

## **ANIMAL ANATOMY AND PHYSIOLOGY**

**UNIT CODE:** 0811 451 06A

**TVET CDACC UNIT CODE:** AGR/CU/EXT/CC/01/5/MA

**UNIT DURATION:** 100 HOURS

### **Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Apply Animal anatomy and physiology

### **Unit Description**

This unit describes knowledge, skills and attitudes required to apply animal anatomy and physiology. It involves classifying farm animals, applying morphology and applying physiology in animal production.

### **Summary of Learning Outcomes**

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

S/No	Learning Outcomes	Duration (Hours)
1.	To classify farm animals	40
2.	To apply morphology in animal production	30
3.	To apply animal physiological functions	30
<b>Total</b>		<b>100</b>

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

Learning Outcomes	Content	Suggested Assessment Methods
1. To classify farm animals	<b>Theory</b> 1.1 Classification of farm mammals 1.1.1 Define Mammals 1.1.2 Types of mammals	<ul style="list-style-type: none"><li>• Written tests</li><li>• Third party report</li><li>• Reflection papers</li></ul>

	<p>1.1.2.1 Cattle</p> <p>1.1.2.2 Rabbits</p> <p>1.1.2.3 Sheep</p> <p>1.1.2.4 Goats</p> <p>1.1.2.5 Donkeys</p> <p>1.1.2.6 Camel</p> <p>1.1.2.7 Horses</p> <p>1.1.3 Taxonomic classification of mammals</p> <p>1.1.3.1 Domain</p> <p>1.1.3.2 Kingdom</p> <p>1.1.3.3 Phylum</p> <p>1.1.3.4 Subphylum</p> <p>1.1.3.5 Class</p> <p>1.2 Classification of Aves</p> <p>1.2.1 Define Aves</p> <p>1.2.2 Types of Aves</p> <p>1.2.2.1 Chicken</p> <p>1.2.2.2 Ducks</p> <p>1.2.2.3 Guinea fowl</p> <p>1.2.2.4 Geese</p> <p>1.2.2.5 Turkey</p> <p>1.2.3 Taxonomic classification of Aves</p> <p>1.2.3.1 Domain</p> <p>1.2.3.2 Kingdom</p> <p>1.2.3.3 Phylum</p> <p>1.2.3.4 Subphylum</p> <p>1.2.3.5 Class</p> <p>1.3 Classification of Pisces</p> <p>1.3.1 Define Pisces</p> <p>1.3.2 Types of Pisces Tilapia</p> <p>1.3.2.1 Nile perch</p>	<ul style="list-style-type: none"> <li>• Projects</li> <li>• Interviews/ Oral questions</li> <li>• Workshop reports</li> <li>• Individual/group assignments</li> <li>• Case Studies</li> <li>• Practicals</li> </ul>
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	<p>1.3.2.2 Cat fish</p> <p>1.3.2.3 Mudfish</p> <p>1.3.2.4 Salmon fish</p> <p>1.3.3 Taxonomic classification of Pisces</p> <p>1.3.3.1 Domain</p> <p>1.3.3.2 Kingdom</p> <p>1.3.3.3 Phylum</p> <p>1.3.3.4 Subphylum</p> <p>1.3.3.5 Class</p> <p>1.4 Classification of Arthropods</p> <p>1.4.1 Define Arthropods</p> <p>1.4.2 Types of Arthropods</p> <p>1.4.2.1 Tick</p> <p>1.4.2.2 Spider</p> <p>1.4.2.3 Lobsters</p> <p>1.4.2.4 Crabs</p> <p>1.4.3 Taxonomic classification of Arthropods</p> <p>1.4.3.1 Domain</p> <p>1.4.3.2 Kingdom</p> <p>1.4.3.3 Phylum</p> <p>1.4.3.4 Subphylum</p> <p>1.4.3.5 Class</p>	
2. To apply morphology in animal production	<p><b>Theory</b></p> <p>2.1 Animal production morphology</p> <p>2.1.1 Definition of terms</p> <p>2.1.1.1 Animal production</p> <p>2.1.1.2 Animal morphology</p> <p>2.1.1.3 Animal anatomy</p> <p>2.1.2 Animal external features</p> <p>2.1.3 Animal anatomical structures</p> <p>2.1.3.1 Vertebral column</p>	<ul style="list-style-type: none"> <li>• Written tests</li> <li>• Third party report</li> <li>• Reflection papers</li> <li>• Projects</li> <li>• Interviews/ Oral questions</li> <li>• Workshop reports</li> <li>• Individual/group assignments</li> </ul>

	<p>2.1.3.2 Skull</p> <p>2.1.3.3 Rib</p> <p>2.1.3.4 Forelimb</p> <p>2.1.3.5 Hind limb</p> <p>2.1.3.6 Pectoral girdle</p> <p>2.1.3.7 Pelvic girdle</p> <p>2.1.3.8 Animal structures relationship</p>	<ul style="list-style-type: none"> <li>• Case Studies</li> <li>• Practicals</li> <li>• </li> </ul>
3. To apply animal physiologic al functions	<p><b>Theory</b></p> <p>3.1 Animal physiological functions</p> <p>3.1.1 Thermoregulation</p> <p>3.1.2 Osmoregulation</p> <p>3.1.3 Respiration</p> <p>3.2 Animal organ systems</p> <p>3.2.1 Circulatory system</p> <p>3.2.2 Digestive system</p> <p>3.2.3 Reproductive system</p> <p>3.2.4 Respiratory system</p> <p>3.2.5 Excretory system</p> <p>3.2.6 Nervous system</p> <p>3.2.7 Lymphatic system</p> <p>3.2.8 Cardiovascular system</p> <p>3.2.9 Musculoskeletal system</p> <p>3.2.10 Integumentary system</p> <p>3.2.11 Endocrine system</p>	<ul style="list-style-type: none"> <li>• Written tests</li> <li>• Third party report</li> <li>• Reflection papers</li> <li>• Projects</li> <li>• Interviews/ Oral questions</li> <li>• Workshop reports</li> <li>• Individual/group assignments</li> <li>• Case Studies</li> <li>• Practicals</li> </ul>

	<p>3.3 Animal body organs</p> <p>3.3.1 Heart</p> <p>3.3.2 Lungs</p> <p>3.3.3 Kidney</p> <p>3.3.4 Skin</p> <p>3.3.5 Liver</p> <p>3.3.6 Pancreas</p>	
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### Suggested Methods of Instruction

- Role playing
- Group discussion
- Direct instruction

### Recommended Resources for 25 Trainees

S/No.	Category/Item	Description/Specifications	Quantity	Recommended Ratio (Item: Trainee)
A	<b>Learning Materials</b>			
9.	Journals		5 pcs	1:5
10.	writing materials		50	2:1
11.	Charts	Animal Anatomical structure	1	1:25
12.	PowerPoint presentations	For trainer's use		
13.	Whiteboard		1	1:25
14.	Assorted color of whiteboard markers	For trainer's use		

15.	Printers		1	1:25
16.	Projector		1	1:25
<b>B</b>	<b>Learning Facilities &amp; infrastructure</b>			
3.	Lecture/theory room		1	1:25
4.	Agriculture lab		1	1:25
5.	Animal skeletal		1	1:25