

**ITEC Level 3**

**Unit 383 – Knowledge of Anatomy, Physiology and Pathology for Complementary Therapies**

**Recommended Minimum Guided Learning Hours – 94**

**Learning Outcome**

The Learner will:

1. Understand the organisation of the body

**Assessment Criteria**

The Learner can:

- 1.1 Describe the anatomical regions of the body

- 1.2 Describe the planes of the body

- 1.3 Describe the directional terms of the body

- 1.4 Describe the quadrants of the body

- 1.5 Describe the chemical organisation of the body

- 1.6 Describe the structure, function and types of cell

**Taught Content**

1.1.1 To include:

- Abdominal ▪ Axillary ▪ Brachial ▪ Buccal ▪ Calcaneal ▪ Carpal ▪ Cephalic ▪ Cervical ▪ Costal
- Cranial ▪ Crural ▪ Cubital ▪ Cutaneous ▪ Femoral ▪ Forearm ▪ Frontal ▪ Gluteal ▪ Groin
- Inguinal ▪ Lumbar ▪ Mammary ▪ Occipital ▪ Ophthalmic ▪ Oral ▪ Orbital ▪ Palmar ▪ Patellar
- Pectoral ▪ Pedal ▪ Pelvic ▪ Perineal ▪ Plantar ▪ Popliteal ▪ Sacral ▪ Tarsal ▪ Thoracic
- Umbilical

1.2.1 To include:

- Sagittal ▪ Coronal/Frontal ▪ Transverse

1.3.1 To include:

- Superior ▪ Caudal/Inferior ▪ Anterior/Ventral ▪ Posterior/Dorsal ▪ Medial ▪ Lateral
- Proximal ▪ Distal ▪ Superficial ▪ Deep ▪ Ipsilateral ▪ Contralateral ▪ Parietal ▪ Visceral

1.4.1 To include:

- Left Upper Quadrant (LUQ) ▪ Right Upper Quadrant (RUQ) ▪ Left Lower Quadrant (LLQ)
- Right Lower Quadrant (RLQ)

1.5.1 To include:

- Atoms ▪ Molecules ▪ Inorganic compounds ▪ Organic compounds

1.6.1 To include:

- Cell Membrane ▪ Cytoplasm ▪ Mitochondria ▪ Ribosome ▪ Endoplasmic Reticulum ▪ Golgi Apparatus ▪ Lysosomes ▪ Vacuoles ▪ Centrioles ▪ Centrosome ▪ Nuclear Membrane
- Nucleus ▪ Nucleolus ▪ Chromatin ▪ Chromosomes ▪ Chromatids ▪ Centromere

1.6.2 To include:

- Movement ▪ Respiration ▪ Sensitivity ▪ Growth ▪ Reproduction ▪ Excretion ▪ Metabolism
- Anabolism ▪ Catabolism

1.6.3 The process of Mitosis to include:

- Prophase ▪ Metaphase ▪ Anaphase ▪ Telophase ▪ Interphase

1.6.4 How substances enter and leave the cell to include:

- Diffusion ▪ Osmosis ▪ Dissolution ▪ Active Transport ▪ Filtration ▪ Phagocytosis
- Pinocytosis

1.6.5 Define Histology

1.6.6 The structure and function of the main types of tissue in the body

To include the following, giving examples:

◆ **Epithelial tissue**

- Simple: ▪ Squamous ▪ Cuboidal ▪ Columnar ▪ Ciliated ▪ Compound: ▪ Stratified – keratinised, non-keratinised ▪ Transitional

◆ **Nervous tissue**

◆ **Muscular tissue**

- Striated ▪ Non-striated ▪ Cardiac

◆ **Connective tissue**

- Areolar ▪ Adipose ▪ Lymphoid ▪ Yellow elastic ▪ White fibrous ▪ Bone ▪ Blood
- Cartilage (hyaline, yellow elastic, white fibrous)

◆ **Membranes**

- Serous ▪ Mucous ▪ Synovial

1.6.7 Define the following:

- Anatomy ▪ Physiology ▪ Pathology ▪ The acute condition ▪ The chronic condition ▪ The emergency condition



|  |  |
|--|--|
| <p>2.3 Explain the structure, function and growth cycle of the nails</p> | <p>2.3.1 The position and function of the following nail structures to include:<br/> <ul style="list-style-type: none"> <li>▪ Free edge ▪ Hyponychium ▪ Eponychium ▪ Paronychium ▪ Lunula ▪ Mantle ▪ Cuticle ▪ Nail plate ▪ Nail bed ▪ Nail fold ▪ Matrix ▪ Nail wall</li> </ul> </p> <p>2.3.2 The process by which the nail grows<br/> <ul style="list-style-type: none"> <li>▪ Formed in the matrix ▪ 3 layers ▪ Keratin ▪ Grows forward and dovetails into the nail bed</li> <li>▪ Rate of growth</li> </ul> </p> <p>2.3.3 The factors which affect nail growth to include:<br/> <ul style="list-style-type: none"> <li>▪ Health ▪ Age ▪ Diet ▪ Medication ▪ Climate ▪ Damage ▪ Lifestyle</li> </ul> </p>   |
| <p>2.4 Analyse the pathologies of the skin</p>                           | <p>2.4.1 To include:</p> <ul style="list-style-type: none"> <li>◆ Congenital <ul style="list-style-type: none"> <li>▪ Eczema ▪ Psoriasis</li> </ul> </li> <li>◆ Bacterial <ul style="list-style-type: none"> <li>▪ Acne Vulgaris ▪ Acne Rosacea ▪ Boils ▪ Carbuncles ▪ Folliculitis ▪ Impetigo</li> </ul> </li> <li>◆ Viral <ul style="list-style-type: none"> <li>▪ Herpes simplex ▪ Herpes zoster ▪ Verrucae ▪ Warts</li> </ul> </li> <li>◆ Fungal <ul style="list-style-type: none"> <li>▪ Candida ▪ Tinea corporis ▪ Tinea Pedis</li> </ul> </li> <li>◆ Parasitological infestation <ul style="list-style-type: none"> <li>▪ Pediculosis – capitis, corporis, pubis ▪ Scabies</li> </ul> </li> <li>◆ Pigmentation disorders <ul style="list-style-type: none"> <li>▪ Albinism ▪ Chloasma ▪ Dermatitis Papulosa Nigra ▪ Ephelides ▪ Lentigo ▪ Naevae</li> <li>▪ Papilloma ▪ Port wine stain ▪ Vitiligo</li> </ul> </li> <li>◆ General disorders <ul style="list-style-type: none"> <li>▪ Abrasions ▪ Allergic reaction ▪ Blisters ▪ Broken capillaries ▪ Comedones ▪ Corns ▪ Cyst</li> <li>▪ Crow's feet ▪ Cuts ▪ Chilblains ▪ Dermatitis ▪ Dehydrated skin ▪ Keloid scars ▪ Loss of skin sensation ▪ Milia ▪ Sensitive skin ▪ Striae ▪ Thin skin ▪ UV damage ▪ Urticaria ▪ Verrucae filliformis (skin tags) ▪ Verrucae ▪ Warts ▪ Xanthomas ▪ Burns ▪ Cellulitis ▪ Methicillin-resistant Staphylococcus aureus (MRSA) ▪ Pressure sores/bed sores ▪ Sudiferous gland disorders - bromidrosis/osmidrosis, anhidrosis, hyperhidrosis ▪ Connective tissue diseases – Scleroderma, Systemic Lupus Erythematosus (SLE)</li> </ul> </li> </ul> <p>2.4.2 The different skin cancers and their possible causes to include:<br/> <ul style="list-style-type: none"> <li>▪ Basal Cell Carcinoma ▪ Squamous Cell Carcinoma ▪ Malignant Melanoma</li> </ul> </p> |

