The Competency Domains of the DVM Program at the Ontario Veterinary College

1. PLANNING AND ANALYSIS

The ability to solve problems in a variety of circumstances, think critically, and evaluate information in the context of individuals and groups of animals, are fundamental attributes of a veterinarian. A new graduate of the Ontario Veterinary College will have the ability to identify and analyze a situation and devise a plan of action based on current best evidence[1].

[1] Holmes, M.A., Philosophical foundations of evidence-based medicine for veterinary clinicians. JAVMA. 235 (9), 1035 – 1039, 2009.

At the end of Phase 1 a DVM student will be able to:
- describe the evolution, development, function and identification of normal microscopic and gross anatomical structures, and explain the inter-relationships between form and function in common domestic animals
- describe the normal physiological and biochemical processes that maintain homeostasis and explain the physiological and biochemical basis for common tests used in the diagnostic process.
- identify and describe various factors that cause and influence animal behaviour
- describe the defence, injury, and repair responses of an animal to disruptions in homeostasis when exposed to common disease-causing agents
- describe and identify the modes of inheritance of common genetic disorders and explain the current genetic tests available for specific diseases
- Evaluate the performance characteristics of diagnostic tests
- assess the level of evidence for therapies in order to weigh risks and benefits

At the end of Phase 2 a DVM student will be able to:
- compare and contrast the actions, applications, adverse effects, and contraindications of major classes of pharmaceuticals, biologicals, and other drugs used in veterinary medicine.
- critically evaluate information in order to select appropriate diagnostic tests, treatments, and preventive strategies and apply problem-solving processes when interpreting information derived from selected tests and procedures
- construct a problem list and assess a patient using the problem-oriented veterinary medical record system

At the end of Phase 3 a DVM student will be able to:
- know the presenting history, clinical signs, appropriate diagnostic tests, treatment options and prevention strategies of common diseases in a variety of domestic and non-domestic species relevant to the Canadian context
- develop a plan for treatment using the problem-oriented veterinary medical record system, giving due regard to ethical, animal welfare, legal, regulatory, zoonotic, food safety and economic considerations
- evaluate animal health and performance, recognize when norms in health, welfare and performance are not met
- describe potential factors that may account for deviations from norms of health and performance and develop a plan and monitor appropriate outcomes
- describe species/commodity specific health management programs and their components, analyze and monitor the efficacy of the program(s)

The new DVM graduate should be able to:
- Obtain accurate and valid information about a situation in order to identify areas of veterinary responsibilities, and the expectations of parties involved.
- Appropriately identify, validate and analyze a problem based on scientific methodology, in a manner that can be critically reviewed.
- Formulate a timely, rational, and effective plan that clearly identifies the desired outcomes, and balances the needs and expectations of the profession, the parties involved, cost effectiveness, and the welfare of the animal.

2. PROFESSIONALISM
Professional conduct embodies knowledge of ethical, moral, and scientific principles that are balanced to provide informed judgement and action in the workplace in regards to individuals and groups of animals. This behaviour includes the ability to communicate effectively, listen, offer professional advice, and deliver instruction to a variety of audiences. In addition, a graduate of the DVM program must recognize the need for collaboration, supervision, and delegation where appropriate, and be prepared to undertake appropriate continuing professional development in order to meet the evolving role of the veterinarian in society.

At the end of Phase 1 a DVM student will be able to:
- compare and contrast the veterinarian's role within common animal industries by describing differences in important health management issues and common measures of assessing group performance
- differentiate between scientific and ethical aspects of animal welfare
- conduct professional conversations with clients and colleagues that demonstrate empathetic listening and communication skills, and an ability to use and translate veterinary terminology to an appropriate level for a variety of audiences

At the end of Phase 2 a DVM student will be able to:
- describe a veterinarian's legal, ethical and moral responsibilities and obligations, including a knowledge of OIE reportable and Canadian notifiable diseases, and associated zoonotic and other human health risks
- describe the common behavioural problems, techniques for assessment of behaviour and welfare, and behavioural modification techniques in common domestic animals
- explain the principles of prevention and control of disease, including use of quarantine, vaccination, and eradication.
- demonstrate the ability to evolve and adapt written and oral communication skills in order to effectively interact with clients, colleagues and staff as both a leader and team manager

