



**REPUBLIC OF KENYA**

**COMPETENCY-BASED MODULAR CURRICULUM**

**FOR**

**ANIMAL HEALTH AND PRODUCTION**

**KNQF LEVEL: 6  
(CYCLE 3)**

**PROGRAMME ISCED CODE: 0841 554A**



**TVET CDACC  
P.O. BOX 15745-00100 NAIROBI**

## ANIMAL PHYSIOLOGY

**ISCED UNIT CODE:** 0313 541 05A

**TVET CDACC UNIT CODE:** HE/CU/AHP/CC/02/6/MA

### Relationship to Occupational Standards

This unit addresses the Unit of Competency: Apply knowledge of animal physiology.

**UNIT DURATION:** 90 Hours

### Unit Description

This unit specifies the competencies required by an animal health and production technologist to demonstrate knowledge of animal physiology in managing the health and production of animals. It involves applying knowledge of physiological principles, applying knowledge of the functioning of various body systems and knowledge of environmental physiology.

### Summary of Learning Outcomes

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

S/No	Learning Outcomes	Duration (Hours)
1.	Apply principles of physiological principles	30
2.	Apply knowledge of animal body systems functions	30
3.	Apply knowledge of environmental physiology	30
<b>Total</b>		<b>90</b>

### Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcomes	Content	Suggested Assessment Methods
1. Apply principles of anatomy in animals handling	1.1. Introduction to animal physiology 1.2. Definitions 1.2.1. Animal physiology 1.2.2. Homeostasis 1.2.3. Ethology 1.3. Principles of animal physiology	<ul style="list-style-type: none"><li>• Practical</li><li>• Project</li><li>• Portfolio of evidence</li><li>• Third party report</li><li>• Written assessment</li></ul>

	<p>1.4. Animal cell physiology</p> <p>1.5. Mechanism of cell transport</p> <p>    1.5.1. Diffusion</p> <p>    1.5.2. Solvent drag</p> <p>    1.5.3. Osmosis</p> <p>    1.5.4. Filtration</p> <p>    1.5.5. Active transport</p> <p>    1.5.6. Exocytosis</p> <p>    1.5.7. Endocytosis</p> <p>1.6. Mammalian cell and cell components</p> <p>    1.6.1. Mitochondria</p> <p>    1.6.2. Endoplasmic reticulum</p> <p>    1.6.3. Nuclei</p> <p>    1.6.4. Cell membrane</p> <p>    1.6.5. Cytoplasm</p>	<ul style="list-style-type: none"> <li>• Oral questioning</li> </ul>
<p>2. Apply knowledge of animal body systems functions</p>	<p>2.1. Animal tissue physiology</p> <p>2.2. Animal organ physiology</p> <p>2.3. Animal organ system</p> <p>    2.3.1. Integumentary system</p> <p>    2.3.2. Cardiovascular system</p> <p>    2.3.3. Respiratory system</p> <p>    2.3.4. Renal system</p> <p>    2.3.5. Musculoskeletal system</p> <p>    2.3.6. Reproductive system</p> <p>    2.3.7. Gastro/digestive intestinal</p> <p>    2.3.8. Nervous system</p> <p>    2.3.9. Hepatic system</p> <p>    2.3.10. Endocrine system</p> <p>    2.3.11. Lymphatic system</p>	<ul style="list-style-type: none"> <li>• Practical</li> <li>• Project</li> <li>• Portfolio of evidence</li> <li>• Third party report</li> <li>• Written assessment</li> <li>• Oral questioning</li> </ul>
<p>3. Apply knowledge of environmenta</p>	<p>3.1. Management of environmental effect</p> <p>3.2. Management of animal adaptive response</p> <p>3.3. Management of animal behavior</p>	<ul style="list-style-type: none"> <li>• Practical</li> <li>• Project</li> <li>• Portfolio of evidence</li> </ul>

I physiology		<ul style="list-style-type: none"> <li>• Third party report</li> <li>• Written assessment</li> <li>• Oral questioning</li> </ul>
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### Suggested Methods of delivery

- Practical
- Projects
- Demonstrations
- Group discussion
- Direct instructions

### Training resources for 25 trainees

S/No.	Category/Item	Description/ Specification	Quantity	Recommended Ratio (Item: Trainee)
<b>Learning materials</b>				
1.	Projector		1	1:25
2.	Whiteboard/Smart board		1	1:25
3.	Desktop/computer		1	1:25
4.	Animal organs/organ systems charts		5	1:5
5.	Lecture/Theory room		1	1:25
6.	Laboratory	As per KVB guidelines	1	1:25
7.	Animal farm	As per KVB guidelines	1	1:25
8.	Library		1	1:25
9.	E-Library		1	1:25