|   |   |
|---|---|
| <p>2.5 Analyse the pathologies of the hair</p> <p>2.6 Analyse the pathologies of the nails</p>  | <p>2.5.1 To include:<br/> <ul style="list-style-type: none"> <li>▪ Alopecia</li> <li>▪ Androgenic Alopecia</li> <li>▪ Hirsutism</li> <li>▪ Ingrown hair</li> <li>▪ Pediculosis capitis</li> <li>▪ Sycosis barbae</li> </ul> </p> <p>2.6.1 To include:<br/> <ul style="list-style-type: none"> <li>▪ Beau's line</li> <li>▪ Blue nail</li> <li>▪ Discoloured nails</li> <li>▪ Dry/Brittle nails</li> <li>▪ Flaking</li> <li>▪ Hang nail</li> <li>▪ Habit tic</li> <li>▪ Koilonychia</li> <li>▪ Lamella dystrophy</li> <li>▪ Leuconychia</li> <li>▪ Onychatrophia</li> <li>▪ Onychauxis</li> <li>▪ Onychia</li> <li>▪ Onychocryptosis</li> <li>▪ Onychogryposis</li> <li>▪ Onycholysis</li> <li>▪ Onychomycosis</li> <li>▪ Onychophagy</li> <li>▪ Paronychia</li> <li>▪ Pitting</li> <li>▪ Pterygium</li> <li>▪ Psoriasis</li> <li>▪ Sepsis</li> <li>▪ Transverse ridges</li> <li>▪ Vertical ridges</li> <li>▪ Tinea Ungium</li> <li>▪ Tinea Pedis</li> <li>▪ Whitlow</li> </ul> </p>   |
| <p><b>Learning Outcome</b><br/> The Learner will:</p> <p>3. Understand the anatomy, physiology and pathologies of the skeletal system</p> |   |
| <p><b>Assessment Criteria</b><br/> The Learner can:</p>   | <p><b>Taught Content</b></p>  |
| <p>3.1 Explain the structure and classification of bones</p> <p>3.2 Explain the structure, function and growth of the skeletal system</p> | <p>3.1.1 To include:<br/> <ul style="list-style-type: none"> <li>▪ Compact</li> <li>▪ Cancellous</li> <li>▪ Long</li> <li>▪ Short</li> <li>▪ Flat</li> <li>▪ Irregular</li> <li>▪ Sesamoid</li> <li>▪ Examples of where in the body they would be found</li> </ul> </p> <p>3.2.1 To include:<br/> <ul style="list-style-type: none"> <li>▪ Axial skeleton</li> <li>▪ Appendicular skeleton</li> <li>▪ Support framework</li> <li>▪ Provides attachments for muscles</li> <li>▪ Forms joints to provide movement</li> <li>▪ Forms erythrocytes in the bone marrow</li> <li>▪ Stores calcium</li> <li>▪ Protection</li> <li>▪ Osteoblasts</li> <li>▪ Osteocytes</li> <li>▪ Osteoclasts</li> <li>▪ Epiphysis</li> <li>▪ Diaphysis</li> <li>▪ Periosteum</li> <li>▪ Ossification</li> </ul> </p> <p>3.2.2 The bones of the skeleton to include:</p> <ul style="list-style-type: none"> <li>◆ <b>Cranium</b> <ul style="list-style-type: none"> <li>▪ Parietal</li> <li>▪ Frontal</li> <li>▪ Ethmoid</li> <li>▪ Sphenoid</li> <li>▪ Occipital</li> <li>▪ Temporal</li> </ul> </li> <li>◆ <b>Facial</b> <ul style="list-style-type: none"> <li>▪ Nasal</li> <li>▪ Zygomatic</li> <li>▪ Maxilla</li> <li>▪ Lacrimal</li> <li>▪ Turbinator</li> <li>▪ Palatine</li> <li>▪ Mandible</li> <li>▪ Vomer</li> <li>▪ Hyoid</li> </ul> </li> <li>◆ <b>Vertebrae</b> <ul style="list-style-type: none"> <li>▪ 7 Cervical</li> <li>▪ 12 Thoracic</li> <li>▪ 5 Lumbar</li> <li>▪ 5 Sacrum</li> <li>▪ 4 Coccyx</li> <li>▪ Intervertebral discs</li> </ul> </li> <li>◆ <b>Shoulder Girdle</b> <ul style="list-style-type: none"> <li>▪ Scapula</li> <li>▪ Clavicle</li> </ul> </li> </ul> |

|  |   |
|--|---|
| <p>3.3 Explain the types of joints and their range of movements</p> <p>3.4 Explain the functions of the arches of the feet</p> <p>3.5 Analyse the pathologies of the skeletal system</p> | <ul style="list-style-type: none"> <li>◆ <b>Thoracic Cage</b> <ul style="list-style-type: none"> <li>▪ Ribs ▪ Sternum</li> </ul> </li> <li>◆ <b>Pelvic Girdle</b> <ul style="list-style-type: none"> <li>▪ Innominate bones: Ischium ▪ Ilium ▪ Pubis</li> </ul> </li> <li>◆ <b>Upper Limb</b> <ul style="list-style-type: none"> <li>▪ Humerus ▪ Ulna ▪ Radius ▪ Carpals: Scaphoid, Lunate, Triquetral, Pisiform, Trapezium, Trapezoid, Capitate, Hamate ▪ Metacarpals ▪ Phalanges</li> </ul> </li> <li>◆ <b>Lower Limb</b> <ul style="list-style-type: none"> <li>▪ Femur ▪ Tibia ▪ Fibula ▪ Patella ▪ Tarsals: Talus, Calcaneus, Navicular, Cuneiforms (Medial, Intermediate, Lateral), Cuboid ▪ Metatarsals ▪ Phalanges</li> </ul> </li> </ul> <p>3.3.1 The different types of joints and where they occur in the body to include:</p> <ul style="list-style-type: none"> <li>▪ Fixed/fibrous ▪ Slightly moveable/cartilaginous ▪ Freely moveable/synovial ▪ Ball and Socket ▪ Condylloid ▪ Hinge ▪ Pivot ▪ Gliding ▪ Saddle ▪ Ligament(s) and where they are found</li> </ul> <p>3.4.1 To include:</p> <ul style="list-style-type: none"> <li>▪ Longitudinal arches ▪ Transverse arch</li> </ul> <p>3.5.1 To include:</p> <ul style="list-style-type: none"> <li>▪ Arthritis ▪ Ankylosing spondylitis ▪ Cancer ▪ Carpal Tunnel Syndrome ▪ Cervical spondylitis ▪ Fractures ▪ Ganglion ▪ Gout ▪ Osteo Arthritis ▪ Osteoporosis ▪ Prolapsed intervertebral (slipped) disc ▪ Rheumatoid Arthritis ▪ Stress ▪ Synovitis ▪ Tooth disorders ▪ Whiplash ▪ Fractures – simple, compound, comminuted, greenstick, impacted, complicated ▪ Loss of limbs - prostheses ▪ Osteomalacia ▪ Osteogenesis imperfecta ▪ Psoriatic Arthritis ▪ Paget’s disease ▪ Rickets ▪ Spinal stenosis</li> </ul> <p>3.5.2 Recognition and possible causes of postural deformities to include:</p> <ul style="list-style-type: none"> <li>▪ Congenital ▪ Environmental ▪ Traumatic ▪ Kyphosis ▪ Lordosis ▪ Scoliosis</li> </ul> |
| <p><b>Learning Outcome</b><br/>The Learner will:</p> <p>4. Understand the anatomy, physiology and pathologies of the muscular system</p>   |   |
| <p><b>Assessment Criteria</b><br/>The Learner can:</p>   | <p><b>Taught Content</b></p>  |
| <p>4.1 Explain the structure, function, growth and repair of the muscular system</p>   | <p>4.1.1 To include:</p> <ul style="list-style-type: none"> <li>▪ Voluntary/skeletal (striated) ▪ Involuntary/smooth (non-striated) ▪ Cardiac ▪ Movement</li> <li>▪ Joint stabilisation ▪ Postural maintenance ▪ Temperature control</li> <li>▪ Sliding filament theory ▪ Nutrition (protein synthesis) ▪ Amino acids</li> </ul>  |

