

iUCT36 – Knowledge of anatomy and physiology for complementary therapies

URN – A/617/4355

Guided Learning Hours: 90

Learning outcome	Assessment criteria	Taught content to include
LO1 Know the organisation of the body	1.1. State the anatomical regions of the body	<ul style="list-style-type: none"> • Cranial • Frontal • Occipital • Cervical • Thoracic • Axillary • Brachial • Cubital • Carpal • Palmar • Digital • Popliteal • Patellar • Tarsal • Plantar
	1.2. Describe the directional terms of the body	<ul style="list-style-type: none"> • Medial • Lateral • Proximal • Distal • Anterior • Posterior • Superior • Inferior

		<ul style="list-style-type: none"> • Superficial • Deep
	1.3. Describe the basic chemical organisation of the body	<ul style="list-style-type: none"> • Simple chemicals (e.g. oxygen, carbon dioxide) • Nutrient chemicals (e.g. carbohydrates, fats (lipids), proteins, vitamins, minerals, fibre, water) • Complex chemicals (e.g. ATP, DNA, body fluids)
	1.4. Describe the basic structure of a cell	<ul style="list-style-type: none"> • Cell membrane • Nuclear membrane • Nucleus • Nucleolus • Cytoplasm • Centrosome • Golgi apparatus • Mitochondria • Lysosome • Protoplasm • Chromosome • Endoplasmic reticulum • Ribosome • Centromere • Vacuoles • Centrioles • Chromatids
	1.5. State the major tissue types and their location	<ul style="list-style-type: none"> • Epithelial tissue • Nervous tissue • Muscular tissue <ul style="list-style-type: none"> - Striated - Non-striated - Cardiac • Connective tissue <ul style="list-style-type: none"> - Areolar - Adipose - Cartilage - Bone - Blood - Lymph

LO2 Know the structure, function and pathologies of the skin, hair and nail	2.1. Describe the structure and functions of the skin	<ul style="list-style-type: none"> • Epidermis <ul style="list-style-type: none"> - Stratum corneum - Stratum lucidum - Stratum granulosum - Stratum spinosum/malphigian layer - Stratum germinativum/basal layer • Dermis <ul style="list-style-type: none"> - Blood supply - Lymphatic supply - Hair follicle - Hair - Sebaceous gland - Sweat gland: <ul style="list-style-type: none"> ▪ Eccrine and apocrine - Sensory nerve endings - Dermal papilla - Collagen - Elastin - Histeocytes - Mast cells - Fibroblasts - Erector pili muscle • Subcutaneous/adipose layer <ul style="list-style-type: none"> - The structure and function of the fatty layer found underneath the dermis • Functions <ul style="list-style-type: none"> - Secretion - Heat regulation - Absorption - Protection/acid mantle (composition and formation) - Elimination/excretion - Sensation - Vitamin D formation (7-dehydro-cholesterol)
	2.2. State the skin types and factors that affect the skin	<ul style="list-style-type: none"> • Dry • Oily • Combination • Mature skin • Young skin

		<ul style="list-style-type: none"> • Age • UV damage • Diet • Smoking • Alcohol • Central heating • Air conditioning • Stress
	2.3. Describe the structure and function of the hair	<ul style="list-style-type: none"> • Lanugo • Vellus • Terminal • Cuticle • Cortex • Medulla • Dermal papilla
	2.4. Describe the structure and function of the nail	<ul style="list-style-type: none"> • Free edge • Cuticle • Nail plate • Nail bed • Matrix • Nail wall
	2.5. Describe diseases and disorders of the skin, hair and nails	<ul style="list-style-type: none"> • The skin to include: <ul style="list-style-type: none"> - Infestations <ul style="list-style-type: none"> ▪ Scabies ▪ Pediculosis corporis - Congenital <ul style="list-style-type: none"> ▪ Eczema ▪ Psoriasis ▪ Dermatitis - Bacterial <ul style="list-style-type: none"> ▪ Acne vulgaris ▪ Impetigo ▪ Acne rosacea ▪ Boils ▪ Folliculitis - Viral <ul style="list-style-type: none"> ▪ Warts