At the end of Phase 3 a DVM student will be able to:
- know the basic business concepts, structure and function of a veterinary practice
- know which diseases have zoonotic potential and identify which ones are reportable
- recognize important zoonotic, animal-related, environmental and food-borne issues and those health management practices that mitigate risk to animals and humans for the relevant animal industries
- recognize when intervention is required to meet societal expectations with respect to the well-being of animals and what constitutes appropriate intervention
- create a clinically useful medical record and communicate with the owner relevant follow-up care and prevention strategies, including monitoring of health, welfare and performance

- identify industry/government health management programs available and effectively communicate recommendations to the client

The new DVM graduate should be able to:
- Communicate clearly, appropriately and effectively, adapting the opinions and advice offered to meet the needs of varying audiences
- Comply with ethical principles, legislation and regulations for the licensed veterinarian, and any other contractual or legal arrangements
- Promote the welfare of animals by following established codes of practice and taking appropriate action in cases of suspected unethical behaviour
- Establish effective work teams, by identifying clear objectives, roles, responsibilities, and methods for resolving differences respectfully
- Participate in professional organizations and development activities that allow for the maintenance of veterinary standards, and the integration of new knowledge, skills and behaviours into the profession
- Provide instruction for the delivery of veterinary care and the implementation of veterinary policies to co-workers and other involved parties
- Understand roles and responsibilities related to animal and public health and safety

3. CONDUCTING VETERINARY ACTIVITIES

The role of the OVC graduate in society requires the use of knowledge, skills and attitudes to examine aspects of health where animals, humans and the environment intersect, while considering individuals and groups of animals. This requires the ability to perform, and integrate the outcomes of, a variety of veterinary medical procedures while managing situations, resources and personnel effectively and efficiently.

At the end of Phase 1 a DVM student will be able to:
- handle and restrain animals and perform a routine physical and post-mortem examination , know the normal physiological parameters of common domestic animals and develop an initial problem list based on the history and physical examination
- describe techniques for assessing the welfare of animals (e.g. behaviour, physiology, health)
- perform and stain a blood smear and identify cell types and their differences among species

At the end of Phase 2 a DVM student will be able to:
- handle and restrain animals and perform a routine physical examination; and when appropriate conduct dermatological and neurological examinations and radiological tests, in order to develop a problem list and medical record for common domestic animals
- describe the development of disease including the transmission, pathogenesis and expression in relation to interactions of the host with its environment and disease- causing agent
- demonstrate knowledge and skills in anesthetic drug selection, equipment set up, emergency management, shock, acid-base derangement and fluid therapy
- describe the reproductive management, cycles, anatomical features and common reproductive diseases and syndromes, and their therapies for common domestic animals .
- maintain aseptic technique during surgery, correctly use selected surgical instruments, performs basic suture patterns and describe the principles of surgical procedures and wound management

At the end of <u>Phase 3</u> a DVM student will be able to:
- perform a routine physical examination and conduct and interpret appropriate diagnostic tests in order to develop a plan for treatment, and a list of diagnostic hypotheses
- interpret, integrate and communicate veterinary terminology and reports for a variety of audiences including veterinary professionals and clients
- plan and perform appropriate analgesic, anesthetic and aseptic surgical techniques commonly used in primary care practice
- Identify and recommend appropriate strategies (e.g. vaccination, metaphylactic or prophylactic medication, biosecurity, nutritional, environmental and housing management) for promotion of health and prevention, control or eradication of disease to correct diagnoses
- Identify key measures that will monitor outcomes or actions taken to correct deviations in health and productivity at the group level

The <u>new DVM graduate</u> should be able to:
- Perform a physical exam, and select and conduct diagnostic tests in order to reach/refine a diagnosis
- Perform, evaluate and advise on therapeutic approaches/actions, and ensure treatment measures are consistent with the needs of the prevailing circumstance.
- Select and perform appropriate veterinary medical procedures effectively, and provide the appropriate level of care in a humane and ethical manner
- Maintain and promote health in individual animals and animal populations.