|  |   |
|--|---|
| <p>4.2 Explain the location and action of muscle groups within the muscular system</p> | <p>4.2.1 To include:</p> <ul style="list-style-type: none"> <li>◆ <b>Trunk/torso</b> <ul style="list-style-type: none"> <li>▪ Sternocleidomastoid ▪ Splenius Capitis ▪ Levator scapulae ▪ Trapezius ▪ Erector Spinae</li> <li>▪ Supraspinatis ▪ Infraspinatis ▪ Teres Major ▪ Teres Minor ▪ Subscapularis ▪ Rhomboid Major and Minor ▪ Serratus Anterior ▪ Latissimus Dorsi ▪ Gluteus Medius ▪ Gluteus Maximus</li> <li>▪ Gluteus Minimus ▪ Pectoralis Major and Minor ▪ Rectus Abdominus ▪ External Oblique</li> <li>▪ Internal Oblique ▪ Transversus Abdominus ▪ Quadratus Lumborum ▪ Intercostals</li> </ul> </li> <li>◆ <b>Arm/Hand</b> <ul style="list-style-type: none"> <li>▪ Deltoid ▪ Biceps ▪ Triceps ▪ Brachialis ▪ Coraco Brachialis ▪ Brachioradialis ▪ Pronator Teres ▪ Supinator Radii Brevis ▪ Flexor Carpi Radialis ▪ Palmaris Longus ▪ Extensor Carpi Radialis ▪ Extensor Carpi Ulnaris ▪ Flexor Carpi Ulnaris ▪ Flexor Carpi Digitorum ▪ Extensor Carpi Digitorum ▪ Extensor Pollicis Longus ▪ Flexor Pollicis Brevis ▪ Abductor Pollicis Brevis</li> <li>▪ Flexor Digitorum Superficialis ▪ Muscles of Thenar Eminence ▪ Muscles of Hypothenar Eminence ▪ Palmar Aponeurosis ▪ Tendons of Extensor Digitorum ▪ Flexor Digitorum Profundus</li> </ul> </li> <li>◆ <b>Upper Leg/Thigh</b> <ul style="list-style-type: none"> <li>▪ Iliacus ▪ Psoas ▪ Quadriceps: Rectus Femoris, Vastus Lateralis, Vastus Medialis, Vastus Intermedius ▪ Hamstrings: Biceps Femoris, Semimembranosus, Semitendinosus</li> <li>▪ Adductor Longus ▪ Adductor Magnus ▪ Adductor Brevis ▪ Gracilis ▪ Sartorius</li> <li>▪ Piriformis ▪ Gluteus Maximus ▪ Gluteus Medius ▪ Gluteus Minimus</li> </ul> </li> <li>◆ <b>Lower Leg/Foot</b> <ul style="list-style-type: none"> <li>▪ Gastrocnemius ▪ Soleus ▪ Peroneus Longus ▪ Peroneus Brevis ▪ Tibialis Anterior ▪ Tibialis Posterior ▪ Extensor Digitorum Longus ▪ Extensor Hallucis Longus ▪ Flexor Digitorum Longus ▪ Peroneus Tertius ▪ Digitorum Brevis ▪ Abductor Hallucis ▪ Achilles Tendon ▪ Flexor Hallucis Longus</li> </ul> </li> <li>◆ <b>Face, neck and scalp</b> <ul style="list-style-type: none"> <li>▪ Occipitalis ▪ Frontalis ▪ Procerus nasi ▪ Nasalis ▪ Levator Labii Superioris ▪ Levator Anguli Oris ▪ Zygomaticus ▪ Orbicularis Oris ▪ Mentalis ▪ Depressor Labii Inferioris ▪ Depressor Anguli Oris ▪ Buccinator ▪ Risorius ▪ Medial and Lateral Pterygoids ▪ Masseter ▪ Temporalis</li> <li>▪ Orbicularis Oculi ▪ Levator palpebrae ▪ Sternocleidomastoid ▪ Splenius capitis ▪ Trapezius</li> <li>▪ Platysma</li> </ul> </li> </ul> <p>4.2.2 The following terms in relation to the muscular system to include:</p> <ul style="list-style-type: none"> <li>▪ Action ▪ Agonist ▪ Antagonist ▪ Attachment ▪ Belly ▪ Contractibility ▪ Elasticity ▪ Excitability</li> <li>▪ Extensibility ▪ Fatigue ▪ Fascia ▪ Insertion ▪ Levers ▪ Origin ▪ Tendon ▪ Tone ▪ Tension</li> <li>▪ Flexion ▪ Extension ▪ Abduction ▪ Adduction ▪ Rotation ▪ Supination ▪ Pronation</li> <li>▪ Dorsiflexion ▪ Plantarflexion ▪ Eversion ▪ Inversion ▪ Circumduction ▪ Protraction</li> <li>▪ Retraction ▪ Depression ▪ Elevation</li> </ul> |
|--|---|

