

# Graduate Day-1 Competencies

## Rural Animal Veterinary Technology

### (Diploma Level 6)

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## Overall Notes

The Day One Competencies in this document list the set of related knowledge, and attitudes that enables an individual to practice as a Rural Animal Veterinary Technician in a range of situations and/or contexts. The graduate demonstrating these competencies should have adequate knowledge, understanding and technical skills to meet each *Performance Standard*, in each of the *Graduate Competencies* listed below. An Indication of content has been developed as a guide for programmes but has not been included in this consultation as it is the Performance Standards that will be regulated and therefore require feedback. An indication of the content in each Performance Standard has been provided to assist with interpretation of these.

## Legislative Limits & Scope of Practice

The term *Rural Animal Veterinary Technician (RAVT)* describes a veterinary professional who holds a formal qualification with that title. In the course of their work, they should act with professional accountability, and have certain autonomy to make care decisions for their patients within the legislative limits allowed in New Zealand. Most RAVTs work under the direction of, or in collaboration with, a veterinarian in the provision of animal healthcare. This includes but is not limited to support personnel in animal facilities, veterinary clinics, farms, or any other area where animal husbandry, management, and healthcare are provided.

## Using this Document

These competencies are written with a primary structure aimed at a graduate of the diploma in rural animal veterinary technology. Each competency that follows is introduced using a section called *About this competency* which describes it in brief and clear terms for the benefit of the end user. The *Performance Standard* in each competency describes what the RAVT must be able to do as a new graduate and are broad to allow flexibility for regulatory enforcement of educational standards.

These competencies represent a graduate at the start of their career. Competence is a relative term and increasing levels of competence will be expected throughout the professional's career. New graduates are likely to need more time to perform some functions without supervision and guidance, and therefore support and direction from more senior colleagues should always be available.

# Graduate Competency 1 - Clinical Governance

## About This Competency

The rural animal veterinary technician can competently apply knowledge of clinical governance to ensure a high standard of animal welfare in the safe and effective delivery of animal healthcare.

Performance Standard	Indication of content
1. Apply knowledge of clinical governance to veterinary practice	A. Relevance and value of clinical governance to veterinary practice, optimal patient outcomes, and a positive professional identity
2. Apply knowledge of clinical effectiveness in the context of clinical governance	A. Principles of patient-centred care that is inclusive of clients B. Principles of reflective practice C. Evaluation of scientific evidence D. Principles of evidence-based practice E. Basic principles of clinical auditing
3. Apply knowledge of quality improvement processes in the context of clinical governance	A. Importance of developing a quality and safety culture in the clinical environment B. Principles of quality improvement processes and risk management
4. Apply knowledge of the engaged effective workforce, organisational systems, and clinical processes	A. Roles and responsibilities of the veterinary team B. Teamwork and communication C. Professionalism of animal healthcare careers D. Training and education
5. Apply knowledge of the importance of community, consumer, and client engagement	A. Relationship-centred care and client engagement

## Graduate Competency 2 - Professional Practice

### About This Competency

The rural animal veterinary technician can competently apply knowledge of professional practice to ensure a high standard of animal welfare in the safe and effective delivery of animal healthcare.

Performance Standard	Indication of content
1. Apply knowledge of professional identity	A. Professional identity
2. Apply knowledge of professional conduct, standards, and success in the workplace	A. Professional standards and conduct B. Professional presentation C. Skills for the workplace D. Personal success
3. Apply knowledge of legislative guidelines, organisational systems, and clinical processes	A. Practice in compliance with industry legislation and standards B. Practice in compliance with Health and Safety at Work Act 2015 and industry standards C. Practice in compliance with medical recordkeeping legislation and industry standards D. Practice in compliance with clinical waste management legislation and industry standards
4. Apply knowledge of sustainable veterinary communities	A. Concepts of environmental, economic, and social (personal and professional) sustainability and their interconnectedness B. Consideration of future-focused industry aims C. Principles of social sustainability, self-care, and management of compassion fatigue D. Concepts of environmental and economic sustainability related to the delivery of animal healthcare
5. Demonstrate the ability to apply the principles of Te Tiriti o Waitangi to veterinary nursing practice	A. Principles of Te Tiriti o Waitangi B. Application to veterinary nursing practice

## Graduate Competency 3 - Anatomy & Physiology

### About This Competency

The rural animal veterinary technician can competently apply knowledge of basic animal anatomy & physiology to ensure a high standard of animal welfare in the safe and effective delivery of animal healthcare. Must include cats, dogs, equine and ruminants.

