



## Higher National Unit Specification

### General information

**Unit title:** Beauty Therapy: Applied Anatomy and Physiology  
(SCQF level 7)

**Unit code:** HX03 34

**Superclass:** HL

**Publication date:** November 2017

**Source:** Scottish Qualifications Authority

**Version:** 01

### Unit purpose

This unit has been designed to provide learners with a good working knowledge of human anatomy and physiology as it relates to beauty therapy.

The unit covers the integumentary (skin, hair, nail), skeletal, muscular, cardiovascular, lymphatic and nervous systems and will provide essential knowledge which supports the technical units of the HNC/HND Beauty Therapy.

This unit will be beneficial for those who wish to pursue a career within the beauty therapy industry.

- 1 Describe the structures and functions of the skin, hair and nails.
- 2 Describe the structure and functions of the skeletal and muscular systems.
- 3 Describe the structure, and function of the cardiovascular, lymphatic and nervous systems.
- 4 Describe the benefits and effects of beauty therapy treatments on each identified body system.

### Credit points and level

2 Higher National Unit credits at SCQF level 7: (16 SCQF credit points at SCQF level 7)

### Recommended entry to the unit

It is at the discretion of the centre. It is recommended that the learner has underpinning knowledge of human biology or anatomy and physiology and core Beauty Therapy knowledge.

## Higher National Unit Specification: General information (cont)

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### Core Skills

Opportunities to develop aspects of Core Skills are highlighted in the support notes for this unit specification.

There is no automatic certification of Core Skills or Core Skill components in this unit.

### Context for delivery

If this unit is delivered as part of the HNC/HND Beauty Therapy Group Award. It is recommended that it should be taught and assessed throughout the HNC Beauty Therapy to which it contributes.

The Assessment Support Pack (ASP) for this unit provides assessment and marking guidelines that exemplify the national standard for achievement. It is a valid, reliable and practicable assessment. Centres wishing to develop their own assessments should refer to the ASP to ensure a comparable standard. A list of existing ASPs is available to download from SQA's website (<http://www.sqa.org.uk/sqa/46233.2769.html>).

### Equality and inclusion

This unit specification has been designed to ensure that there are no unnecessary barriers to learning or assessment. The individual needs of learners should be taken into account when planning learning experiences, selecting assessment methods or considering alternative evidence.

Further advice can be found on our website [www.sqa.org.uk/assessmentarrangements](http://www.sqa.org.uk/assessmentarrangements).

## **Higher National Unit Specification: Statement of standards**

**Unit title:** Beauty Therapy: Applied Anatomy and Physiology  
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Acceptable performance in this unit will be the satisfactory achievement of the standards set out in this part of the unit specification. All sections of the statement of standards are mandatory and cannot be altered without reference to SQA.

Where evidence for outcomes is assessed on a sample basis, the whole of the content listed in the knowledge and/or skills section must be taught and available for assessment. Learners should not know in advance the items on which they will be assessed and different items should be sampled on each assessment occasion.

### **Outcome 1**

Describe the structures and functions of the skin, hair and nails.

#### **Knowledge and/or skills**

- ◆ The skin.
- ◆ The hair growth cycle
- ◆ The nail

### **Outcome 2**

Describe the structure and functions of the skeletal and muscular systems.

#### **Knowledge and/or skills**

- ◆ Skeletal system
- ◆ Muscular system

### **Outcome 3**

Describe the structure, and function of the cardiovascular, lymphatic and nervous systems.

#### **Knowledge and/or skills**

- ◆ Cardio vascular system
- ◆ Lymphatic system
- ◆ Nervous system

## Higher National Unit Specification: Statement of standards (cont)

**Unit title:** Beauty Therapy: Applied Anatomy and Physiology  
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### Outcome 4

Describe the benefits and effects of beauty therapy treatment on each identified body system.