|   |   |
|---|---|
| <p>4.3 Explain the principles of muscle contraction</p> <p>4.4 Analyse the pathologies of the muscular system</p>                       | <p>4.3.1 To include:</p> <ul style="list-style-type: none"> <li>▪ How a muscle works ▪ How it provides movement ▪ Isotonic ▪ Isometric ▪ How a muscle knows when to contract ▪ The source of energy to create a contraction ▪ Factors affecting muscle tone ▪ Different stages of contraction, i.e. tone and relaxation ▪ Over contraction, i.e. causes of muscle tension and muscle fatigue ▪ The formation of lactic acid ▪ Circulation and muscle health</li> </ul> <p>4.4.1 To include:</p> <ul style="list-style-type: none"> <li>▪ Adhesions ▪ Adhesive capsulitis (frozen shoulder) ▪ Atony ▪ Atrophy ▪ Achilles tendonitis ▪ Back pain e.g., Lumbago, Rheumatism ▪ Bursitis ▪ Cramp ▪ Deltoid bursitis ▪ Fibromyalgia ▪ Housemaid's knee ▪ Lateral epicondylitis (tennis elbow) ▪ Medial epicondylitis (golfer's elbow) ▪ Microtrauma ▪ Muscle Fatigue ▪ Myositis ▪ Overuse ▪ Repetitive Strain Injury/syndrome ▪ Rupture ▪ Shin splints ▪ Spasm ▪ Spasticity ▪ Sprain ▪ Strain ▪ Stress ▪ Tendonitis ▪ Achilles bursitis ▪ Muscular dystrophy ▪ Tetanus</li> </ul> |
| <p><b>Learning Outcome</b><br/>The Learner will:</p> <p>5. Understand the anatomy, physiology and pathologies of the nervous system</p> |   |
| <p><b>Assessment Criteria</b><br/>The Learner can:</p>  | <p><b>Taught Content</b></p>  |
| <p>5.1 Describe the structure and function of each component of the nervous system</p>  | <p>5.1.1 To include:</p> <ul style="list-style-type: none"> <li>▪ Neurone ▪ Motor Neurone ▪ Sensory Neurone ▪ Mixed Nerve ▪ Dendrite ▪ Axon ▪ Synapse ▪ Neurilemma ▪ Nodes of Ranvier ▪ White Matter ▪ Grey Matter ▪ Myelin Sheath ▪ End Feet/Axon Terminals ▪ Ganglia ▪ Reflex Arc</li> </ul> <p>5.1.2 The structure and functions of the Central Nervous System (CNS), the Peripheral and the Autonomic Nervous System (ANS) to include:</p> <ul style="list-style-type: none"> <li>◆ <b>Central Nervous System</b> <ul style="list-style-type: none"> <li>▪ Brain ▪ Spinal Cord</li> </ul> </li> <li>◆ <b>Peripheral Nervous System</b> <ul style="list-style-type: none"> <li>▪ 12 pairs of cranial nerves ▪ 31 pairs of spinal nerves ▪ 8 cervical ▪ 12 thoracic ▪ 5 lumbar ▪ 5 sacral ▪ 1 coccygeal ▪ Brachial plexus ▪ Lumbar plexus ▪ Sacral plexus</li> </ul> </li> <li>◆ <b>Autonomic Nervous System</b> <ul style="list-style-type: none"> <li>▪ Sympathetic ▪ Parasympathetic</li> </ul> </li> </ul>  |



|   |   |
|---|---|
| <p>5.2 Analyse the pathologies of the nervous system</p>  | <p>5.1.3 The structure and function of the brain and spinal cord to include:</p> <ul style="list-style-type: none"> <li>◆ <b>Brain</b></li> <li>▪ Meninges – Pia, Arachnoid and Dura mater ▪ Cerebrospinal Fluid ▪ Cerebrum</li> <li>▪ Cerebellum ▪ Pons varolii ▪ Medulla Oblongata ▪ Hypothalamus ▪ Thalamus ▪ Brain Stem</li> <li>◆ <b>Spinal cord</b></li> <li>▪ White Matter ▪ Grey Matter ▪ Dura, Arachnoid and Pia Mater ▪ Cerebrospinal Fluid</li> </ul> <p>5.1.4 How a nerve impulse is created to include:</p> <ul style="list-style-type: none"> <li>▪ Changes in temperature, pressure and chemicals ▪ Neurotransmitters ▪ Potassium and sodium ions</li> </ul> <p>5.2.1 To include:</p> <ul style="list-style-type: none"> <li>▪ Alcohol abuse ▪ Bell’s palsy ▪ Cancer ▪ Cerebral Palsy ▪ Depression – clinical, bipolar affective disorder, seasonal affective disorder (SAD), post-natal ▪ Drug abuse ▪ Epilepsy</li> <li>▪ Headache ▪ Migraine ▪ Motor Neurone Disease ▪ Multiple Sclerosis ▪ Myalgic Encephalomyelitis (ME) ▪ Neuralgia ▪ Neuritis ▪ Parkinson’s Disease ▪ Sciatica ▪ Stress</li> <li>▪ Stroke ▪ Transient ischaemic attack (TIA) ▪ Alzheimer’s disease ▪ Concussion ▪ Dementia</li> <li>▪ Motor Neurone disease ▪ Meningitis ▪ Myasthenia gravis ▪ Paralysis ▪ Peripheral neuropathy ▪ Poliomyelitis ▪ Spinal cord injury ▪ Spina bifida</li> </ul> <p>5.2.2 The effect of stress on the nervous system</p> <ul style="list-style-type: none"> <li>▪ The way in which stress affects the fear, fight, flight syndrome ▪ The way in which various parts of the sympathetic and parasympathetic nervous systems can be affected by stress and possible diseases and disorders caused by stress</li> </ul> |
| <p><b>Learning Outcome</b><br/>The Learner will:</p> <p>6. Understand the anatomy, physiology and pathologies of the endocrine system</p> |   |
| <p><b>Assessment Criteria</b><br/>The Learner can:</p>  | <p><b>Taught Content</b></p>  |
| <p>6.1 Explain the structure and function of the endocrine system</p>   | <p>6.1.1 To include:</p> <ul style="list-style-type: none"> <li>▪ Ductless glands ▪ Chemical messengers</li> </ul> <p>6.1.2 The interrelationship of the endocrine system with other systems to include:</p> <ul style="list-style-type: none"> <li>▪ Nervous system including the hypothalamus ▪ Circulatory system ▪ Digestive system</li> <li>▪ Reproductive system ▪ Integumentary system</li> </ul>  |

|     |   |  |
|-----|---|--|
| 6.2 | Explain the location of endocrine glands  | 6.2.1 To include: <ul style="list-style-type: none"> <li>▪ Pituitary ▪ Thyroid ▪ Parathyroids ▪ Thymus ▪ Pineal ▪ Pancreas ▪ Adrenal medulla</li> <li>▪ Adrenal cortex ▪ Ovaries ▪ Testes</li> </ul>   |
| 6.3 | Explain the function of the endocrine glands                                    | 6.3.1 To include: <ul style="list-style-type: none"> <li>▪ Maintenance of homeostasis ▪ Control of bodily functions ▪ Puberty, pregnancy, menopause and during the menstrual cycle</li> </ul>  |
| 6.4 | Describe the hormones secreted from the endocrine glands and their target sites | 6.4.1 Hormones secreted, their target sites and the result of hypo and hyper secretion of each to include: <ul style="list-style-type: none"> <li>◆ <b>Pituitary</b></li> <li><b>Posterior Lobe</b> <ul style="list-style-type: none"> <li>▪ Oxytocin ▪ Antidiuretic hormone (ADH or vasopressin)</li> </ul> </li> <li><b>Anterior lobe</b> <ul style="list-style-type: none"> <li>▪ Prolactin ▪ Human growth Hormone (HGH) ▪ Thyroid Stimulating Hormone (TSH)</li> <li>▪ Adrenocorticotrophin Hormone (ACTH) ▪ Luteinising Hormone (LH) ▪ Follicle Stimulating Hormone (FSH) ▪ Interstitial cell stimulating Hormone (ICH) ▪ Melanin Stimulating Hormone (MSH)</li> </ul> </li> <li>◆ <b>Thyroid gland</b> <ul style="list-style-type: none"> <li>▪ Thyroxin ▪ Triiodothyronine ▪ Calcitonin</li> </ul> </li> <li>◆ <b>Parathyroids</b> <ul style="list-style-type: none"> <li>▪ Parathormone</li> </ul> </li> <li>◆ <b>Thymus</b> <ul style="list-style-type: none"> <li>▪ Thymosin</li> </ul> </li> <li>◆ <b>Pineal</b> <ul style="list-style-type: none"> <li>▪ Melatonin</li> </ul> </li> <li>◆ <b>Pancreas - Islets of Langerhans</b> <ul style="list-style-type: none"> <li>▪ Insulin ▪ Glucagon</li> </ul> </li> <li>◆ <b>Adrenal medulla</b> <ul style="list-style-type: none"> <li>▪ Adrenalin (Epinephrine) ▪ Noradrenalin</li> </ul> </li> <li>◆ <b>Adrenal cortex</b> <ul style="list-style-type: none"> <li>▪ Mineralocorticoids – Aldosterone ▪ Glucocorticoids – Cortisone, Cortisol ▪ Sex hormones – Androgens, Progesterone/oestrogen</li> </ul> </li> <li>◆ <b>Ovaries</b> <ul style="list-style-type: none"> <li>▪ Oestrogen ▪ Progesterone</li> </ul> </li> <li>◆ <b>Testes</b></li> </ul> |