<b>Performance Standard</b>	<b>Indication of content</b>
1. Identify and describe basic anatomy physiology of animal species	A. Animal Cells B. Anatomical components and functions C. Homeostasis D. Directional terms
2. Apply knowledge of basic anatomy and physiology to management of animals	A. Variations of anatomical structures and functions for relevant animal species in terms of their management

## Graduate Competency 4 - Microbiology & Infection Control

### About This Competency

The rural animal veterinary technician can competently apply knowledge of microbiology and infection control to ensure a high standard of animal welfare in the safe and effective delivery of animal healthcare. Must include cats, dogs, equine and ruminants.

Performance Standard	Indication of content
1. Apply knowledge of fundamentals of veterinary microbiology	<ul style="list-style-type: none"> <li>A. Knowledge of pathogens relative to animal health and infection control</li> <li>B. Modes of contamination, identifying risks associated with exposure to body fluids, infectious agents, fomites, vectors, zoonoses, and nosocomial infections.</li> <li>C. Mechanisms by which microorganisms cause disease, common immunological methods and chemotherapeutic methods used to combat these mechanisms, including evaluation of the importance of antimicrobial drug resistance, and anthelmintic resistance.</li> </ul>
2. Apply knowledge of effective infection control principles in an animal husbandry, animal management, or animal healthcare setting	<ul style="list-style-type: none"> <li>A. Knowledge and application of infection control in an animal husbandry, animal management, or animal healthcare setting</li> <li>B. Knowledge and application of indications and use of disinfectants.</li> </ul>
3. Apply knowledge of effective isolation procedures for infectious animals	<ul style="list-style-type: none"> <li>A. Knowledge and application of standard isolation precautions for infectious patients</li> <li>B. Knowledge of transmission-based isolation precautions for infectious patients</li> </ul>
4. Apply knowledge of effective antisepsis principles in an animal healthcare setting	<ul style="list-style-type: none"> <li>A. Knowledge and application of asepsis in an animal healthcare setting</li> </ul>

## Graduate Competency 5 - Animal Learning & Communication

### About This Competency

The rural animal veterinary technician can competently apply knowledge of animal learning and communication to ensure a high standard of animal welfare in the safe and effective delivery of animal healthcare. Must include cats, dogs, equine and ruminants.

Performance Standard	Indication of content
1. Apply knowledge of animal communication, and learning	A. External factors that influence an animal's behaviour B. Internal factors that influence an animal's behaviour C. Animal pain and distress D. Animal communication E. Animal learning

## Graduate Competency 6 - Pharmacology

### About This Competency

The rural animal veterinary technician can competently apply knowledge of pharmacology to ensure a high standard of animal welfare in the safe and effective delivery of animal healthcare. Must include cats, dogs, equine and ruminants.

<b>Performance Standard</b>	<b>Indication of content</b>
1. Demonstrate knowledge of pharmacology	<ul style="list-style-type: none"><li>A. Legislation and standards relating to medicating animals</li><li>B. Pharmacodynamics and pharmacokinetics for a range of medications</li><li>C. Dispensing medications</li><li>D. Client communication in relation to dispensing.</li><li>E. Pharmacy management - stock/inventory control, disposal of medications.</li></ul>
2. Apply knowledge of pharmacology to nursing animal patients	<ul style="list-style-type: none"><li>A. Dispense medications</li><li>B. Administer medication</li><li>C. Monitoring clinical signs of patients receiving medication</li></ul>



## Graduate Competency 7 - Rural Animals and Their Care

### About This Competency

The rural animal veterinary technician can competently apply knowledge of rural animals and their care to ensure a high standard of animal welfare in the safe and effective delivery of animal healthcare.

Performance Standard	Indication of content
1. Apply knowledge of a range of animals/species*	A. Domestic animals B. Identification of animals
2. Apply knowledge of optimal housing and environment for a range of species*	A. Intensive and extensive farming practices, and temporary holding facilities (e.g., yards). B. In a veterinary clinic. C. Transportation. RANGE for each includes but is not limited to social needs of animals, environmental enrichment, welfare, and safety needs, following animal welfare legislation

\*Refer to qualification for species.

## Graduate Competency 8 - Rural Animal Behaviour, Handling & Restraint

### About This Competency

The rural animal veterinary technician can competently apply knowledge of rural animal behaviour and training to ensure a high standard of animal welfare in the safe and effective delivery of animal healthcare.

