



Ministry of Education

Identified Competency Focus Areas and Core Courses for National Exit Examination

Program: - The Degree of “Doctor of Veterinary Medicine (DVM)”

Prepared By:- Dr Habtamu Tassew
Bahir Dar University

**August, 2022
Addis Ababa, Ethiopia**

Table of Contents

	Pages
1. Introduction.....	1
1.1. Objectives of the Exit Examination.....	1
1.2. Significance of the Document.....	2
2. Expected Profiles of Graduates.....	2
3. Competencies and Learning Outcomes.....	3
3.1. Competencies.....	3
3.2. Learning Outcomes.....	4
4. Selected Courses to be Included in the Exit Exam.....	6
5. Conclusion.....	7
6. Appendix	8

1. Introduction

Veterinary education is a cornerstone to assure that the graduating veterinarian (“Day 1 veterinary graduate”) not only has received a level of education and training that ensures sound overall competencies, but also has the required knowledge, skills, attitudes and aptitudes. This will let graduates understand and be able to perform entry-level national veterinary service tasks that relate to the promotion of the health of animal, public and the ecosystem.

The Higher Education Proclamation Proc. No. 1152/2019 states that "... the teaching-learning process shall be continuously updated in its design, delivery methods, and instruments of assessment". In light of this, Veterinary Institutions (Colleges/Schools/Faculties) in Ethiopia have taken various measures to improve the quality and relevance of veterinary education to meet the market demand and the country's development, including the introduction of criterion-referenced and continuous assessments. One potential way to improve student learning outcomes in a way it links with the labor market and economic growth is the introduction of exit exams throughout veterinary education institutions.

The national Educational Road-Map also recommends to institutionalize exit exams in all first degree graduate programs and put as an accreditation requirement of graduate programs in five years after the establishment by an independent body. Therefore, on the basis of key learning competencies and assessment blueprint, exit exams need to be administered in Higher Education system. Once the students take the exam, the results will be analyzed, examined, and discussed extensively to identify points of strengths as well as weaknesses, and pinpoint any areas for development in the academic programs or even the introduction of new programs and courses.

1.1 Objectives of the Exit Examination

The national doctor of veterinary medicine (DVM) exit exam shall have the following objectives:

- To achieve skilled and competent veterinarians to national and international market
- Assessing students’ educational achievement in major areas of veterinary medicine
- Ensuring whether the graduating profiles of DVM curriculum have achieved at least common standards of knowledge, practical skills and behavioral value.
- Improving public trust and confidence in animal health and production activities of veterinary professions

- Facilitating the efforts of students to revise the core learning outcomes of the courses covered by the exit examination
- Ensuring all graduates from higher education institutions (HEIs) satisfy the requirements of the labor market and employability through the national wide implementation of competency-based exit exam
- Creating competitive spirit among Veterinary teaching instructions in Ethiopia with the vies to encouraging them to give due attention to the national standards
- It will also be used as a tool for quality assurance to correct any potential problem or deficiency in the curricula or methods of instruction

1.2 Significance of the Document

It is important to set competency areas of the subject matter (DVM program) in order to measure how much graduates are acquired with skills, knowledge and attitudes. The following shows us the significance or setting competencies and identifying core courses of the program;

- To set competencies that helps to assess the basic skills, knowledge and attitude of graduating students;
- To systematically identify the core courses which will be included in the exit exam;
- Used as guideline indicator to prepare the exit exams

2. Expected Profiles of Graduates

By the end of the program, students are expected to acquire the basic scientific knowledge, skills and behavioral values to practice veterinary medicine. They will

- Have the knowledge of normal and abnormal biological structures and functions of domestic and wild animals
- Know infectious and non-infectious agents and the disease they cause in animals
- Know the epidemiology, prevention and control of major endemic and transboundary animal diseases
- Be familiar with the behavior, welfare and management different species of domestic animals
- Know the pharmacological, toxicological and veterinary biological products and their principles

- Promote and maintain human health through the application of veterinary public health principles in the provision of safe, sound and wholesome foodstuffs of animal origin, and the control of zoonoses
- Have skills how to handle, diagnose, treat, control and prevent the common diseases of animals
- Collect and interpret clinical and research information on animal health and production
- Select and collect specimens for laboratory tests, analyze and interpret the results
- Present ideas and evidences orally and in written forms
- Perform clinical, theriogenological and minor surgical procedures
- Design and conduct scientific research independently
- A person of higher creativity, social consciousness, and professional ethics with a sense of responsibility to work towards national goals and development
- Conduct productive professional activities in accordance with ethical and legal codes for the well-being of animals and the benefit of the society.