|  |   |
|--|---|
| <p>6.5 Analyse the pathologies of the endocrine systems</p>  | <p>6.4.2 The exocrine glands to include:<br/> <ul style="list-style-type: none"> <li>▪ Salivary ▪ Mammary ▪ Sebaceous ▪ Eccrine ▪ Apocrine</li> </ul> </p> <p>6.5.1 To include:<br/> <ul style="list-style-type: none"> <li>▪ Addison's disease ▪ Cancer ▪ Cushings syndrome ▪ Diabetes Insipidus ▪ Diabetes Mellitus</li> <li>▪ Goitre ▪ Grave's disease ▪ Hyperthyroidism - thyrotoxicosis ▪ Hypothyroidism ▪ Insomnia</li> <li>▪ Polycystic Ovarian Syndrome ▪ Stress ▪ Myxoedema ▪ Acromegaly ▪ Gigantism</li> <li>▪ Hyperparathyroidism ▪ Hypoparathyroidism</li> </ul> </p>   |
| <p><b>Learning Outcome</b><br/> The Learner will:<br/> 7. Understand the anatomy, physiology and pathologies of the respiratory system</p>                               |   |
| <p><b>Assessment Criteria</b><br/> The Learner can:</p>  | <p><b>Taught Content</b></p>  |
| <p>7.1 Explain the structure and function of the respiratory system</p> <p>7.2 Describe the stages of respiration</p> <p>7.3 Explain the process of gaseous exchange</p> | <p>7.1.1 To include:<br/> <ul style="list-style-type: none"> <li>▪ Nose ▪ Nasal cavity ▪ Mouth ▪ Pharynx ▪ Larynx ▪ Trachea ▪ Bronchi ▪ Bronchioles ▪ Alveoli</li> <li>▪ Lungs (including lobes) ▪ Ribs ▪ Pleura (visceral, parietal, pleural cavity) ▪ Diaphragm</li> <li>▪ Intercostal muscles</li> </ul> </p> <p>7.1.2 The interrelationship of the respiratory system with other systems of the body to include:<br/> <ul style="list-style-type: none"> <li>▪ Circulatory system ▪ Nervous system ▪ Muscular system</li> </ul> </p> <p>7.2.1 To include:<br/> <ul style="list-style-type: none"> <li>▪ Ventilation ▪ Pulmonary gas exchange ▪ Gas transport ▪ Peripheral gas exchange</li> </ul> </p> <p>7.3.1 External respiration, i.e. the process and mechanism of breathing/ventilation to include:<br/> <ul style="list-style-type: none"> <li>▪ Inhalation and the organs involved ▪ Expiration and the organs involved ▪ Process of diffusion in the alveoli</li> </ul> </p> <p>7.3.2 Internal respiration to include:<br/> <ul style="list-style-type: none"> <li>▪ The way in which the transport and exchange of gases takes place between the cells and the circulatory system</li> </ul> </p> <p>7.3.3 The chemical control of the respiration to include:<br/> <ul style="list-style-type: none"> <li>▪ Position, function and role of the chemo-receptors</li> </ul> </p> |

|  |  |
|--|--|
| <p>7.4 Analyse the pathologies of the respiratory system</p>   | <p>7.3.4 The nervous control of respiration to include:</p> <ul style="list-style-type: none"> <li>▪ Role of the brain, i.e. the pons varolii and medulla oblongata in the process of respiration</li> </ul> <p>7.4.1 To include:</p> <ul style="list-style-type: none"> <li>▪ Asthma ▪ Bronchitis ▪ Cancer ▪ Common cold ▪ Cough ▪ Emphysema ▪ Hay fever</li> <li>▪ Influenza ▪ Laryngitis ▪ Pleurisy ▪ Pharyngitis ▪ Pneumonia ▪ Pulmonary Embolism</li> <li>▪ Rhinitis ▪ Sinusitis ▪ Smoking ▪ Stress ▪ Tonsillitis ▪ Tuberculosis (TB) ▪ Bronchiolitis ▪ Cor pulmonale ▪ Chronic Obstructive Airways Disease /Chronic Obstructive Pulmonary Disorder (COPD) ▪ Cystic fibrosis ▪ Hyperventilation ▪ Lung cancer ▪ Pertussis ▪ Pneumothorax</li> <li>▪ Pulmonary Fibrosis ▪ Sarcoidosis ▪ Severe Acute Respiratory Syndrome (SARS) ▪ Snoring</li> <li>▪ Tracheitis</li> </ul> <p>7.4.2 Modified respiratory movements to include:</p> <ul style="list-style-type: none"> <li>▪ Crying ▪ Coughing ▪ Hiccoughs ▪ Laughing ▪ Sighing ▪ Sneezing ▪ Talking ▪ Yawning</li> </ul>  |
| <p><b>Learning Outcome</b><br/>The Learner will:</p> <p>8. Understand the anatomy, physiology and pathologies of the cardiovascular system</p> |  |
| <p><b>Assessment Criteria</b><br/>The Learner can:</p>   | <p><b>Taught Content</b></p>   |
| <p>8.1 Explain the structure and function of the cardiovascular system</p> <p>8.2 Explain the composition and functions of the blood</p>       | <p>8.1.1 To include:</p> <ul style="list-style-type: none"> <li>▪ Heart ▪ Arteries ▪ Arterioles ▪ Veins ▪ Venules ▪ Capillaries ▪ Transportation ▪ Protection</li> <li>▪ Regulation</li> </ul> <p>8.1.2 Pulmonary circulation to include:</p> <ul style="list-style-type: none"> <li>▪ Way in which the blood circulates from the heart to the lungs and back to the heart</li> <li>▪ Vessels in which the blood is carried ▪ Whether the blood is oxygenated or deoxygenated</li> <li>▪ Process of gaseous exchange</li> </ul> <p>8.1.3 Systemic circulation to include:</p> <ul style="list-style-type: none"> <li>▪ The structure and function of the systemic circulation ▪ The coronary circulation</li> </ul> <p>8.2.1 To include:</p> <ul style="list-style-type: none"> <li>▪ Erythrocytes ▪ Leucocytes ▪ Thrombocytes (Platelets) ▪ Plasma and plasma proteins</li> <li>▪ Transportation ▪ Protection ▪ Regulation</li> </ul> <p>8.2.2 The process of blood clotting/coagulation to include:</p> <ul style="list-style-type: none"> <li>▪ Thrombocytes ▪ Thromboplastin ▪ Prothrombin ▪ Calcium ▪ Thrombin ▪ Fibrinogen ▪ Fibrin</li> </ul> |