#### Knowledge and skills

- ◆ Anatomy and Physiology of the identified body systems — Integumentary (hair, skin and nails), skeletal, muscular, cardiovascular, lymphatic, nervous
- ◆ The benefits and effects of the application of a range of beauty therapy treatments on each body system — integumentary (hair skin and nails), skeletal, muscular, cardiovascular, lymphatic, nervous

#### Evidence requirements for this unit

Outcomes may be assessed individually or holistically assessed. The assessment of Outcome 4 may be integrated with Outcomes 1, 2 or 3.

For each outcome studied the learners must achieve a 70% to pass. Where learners achieve below 70% they must be re-assessed. Re-assessments must differ significantly from the original; however they must adequately cover the same topics.

Learners will need to provide evidence to demonstrate their knowledge and/or skills across all outcomes by showing that they can:

#### Outcome 1 — closed-book assessment

Answer structured questions in closed-book conditions. The assessment should contain both diagrams and anatomical descriptions and enable learners to demonstrate their understanding of the skin, hair and nail.

#### Outcome 2 — closed-book assessment

Answer structured extended response questions in closed-book conditions. The assessment should contain both diagrams and anatomical descriptions and enable learners to demonstrate their understanding of the skeletal and muscular systems.

## Higher National Unit Specification: Statement of standards (cont)

**Unit title:** Beauty Therapy: Applied Anatomy and Physiology  
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### **Outcome 3 — closed-book assessment**

Answer structured extended response questions in closed-book conditions. The assessment should contain both diagrams and anatomical descriptions and enable learners to demonstrate their understanding of the cardiovascular, lymphatic and nervous systems.

### **Outcome 4 — closed-book assessment**

Answer structured questions in closed-book conditions. Outcome 4 — Questions should enable you to demonstrate your understanding of the body systems as it relates to beauty therapy by identifying and describing the benefits and effects of the application of a selection of beauty therapy treatments on each body system — integumentary (skin, hair, nails), skeletal, muscular, cardiovascular, lymphatic and nervous.

The treatments selected within this assessment should reflect the mandatory and optional units studied as part of the HNC/HND Beauty Therapy award.

This assessment should be generated from the knowledge and understanding developed by the individual learner from the study of the core beauty therapy subjects along with Beauty Therapy: Applied Anatomy and Physiology of this group award.



## Higher National Unit Support Notes

**Unit title:** Beauty Therapy: Applied Anatomy and Physiology  
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Unit support notes are offered as guidance and are not mandatory.

While the exact time allocated to this unit is at the discretion of the centre, the notional design length is 80 hours.

### Guidance on the content and context for this unit

This unit has been designed to provide learners with a good working knowledge of human anatomy and physiology as it relates to beauty therapy.

The unit covers the integumentary (skin, hair and nail), skeletal, muscular, cardiovascular, lymphatic and nervous systems and will provide essential knowledge which supports the technical units of the HNC/HND Beauty Therapy and will help prepare learners for their role as a therapist. Learner will apply their knowledge to a range of therapies by assessing the benefits and effects of treatment applications on each body system.

#### Key areas of knowledge:

**Outcome 1** will cover the structure and function of the skin, hair growth cycle and the nails.

#### Skin, hair and nail

- ◆ Five layers of the epidermis
- ◆ Appendages found within the dermis and the subcutaneous layer of the skin
- ◆ Structure and function of the appendages found within the dermis
- ◆ Functions of the skin
- ◆ Structure and function of the pilo-sebaceous unit
- ◆ Layers of the hair structure
- ◆ Hair growth cycle
- ◆ Structure of the nail

## Higher National Unit Support Notes (cont)

**Unit title:** Beauty Therapy: Applied Anatomy and Physiology  
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**Outcome 2** will cover the structure and functions of the skeletal and muscular systems.

