

UNIVERSITY OF PRETORIA
FACULTY OF VETERINARY SCIENCE

ESSENTIAL COMPETENCES REQUIRED OF THE NEW VETERINARY GRADUATE

The proposed “Day One Competences” contained in this document were adapted from the latest (2006) document of the RCVS entitled “Criteria and guidance for RCVS approval of veterinary degree courses in the UK and overseas”. It follows on the recent discussions on global accreditation between the Australasian Veterinary Boards Council (AVBC), the American Veterinary Medical Association (AVMA), the European Association of Establishments for Veterinary Education (EAEVE) and the South African Veterinary Council (SAVC).

The RCVS document makes the following statements on competence which should be observed when reading the attached proposals:

“There are many definitions of ‘competence’ and many views on how it can be developed and assessed. In general terms, however, competence is a concept that integrates knowledge, skills and attitudes, the application of which enables the professional to perform effectively, and to respond to contingencies, change, and the unexpected.

This document takes a broad definition of competence as being “the ability to perform the roles and tasks required by one’s job to the expected standard” (Eraut & Boulay, 2000¹²). The advantage of this definition is that it recognises that requirements and expectations change depending on the job role and context. It also recognises that competence develops, and that an individual may work ‘competently’ at many different levels, either at different stages of their career, or indeed from one day to the next depending on the nature of their work”.

The proposed “Day One Competences” which follow are to be seen as the minimum requirements of veterinary education and training in South Africa. As such, they reflect the minimum requirements of the core component in a core-elective degree programme.

It should be noted that the RCVS is also in the process of developing further minimum requirements for veterinary public health teaching in the UK schools which will also have to be considered for implementation. The current minimum requirements are as follows:

- 1) Recognise and advise on the consequences for human health and the environment of animals and their management, and through this contribute to the improvement of human well-being as part of a multidisciplinary team
- 2) Understand the scientific basis for the legislative control of food and protection of the environment
- 3) Advise on the suitability of animals for food production, recognise and apply the principles of food hygiene and safety, including food inspection and control, and implement the principles of health certification of food – this item is already included in the attached proposal in items B1.9 and C1.9
- 4) Understand and apply the principles of risk analysis, particularly as they relate to food safety at all stages of the food chain
- 5) Devise and operate HACCP programmes and longitudinal integrated food safety and quality assurance (LISA) systems.

ESSENTIAL COMPETENCES REQUIRED OF THE NEW VETERINARY GRADUATE**DAY ONE COMPETENCES****A1 - GENERAL PROFESSIONAL SKILLS AND ATTRIBUTES**

The new veterinary graduate should be able to:

- A1.1 Recognise and comply with all legal and statutory requirements and obligations pertaining to veterinary activities
- A1.2 Communicate effectively, both verbally and in writing, with clients, the lay public, professional colleagues and responsible authorities; listen to, understand and respond empathetically to clients, use language in a form appropriate to the audience and the context (a diversity of cultures, customs, value systems and means)
- A1.3 Work as a member of a multi-disciplinary team and/or collaboratively with professional colleagues, support staff and clients
- A1.4 Recognise the ethical responsibilities of the veterinarian to the community in relation to their possible impact on the environment and society as a whole, taking into account the diversity of cultures, customs, value systems and means of the various communities (see A1.9)
- A1.5 Recognise the economic and emotional climate in which the veterinarian operates and respond appropriately to the influence of such pressures
- A1.6 Demonstrate willingness to use his/her professional capabilities to contribute as far as possible to the advancement of veterinary knowledge in order to improve the quality of animal care and public health
- A1.7 Manage a veterinary practice through application of basic principles of:
 - human resource management,
 - financial management,
 - health, safety, biosecurity and labour legislation,
 - use of information technology,
 - public liability, and
 - compliance with regulatory requirements (fees and record-keeping) as determined by the SAVC
- A1.8 Understand the need and professional obligation for a commitment to continuing education, training and professional development throughout one's professional life
- A1.9 Conduct him/herself in a professional manner with regard to the veterinarian's professional, legal and ethical responsibilities in relation to individual patient care and client relations, demonstrate a mature personality, integrity, tolerance and patience and understand and apply the Code of Conduct and Practice of the SAVC (see A1.4)

- A1.10 Demonstrate and apply skills that enable him/her to competently undertake the functions expected of a veterinarian including
- literacy and numeracy,
 - relevant computer skills and utilisation of modern information technology,
 - critical and analytical thought,
 - logical reasoning,
 - problem-solving,
 - finding, utilising and managing information,
 - well-developed observational skills,
 - adaptation to change, and
 - make valid judgments and deductions on the basis of available evidence and information.
- A1.11 Develop a capacity for intellectual curiosity and desire for life-long learning, self-audit and willingness to participate in the peer-review process
- A1.12 Demonstrate understanding of the scientific method and the scientific basis of modern veterinary medicine and the ability to utilise scientific principles in the practice of veterinary science and medicine
- A 1.13 Recognise own professional/technical limitations and demonstrate awareness of when and from where to seek professional advice, assistance and support

(Commentary: This last item is considered to be one of the most important, and should guide all new veterinary graduates when undertaking their professional duties.)