|   |   |
|---|---|
| 8.3 Explain the location, structure and function of the heart | 8.3.1 To include: <ul style="list-style-type: none"> <li>▪ Superior Vena Cava ▪ Inferior Vena Cava ▪ Right Atrium ▪ Tricuspid Valve ▪ Right Ventricle</li> <li>▪ Pulmonary Valve ▪ Pulmonary Artery ▪ Septum ▪ Pulmonary Veins ▪ Left Atrium ▪ Mitral (Bicuspid) Valve ▪ Left Ventricle ▪ Aorta ▪ Aortic Arch ▪ Endocardium ▪ Myocardium</li> <li>▪ Pericardium ▪ The cardiac cycle</li> </ul>  |
| 8.4 Explain the types of blood vessel                         | 8.4.1 To include: <ul style="list-style-type: none"> <li>▪ Arteries ▪ Arterioles ▪ Veins ▪ Venules ▪ Capillaries</li> </ul>   |
| 8.5 Identify the major blood vessels of the body              | 8.5.1 The position of the main arteries and veins of the body to include: <ul style="list-style-type: none"> <li>◆ <b>Main arteries of the head and neck</b></li> <li>▪ Innominate ▪ Common Carotid ▪ Internal Carotid ▪ External Carotid ▪ Facial ▪ Occipital</li> <li>▪ Superficial Temporal</li> <li>◆ <b>Main veins of the head and neck</b></li> <li>▪ Posterior External Jugular ▪ Occipital ▪ Superficial Temporal ▪ Maxillary ▪ Anterior Facial</li> <li>▪ Common Facial ▪ Internal Jugular ▪ External Jugular</li> <li>◆ <b>Main arteries of the body</b></li> <li>▪ Coronary Artery ▪ Ascending Aorta ▪ Descending Aorta ▪ Left Common Carotid ▪ Left Subclavian ▪ Right Common Carotid ▪ Right Subclavian ▪ Intercostal ▪ Pulmonary ▪ Right Hepatic ▪ Splenic ▪ Renal ▪ Superior Mesenteric ▪ Right Iliac ▪ Inferior Mesenteric ▪ Left Iliac</li> <li>▪ Vertebral ▪ Axillary ▪ Brachial ▪ Right Ulnar ▪ Left Ulnar ▪ Right Radial ▪ Left Radial ▪ Right Deep Palmar Arch ▪ Left Deep Palmar Arch ▪ Right Superficial Palmar Arch ▪ Left Superficial Palmar Arch ▪ External Iliac ▪ Left Femoral ▪ Right Femoral ▪ Left Popliteal</li> <li>▪ Right Popliteal ▪ Left Anterior Tibial ▪ Right Anterior Tibial ▪ Left Posterior Tibial ▪ Right Posterior Tibial ▪ Plantar Arch ▪ Digital arteries</li> <li>◆ <b>Main veins of the body</b></li> <li>▪ Inferior Vena Cava ▪ Pulmonary ▪ Right Hepatic ▪ Hepatic Portal ▪ Splenic ▪ Right Renal</li> <li>▪ Right Iliac ▪ Left Iliac ▪ Right Axillary ▪ Left Axillary ▪ Right Brachial ▪ Left Brachial ▪ Right Basilic ▪ Left Basilic ▪ Right Cephalic ▪ Left Cephalic ▪ Right Subclavian ▪ Left Subclavian</li> <li>▪ Long Saphenous ▪ Left Short Saphenous ▪ Right Short Saphenous ▪ Dorsal Venous Arch</li> <li>▪ Left Femoral ▪ Right Femoral ▪ Left Popliteal ▪ Right Popliteal ▪ Right Posterior Tibial ▪ Left Posterior Tibial ▪ Right Anterior Tibial ▪ Left Anterior Tibial</li> </ul> |
| 8.6 Define blood pressure                                     | 8.6.1 To include: <ul style="list-style-type: none"> <li>▪ Blood pressure and pulse rate and how they are measured</li> </ul>   |
| 8.7 Explain the factors that affect blood pressure            | 8.7.1 To include: <ul style="list-style-type: none"> <li>▪ Factors which produce, maintain and affect blood pressure and pulse rate</li> </ul>  |

|  |  |
|--|--|
| <p>8.8 Analyse the pathologies of the cardiovascular system</p>  | <ul style="list-style-type: none"> <li>▪ Systolic ▪ Diastolic ▪ Way in which blood pressure is measured ▪ Sphygmomanometer</li> </ul> <p>8.7.2 The conditions of high and low blood pressure to include:</p> <ul style="list-style-type: none"> <li>▪ Causes and effects of hypo and hyper tension ▪ Way in which blood pressure can be influenced by complementary therapies</li> </ul> <p>8.7.3 Describe the effects of exercise on the cardiovascular system</p> <p>8.8.1 To include:</p> <ul style="list-style-type: none"> <li>▪ Anaemia ▪ Angina ▪ Aneurysm ▪ Arteriosclerosis ▪ Atherosclerosis/Atheroma ▪ Cancer</li> <li>▪ Coronary thrombosis ▪ Deep Vein Thrombosis (DVT) ▪ Haemophilia ▪ Haematoma</li> <li>▪ Haemorrhoids ▪ HIV/AIDS ▪ High cholesterol ▪ High blood pressure (hypertension)</li> <li>▪ Leukaemia ▪ Low blood pressure (hypotension) ▪ Hepatitis A, B &amp; C ▪ Phlebitis</li> <li>▪ Septicaemia ▪ Stress ▪ Thrombus ▪ Varicose veins ▪ Cardiac arrhythmia, tachycardia, bradycardia ▪ Cardiac failure ▪ Epistaxis (nosebleeds) ▪ Gangrene ▪ Heart disease ▪ Hole in the heart (septal defects) ▪ Intermittent claudication ▪ Myocardial infarction ▪ Palpitations</li> <li>▪ Pulmonary embolism ▪ Raynaud’s disease ▪ Sickle cell anaemia ▪ Thalassaemia</li> <li>▪ Varicose ulcers</li> </ul> |
| <p><b>Learning Outcome</b><br/>The Learner will:</p> <p>9. Understand the anatomy, physiology and pathologies of the lymphatic system</p>  |  |
| <p><b>Assessment Criteria</b><br/>The Learner can:</p>   | <p><b>Taught Content</b></p>   |
| <p>9.1 Explain the structure and function of the lymphatic system</p> <p>9.2 Describe the composition of lymph</p> <p>9.3 Explain the location and function of the major lymphatic nodes and ducts</p> | <p>9.1.1 To include:</p> <ul style="list-style-type: none"> <li>▪ Lymphatic capillaries ▪ Lymphatic vessels ▪ Lymphatic nodes ▪ Lymphatic ducts ▪ Immune response ▪ Protection ▪ Transportation</li> </ul> <p>9.1.2 The interrelationship between the Circulatory/ Lymphatic systems and the Muscular, Digestive and Immune systems to include:</p> <ul style="list-style-type: none"> <li>▪ Way in which blood becomes tissue fluid ▪ Way in which excess tissue fluid is picked up by the lymphatic capillaries ▪ Route which the lymph takes before it returns to the Circulatory System</li> </ul> <p>9.2.1 To include:</p> <ul style="list-style-type: none"> <li>▪ Lymph ▪ Leucocytes ▪ Lymphocytes ▪ Waste products</li> </ul> <p>9.3.1 To include:</p> <ul style="list-style-type: none"> <li>▪ The position of the lymph nodes of the body and the way in which lymph is moved around the body ▪ Superficial and deep cervical ▪ Submandibular ▪ Thoracic duct ▪ Cisterna chyli</li> </ul>  |

