

## BASIC IMMUNOLOGY AND VACCINES

**UNIT CODE: 0841 441 15A**

**TVET CDACC UNIT CODE: HE/CU/AHP/CC/12/5/MA**

### **Relationship to Occupational Standards**

This unit addresses the unit of competency: Apply knowledge of Immunology in animal vaccination.

**Duration of Unit: 50 hours**

### **Unit Description**

This unit specifies the competencies required by an animal health and production technician 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.

### **Summary of Learning Outcomes**

By the end of this unit, the learner should be able to:

<b>S/No</b>	<b>Learning Outcomes</b>	<b>Duration (Hours)</b>
1.	Apply knowledge of immunology	15
2.	Apply knowledge of serology in disease diagnosis	15
3.	Apply knowledge of vaccinology and immunization	20
<b>Total</b>		<b>50</b>

### **Learning Outcomes, Content and Suggested Assessment Methods**

<b>Learning Outcomes</b>	<b>Content</b>	<b>Suggested Assessment Methods</b>
1. Apply knowledge of immunology	1.1 Immunological principles 1.2 Immunity 1.3 Immunology	● Practical ● Project ● Written tests

		<ul style="list-style-type: none"> <li>● Third party report</li> <li>● Portfolio of evidence</li> <li>● Oral questions</li> </ul>
2. Apply knowledge of serology in disease diagnosis	2.1 Serological principles 2.2 Serological tests 2.2.1 ELISA 2.2.2 PCR 2.2.3 CFT 2.3 Serology	<ul style="list-style-type: none"> <li>● Practical</li> <li>● Project</li> <li>● Written tests</li> <li>● Third party report</li> <li>● Portfolio of evidence</li> <li>● Oral questions</li> </ul>
3. Apply knowledge of vaccinology and immunization	3.1 Principles of vaccinology 3.2 Adjuvants knowledge in vaccines 3.3 Types of vaccines 3.3.1 Live 3.3.2 Killed 3.3.3 Attenuated 3.3.4 Toxoids 3.3.5 Antisera 3.4 Veterinary vaccines 3.4.1 Rabies 3.4.2 LSD 3.4.3 FMD 3.4.4 RVF 3.4.5 NCD 3.4.6 Fowl Pox 3.4.7 Fowl Typhoid 3.4.8 ASF	<ul style="list-style-type: none"> <li>● Practical</li> <li>● Project</li> <li>● Written tests</li> <li>● Third party report</li> <li>● Portfolio of evidence</li> <li>● Oral questions</li> </ul>

### Suggested Methods of Delivery

- Practical
- Projects
- Demonstrations

- Group discussion
- Direct instructions

### Recommended Resources for 25 trainees

S/NO	Category/Item	Description/specification	Qty	Recommended ratio (item: trainee)
1.	Projector	EPSOM	1	1:25
2.	Whiteboard/smartboard	2.5 By 1.5.M	1	1:25
3.	Desktop/computer		1	1:25
4.	Classroom	Well-lit with 25 seats	1	1:25
5.	Library	Equipped with immunology books and E- section	1	1:25
6.	Rabies vaccines			
7.	LSD vaccines			
8.	FMD vaccines			
9.	RVF vaccines			
10.	NCD vaccines			
11.	Fowl Pox vaccines			
12.	Fowl Typhoid vaccines			
13.	ASF vaccines			
14.	Automatic syringes	1oml syringe, 30ml syringe and 50ml syringe	25	1:1
15.	Cool box		1	1:25