability to formulate the objective and tasks of research work, analyse scientific and informative literature, prepare research work methodology, collect research data, summarise results and draw conclusions;

31.2.2. the ability to apply scientific principles, methods and knowledge in veterinary practice and research.

## 31.3. Social abilities:

31.3.1. the ability to effectively communicate in correct national and foreign languages with colleagues and clients, present ideas and proposed solutions both orally and in writing, and express professional decisions;

31.3.2. the ability to interact in cyberspace, apply computer technology for the delivery of information, and provide veterinary specialists and the public with qualified information;

31.3.3. the ability to provide, in practice, reasoned consultation to colleagues, animal handlers and the general public on fundamental issues related to veterinary medicine;

31.3.4. the ability to take responsibility for the quality of work performed by them and their subordinates in accordance with professional ethics and public spirit.

## 31.4. Personal abilities:

31.4.1. the ability to think abstractly and critically evaluate one's professional activities, knowledge and skills;

31.4.2. the ability to rationally organise and plan one's time and workload, make independent decisions and assess their impact in a defined situation;

31.4.3. the ability to make use of literature, databases and other information sources;

31.4.4. the ability to learn independently and apply the knowledge acquired in practice.

## 31.5. Special abilities:

31.5.1. the ability to apply principles, methods and knowledge of biomedical science (anatomy, physiology, pathology, microbiology) in veterinary medical practice;

31.5.2. the ability to control, supervise and ensure proper safety standards for themselves and those around them;

31.5.3. the ability to make appointments for animals, receive animals at a clinic and ensure that the animal be properly cared for;

31.5.4. the ability to carry out financial transactions after consultation or treatment and sell corresponding products;

31.5.5 the ability to supervise a veterinary clinic and prepare the environment, tools and materials in the clinic properly;

31.5.6. the ability to prepare animals properly so that the veterinarian is able to perform medical procedures or tests;

31.5.7. the ability to assist a veterinarian during surgical procedures and perform simple operations on the instructions thereof;

31.5.8. the ability to control an animal's healing and provide the animal with the necessary post-operative care;

31.5.9. the ability to perform certain clinical diagnostic and therapeutic procedures on the instructions of a veterinary physician in a safe and effective manner;

31.5.10. the ability to provide first aid, assess the clinical condition of an animal, maintain basic vital functions and perform initial differential diagnosis;

31.5.11. the ability to provide care to an animal and identify and describe the clinical signs and course of diseases as well as the severity of clinical signs;

31.5.12. the ability to apply protective measures to prevent the spread of infections;

31.5.13. the ability take samples for different laboratory tests, perform blood, urine and other tests with the equipment at the clinic, and interpret test results on the instructions of a physician;

31.5.14. the ability to prepare the appropriate anaesthesia equipment and materials for an anaesthesia procedure to be performed;

31.5.15. the ability to prepare an animal for anaesthesia and assist the veterinarian in administering and maintaining anaesthesia;

31.5.16. the ability to calculate the correct drug dosage and administer it to an animal;

31.5.17. the ability to issue medication that has been prescribed by a veterinary physician to a client and explain how to use it and store it in a safe and proper manner;

31.5.18. the ability to properly store and safeguard all veterinary documentation and rationally perform calculations and analyse the results obtained in processing electronic registration of veterinary preparations;

31.5.19. the ability to assess the suitability of animal products and raw materials for human consumption and carry out supervision of hygiene requirements for food business operators.

32. Upon completion of integrated studies in veterinary medicine, the following learning outcomes should be achieved:

32.1. Knowledge and the understanding and application thereof:

32.1.1. an understanding of human interaction principles based on humanism and respect for human freedom and animal welfare, veterinary legal standards and professional ethics;

32.1.2. an understanding of general biological life development principles and animal classification, and the ability to explain the change and statics of phenomena based on the laws of chemistry and physics;

32.1.3. an understanding of animal structure and functions, cell structure and the biochemical processes which take place therein, and pathological, physiological, morphological and functional changes in animal organs and body systems;

32.1.4. an understanding of European Union legislation on which veterinarian activity and its organisation are based;

32.1.5. an understanding of the aetiology, pathogenesis, morphological changes, diagnosis, treatment and prevention of infectious and non-infectious animal diseases;

32.1.6. an understanding of common animal and human diseases;

32.1.7. an understanding of basic pharmaceutical substances and their effects, as well as pharmacodynamics, pharmacokinetics and pharmacopathology and their compatibility and interaction;

32.1.8. an understanding of the requirements for animal welfare and the legal basis of welfare and protection;

32.1.9. an understanding of food safety measures suited to all stages of the food chain;

32.1.10. an understanding of the basic principles for the determination of food safety requirements.