		<ul style="list-style-type: none"> ▪ Herpes simplex ▪ Herpes zoster - Fungal <ul style="list-style-type: none"> ▪ Tinea corporis (ringworm) ▪ Tinea capitis ▪ Tinea pedis - Pigmentation disorders <ul style="list-style-type: none"> ▪ Vitiligo ▪ Albinism ▪ Chloasma ▪ Ephelides ▪ Lentigo ▪ Moles (papilloma) ▪ Naevae ▪ Port wine stain ▪ Leucoderma - General disorders/conditions <ul style="list-style-type: none"> ▪ UV damage ▪ Urticaria ▪ Allergic reaction ▪ Sensitive skin ▪ Milia ▪ Comedones ▪ Dehydrated skin ▪ Broken capillaries ▪ Pustules ▪ Crow's feet ▪ Papules ▪ Open pores ▪ Hyperpigmentation ▪ Hypopigmentation ▪ Dermatitis papulosa nigra ▪ Pseudo folliculitis ▪ Keloid scarring ▪ Ingrowing hairs ▪ Thin skin ▪ Papilloma - Skin cancers <ul style="list-style-type: none"> ▪ Melanoma
--	--	---

		<ul style="list-style-type: none"> ▪ Carcinoma • The hair to include: <ul style="list-style-type: none"> - Alopecia - Hirsutism - Ingrown hair - Pediculosis capitis - Pediculosis pubis • The nails to include: <ul style="list-style-type: none"> - Transverse ridges - Vertical ridges - Blue nail - Psoriasis - Eczema - Tinea unguium - Paronychia - Whitlow - Sepsis - Leuconychia - Pitting
--	--	---

LO3 Know the structure, function and pathologies of the skeletal system	3.1. Describe the structure and functions of the skeleton	<ul style="list-style-type: none"> • Compact • Cancellous • Long • Short • Flat • Irregular • Sesamoid • Support • Attachment • Movement • Forms erythrocytes • Stores calcium • Protection
	3.2. State the bones of the head, neck, upper limbs, hands, lower limbs and feet	<ul style="list-style-type: none"> • Basic structure of the skeleton to include: <ul style="list-style-type: none"> - Cranium <ul style="list-style-type: none"> ▪ Parietal ▪ Frontal ▪ Ethmoid

		<ul style="list-style-type: none"> ▪ Sphenoid ▪ Occipital ▪ Temporal - Facial <ul style="list-style-type: none"> ▪ Nasal ▪ Zygomatic ▪ Maxilla ▪ Lacrimal ▪ Turbinator ▪ Palatine ▪ Mandible ▪ Vomer - Shoulder girdle <ul style="list-style-type: none"> ▪ Scapula ▪ Clavicle ▪ Humerus - Neck <ul style="list-style-type: none"> ▪ Cervical vertebrae - Thoracic cage <ul style="list-style-type: none"> ▪ Ribs ▪ Sternum ▪ Thoracic vertebrae - Lower arm and hand <ul style="list-style-type: none"> ▪ Ulna ▪ Radius ▪ Carpals ▪ Metacarpals ▪ Phalanges - Lower leg and foot <ul style="list-style-type: none"> ▪ Patella ▪ Tibia ▪ Fibula ▪ Tarsals ▪ Metatarsals ▪ Phalanges
	3.3. Identify the arches of the foot	<ul style="list-style-type: none"> • Where they are found
	3.4. State the types of joint	<ul style="list-style-type: none"> • Ball and socket • Hinge

		<ul style="list-style-type: none"> • Pivot • Gliding • Saddle
	3.5. State the range of joint movements	<ul style="list-style-type: none"> • Fixed • Slightly moveable • Freely moveable
	3.6. Describe the diseases and disorders of the skeletal system	<ul style="list-style-type: none"> • Arthritis <ul style="list-style-type: none"> - Osteo and Rheumatoid • Gout • Hallux valgus • Osteoporosis

LO4 Know the structure, function and pathologies of the muscular system	4.1. Identify the location of the muscles of the head, face, neck, shoulders, arms, hands, lower leg and foot	<ul style="list-style-type: none"> • Face, neck and scalp <ul style="list-style-type: none"> - Orbicularis oculi - Orbicularis oris - Masseter - Buccinator - Levator anguli oris - Levator labii superioris - Depressor anguli oris - Depressor labii inferioris - Mentalis - Zygomaticus - Temporalis - Nasalis - Procerous - Corrugator - Frontalis - Occipitalis - Risorius - Sternocleidomastoid - Platysma • Upper trunk/torso <ul style="list-style-type: none"> - Trapezius - Splenius capitis - Deltoids
---	---	---