### Skeletal system

- ◆ Major bones of the skeleton:
  - Cranium, clavicle, scapula, humerus, radius, ulna, carpals, metacarpals, phalanges, pelvis, ischium, femur, tibia, fibula, tarsals, metatarsals
- ◆ Anatomy of the long bone:
  - Periosteum, epiphyses, diaphysis, epiphyseal line, spongy/cancellous bone, compact bone, medullary cavity
- ◆ Bone types:
  - long, short, flat, irregular sesamoid
- ◆ Axial and appendicular skeleton
- ◆ Classification of joints:
  - Ball and socket, hinge, pivot, condyloid, gliding, saddle
- ◆ Anatomy of the synovial joint
  - joint capsule/ligament, articular cartilage, synovial membrane, synovial fluid
- ◆ Joints of the skeletal system:
  - main articulation points in relation to muscle attachment
- ◆ Functions of the bone
- ◆ Development of bone tissue and the process of ossification
- ◆ Process of calcium homeostasis

### Muscular system

- ◆ Structure of skeletal muscle:
  - tendon, epimysium, perimysium, endomysium, fascicle
- ◆ Attachment of skeletal muscle to bone
- ◆ Location of the major superficial muscles of the body:
  - biceps, triceps, deltoid, pectoralis major, latissimus dorsi, trapezius, rectus abdominus, obliques, biceps femoris, rectus femoris, gastrocnemius, soleus (Achilles tendon can be assessed)
- ◆ Principles of skeletal muscle contraction: name, describe and give an example of the types of contraction commenting on muscular tension:
  - sliding filament theory
- ◆ Origin, insertion and action of the major superficial muscles

## Higher National Unit Support Notes (cont)

**Unit title:** Beauty Therapy: Applied Anatomy and Physiology  
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**Outcomes 3** will cover the cardiovascular, lymphatic and nervous systems.

### Cardiovascular system

- ◆ Function of the cardiovascular system
- ◆ Anatomy of the heart
  - Atria, ventricles, aorta, pulmonary vessels, superior and inferior vena cava, tricuspid and bicuspid valves
- ◆ Structure of the blood vessels:
  - arteries, arterioles, veins, venules, capillary network
- ◆ Components of blood:
  - red blood cells, white blood cells platelets, plasma
- ◆ Physiology of the heart, blood vessels and blood
- ◆ Vasodilation and vasoconstriction
- ◆ Cardiac cycle

### Lymphatic system

- ◆ Structure and function of the lymphatic capillaries, ducts, lymph nodes, thymus, spleen, tonsils
- ◆ Movement within the lymphatic system to support fluid balance and the formation of lymph: filtration of blood, cells and interstitial fluid
- ◆ Process of fat absorption
- ◆ Body's defence through: innate, adaptive immunity and acquired immunity

### Nervous system

- ◆ Structure and function of the central nervous system (CNS) - brain and spinal cord:
  - components of the brain: meninges, brain stem (mid brain, pons, medulla oblongata), cerebellum, cerebrum, hypothalamus, thalamus, pituitary, ventricles, cerebrospinal fluid
- ◆ Function of the peripheral nervous system (PNS):
  - Cranial nerves (12 pairs), spinal nerves (31 pairs)
  - Somatic nervous system, autonomic nervous system — parasympathetic and sympathetic branches
- ◆ Structure and function the sensory neurons:
  - Mechanoreceptors, thermoreceptors, chemoreceptors, nociceptors and photoreceptors
- ◆ Neurons, neuronal pathways, circuits and the reflex arc

**Outcome 4** should develop the learners understanding of the benefits and effects on the body systems of the application of a selection of therapies which they are undertaking within the HNC/HND Beauty Therapy framework.



## Higher National Unit Support Notes (cont)

**Unit title:** Beauty Therapy: Applied Anatomy and Physiology  
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### Guidance on approaches to delivery of this unit

An induction to the unit should be given which enables learners to understand fully what is required.

This unit should be taught through a range of theory, group work, presentations and research; models, diagrams, animations and video clips could be used. Learners should have the opportunity to work independently and in groups on directed study to extend their knowledge and skills.