3. Competencies and Learning Outcomes

3.1 Competencies

Students who have completed the DVM program will be expected to have the Day 1 competencies of knowledge, skills and behavioral values to practice veterinary medicine independently. They need to have the following **core competencies** at their workplaces.

Knowledge: The graduates will be able to:

- know the major infectious and non-infectious animal diseases
- Familiarize the concepts and principles of Animal Welfare, Ethics and Veterinary Jurisprudence
- Understand the principles of epidemiology in prevention and control of major animal diseases
- Promote and maintain health of human and animals

Skills: The graduates will be able to:

- Properly handle, diagnose and effectively manage veterinary clinical cases
- Conduct research on animal health and disseminate research outputs to various stakeholders
- Perform Animal Health Extension and apply Communication Skills

Attitude: The graduates will be able to:

- Conduct productive professional activities in accordance with ethical and legal codes for the well-being of animals and the benefit of the society.

3.2. Learning Outcomes

The learning outcomes are described with each respective competencies and corresponding courses (Table 1).

Table 1: Competencies, learning outcomes and corresponding courses

S N	Competencies	Learning Outcomes	Courses
1	Know the major infectious and non-infectious animal diseases	- Identify the major infectious & non infectious diseases of vet importance - Describe the clinical signs of major causative agents of animal diseases	Vet Parasitology I &II Vet Microbiology I &II Vet General Medicine Large Animal Medicine Small Animal Medicine
2	Understand Animal Welfare, Veterinary Ethics and Jurisprudence	– explain animal welfare and related responsibilities of owners, handlers, veterinarians and others responsible for the care of animals; – identify animal welfare problems and participate in corrective actions; – have a general knowledge of the fundamentals of national veterinary legislation and regulations; – understand and apply high standards of veterinary medical ethics;	Vet Ethics & Jurisprudence Animal Behavior & Welfare
3	Understand principles of epidemiology, prevention and control of major animal diseases	- know and understand the general principles of descriptive epidemiology, its application to disease control; - Understand and participate in an epidemiological investigation to control transboundary diseases. – Describe established programs for the prevention and control of common zoonotic or contagious diseases or emerging/re-emerging diseases, – understand and participate in regular or emergency vaccination campaigns;	Veterinary Epidemiology Vet Preventive Medicine Vet Immunology
4	Promote and maintain health of human and animal	– Describe the major zoonotic diseases - understand the impacts of common zoonotic and food borne diseases for human health; – understand regulatory implications of common zoonotic and food borne diseases and pathogens. – participate in slaughter inspection: this includes ante mortem, post mortem and humane slaughter;	Vet Public Health I & II Vet Parasitology I & II Vet Microbiology I &II Vet Systemic Pathology
5	Handle, diagnose and effectively manage veterinary clinical cases	- identify the clinical signs and clinical courses of a disease - Properly collect and handle clinical samples - Undertake confirmatory diagnosis of disease using appropriate laboratory	Clinical Diagnosis Vet General Medicine Vet Parasitology I & II Vet Microbiology I &II Vet Immunology

	procedures - Prescribe and administer veterinary products in the appropriate manner, including appropriate record keeping - understand common mechanisms leading to development of drug resistance in common pathogens - explain and utilize the concept of drug withdrawal time as a means to prevent drug residues - describe the basic step in the use of anesthetics, surgical procedures and post-operative care - perform minor surgical and gynecological cases	Vet Systemic Pathology Vet Clinical Pathology I & II Large Animal Medicine Small Animal Medicine Vet. General Surgery and Anesthesiology Vet Operative Surgery Theriogenology I & II Vet. Pharmacology & Therapeutics I & II
6	Conduct research on animal health and disseminate research outputs to various stakeholders	- Develop research proposal on economically important animal diseases - Conduct research and disseminate outputs to various stakeholders Veterinary Epidemiology Biostatistics and research Methodology
7	Perform Animal Health Extension and Apply Communication Skills	- communicate technical information in a way that the general public can understand; - communicate effectively with health professionals, potential experts to exchange scientific and technical information and practical experience. - Perform client education Animal Health Extension and Pastoralism Vet Ethics & Jurisprudence
8	Conduct productive professional activities in accordance with ethical and legal codes	- Handle clinical cases humanely - Enhance autonomous decision making ability - Respect social values (sensitivities) while conducting productive professional activities Vet Ethics & Jurisprudence

4. Selected Courses to be Included in the Exit Exam

Courses are selected to be included in the national exit exam based on graduate profiles, core competencies and learning outcomes. They have been categorized into themes and tabulated with CHrs, CP/ECTS and theme weight.