		<ul style="list-style-type: none"> - Pectoralis • Lower arm and hand <ul style="list-style-type: none"> - Supinator radii brevis - Flexors of lower arm and hand - Extensors of lower arm and hand • Lower leg and foot <ul style="list-style-type: none"> - Gastrocnemius - Soleus - Tibialis anterior - Peroneus longus - Flexors of lower leg and foot - Extensors of lower leg and foot - Achilles tendon
	4.2. Describe the actions of the muscles of the head, face, neck, shoulders, arms, hands, lower leg and foot	<ul style="list-style-type: none"> • Flexion • Extension • Adduction • Abduction • Circumduction • Rotation • Pronation • Supination • Dorsiflexion • Plantarflexion • Eversion • Inversion
	4.3. State the different types of muscle contraction	<ul style="list-style-type: none"> • Concentric • Eccentric • Isometric
	4.4. Describe the diseases and disorders of the muscular system	<ul style="list-style-type: none"> • Cramp • Repetitive Strain Injury (RSI) • Muscle fatigue • Muscle strain
	5.1. State the structure and function of the nervous system	<ul style="list-style-type: none"> • Axon • Dendrites • Cell body

LO5 Know the structure, function and pathologies of the nervous system		<ul style="list-style-type: none"> • Myelin sheath • Motor • Mixed nerves • Sensory • Central nervous system (CNS) • Peripheral nervous system (PNS) • Autonomic nervous system (ANS) • Detection, interpretation and response to stimuli • Brain <ul style="list-style-type: none"> - Meninges - Cerebrospinal fluid - Cerebrum - Cerebellum - Pons varolii - Medulla oblongata - Hypothalamus - Brain stem • 5th (Trigeminal), 7th (Facial) and 11th (Accessory) cranial nerves
	5.2. Describe the diseases and disorders of the nervous system	<ul style="list-style-type: none"> • Neuritis • Bell's palsy • Epilepsy • Neuralgia • Parkinson's disease • Stress • Myalgic encephalomyelitis (ME) • Cerebral palsy • Multiple sclerosis • Sciatica • Motor neurone disease • Dementia
LO6 Know the structure, function and pathologies of the endocrine system	6.1. State the functions of the endocrine system	<ul style="list-style-type: none"> • Hormone secretion • Homeostasis • Control of body functions
	6.2. State the position and function of the endocrine glands	<ul style="list-style-type: none"> • Pituitary • Thyroid gland • Parathyroids

		<ul style="list-style-type: none"> • Thymus • Pineal • Pancreas • Adrenals • Ovaries • Testes
	6.3. Describe the diseases and disorders of the endocrine system	<ul style="list-style-type: none"> • Addison's syndrome • Amenorrhoea • Cushing's syndrome • Pre-menstrual syndrome • Polycystic ovarian • Diabetes – Type 1 and 2

LO7 Know the structure, function and pathologies of the respiratory system	7.1. State the structure and function of the respiratory system	<ul style="list-style-type: none"> • Nose • Nasal cavity • Larynx • Pharynx • Trachea • Bronchi • Bronchioles • Alveoli • Lungs • Pleura (visceral, parietal, pleural cavity) • Diaphragm • Intercostals
	7.2. State the difference between internal and external respiration	<ul style="list-style-type: none"> • Internal respiration • External respiration
	7.3. Describe the diseases and disorders of the respiratory system	<ul style="list-style-type: none"> • Bronchitis • Emphysema • Pleurisy • Pneumonia • Asthma • Hay fever • Sinusitis • Influenza • Laryngitis

		<ul style="list-style-type: none"> • Hyperventilation
LO8 Know the structure, function and pathologies of the cardiovascular system	8.1. State the structure and functions of the cardiovascular system	<ul style="list-style-type: none"> • Arteries • Arterioles • Veins • Venules • Capillaries • Blood plasma • Erythrocytes • Leucocytes • Platelets • Thrombocytes • Transportation • Protection • Regulation of body temperature
	8.2. State the composition and functions of the blood	<ul style="list-style-type: none"> • Erythrocytes • Leucocytes • Thrombocytes (platelets) • Plasma and plasma proteins
	8.3. State the primary vessels in the head, face, neck, hand, wrist, forearm, foot, ankle and lower leg	<ul style="list-style-type: none"> • Main arteries of the head and neck <ul style="list-style-type: none"> - Thyroid - Facial - Temporal - Lingual - Occipital - Maxillary • Main veins of the head and neck <ul style="list-style-type: none"> - Middle temporal - Superficial temporal - Maxillary - Anterior facial - Common facial - Internal jugular - External jugular • Arteries of the lower arm and hand <ul style="list-style-type: none"> - Radial - Ulnar

