

Unit title	Introduction to Anatomy
Unit level	Three
Unit credit value	3
Unit code	WNI846
Unit type	Academic Subject Content
Unit review date	31/12/2028
Graded/Ungraded	Ungraded

This unit has 4 learning outcomes:

LEARNING OUTCOMES	ASSESSMENT CRITERIA
The learner will:	The learner can:
1. Understand the structure and function of the skeletal system.	1.1 Describe the structure of the skeletal system. 1.2 Identify the location of major bones. 1.3 Explain the function of the skeletal system. 1.4 Describe the different classifications of joints.
2. Understand the structure and function of the muscular system.	2.1 Describe the function of the muscular system. 2.2 Describe the different muscle types. 2.3 Identify the location of the major muscles in the human body. 2.4 Describe the different fibre types.
3. Understand the structure and function of the cardiovascular system.	3.1 Describe the structure of the cardiovascular system. 3.2 Explain the functions of the cardiovascular system.

<p>4. Understand the structure and function of the respiratory system.</p>	<p>4.1 Describe the structure of the respiratory system.</p> <p>4.2 Explain the functions of the respiratory system.</p>
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Assessment (Ungraded)

1. Meets assessment criteria

Achieved

Indicative content

The following content is to be included in the delivery of the unit.

Learning outcomes	Indicative content
1. Structure	<ul style="list-style-type: none"> • Axial skeleton • Appendicular skeleton • Types of bone (long bones, short bones, flat bones, irregular bones, sesamoid bones)
1. Location of Major bones	<ul style="list-style-type: none"> • Cranium, clavicle, ribs, sternum, humerus, radius, ulna, scapula, ilium, pubis, ischium, carpals, metacarpals, phalanges, femur, patella, tibia, fibula, tarsals, metatarsals, vertebral column – cervical, thoracic, and lumbar vertebrae, sacrum, coccyx
1. Function	<ul style="list-style-type: none"> • Support • Protection • Attachment for skeletal muscle • Source of blood cell production • Store of minerals
1. Classification of Joints	<ul style="list-style-type: none"> • Fixed • Slightly moveable • Synovial/freely moveable • Types, structures, movement at each joint
2 – Functions	<ul style="list-style-type: none"> • Movement – antagonistic pairs (agonist, antagonist); fixator; synergist; • Types of contraction (isometric, concentric, eccentric, isokinetic) • Heat production
2 – Muscle types Location of Major Muscles	<p>Muscle Types</p> <ul style="list-style-type: none"> • Cardiac (non-fatiguing, involuntary). • Skeletal (fatiguing, voluntary).

	<ul style="list-style-type: none"> • Smooth (involuntary) <p>Major Muscles biceps, triceps, deltoids, pectoralis major, rectus abdominis, rectus femoris, vastus lateralis, vastus medialis, vastus intermedius, semimembranosus, semitendinosus, biceps femoris, gastrocnemius, soleus, tibialis anterior, erector spinae, teres major, trapezius, latissimus dorsi, obliques, gluteus maximus</p>
2 – Fibre Types	<ul style="list-style-type: none"> • Type 1 • Type 2a • Type 2b • Characteristics • Types of sports each are associated with each type
3 -Structure of the cardiovascular system	<ul style="list-style-type: none"> • Heart (atria, ventricles, bicuspid valve, tricuspid valve, aortic valve, pulmonary valve, aorta, vena cava – superior and inferior, pulmonary vein, pulmonary artery) • Blood vessels (arteries, arterioles, capillaries, veins, venuoles)
3 – Function of the cardiovascular system	<ul style="list-style-type: none"> • Delivery of oxygen and nutrients • Removal of waste products • Thermoregulation (vasodilation and vasoconstriction of vessels) • Function of blood (oxygen transport, clotting, fighting infection)
4 - Structure of the respiratory system	nasal cavity, epiglottis; pharynx; larynx; trachea; bronchus; bronchioles; lungs (lobes, pleural membrane, thoracic cavity, visceral pleura, pleural fluid, alveoli); diaphragm; intercostal muscles (external and internal)
4 – Function of the respiratory system	<ul style="list-style-type: none"> • Gaseous exchange (percentage of carbon dioxide and oxygen inspired and expired, diffusion of gases) • Mechanisms of breathing (inspiration and expiration) • Lung volumes, eg tidal volume, vital capacity, residual volume

Indicative content

The following content is to be included in the assessment of the unit.

Learning outcomes	Indicative content
<p>1. Understand the structure and function of the Skeletal System</p>	<p>Learners must describe the structure of the skeletal system, to include: bone structure (compact and cancellous), the axial skeleton and the appendicular skeleton, types of bone (long, short, flat, irregular and sesamoid) providing examples of where each type of bone can be located in the skeleton.</p> <p>Learners must be able to locate the major bones of the skeletal system as identified in the inductive content.</p> <p>Learners must describe the functions of the skeletal system providing relevant examples</p> <p>Learners must describe the 3 different types of joints found in the skeletal system, to include the location, structure and movement available.</p> <p>Learners must describe the following types of synovial joints providing examples of where they can be found:</p> <ul style="list-style-type: none"> • ball and socket • hinge • pivot • gliding • condyloid • saddle. <p>Learners must describe the movement available at each synovial joint, such as flexion/extension, lateral flexion, abduction, adduction, rotation, circumduction, pronation, supination, plantar flexion, dorsiflexion, inversion and eversion</p>
<p>2. Understand the structure and function of the muscular system</p>	<p>Learners must describe the functions of the muscular system, to include:</p> <ul style="list-style-type: none"> • movement • heat production • muscle contraction. <p>Learners must describe the different muscle types, including:</p> <ul style="list-style-type: none"> • smooth, cardiac, and skeletal • the characteristics of each muscle type • examples of where each muscle type can be located in the body.

	<p>Learners must identify the location of the major muscles of the body as per the indicative content.</p> <p>Learners must describe the different fibre types: Type 1; Type 2a; Type 2b and include:</p> <ul style="list-style-type: none"> • the different characteristics of each classification • examples of different sports or actions where these fibres are used
<p>3. Understand the structure and function of the cardiovascular system</p>	<p>Learners must describe the structure of the cardiovascular system, to include:</p> <ul style="list-style-type: none"> • atria, ventricles, bicuspid valve, tricuspid valve, aortic valve, pulmonary valve, aorta, vena cava - superior and inferior, pulmonary vein, pulmonary artery. <p>Learners must also describe the characteristics of different blood vessels:</p> <ul style="list-style-type: none"> • arteries • arterioles • capillaries • veins • venules. <p>Learners must describe the functions of the cardiovascular system, to include:</p> <ul style="list-style-type: none"> • delivery of oxygen and nutrients • removal of waste products • thermoregulation (vasodilation and vasoconstriction of vessels) • the function of blood (oxygen transport, clotting, fighting infection).
<p>4. Understand the structure and function of the respiratory system</p>	<p>Learners must describe the structures of the respiratory system, to include:</p> <ul style="list-style-type: none"> • nasal cavity • epiglottis • pharynx • larynx • trachea • bronchus • bronchioles • lungs (lobes, pleural membrane, thoracic cavity visceral pleura, pleural fluid, and alveoli) • diaphragm • intercostal muscles (external and internal).

	<p>Learners must describe the functions of the respiratory system, to include:</p> <ul style="list-style-type: none">• gaseous exchange• mechanisms of breathing in relation to inspiration and expiration• lung volumes (tidal volume)• vital capacity• residual volume
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Assessment methodology

The following assessment methods are suggested for the assessment of this unit.

- Report
- Presentation
- Academic Poster
- Assignment