B1- UNDERPINNING KNOWLEDGE AND UNDERSTANDING

The new veterinary graduate shall have a thorough knowledge and understanding of the following:

- B1.1 Basic subjects in chemistry, molecular cell biology and physics as well as animal science (husbandry, nutrition and production) and veterinary science subjects on which everyday veterinary activities are based
- B1.2 A basic foundation in research methodology and the contribution of basic and applied research to all aspects of veterinary science
- B1.3 How to evaluate evidence
- B1.4 The structure and functions of healthy animals and all aspects of their husbandry
- B1.5 The aetiology, pathogenesis, clinical signs, diagnosis, pathology, treatment, epidemiology and control/eradication of the common diseases (infectious, parasitic, non-infectious and toxicities) and other disorders that occur in the common domestic species and selected non-domestic species in South Africa and the immediate surrounding southern African region
- B1.6 Relevant South African legislation applicable to the veterinary and para-veterinary professions, animal welfare, meat safety, animal improvement, medicines and related substances, hazardous substances, animal diseases and notifiable/controlled diseases

- B1.7 Relevant South African legislation and guidelines on responsible sale, use, dispensing, storage and disposal of medicines and related substances in animals
- B1.8 The principles of disease prevention (immunisation, parasite control, housing, nutrition, management and medication) and the promotion of health and welfare, including public health and zoonoses
- B1.9 Veterinary public health principles related to food hygiene and safety, health certification of food, HACCP and zoonotic diseases

C1 - PRACTICAL COMPETENCES/SKILLS

The new veterinary graduate should be able to:

- C1.1 Obtain an accurate history of the individual animal/group of animals including relevant aspects related to the immediate environment of the animal(s)
- C1.2 Approach, handle and restrain animals in ways that are effective, safe, humane, ethical and appropriate to the circumstances and instruct others in performing these techniques
- C1.3 Perform a complete clinical examination and distinguish between normal and abnormal
- C1.4 Derive a well-considered diagnosis and list of differential diagnoses
- C1.5 Attend all animals in an emergency and perform basic first aid

(Commentary: Problems to be handled for any species include first aid management of haemorrhage, wounds, breathing difficulties, eye and ear injuries, unconsciousness, clinical deterioration, burns, tissue damage, internal organ damage and cardiac arrest. First aid to be applied includes bandaging, cleaning, immobilising limbs, resuscitation procedures, haemorrhage control.)

- C1.6 Correctly assess the nutritional status of an animal and advise the client on principles of husbandry and feeding

(Commentary: This applies to commonly presented cases and would not, for example, be expected to include advanced nutritional advice for complex cases, e.g. high performance horses, high yielding dairy cows, certain exotic or zoological species.)

- C1.7 Where appropriate, carry out routine diagnostic tests and procedures (such as haematology, basic clinical pathology, basic imaging) and request more advanced tests as are needed to make a diagnosis. Ensure proper collection, preservation, identification, and handling of samples, keep accurate records, interpret the results, ensure any diagnostic equipment is used safely and maintained in accordance with current regulations, while applying appropriate quality control

(Commentary: New graduates are expected to have a working knowledge of tests to be undertaken including conditions relating to infectious and contagious diseases; alimentary system; respiratory system; circulatory system; urinary system; nervous

system; endocrine system; mucocutaneous system; musculoskeletal system; trauma; poisoning; obstetrics; paediatrics; parturition; reproduction.)

- C1.8 Use radiographic, ultrasonic, and other technical equipment which can be used as a diagnostic aid, safely and in accordance with current regulations
- C1.9 Adhere to and implement the requirements of regulatory/state veterinary medicine in relation to controlled/notifiable diseases, food safety and certification of animals and animal products
- C1.10 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, the control of zoonoses and the appropriate handling and disposal of biological waste and contaminated materials/substances
- C1.11 Know and apply the requirements for veterinary certificates as contained in the Code of Conduct and Practice and Rule 5 of the Rules relating to the practicing of veterinary professions, correctly
- C1.12 Access the appropriate sources of data on registered medicines; store, administer, prescribe and dispense appropriate pharmacological agents or medicines correctly and responsibly in accordance with relevant legislation, including disposal of waste and unused/expired medicines
- C1.13 Carry out common surgical procedures using appropriate techniques and procedures before, during and after surgery, including correct application of the principles of sterilisation of surgical equipment and aseptic surgery
- C1.14 Recognise when analgesia and/or anaesthesia are required, implement chemical methods of restraint, assess and control pain, safely induce, maintain and monitor analgesia, sedation, general and regional anaesthesia and take steps to ensure safe and humane recovery
- C1.15 Assess the need for therapeutic or other intervention, advise the client accordingly (rationale, options, outcomes, human safety, costs, ethical considerations) and administer appropriate treatment with due cognisance of one's own professional/technical limitations

(Commentary: The new veterinarian must always seek professional advice and support if presented with a case beyond his or her immediate capability - see item A1.14.)

- C1.16 Evaluate the need for euthanasia and, where required, carry it out safely and humanely with due consideration of the owner's consent and the feelings of owners and others. Advise on disposal of the carcass
- C1.17 Carry out a routine post-mortem examination of common domestic animals, record and interpret gross post-mortem findings, and initiate further diagnostic procedures where appropriate
- C1.18 Perform ante mortem inspection of animals destined for the food chain and correctly identify conditions affecting the quality and safety of products of animal origin

- C1.19 Assess and implement basic health and welfare records (and production records where appropriate)
- C1.20 Advise on, and carry out basic preventive and prophylactic programmes to promote health, well-being, productivity and performance (immunisation, feeding, housing, management, training, parasite control, treatment) appropriate to the species and commensurate with accepted animal health, welfare and public health standards
- C1.21 Promote animal welfare
- C1.22 Apply principles of bio-security to minimise the risk of contamination, cross infection and accumulation of pathogens in the veterinary premises and in the field

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