		<ul style="list-style-type: none"> • Veins of the lower arm and hand <ul style="list-style-type: none"> - Basilic - Cephalic • Arteries of the lower leg and foot <ul style="list-style-type: none"> - Anterior tibial - Posterior tibial • Veins of the lower leg and foot <ul style="list-style-type: none"> - Anterior tibial - Posterior tibial
	8.4. Describe the diseases and disorders of the cardiovascular system	<ul style="list-style-type: none"> • Anaemia • Aneurysm • Arteriosclerosis • Atherosclerosis • Coronary thrombosis • Haemorrhoids • Haemophilia • Hepatitis A, B & C • High blood pressure (hypertension) • High cholesterol • HIV/AIDS • Leukaemia • Low blood pressure (hypotension) • Nosebleeds • Palpitations • Phlebitis • Septicaemia • Deep vein thrombosis • Varicose veins
LO9 Know the structure, function and pathologies of the lymphatic system	9.1. State the function of the lymphatic system	<ul style="list-style-type: none"> • Transportation • Purification • Protection
	9.2. State the structure of the lymphatic system	<ul style="list-style-type: none"> • Lymphocyte • Lymphatic capillary • Lymphatic vessel • Lymph node • Lymphatic duct

		<ul style="list-style-type: none"> • Lymphatic tissue
	9.3. State the location of the major lymphatic nodes in the head, face, neck, hand, wrist, forearm, foot, ankle and lower leg	<ul style="list-style-type: none"> • Deep and superficial cervical • Submandibular • Submental • Anterior and posterior auricular • Occipital • Buccal • Axillary • Supratrochlear • Popliteal
	9.4. Describe the diseases and disorders of the lymphatic system	<ul style="list-style-type: none"> • Cellulitis • Oedema/water retention • Hodgkin's disease • Lymphoedema
LO10 Know the structure, function and pathologies of the other systems of the body	10.1. State the structure and function of the digestive system	<ul style="list-style-type: none"> • Alimentary canal • Salivary glands • Tongue • Epiglottis • Oesophagus • Stomach • Small intestine • Appendix • Large intestine • Rectum • Anus • Accessory organs • Liver • Gall bladder • Pancreas • Peristalsis • Ingestion • Digestion • Absorption • Defecation

	10.2. Describe the diseases and disorders of the digestive system	<ul style="list-style-type: none"> • Appendicitis • Cirrhosis of the liver • Jaundice • Heartburn • Irritable bowel syndrome (IBS) • Ulcer • Hernia • Anorexia nervosa • Bulimia nervosa • Constipation • Gall stones • Coeliac's disease
	10.3. State the structure and function of the urinary system	<ul style="list-style-type: none"> • Kidney • Pelvis • Ureter • Bladder • Urethra • Filtration • Re-absorption • Secretion/micturition
	10.4. Describe the diseases and disorders of the urinary system	<ul style="list-style-type: none"> • Cystitis • Kidney stones • Nephritis • Diabetes insipidus
	10.5. State the structure and function of the reproductive system	<ul style="list-style-type: none"> • Prostate • Testes • Testicular vessels • Penis • Scrotum • Uterus • Fallopian tubes • Cervix • Ovary • Vagina • Labia • Reproduction

	10.6. Describe the diseases and disorders of the reproductive system	<ul style="list-style-type: none"> • Ectopic pregnancy • Amenorrhoea • Dysmenorrhoea • Pre-menstrual syndrome • Polycystic ovarian syndrome • Endometriosis • Mastitis • Sexually transmitted diseases • Testicular cancer • Prostate cancer
--	--	--

Assessment	
Portfolio of evidence containing:	The internal task must be evidenced using the project assessment form. See www.itecworld.co.uk
<ul style="list-style-type: none"> • Internal task 	The project guidance form may be downloaded from www.itecworld.co.uk

Guide to taught content
The content contained within the unit specification is not prescriptive or exhaustive but is intended to provide helpful guidance to teachers and learners with the key areas that will be covered within the unit, and, relating to the kinds of evidence that should be provided for each assessment objective specific to the unit learning outcomes.

Document History

Version	Issue Date	Changes	Role
v1	17/09/2019	First published	Qualifications and Regulation Co-ordinator