32.2. Research skills:

32.2.1. the ability to apply clinical and laboratory methods of analysis;

32.2.2. the ability to critically and systematically analyse the latest specialised knowledge of animal diseases, reproduction and animal housing conditions and apply (create) said in veterinary practice and research;

32.2.3. the ability to use one's professional abilities in a flexible manner in order to extend knowledge related to veterinary practice, animal care, animal welfare and the improvement of public health;

32.2.4. the ability to use information technology to communicate and share, collect, manage and analyse information;

32.2.5. the ability to empirically analyse a scientific problem, apply research methods to collect data and perform statistical analysis of the research data, and formulate conclusions based thereon.



### 32.3. Social abilities:

32.3.1. the ability to initiate, execute, control and complete planned activities for people in a group;

32.3.2. the ability to interact freely in the state language of the current cultural environment, and in the state and foreign languages in a cross-cultural and cross-sectoral environment;

32.3.3. the ability to comprehend the necessity of effective communication and cooperation based on ethical principles and not be afraid to take responsibility;

32.3.4. the ability to communicate effectively in presenting knowledge based on science and ethics to both specialists and the general public;

32.3.5. the ability to understand the importance of being socially active, plan and implement both individual and collective activities, and assess the quality thereof;

32.3.6. the ability to understand the ethical responsibility of veterinary physicians regarding the care of animals and relations with clients, and to pay particular attention to potential impact on the environment and society.

### 32.4. Personal abilities:

32.4.1. the understanding that the constant need for continuous education and necessity of professional development is a professional obligation which is implemented by spreading professional knowledge;

32.4.2. the ability to make independent decisions and assess the impact thereof on the determined situation;

32.4.3. the ability to formulate relevant learning objectives and plan professional and personal learning;

32.4.4. an understanding of the key principles, methods and ethical requirements of scientific research and the ability to adhere thereto;

32.4.5. the ability to select and classify sources of information as well as to analyse data and to apply them to improve professional and personal experience;

32.4.6. the ability to work effectively in a team, specialising in a regulated profession.

### 32.5. Special abilities:

32.5.1 the ability to collect relevant veterinary information about an animal or a group of animals and living conditions;

32.5.2 an understanding of the legislation and laws in the field of animal care, transportation and communicable diseases;

32.5.3 an understanding of the aetiology, pathogenesis, clinical symptoms, diagnosis and treatment of diseases and disorders of pets raised in the European Union;

32.5.4 the ability to perform actions related to the limitation of an animal's well-being, carry them out only when absolutely necessary and in a humane manner, and demand the same from others;

32.5.5 the ability to carry out a full clinical examination of an animal;

32.5.6. the ability to provide first aid to all animals;

32.5.7. the ability to assess animal nutrition and advise breeders on the correct preparation and use of feed;

32.5.8. the ability to take, store and transport organ and tissue samples for laboratory testing and present laboratory test results;

32.5.9. ability to perform standard laboratory tests and interpret their results;

32.5.10. the ability to perform x-rays, ultrasound and high-speed (express) tests for diagnostic purposes;

32.5.11. having diagnosed a zoonotic disease, the ability to correctly formulate and communicate information to the competent authorities;

32.5.12. the commitment to only use licensed medication and allocate it responsibly, in accordance with legislative requirements, as well as an understanding of the requirements for drug use in Lithuania and the European Union as established by legislation;

32.5.13. the commitment to ensure proper storage of drugs and unused amounts thereof;

32.5.14. compliance with surgical equipment sterilisation rules;

32.5.15. compliance with the principles of surgical asepsis;

32.5.16. the ability to safely administer general and local anaesthesia and pain control;

32.5.17. the ability to provide sound advice to breeders and assign appropriate treatment;

32.5.18. a clear understanding of when euthanasia is necessary and, if so, the ability to carry it out in a humane manner;

32.5.19. the ability to perform animal autopsies and register the findings properly;

32.5.20. the ability to evaluate carcass quality and safety, paying attention to the animal's nutrition and preparations for medical treatment;

32.5.21. the ability to evaluate food raw materials and processing technologies, food hygiene and conditions for the storage and transportation of food raw materials and products;

32.5.22. having regard to the type of animal, the ability to organise disease prevention and prophylaxis consistent with animal health and welfare standards;

32.5.23. the commitment to reduce the risk of pollution, infection or accumulation of infectious agents in the veterinary work environment.