<b>Performance Standard</b>	<b>Indication of content</b>
1. Apply knowledge of low stress/fear free animal handling and restraint techniques	A. Knowledge of animal communication, behaviour and learning is applied to provide optimal low stress handling B. Low stress handling techniques to optimise health & safety, and animal welfare C. Pros and cons of restraint aids in terms of health and safety and animal welfare
2. Apply knowledge about preventing and addressing behaviour problems	A. Preventing behaviour problems B. Addressing behavioural problems

## Graduate Competency 9 - Rural Animal First Aid, Trauma Care

### About This Competency

The rural animal veterinary technician can competently apply knowledge of emergency and trauma care to ensure a high standard of animal welfare in the safe and effective delivery of animal healthcare. All aspects of this competency may be simulated.

<b>Performance Standard</b>	<b>Indication of content</b>
1. Apply first aid outside of a clinical environment	A. Basic life support B. Telephone first aid
2. Apply emergency processes in a clinical environment	A. Knowledge of common animal emergencies B. Emergency processes C. Working as a team in an emergency D. Knowledge of advanced life support.

## Graduate Competency 10 - Rural Animal Disease and Immunology

### About This Competency

The rural animal veterinary technician can competently apply knowledge of animal diseases and immunology to ensure a high standard of animal welfare in the safe and effective delivery of animal healthcare.

NB: Practical diagnostic tests including collection of samples, testing and interpretation are covered in the diagnostics competency. What diagnostic tests are used and why are covered in this competency.

Performance Standard	Indication of content
1. Apply knowledge of medical conditions of the body systems	A. Apply knowledge of anatomy and physiology to pathogenic processes of diseases B. Response to exotic, emerging and notifiable diseases
2. Apply knowledge of parasitic diseases.	A. Apply knowledge of anatomy and physiology to pathogenic processes of parasitic disease B. Treatment, control and prevention of common endo and ectoparasites within New Zealand
3. Apply knowledge of immunology and immunisation	A. Apply knowledge of components and functions of the immune system during immune challenge B. Principles of vaccination

## Graduate Competency 11 - Rural Animal Nutrition

### About This Competency

The rural animal veterinary technician can competently apply knowledge of nutrition of animals to ensure a high standard of animal welfare in the safe and effective delivery of animal healthcare.

<b>Performance Standard</b>	<b>Indication of content</b>
1. Apply knowledge of nutrients and digestibility	A. Digestive physiology B. Essential nutrients
2. Apply knowledge of feeding animals	A. Nutrient requirements of animals B. Dietary analysis, composition C. Principles of pasture and supplementary feeding D. Principles of appetite and hunger
3. Apply knowledge of nutrition to therapeutic and assisted feeding	A. Assisted feeding strategies for neonates B. Therapeutic nutrition

## Graduate Competency 12 - Nursing Process, Care Planning & Technician Interventions

### About This Competency

The rural animal veterinary technician can competently apply knowledge of the nursing process to ensure a high standard of animal welfare in the safe and effective delivery of animal healthcare.

Performance Standard	Indication of content
1. Apply knowledge of the nursing process and care planning	<ul style="list-style-type: none"> <li>A. Nursing philosophy in terms of how it relates to patient care</li> <li>B. Principles of nursing process and how it relates to care planning and delivery for rural animals. e.g., downer cows, metabolic cases, and neonatal care.</li> <li>C. Application of care planning and nursing process</li> </ul>
2. Apply knowledge of client co-design, and relationship-centred care	<ul style="list-style-type: none"> <li>A. Care planning and relationship-centred care</li> <li>B. Communicating for client understanding.</li> </ul>
3. Demonstrate knowledge of veterinary technician services in the clinic environment	<ul style="list-style-type: none"> <li>A. Veterinary technician services</li> </ul>
4. Apply knowledge of end-of-life care and euthanasia	<ul style="list-style-type: none"> <li>A. Relationship centred care associated with end of life</li> <li>B. Process of euthanasia</li> </ul>

## Graduate Competency 13 - Rural Animal Fluid Therapy

### About This Competency

The rural animal veterinary technician can competently apply knowledge of fluid therapy and blood transfusions to ensure a high standard of animal welfare in the safe and effective delivery of animal healthcare.

