

## 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>

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

	3.3 Animal body organs  3.3.1 Heart  3.3.2 Lungs  3.3.3 Kidney  3.3.4 Skin  3.3.5 Liver  3.3.6 Pancreas	
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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)
<b>A</b>	<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

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