|  |  |  |
|--|--|--|
| 9.4  | Explain the location and function of lymphatic organs      | <ul style="list-style-type: none"> <li>▪ Right lymphatic duct ▪ Axillary ▪ Mammary ▪ Supratrochlear ▪ Inguinal ▪ Popliteal ▪ Anterior auricular ▪ Posterior auricular ▪ Occipital</li> </ul>   |
| 9.5  | Explain the principles of immunity                         | <p>9.4.1 To include:</p> <ul style="list-style-type: none"> <li>▪ The structure and function of lymphatic tissue and the areas in which it can be found in the body ▪ Spleen ▪ Thymus ▪ Tonsils and adenoids ▪ Peyer’s Patches ▪ Appendix</li> </ul> <p>9.5.1 To include:</p> <ul style="list-style-type: none"> <li>▪ Antibodies ▪ Antigens ▪ The inflammatory response ▪ Immune response ▪ Acquired immunity – natural and artificial</li> </ul>   |
| 9.6  | Analyse the pathologies of the lymphatic system            | <p>9.6.1 To include:</p> <ul style="list-style-type: none"> <li>▪ Allergies ▪ Cancer ▪ Cellulitis ▪ HIV/AIDS ▪ Infectious mononucleosis (glandular fever) ▪ Lymphadenitis ▪ Lymphoedema ▪ Oedema/ Water retention ▪ Hodgkin’s disease ▪ Non-Hodgkin’s lymphoma ▪ Hashimoto’s thyroiditis ▪ Lymphoma</li> </ul>   |
| <p><b>Learning Outcome</b><br/>The Learner will:</p> <p>10. Understand the anatomy, physiology and pathologies of the digestive system</p> |  |  |
| <p><b>Assessment Criteria</b><br/>The Learner can:</p>   |  | <b>Taught Content</b>  |
| 10.1   | Explain the structure and function of the digestive system | <p>10.1.1 To include:</p> <ul style="list-style-type: none"> <li>▪ Mouth ▪ Tongue ▪ Teeth ▪ Pharynx ▪ Salivary Glands ▪ Epiglottis ▪ Alimentary Canal ▪ Oesophagus ▪ Stomach ▪ Pancreas ▪ Liver ▪ Gall bladder ▪ Small intestine (Duodenum, Jejunum, Ileum) ▪ Appendix ▪ Ileo-caecal Valve ▪ Large Intestine ▪ Rectum ▪ Anus</li> <li>▪ Accessory organs ▪ Breakdown of foodstuffs ▪ Absorption of nutrients ▪ Assimilation of nutrients ▪ Excretion of waste</li> </ul> <p>10.1.2 The interrelationship of the Digestive system with other systems of the body<br/>To include:</p> <ul style="list-style-type: none"> <li>▪ Circulatory ▪ Endocrine ▪ Lymphatic ▪ Muscular ▪ Nervous</li> </ul> |
| 10.2   | Explain the processes of digestion                         | <p>10.2.1 To include:</p> <ul style="list-style-type: none"> <li>▪ Mastication ▪ Peristalsis ▪ Ingestion ▪ Digestion ▪ Absorption ▪ Defecation ▪ Action of Rennin, hydrochloric acid and pepsin in the stomach ▪ Action of pancreatic juice, i.e. trypsin and trypsinogen, lipase, amylase on peptones, fats and polysaccharides ▪ Action of bile on fat ▪ Action of intestinal juice – maltase, sucrase, lactase on disaccharides</li> </ul>  |

|  |  |
|--|--|
| <p>10.3 Identify the location of the organs involved in digestion</p> <p>10.4 Analyse the pathologies of the digestive system</p>        | <p>10.2.2 The process of absorption of nutrients to include:</p> <ul style="list-style-type: none"> <li>▪ Process of absorption of nutrients by the villi and lacteals contained in the small intestine</li> </ul> <p>10.2.3 The function of the following and where in the digestive system they occur to include:</p> <ul style="list-style-type: none"> <li>▪ Enzymes ▪ Proteins ▪ Peptones ▪ Polypeptides ▪ Amino acids ▪ Carbohydrates</li> <li>▪ Monosaccharides ▪ Disaccharides ▪ Polysaccharides ▪ Fats ▪ Fatty acids ▪ Glycerol</li> </ul> <p>10.3.1 To include:</p> <ul style="list-style-type: none"> <li>▪ Mouth ▪ Tongue ▪ Teeth ▪ Pharynx ▪ Salivary Glands ▪ Epiglottis ▪ Alimentary Canal</li> <li>▪ Oesophagus ▪ Stomach ▪ Pancreas ▪ Liver ▪ Gall bladder ▪ Small intestine (Duodenum, Jejunum, Ileum) ▪ Appendix ▪ Ileo-caecal Valve ▪ Large Intestine ▪ Rectum ▪ Anus</li> <li>▪ Accessory organs</li> </ul> <p>10.4.1 To include:</p> <ul style="list-style-type: none"> <li>▪ Anorexia Nervosa ▪ Appendicitis ▪ Bulimia Nervosa ▪ Cancer ▪ Cirrhosis of the liver</li> <li>▪ Constipation ▪ Coeliac's disease ▪ Diarrhoea ▪ Flatulence ▪ Gall stones ▪ Gingivitis</li> <li>▪ Haemorrhoids ▪ Heartburn - Reflux oesophagitis ▪ Hepatitis ▪ Hernia – Abdominal, Hiatus</li> <li>▪ Hiccoughs ▪ Indigestion (Dyspepsia) ▪ Irritable bowel syndrome (IBS) ▪ Jaundice ▪ Nausea</li> <li>▪ Obesity ▪ Stress ▪ Ulcer – Aphthous (mouth), Duodenal, Gastric, Peptic, oesophageal</li> <li>▪ Candida ▪ Colitis ▪ Ulcerative colitis ▪ Crohn's disease ▪ Diverticulosis ▪ Diverticulitis</li> <li>▪ Enteritis ▪ Gastritis ▪ Inflamed gall bladder ▪ Pernicious anaemia</li> </ul> |
| <p><b>Learning Outcome</b><br/>The Learner will:</p> <p>11. Understand the anatomy, physiology and pathologies of the urinary system</p> |  |
| <p><b>Assessment Criteria</b><br/>The Learner can:</p>   | <p><b>Taught Content</b></p>   |
| <p>11.1 Explain the structure and function of the urinary system</p>   | <p>11.1.1 To include:</p> <ul style="list-style-type: none"> <li>▪ Nephron ▪ Kidney (cortex and medulla) ▪ Renal pelvis ▪ Ureters ▪ Bladder ▪ Urethra</li> <li>▪ Filtration ▪ Regulation of blood pressure</li> </ul> <p>11.1.2 The process and function of filtration to include:</p> <ul style="list-style-type: none"> <li>▪ Functions of the Bowman's capsule ▪ Filtration ▪ Re-absorption ▪ Secretion/ Micturition</li> <li>▪ Electrolyte balance</li> </ul> <p>11.1.3 The interrelationship of the Urinary system with other body systems to include:</p> <ul style="list-style-type: none"> <li>▪ Circulatory system ▪ Endocrine system ▪ Skeletal system ▪ The Skin</li> </ul>   |



