

## APPLY KNOWLEDGE OF IMMUNOLOGY IN ANIMAL VACCINATION

**UNIT CODE:** 0912 541 16A

**TVET CDACC UNIT CODE:** HE/OS/AHP/CC/10/6/MA

### UNIT DESCRIPTION:

This unit specifies the competencies required by an animal health technologist to apply knowledge of immunology in animal vaccination. It involves applying knowledge of immunology, knowledge of serology in disease diagnosis, and applying knowledge of vaccines and immunization.

### ELEMENTS AND PERFORMANCE CRITERIA

| <b>ELEMENT</b><br>These describe the key outcomes which make up workplace function | <b>PERFORMANCE CRITERIA</b><br>These are assessable statements which specify the required level of performance for each of the elements<br><i>(Bold and italicized terms are elaborated in the range)</i> |
|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Apply knowledge of immunology                                                   | 1.1 Immunological principles are applied as per work requirement<br>1.2 Immunity knowledge is applied as per work requirement<br>1.3 Immunology knowledge is applied as per requirement                   |
| 2. Apply knowledge of serology in disease diagnosis                                | 2.1 Serological principles are applied as per work procedure<br>2.2 <b><i>Serological tests</i></b> are conducted as per work procedure<br>2.3 Serology knowledge is applied as per work requirement      |
| 3. Apply knowledge of vaccinology and immunization                                 | 3.1 Vaccinology principles are applied as per work requirement<br>3.2 Adjuvants knowledge in vaccines is applied as per work requirement<br>3.3 <b><i>Vaccines</i></b> are managed as per work procedure  |

## RANGE

This section provides work environment and conditions to which the performance criteria apply. It allows for different work environment and situations that will affect performance.

| Variable                                                  | Range                                                                                                                                                                    |
|-----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.Serological tests may include but are not limited to:   | <ul style="list-style-type: none"><li>● ELISA</li><li>● PCR</li><li>● CFT</li></ul>                                                                                      |
| 2.Types of vaccines may include but are not limited to:   | <ul style="list-style-type: none"><li>● Live</li><li>● Killed</li><li>● Attenuated</li><li>● Toxoids</li><li>● Antisera</li></ul>                                        |
| 3.Veterinary vaccines may include but are not limited to: | <ul style="list-style-type: none"><li>● Rabies</li><li>● LSD</li><li>● FMD</li><li>● RVF</li><li>● NCD</li><li>● Fowl Pox</li><li>● Fowl Typhoid</li><li>● ASF</li></ul> |

## REQUIRED KNOWLEDGE AND SKILLS

This section describes the knowledge and skills required for this unit of competency.

### Required skills

The individual needs to demonstrate the following skills:

- Communication skills

- Training skills
- Animal husbandry
- Animal handling

### **Required knowledge**

The individual needs to demonstrate knowledge of:

- Animal physiology
- Animal anatomy
- Animal welfare, ethics and Law
- VMD guidelines
- Veterinary Surgeons and paraprofessionals Act

### **EVIDENCE GUIDE**

This provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills range.

|                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.Critical aspects of competency | 1.1 Applied immunological principles as per work requirement<br>1.2 Applied immunity knowledge as per work requirement<br>1.3 Applied immunology knowledge as per requirement<br>1.4 Applied serological principles as per work procedure<br>1.5 Conducted serological tests as per work procedure<br>1.6 Applied serology knowledge as per work requirement<br>1.7 Applied vaccinology principles as per work requirement<br>1.8 Applied adjuvants knowledge in vaccines as per work requirement<br>1.9 Managed vaccines as per work procedure |
| 2. Resource implications         | The following resources must be provided:<br>2.1 Appropriately simulated environment where assessment can take place                                                                                                                                                                                                                                                                                                                                                                                                                            |

|                                        |                                                                                                                                                                                                                 |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                        | <p>2.2 Access to relevant work environment</p> <p>2.3 Resources relevant to the proposed activities or tasks</p>                                                                                                |
| 7 3. Methods of assessment             | <p>Competency may be assessed through:</p> <p>3.1. Observation</p> <p>3.2. Oral questioning</p> <p>3.3. Written test</p> <p>3.4. Portfolio of Evidence</p> <p>3.5. Interview</p> <p>3.6. Third party report</p> |
| 6. Context of assessment               | <p>Competency may be assessed in a:</p> <p>Workplace or simulated workplace</p>                                                                                                                                 |
| 7. Guidance information for assessment | <p>Holistic assessment with other units relevant to the industry sector and workplace job role is recommended.</p>                                                                                              |