## **CHAPTER IV**

### **TEACHING, LEARNING AND ASSESSMENT**

33. The strategy for teaching (training), learning (studying) and assessment must comprehensively reflect the nature of veterinary medicine studies and encourage the active participation of students in the study process.

34. Teaching is the transfer of knowledge and the development of abilities allowing students to be responsible for their professional competence not only during the course of studies, but for their entire lives. Teaching should be based on fundamental veterinary medicine knowledge and the latest scientific achievements in this field. Teaching should expand the understanding of the foundations of the study programme and ensure students the opportunity to improve reflective skills.

35. Learning is done by students with the help of teachers to find their learning style and understand their motivation for learning, upon which learning outcomes are based and knowledge is updated and deepened, with respect to the changing needs of society.

36. Teaching and learning must include the use of a variety of teaching and learning methods in looking for integrated didactic solutions. Teaching methods must be effective and existing opportunities and equipment must be used rationally.

37. Gnoseological, action, research, control and self-control methods of teaching, as well as ones which simulate independent studies, are recommended for studies in the field of veterinary medicine:

37.1. Gnoseological methods are directed to the development of cognitive skills and the provision of knowledge (the transfer of knowledge and cognition through academic exercises) and the understanding of knowledge (narrative, conversation, illustration, demonstration, observation, cooperative learning, simulations). These methods can be implemented by choosing the form of lecture sessions;

37.2. Action methods are directed to the development of practical (as well as carry-over) abilities (discussion, research activities, individual or group work/projects, simulation, brainstorming). The latter methods can be implemented by choosing forms of exercises and workshops in small groups;

37.3. Methods which simulate independent studies include reflection, case studies, problem solving, simulation, learning by teaching others, learning from experience, individual search for solutions to problems, control and self-control and other methods;

37.4. Investigatory methods such as information search, reflection, information analysis and synthesis, analysis of activities performed, application of a specific research method, and data interpretation must be the foundation of independent studies;

37.5. Control and self-control methods guarantee vocational training feedback for the teacher and the students. These methods allow the student to carry out more thorough applied research described in the term paper and thesis.

38. Study methods can be active (problem analysis and decision classes, educational and vocational practical training, preparation of reports, discussion, project work, research and other methods which focus on active, independent student learning), passive (lectures, practicals, seminars and other traditional methods ascribed to the concept of studies) and interactive (online learning courses and conferences using virtual environments, learning material websites, video lecture products and so on). The same methods can be used for different cycles of studies, but the content of the assignments, the degree of difficulty and the expression of student independence must differ.

39. Students' learning outcomes for a subject (module) are assessed on a 10-point scale based on a system of evaluation criteria. The higher education institution must, in accordance with legislation, establish the principles of organising and assessing student achievements, the procedure for implementation, and the control of assessment quality during studies. The procedure and system for assessing learning outcomes must be based on the following key principles: validity – assessment is linked to the expected learning outcomes; reliability – the assessment information and assessment results that are obtained must be objective and independent if the assessor changes; clarity – the assessment system must be informative and understandable to both the assessors and the assessed; usefulness – the assessment must help the students being assessed achieve programme objectives and expected learning outcomes; impartiality – the methods of assessment must be applied equally to all students; publicity – the assessment must be based on public criteria, and specific assessment results and the explanation thereof must be accessible to the student who were assessed.

40. The assessment system should include a variety of assessment methods (diagnostic, formative, summative, etc.) that allow students to demonstrate specific and general abilities, as well as understanding and knowledge in studies within the study field of veterinary medicine. Teachers have the right to choose assessment methods.

41. In order to ensure the active work of students throughout the semester, the ability to apply theoretical knowledge in practice, and an objective assessment of the learning outcomes, it is recommended that a cumulative score (part of summative assessment) be used.

42. The methods (forms) of assessment can include: written or oral examinations, colloquiums, assessments of laboratory or practical work, tests, quizzes, testing, case analysis, medical history analysis, project assignments, reports, essays, reflections, peer evaluation, papers, term papers, practice reports and the defence thereof, theses and the defence thereof, and so on.

43. At the beginning of the semester, the teacher must inform the students about the procedure for assessing learning outcomes, setting forth a detailed programme of the subject being taught, the objectives, expected learning outcomes, and the specific framework of assessing learning outcomes for the subject being taught (the weight of intermediate evaluations on the final grade, what outcomes require repeating the course or would allow evaluation to be repeated, etc.), as well as the evaluation criteria.