Table 2: Selected courses to be included in the national exit exam

S N	Thematic Area	Courses	CHr	CP/ ECTS	Weight (%)
1	Animal Pathogens and Host Defense	Veterinary Parasitology I & II	8	14	20
		Veterinary Microbiology I and II*	4	7	
		Veterinary Immunology	3	5	
2	Veterinary Pathology	Veterinary Systemic Pathology	4	7	5
		Veterinary Clinical Pathology I & II	6	10	
3	Animal Welfare and Veterinary Ethics	Veterinary Ethics and Jurisprudence	2	3	5
		Animal Behavior & Welfare	2	3	
4	Veterinary Clinical Medicine and Pharmacology	Veterinary General Medicine *	4	7	35
		Large Animal Medicine*	4	7	
		Small Animal Medicine	3	5	
		Veterinary Clinical diagnosis	3	5	
		Vet. Pharmacology & Therapeutics I & II	6	10	
5	Veterinary Surgery and Theriogenology	Vet. General Surgery & Anesthesiology	3	5	15
		Veterinary Operative Surgery*	2	3	
		Theriogenology I & II	6	10	
6	Veterinary Public Health and Epidemiology	Veterinary Public Health I & II*	6	11	20
		Veterinary Epidemiology*	3	5	
		Biostatistics and Research Methodology	3	5	
		Veterinary Preventive Medicine	3	5	
		Animal Health Extension & Pastoralism*	2	3	
Total 6		20	77	130	100

* The name and/or CHr/ECTs of these courses in the old curriculum will be replaced during revision of this document for the next graduating students of the new revised curriculum (DVM curriculum 2021).

5. Conclusion

Based on the Higher Education Proclamation (Proc. No. 1152/2019) which states "... the teaching-learning process shall be continuously updated in its design, method of delivery and assessment" and align with international standards (WOAH/OIE Day One competency recommendations for veterinary graduates), the quality of higher education shall be improved with various measures to meet the market demand and the country's development. One way to improve the student learning outcomes with the labor market and economic growth is the introduction of exit exam throughout higher education institutions. Therefore, on the basis of key learning competencies, exit exam needs to be administered in Higher Education system. The exam shall serve as a quality standard of veterinary graduates with knowledge, skill and behavioral values to certify and license the graduates to work in the veterinary profession and to get registered in the national professional registry system.

6. Appendix

List of participants involved in Competency and Core Course Identification Validation Workshop for National Exit Examination, held in Addis Ababa, from August 11-12, 2022.

S/ N	Name of the Participant	University	Position	Role in the Workshop	Contact Address
1	Dr Habtamu Tassew	Bahir Dar University	Associate Professor	Writer	habtamutasew@gmail.com 0911192503
2	Prof Abebaw Gashaw	Jimma University	Professor	Evaluator	abebawg2002@yahoo.com 0920144778
3	Prof Bersisa Kumsa	Addis Ababa University	Professor	Evaluator	aersissa.kumsa@aau.edu.et 0911715485
4	Dr Haileleul Negussie	Addis Ababa University	Associate Professor	Evaluator	haileleul.negussie@aau.edu.et 0911407565
5	Dr Zerihun Assefa	Addis Ababa University	Assistant Professor	Evaluator	zeru2008@gmail.com 0912138186
6	Dr Hanna Zewdu	Addis Ababa University	SPANNA Project Leader	Evaluator	hannaseph43@gmail.com 0911385452
7	Dr Fentaye Kassa	Wolaita Sodo University	Assistant Professor	Evaluator	fentaye.kassa@wsu.edu.et 0918169855
8	Dr Adem Abdela	Haromaya University	Assistant Professor	Evaluator	0911747251
9	Dr Morka Amante	Wolega University	Assistant Professor	Evaluator	morka_amante@yahoo.com 0911558030