The knowledge aims to enhance the skills of the beauty therapist by providing an awareness of how their profession can maintain and improve the quality of life of their clients. Learners should be aware of the requirement for integrated function to enable maintenance of a stable internal environment; therefore the learning and teaching process should involve a holistic approach where possible.

The physical and psychological effects of a range of beauty therapy treatment applications should be linked with the delivery of each body system, facilitating greater understanding of the relationship between treatment application and the benefits and affects these have on the different body systems. It is expected that the treatment selection linked be those being undertaken by individual learners — mandatory and optional units.

It is strongly recommended that the cardiovascular and respiratory systems be linked to ensure the learner has a good understanding that these systems support each other directly.

- ◆ Structure of the respiratory system: oral and nasal cavities, pharynx, larynx, trachea, epiglottis, bronchus/bronchioles, alveolar structure.
- ◆ Physiology of the respiratory system: gas exchange; diffusion; pressure gradient; oxygen and carbon dioxide.

It is strongly recommended that the nervous and endocrine systems be linked to ensure the learner has a good understanding that these systems support each other directly.

- ◆ Response to physical stressors: sympathetic nervous system stimulation to adrenal medulla, neurotransmitters adrenalin/noradrenalin and body responses (fight-flight).
- ◆ Endocrine response — hypothalamus-pituitary-adrenal (HPA axis), release of ACTH, growth hormone, glucocorticoids and body responses.
- ◆ Endocrine function in bone health- thyroid (calcitonin) and parathyroid (parathyroid hormone) mechanisms.

The purpose of this unit is also to encourage learners to adopt a process of enquiry within their field of study and to apply the concept of an evidence-based approach. The unit terminology is scientific in nature and it is important that students become comfortable and competent with medical terminology. Therefore, the use of the correct terminology should be an integral part of the learning, teaching and assessment.

## Higher National Unit Support Notes (cont)

**Unit title:** Beauty Therapy: Applied Anatomy and Physiology  
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### Guidance on approaches to assessment of this unit

Evidence requirements are fully expressed in the mandatory section of this unit specification. Evidence can be generated using different types of assessment. There may be other methods that would be more suitable to learners.

Centres are reminded that prior verification of centre-devised assessments would help to ensure that the national standard is being met. Where learners experience a range of assessment methods, this helps them to develop different skills that should be transferable to work or further and higher education.

The evidence requirements are fully expressed in the mandatory section of this unit specification.

Outcomes may be assessed individually or holistically assessed. The assessment of Outcome 4 may be integrated with Outcomes 1, 2 or 3.

Learners must achieve a minimum of 70% to pass. Where learners achieve below 70% they must be re-assessed. Re-assessments must differ significantly from the original; however they must adequately cover the same topics.

Outcome 1 — Structured questions in closed-book conditions. The assessment should contain both diagrams and anatomical descriptions and enable learners to demonstrate their understanding of the skin, hair and nail.

Outcome 2 — structured questions in closed-book conditions. The assessment should contain both diagrams and anatomical descriptions and enable learners to demonstrate their understanding of the skeletal and muscular systems.

Outcome 3 — structured questions in closed-book conditions. The assessment should contain both diagrams and anatomical descriptions and enable learners to demonstrate their understanding of the cardiovascular, lymphatic and nervous systems.

Outcome 4 — Structured questions in closed-book conditions. The assessment should enable you to demonstrate your understanding of the body systems as it relates to beauty therapy by identifying and describing the benefits and effects of the application of a selection of beauty therapy treatments on each body system — integumentary (skin, hair, nails), skeletal, muscular, cardiovascular, lymphatic and nervous.

The treatments selected within this assessment should reflect the mandatory and optional units studied as part of the HNC/HND Beauty Therapy award.

This assessment should be generated from the knowledge and understanding developed by the individual learner from the study of the core beauty therapy subjects along with Beauty Therapy: Applied anatomy and Physiology of this group award.