44. A crucial part of assessing student achievements (outcomes) is the provision of feedback to the students about their achievements (outcomes) as well as substantiation of the assessment; also of importance is the provision of student feedback to the teacher in order to improve and develop efficiency of the learning process and improve the quality of teaching. Students must get proper feedback on the work they have done in a timely manner. Assessment of completed work and learning outcomes must be accompanied by constructive commentary and be based on clear evaluation criteria. Students must be given the opportunity to enter into discussion with the assessors regarding many aspects of their studies, including the assessment thereof.

## **CHAPTER V**

### **REQUIREMENTS FOR THE IMPLEMENTATION OF STUDY PROGRAMMES**

45. General requirements for the academic staff of study programmes in the study field of veterinary medicine:

45.1. The basis for all study programmes is a staff of competent and qualified teachers who make up the overall academic environment and set an example for students. The factors on which a teacher's general competence is assessed are: experience, the ability to communicate freely in at least one foreign language, active interest in developing effective and innovative teaching methods, level of scientific activity, recognition in professional, scientific and other types of communities, participation in professional development programmes, vocational discernment and personal interest in students' academic affairs;

45.2. Teachers must take interest in scientific innovation, and participate in scientific research and the development of new projects. Teachers must properly advise students on study plans and careers, and know and understand the criteria according to which study programmes are accredited;

45.3. Teacher certification is carried out according to their scientific, educational and practical activities. Practical training supervisors must have at least a Master's qualification degree of veterinary medicine or equivalent qualification from a higher education institution or equivalent veterinary physician qualification, and at least three years of practical experience;

45.4. At least 60 per cent of integrated study subject teachers must have a doctoral degree in science, and at least 60 per cent of these study field subject teachers must be teaching subjects which correspond to their line of scientific activity. At least 20 per cent of the volume of subjects in the field of study must be taught by professors;

45.5. More than half of higher education college studies teachers must have at least three years of practical experience in the field of the subject being taught. This experience must be updated at least every five years. At least 10 per cent of the volume of the subjects in the field of study must be taught by scientists.

#### 46. Graduation requirements:

46.1. All study programmes in the study field of veterinary medicine must be concluded with an assessment of the student's competence through the preparation and defence of a final thesis (project) as well as the final examination;

46.2. Professional Bachelor's studies are concluded with preparation and defence of a final thesis as well as the final examination (practical assignments from mandatory subjects in the field of study). The final professional Bachelor's thesis (project) must be based on independent research and the application of knowledge or prepared as a project which demonstrates abilities in line with the objectives of the programme. The final thesis (project) must show a student's level of knowledge and understanding and ability to analyse the chosen topic, assess work done previously by others in veterinary medicine, independently study and perform research in the study field of veterinary medicine, describe the research work that was carried out, and clearly and groundedly formulate research findings and recommendations in accordance with the requirements of the higher education institution;

46.3. The final Master's thesis must be based on independent scientific and applied research and the application of knowledge demonstrating abilities in line with the objectives of the programme. The final thesis must show a student's level of knowledge and understanding and ability to analyse the chosen topic, assess national and international work done previously by others in the study field of veterinary medicine, independently study and perform research, present interpretations of the research results, describe the research work that was carried out, clearly and groundedly formulate research findings and present practical recommendations with regard to the scientific research data that was obtained in accordance with the requirements approved by the higher education institution;

46.4. Final examination tasks are demonstrated at a meeting of the qualification commission; they must include the learning outcomes for the study programme provided in the programme;

46.5. The Final Thesis Evaluation Commission must be comprised of competent specialists in the field of study: scientists, professional practitioners, representatives of social partners.

#### 47. Material, informational and methodological resource requirements:

47.1. Auditoriums must have seating capacity that allows for all lectures, with the exception of elective subjects and special courses, to be held for the entire course. Auditoriums must meet hygiene and safety requirements, and they must be equipped with modern audio-visual equipment and means for demonstration;

47.2. Laboratory equipment and apparatus necessary in laboratories for specialised training; laboratory tools must meet the study programme requirements and laboratories must be equipped with proper instruments and devices of good quality;

47.3. The faculty implementing studies in the study field of veterinary medicine must have large and small animal clinics, and in the case of integrated studies, it must also have a practical training and testing centre (farm) with various species of animals where students can be given practical instruction – where they can practise and conduct scientific applied research. The clinics and farm must be equipped with modern equipment and the necessary tools;

47.4. The number of computers in computer classrooms and educational laboratories must meet the study programme requirements. All computers must have word processing, quantitative and qualitative data processing, and innovative educational programmes;

47.5. Libraries must have a sufficient amount of textbooks, methodology publications and other literature on subjects taught in the veterinary medicine study field and the field of biomedicine in Lithuanian, English and other languages. The amount of such literature must meet student needs. Libraries must be equipped with a sufficient number of computers with appropriate software (Internet connection with international databases, literature directories, search engines), and their number must at least satisfy minimum visitor needs;

47.6. Information related to the studies (schedules, study plans, subject (module) descriptors, etc.) must be published on the website of the higher education institution, and all of the material for the studies must be accessible to the students.