<b>Performance Standard</b>	<b>Indication of content</b>
1. Demonstrate knowledge of fluid therapy	A. Principles of fluid dynamic physiology B. Principles of fluid replacement therapy
2. Apply knowledge of fluid therapy to care for animal patients receiving fluids	A. Care for animals receiving fluid therapy. B. Peripheral intravenous catheterization/cannulation C. Oral fluids including, assisting to administer fluids via stomach tube and monitor for complications.

# Graduate Competency 14 - Rural Animal Wounds & Bandaging

## About This Competency

The rural animal veterinary technician can competently apply knowledge of wound management and bandaging to ensure a high standard of animal welfare in the safe and effective delivery of animal healthcare.

Performance Standard	Indication of content
1. Demonstrate knowledge of wound physiology and healing relating to rural animal patients	A. Physiology of skin, inflammation, and infection
2. Apply knowledge of wound physiology to wound management	<ul style="list-style-type: none"> <li>A. Wound documentation, pain management, nutrition, and wound healing.</li> <li>B. Wound treatments, compression, immobilisation, wound dressings.</li> <li>C. Identifying problems with wounds and implementing solutions to issues that negatively affect wound healing.</li> <li>D. Wound asepsis including, microbial resistance, culture and sensitivity, infection control.</li> <li>E. Challenging wounds and complications including, burns, environmental contamination challenges, contaminated wounds, non-healing wounds, abscesses, wounds under tension.</li> </ul>
3. Demonstrate knowledge of bandaging to rural animal patients	<ul style="list-style-type: none"> <li>A. Types of bandages</li> <li>B. Methods of bandaging</li> <li>C. Nursing patients with bandages, casts, and external fixators</li> </ul>
3. Apply knowledge of bandaging to the application of bandages to rural animal patients	<ul style="list-style-type: none"> <li>A. Effective and competent application of limb bandages</li> <li>B. Effective and competent removal</li> </ul>



## Graduate Competency 15 - Rural Animal Anaesthesia & Analgesia

### About This Competency

The rural animal veterinary technician can competently apply knowledge of anaesthesia to ensure a high standard of animal welfare in the safe and effective delivery of animal healthcare.

Performance Standard	Indication of content
1. Apply knowledge of the preanaesthetic period to facilitate optimal patient care	<ul style="list-style-type: none"> <li>A. Patient evaluation</li> <li>B. Patient preanaesthetic care</li> <li>C. Anaesthetic protocol</li> <li>D. Preanaesthetic drug administration</li> </ul>
2. Apply knowledge of general anaesthesia to facilitate optimal patient care	<ul style="list-style-type: none"> <li>A. Scope and use of general anaesthesia</li> <li>B. Physiology of anaesthesia</li> <li>C. Patient Induction</li> <li>D. Endotracheal intubation</li> <li>E. Maintenance Anaesthesia</li> <li>F. Patient positioning, restraint, and transport</li> <li>G. Recovery</li> </ul>
3. Apply knowledge of anaesthetic agents and techniques to facilitate optimal patient care	<ul style="list-style-type: none"> <li>A. Preanaesthetic agents</li> <li>B. Induction agents</li> <li>C. Maintenance anaesthetic agents</li> <li>D. Local anaesthetic agents</li> </ul>
4. Apply knowledge of anaesthetic problems and emergencies to facilitate optimal patient care	<ul style="list-style-type: none"> <li>A. Causes of anaesthetic problems and emergencies</li> <li>B. Response to anaesthetic problems and emergencies</li> </ul>
5. Apply knowledge of analgesia and pain management to facilitate optimal patient care	<ul style="list-style-type: none"> <li>A. Physiology of pain</li> <li>B. Pain assessment</li> <li>C. Principles/goals of analgesic use</li> <li>D. Pharmacology and use of analgesics</li> <li>E. The veterinary technician's role in pain management</li> </ul>

## Graduate Competency 16 - Rural Animal Surgical Procedures

### About This Competency

The rural animal veterinary technician can competently apply knowledge of surgical nursing and theatre practice to ensure a high standard of animal welfare in the safe and effective delivery of animal healthcare.