## Higher National Unit Support Notes (cont)

**Unit title:** Beauty Therapy: Applied Anatomy and Physiology  
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Assessment must allow the learner to demonstrate competence at the level of the qualification.

Assessors should keep in mind that overall, the work should meet SCQF level 7 criteria.  
<http://scqf.org.uk/the-framework/scqf-levels/>

Assessors should use their professional judgement when making assessment decisions. If in doubt, the assessor should refer to their internal verifier.

### Opportunities for e-assessment

E-assessment may be appropriate for some assessments in this unit. By e-assessment we mean assessment which is supported by Information and Communication Technology (ICT), such as e-testing or the use of e-portfolios or social software. Centres which wish to use e-assessment must ensure that the national standard is applied to all learner evidence and that conditions of assessment as specified in the evidence requirements are met, regardless of the mode of gathering evidence. The most up-to-date guidance on the use of e-assessment to support SQA's qualifications is available at [www.sqa.org.uk/e-assessment](http://www.sqa.org.uk/e-assessment).

### Opportunities for developing Core and other essential skills

There are opportunities to develop the Core Skills of *Communication* and *Problem Solving* in this unit as learners work with others within groups developing an understanding of the knowledge of each specified body system; in particular when linking the benefits and effects of treatment application with each of the specified body systems.

**Learners should be encouraged in the use of information technology as they develop their knowledge and understanding of the anatomy and physiology of the human body.** They will be required to carry out some investigative work as they identify the specific effects and benefits of the application of beauty treatments on each of the identified body systems; this may be internet based, giving the opportunity to develop skills in Information and Communication Technology (ICT).

## History of changes to unit

Version	Description of change	Date

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## General information for learners

### Unit title: Beauty Therapy: Applied Anatomy and Physiology (SCQF level 7)

This section will help you decide whether this is the unit for you by explaining what the unit is about, what you should know or be able to do before you start, what you will need to do during the unit and opportunities for further learning and employment.

This unit has been designed to provide you with a good working knowledge of human anatomy and physiology as it relates to beauty therapy.

The unit covers the integumentary (skin, hair and nail), skeletal, muscular, cardiovascular, lymphatic and nervous systems and will provide you with essential knowledge which supports the technical units of the HNC/HND Beauty Therapy and will help prepare you for your role as a therapist. You will apply your knowledge to a range of therapies by assessing the benefits and effects of a selection of treatment applications on each body system.

This unit will be beneficial for you if you wish to pursue a career within the beauty therapy industry.

You will be assessed by answering structured questions in closed-book conditions. You must achieve a minimum of 70% to pass in each outcome.

Outcome 1 — The assessment should contain both diagrams and anatomical descriptions and enable learners to demonstrate their understanding of the skin, hair and nail.

Outcome 2 — The assessment should contain both diagrams and anatomical descriptions and enable learners to demonstrate their understanding of the skeletal and muscular systems.

Outcome 3 — The assessment should contain both diagrams and anatomical descriptions and enable learners to demonstrate their understanding of the cardiovascular, lymphatic and nervous systems.

Outcome 4 — The assessment should enable you to demonstrate your understanding of the body systems as it relates to beauty therapy by identifying and describing the benefits and effects of the application of a selection of beauty therapy treatments on each body system — integumentary (skin, hair, nails), skeletal, muscular, cardiovascular, lymphatic and nervous.

There are opportunities to develop the Core Skills of *Communication* and *Problem Solving* in this unit as you work with others within groups developing an understanding of the knowledge of each specified body system; in particular when linking the benefits and effects of treatment application with each of the specified body systems.

You should be encouraged in the use of information technology as you develop your knowledge and understanding of the anatomy and physiology of the human body. You will be required to carry out some investigative work as you identify the specific effects and benefits of the application of beauty treatments on each of the identified body systems; this may be internet based, giving the opportunity to develop skills in *Information and Communication Technology (ICT)*.