#### 48. Requirements for practical training:

48.1. In studies in the study field of veterinary medicine, practical training is an integral and mandatory part of the curriculum during which the programme framework and special training knowledge, skills and abilities acquired by the student are consolidated, applied and perfected in practical professional activities;

48.2. The total volume of practical training in an integrated study programme must make up at least 18 credits, while the volume of practical training in a programme of higher education college studies (instructional, cognitive, professional, etc.) must make up at least 30 credits. The total volume of professional practical training in programmes of higher education college studies must make up at least 24 credits. The place where professional practical training will be done must be coordinated with the topic of the final thesis and be similar to the workplaces where the student is being prepared to gain employment;

48.3. Practical training in the study field of veterinary medicine is organised according to the procedure for organising professional practical training prepared by the higher education institution, which defines practical training requirements, specific practical training assignments, expected outcomes, the system for assessing achievements, and support for students during practical training, as well as the criteria according to which the appropriate level of skills acquired by the student during practical training are recognised and evaluated;

48.4. Reflective practical training assignments (keeping a diary, registration of animals in a journal, reflective analysis of experience obtained in practical training in a practical training report, etc.) are recommended;

48.5. Practical training supervisors and social partners should be involved in the process of evaluating trainees and improving the organisation of practical training and the content of practical training assignments;

48.6. The higher education institution is responsible for the organisation of practical training supervisors;

48.7. The programme of practical training for the study field of veterinary medicine is prepared to increase professional experience by linking the student's academic preparation to competence in practical activities. Practical training for the study field of veterinary medicine is organised in such a way that the student can develop professional competencies during the study period, from the role of observer to independent performance of functions under the supervision of the practical training supervisor;

48.8. The higher education institution must offer students a list of places with which cooperation agreements have been signed for the execution of practical training. Practical training for the study field of veterinary medicine can be organised at animal clinics, private veterinary practises, veterinary laboratories, pharmaceutical companies, the State Food and Veterinary Service, municipal and regional veterinary services, the National Food and Veterinary Risk Assessment Institute, zoos and others on institutions related to veterinary practice specified by the higher education institution. Once an institution for practical training has been selected, a tripartite agreement is concluded between the student, the higher education institution and the aforementioned institution;

48.9. Upon completion of practical training, the student must present a practical training implementation report: a paper in which the student trainee presents and analyses the assignments performed during practical training as well as the results thereof;

49. From the moment they begin their studies, students must be encouraged to voluntarily participate in various projects, thus perfecting their personal and special abilities in a consistent and purposeful manner;

50. Student academic support is provided according to the procedure prepared by the higher education institution. During the first year, the subject *Introduction of Studies* – which provides information about the peculiarities, objectives, challenges, aspirations and outcomes of programme implementation and the assessment of achievements as well as student career counselling – is recommended.

## **CHAPTER VI**

### **DESCRIPTOR OF LEVELS OF ACHIEVED LEARNING OUTCOMES**

51. The description of achieved learning outcome levels defines the requirements for students' knowledge and practical skills, linking them with the level of study achievements as well as a possible academic and/or professional career.

52. The following achievement levels apply for students in the study field of veterinary medicine: threshold (minimum requirements), typical (standard, average requirements) and excellent (above average requirements):



52.1. Threshold level. Understanding of the study field is limited to what was presented in the mandatory study programme. The student possesses minimal knowledge that can be applied in veterinary practice. Able to perform tests according to the methodology provided. Special abilities are minimal but properly demonstrated in typical or certain specific practical situations. Displays average general abilities;

52.2. Typical level. Good understanding of the study field of veterinary medicine. The graduates understand what knowledge can be applied in changing situations. They absorb new knowledge with ease and confidence. They are able to justify their selection of research methodology and apply it in research. Good special abilities are demonstrated. General abilities are also good and are displayed in everyday and professional activities;

52.3. Excellent level. Understanding of the study field of veterinary medicine is comprehensive and exceeds the information that was presented during studies. Knowledge is critically and flexibly applied in changing situations. New knowledge is absorbed quickly and assuredly. Professional activities are planned and grounded on the latest scientific research data. Special abilities are applied creatively. The graduates stand out for their excellent personal abilities, which are used in everyday and professional activities.

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