Performance Standard	Indication of content
1. Apply knowledge of the surgical preoperative patient care	<i>Period from pre-admission through to immediately prior to induction.</i> A. Patient pre-admission, admission, and post admission procedures B. Preoperative preparation C. Preoperative patient care
2. Apply knowledge of the surgical intraoperative patient care	<i>Period from induction through to the end of anaesthesia.</i> A. Surgical site preparation - first scrub B. Patient positioning C. Maintenance of the sterile field, and non-sterile surrounds. D. Surgical site preparation - second scrub/sterile prep E. During surgical procedure F. End of surgical procedure
3. Apply knowledge of surgical postoperative patient care	<i>Period from the end of anaesthesia through to the end of the patient's recovery.</i> A. Patient monitoring B. Patient care C. Surgical discharge preparation D. Patient management including, production management, drug withholding, restricting milking animal movement (e.g., keep close to the shed), managing milking of milk producing animals.
4. Apply knowledge of post-surgical procedures	A. Clean, disinfect, and maintain the surgical equipment. B. Clean, disinfect, and maintain equipment. C. Clean, disinfect/sterilise and maintain the surgical instruments

## Graduate Competency 17 - Rural Animal Reproduction, Obstetrics, and Neonatal Care

### About This Competency

The rural animal veterinary technician can competently apply knowledge of reproduction, obstetrics, neonatal and paediatric care to ensure a high standard of animal welfare in the safe and effective delivery of animal healthcare.

Performance Standard	Indication of content
1. Apply knowledge of reproduction	<ul style="list-style-type: none"> <li>A. Reproductive cycles</li> <li>B. Control and manipulation of reproductive cycles</li> <li>C. Mating</li> <li>D. Common reproductive diseases and conditions of both the male and female and their management</li> </ul>
2. Apply knowledge of obstetrics	<ul style="list-style-type: none"> <li>A. Stages of pregnancy and animal needs in a variety of rural animal species</li> <li>B. Stages of parturition and relevance to nursing care, and client communication</li> <li>C. Postpartum needs of the dam and the neonate</li> <li>D. Common problems for the dam during parturition and the immediate postpartum period</li> </ul>
3. Apply knowledge of neonatal care	<ul style="list-style-type: none"> <li>A. Nutrition of the neonate</li> <li>B. Common problems in neonates and their management</li> </ul>

## Graduate Competency 18 - Rural Animal Diagnostics

### About This Competency

The rural animal veterinary technician can competently apply knowledge of diagnostic testing to ensure a high standard of animal welfare in the safe and effective delivery of animal healthcare.

Performance Standard	Indication of content
1. Apply knowledge of diagnostics to sample collection and processing	<ul style="list-style-type: none"> <li>A. Prepare animal and equipment for safe/low stress sample collection</li> <li>B. Collect, label and store samples from animals</li> <li>C. Prepare samples of in-house analysis or for dispatch samples to external laboratories</li> <li>D. Necropsy procedures (within scope of practice and assisting with necropsy procedures).</li> </ul>
2. Apply knowledge of diagnostic tests on samples and record results	<ul style="list-style-type: none"> <li>A. Carry out in house testing and record results</li> <li>B. Demonstrate knowledge of microbiology</li> </ul>
3. Apply knowledge of maintenance and quality control in the in-house laboratory to ensure diagnostic test integrity	<ul style="list-style-type: none"> <li>A. Use, care and troubleshooting, maintenance, and quality control of diagnostic equipment</li> <li>B. Quality control procedures</li> </ul>

# Graduate Competency 19 - Rural Animal Imaging

## About This Competency

The rural animal veterinary technician can competently apply knowledge of veterinary imaging techniques to ensure a high standard of animal welfare in the safe and effective delivery of animal healthcare.

Performance Standard	Indication of content
1. Apply knowledge of x-ray machine and associated equipment	A. Structure and function of x-ray machine and associated equipment B. Production of x-rays
2. Apply knowledge of medical imaging health and safety in relation to radiation protection, equipment and underlying physical principles	A. Medical imaging safety
3. Apply knowledge of the production of diagnostic radiographic images	A. Preparing equipment to take the image B. Patient preparation techniques C. Patient positioning techniques for basic imaging D. Records
3. Demonstrate knowledge of ultrasonography	A. Preparing, maintenance and storage of equipment for ultrasonography B. Common usage C. Patient preparation techniques D. Record keeping

## Graduate Competency 20 - Rural Animal Dentistry

### About This Competency

The rural animal veterinary technician can competently apply knowledge of preventative and therapeutic dental care to ensure a high standard of animal welfare in the safe and effective delivery of animal healthcare.

Performance Standard	Indication of content
1. Apply knowledge of dental anatomy and common dental pathology	A. Major anatomical, physiological, and pathological features of the mouth/oral cavity and teeth, and the implications for dental care. B. Dental pathology and preventative care

*End of document.*