|   |  |
|---|--|
| <p>11.2 Explain the production and content of urine</p> <p>11.3 Analyse the pathologies of the urinary system</p>                             | <p>11.2.1 To include:</p> <ul style="list-style-type: none"> <li>▪ The composition of urine ▪ 2% urea ▪ 96% water, 2% other substances, e.g. ammonia, sodium, potassium, phosphates, chlorides, sulphates, and excess vitamins ▪ Colour is formed from bilirubin (bile pigment) ▪ Urine production ▪ Cold and hot weather ▪ Activity and inactivity ▪ Stress ▪ Water consumption</li> </ul> <p>11.2.2 Function of Osmosis in relation to the Urinary system to include:</p> <ul style="list-style-type: none"> <li>▪ Antidiuretic Hormone (ADH)/Vasopressin</li> </ul> <p>11.3.1 To include:</p> <ul style="list-style-type: none"> <li>▪ Cancer ▪ Cystitis ▪ Diabetes Insipidus ▪ Glomerulonephritis ▪ Kidney stones ▪ Nephritis (Bright's disease) ▪ Pyelonephritis/Glomerulonephritis ▪ Urinary tract infections ▪ Urethritis</li> <li>▪ Dysuria ▪ Enuresis ▪ Incontinence ▪ Nephroblastoma ▪ Renal failure ▪ Renal colic</li> <li>▪ Uraemia</li> </ul>   |
| <p><b>Learning Outcome</b><br/>The Learner will:</p> <p>12. Understand the anatomy, physiology and pathologies of the reproductive system</p> |  |
| <p><b>Assessment Criteria</b><br/>The Learner can:</p>  | <p><b>Taught Content</b></p>   |
| <p>12.1 Explain the structure and function of the reproductive system</p> <p>12.2 Explain the key stages of the human reproductive cycle</p>  | <p>12.1.1 To include:</p> <ul style="list-style-type: none"> <li>▪ <b>The organs of the male reproductive system</b> ▪ Testes ▪ Vas deferens ▪ Epididymus</li> <li>▪ Prostate gland ▪ Scrotum ▪ Penis ▪ Sperm ▪ Effects of puberty</li> <li>▪ <b>The organs of the female reproductive system</b> ▪ Vulva ▪ Labia ▪ Vagina ▪ Cervix</li> <li>▪ Uterus ▪ Fallopian tubes ▪ Ovaries ▪ Ovum ▪ Production of sperm and ova ▪ Reproduction</li> </ul> <p>12.2.1 To include:</p> <ul style="list-style-type: none"> <li>▪ Male reproductive stages ▪ Puberty ▪ Menopause</li> <li>▪ Female reproductive stages ▪ Puberty ▪ Pregnancy ▪ Menopause</li> </ul> <p><b>Menstrual cycle</b></p> <ul style="list-style-type: none"> <li>▪ Menstrual ▪ Proliferative ▪ Secretory ▪ Formation of the Graafian Follicle ▪ Formation of the Corpus Luteum</li> </ul> <p><b>Pregnancy</b></p> <ul style="list-style-type: none"> <li>▪ Fertilisation ▪ Post-fertilisation ▪ Cell division ▪ Embryo formation ▪ Foetal development</li> <li>▪ Parturition ▪ Lactation</li> </ul> <p><b>Menopause</b></p> <ul style="list-style-type: none"> <li>▪ Cessation of menses ▪ Vasodilation – sweating, hot flushes ▪ Palpitations</li> <li>▪ Sleep disturbances ▪ Bone loss ▪ Thinning of skin and hair ▪ Atrophy of reproductive organs ▪ Mood swings ▪ Hormone Replacement Therapy (HRT)</li> </ul> |

|   |  |
|---|--|
| <p>12.3 Analyse the pathologies of the reproductive system</p>  | <p>12.2.2 The structure and function of the breast and breast disorders to include:</p> <ul style="list-style-type: none"> <li>▪ Fatty tissue ▪ Ducts ▪ Nipple ▪ Areola ▪ Lobules ▪ Breast pain ▪ Cysts ▪ Galactorrhea</li> <li>▪ Fibroadenomas ▪ Mastitis</li> </ul> <p>12.2.3 Factors causing infertility to include:</p> <ul style="list-style-type: none"> <li>▪ Female infertility - Endocrine disorders ▪ Obstructions ▪ Malnutrition/low body weight</li> <li>▪ Endometriosis ▪ Anatomical abnormalities ▪ Male infertility – Endocrine disorders</li> <li>▪ Obstructions ▪ Sexual dysfunction ▪ Vasectomy ▪ Drugs/medication ▪ Low sperm count</li> </ul> <p>12.3.1 To include:</p> <ul style="list-style-type: none"> <li>▪ Cancer ▪ Chlamydia ▪ Ectopic pregnancy ▪ Endometriosis ▪ Fibroids ▪ Hysterectomy</li> <li>▪ Menstrual disorders - Amenorrhoea, Dysmenorrhoea, Menorrhagia ▪ Pre-menstrual syndrome ▪ Polycystic ovarian syndrome (PCOS) ▪ Prostatitis ▪ Menopause ▪ Stress</li> <li>▪ Vulvovaginal Candidiasis (Thrush) ▪ Benign prostatic enlargement/hyperplasia ▪ Cancer – testicular, prostate, breast, cervical ▪ Frigidity ▪ Impotence ▪ Ovarian cysts ▪ Pelvic inflammatory disease ▪ Pre-eclampsia ▪ Prolapse – uterus/vagina ▪ Sexually transmitted diseases – Gonorrhoea, Syphilis, Trichomonas ▪ Vaginitis ▪ Toxic Shock Syndrome</li> </ul> |
| <p><b>Assessment</b><br/> <b>Unit 383 - Knowledge of Anatomy, Physiology and Pathology for Complementary Therapies</b><br/> All Candidates will be assessed via an externally set multiple choice theory examination for this unit.</p> | <p>See <a href="http://www.itecworld.co.uk">www.itecworld.co.uk</a> for Unit 383 – Knowledge of Anatomy, Physiology and Pathology for Complementary Therapies test specification and sample questions</p>  |