

## **NextGen: HN unit specification**

### **The Human Body in Health and Illness (SCQF level 7)**

**Unit code:** JDCT 47

**SCQF level:** 7 (16 SCQF credit points)

**Valid from:** August 2026

This unit specification provides detailed information about the unit to ensure consistent and transparent assessment year on year. It is for lecturers and assessors, and contains all the mandatory information you need to deliver and assess the unit.

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# Unit purpose

This unit introduces learners to the anatomy and physiology of the human body, and categories of its diseases. Learners can use this knowledge in their everyday life and work. The unit helps learners to progress to further education and degree-level courses.

Learners should have good communication skills, both written and oral. Entry to the unit is at your centre's discretion, but before they start the unit, we recommend learners have one or more of the following:

- Higher English or a qualification equivalent to SCQF level 6
- a pre-course interview, part of which could take the form of a written assignment
- an employer's reference or be in the process of application and interview for a position

The unit is mandatory in HNC Healthcare Practice, but learners can also study it as a stand-alone unit.

# Unit outcomes

Learners who complete this unit can:

1. explain the levels of organisation and body processes essential to maintain health and wellbeing
2. explain the structure and function of selected body systems and associated medical conditions
3. investigate the categories of disease and explain predisposing causes of disease
4. explain how a knowledge of anatomy and physiology of the human body, and the different categories and causes of its diseases, can aid the nursing process

## Evidence requirements

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

- understand the levels of organisation from simple levels, such as chemicals, to living cells, tissues, organs and systems
- explain the importance of fluid balance and understand the movement of substances across the cell membrane, and passive and active movement
- explain the importance of homeostasis and the homeostatic monitoring feedback mechanisms to the process of wellbeing
- explain the structure and the functions of two named body systems and describe one medical condition associated with each of the two systems
- understand the different categories of disease and use the appropriate disease terminology
- identify and explain one disease and the possible predisposing factors associated with this disease
- explain how a knowledge and understanding of anatomy, physiology and the disease process can aid the nursing process

# Knowledge and skills

| Knowledge                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Skills                                                                                                                                                                                                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Outcome 1</b></p> <p>Learners should understand:</p> <ul style="list-style-type: none"> <li>• levels of organisation, from simple levels, such as chemicals, to the body as a whole</li> <li>• the importance of fluid balance</li> <li>• the movement of substances across the plasma membrane, including by diffusion, osmosis, filtration and active transport</li> <li>• the importance of homeostasis</li> </ul>                                                                                                                                                             | <p><b>Outcome 1</b></p> <p>Learners can:</p> <ul style="list-style-type: none"> <li>• explain the importance of fluid balance</li> <li>• explain the importance of homeostasis</li> </ul>               |
| <p><b>Outcome 2</b></p> <p>Learners should understand:</p> <ul style="list-style-type: none"> <li>• the structure and function of the: <ul style="list-style-type: none"> <li>○ cardiovascular system</li> <li>○ respiratory system</li> <li>○ digestive system</li> <li>○ excretory system</li> <li>○ endocrine system</li> <li>○ nervous system</li> <li>○ musculoskeletal system</li> <li>○ integumentary system</li> <li>○ immune system</li> <li>○ male and female reproductive systems</li> </ul> </li> <li>• medical conditions associated with selected body systems</li> </ul> | <p><b>Outcome 2</b></p> <p>Learners can:</p> <ul style="list-style-type: none"> <li>• explain the structure and function of selected body systems and describe associated medical conditions</li> </ul> |

| Knowledge                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Skills                                                                                                                                                                                                              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Outcome 3</b></p> <p>Learners should understand:</p> <ul style="list-style-type: none"> <li>• categories of diseases, including: <ul style="list-style-type: none"> <li>○ infection</li> <li>○ degenerative</li> <li>○ nutritional disorders</li> <li>○ metabolic disorders</li> <li>○ immune disorders</li> <li>○ neoplasms</li> </ul> </li> <li>• predisposing factors, including: <ul style="list-style-type: none"> <li>○ age</li> <li>○ sex</li> <li>○ heredity</li> <li>○ lifestyle</li> <li>○ physical and chemical damage</li> <li>○ mental health</li> <li>○ pre-existing illness</li> </ul> </li> </ul> | <p><b>Outcome 3</b></p> <p>Learners can:</p> <ul style="list-style-type: none"> <li>• explain the different categories of disease</li> <li>• discuss the predisposing factors to disease</li> </ul>                 |
| <p><b>Outcome 4</b></p> <p>Learners should understand:</p> <ul style="list-style-type: none"> <li>• how a knowledge of anatomy, physiology and the different categories and causes of disease can aid the nursing process</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                    | <p><b>Outcome 4</b></p> <p>Learners can:</p> <ul style="list-style-type: none"> <li>• explain how knowledge of the underpinning anatomy, physiology and disease process can aid individual care planning</li> </ul> |

# Meta-skills

You must give learners opportunities to develop their meta-skills throughout this unit. We have suggested how to incorporate the most relevant ones into the unit content, but you may find other opportunities.

## Self-management

This includes focusing, integrity, adapting and initiative. The most relevant are:

- focusing:
  - researching
  - evaluating understanding on an ongoing basis through formative assessment
- integrity:
  - discussing and evaluating own values and personal development
- adapting:
  - accommodating new ideas through research and practical experience
- initiative:
  - independently researching
  - collaborating with other professionals to share enthusiasm and knowledge

## Social intelligence

This includes communicating, feeling, collaborating and leading. The most relevant are:

- communicating:
  - sharing ideas and perspectives
  - discussing practical tasks

- engaging in collaborative working and hands-on activities
- feeling:
  - showing empathy
- collaborating:
  - teamworking
  - completing practical tasks in practice
  - engaging in collaborative working and hands-on activities

## **Innovation**

This includes curiosity, creativity, sense-making and critical thinking. The most relevant are:

- curiosity:
  - researching and making observations, to understand the link between theory and practice
- sense-making:
  - researching
  - evaluating understanding
- critical thinking:
  - analysing research
  - making informed decisions

# Literacies

This unit provides opportunities to develop the following literacies.

- academic writing and referencing
- the use of domain specific language
- understanding evidence-based literature

## Numeracy

Learners develop numeracy skills by:

- analysing research statistics within relevant data

## Communication

Learners develop communication skills by:

- discussing understanding of theory and own personal reflections with other learners in group activities
- collaborating with individuals and colleagues when working on groups tasks
- crediting sources of information

## Digital

Learners develop digital skills by:

- using digital platforms to access information to support learning and understanding
- using a PC or digital device to develop coherent portfolio and assessment work

# Learning for Sustainability

Throughout this unit, you should encourage learners to develop their skills, knowledge and understanding of sustainability.

This includes:

- a general understanding of social, economic and environmental sustainability
- a general understanding of the United Nations Sustainable Development Goals (SDGs)
- a deeper understanding of subject-specific sustainability
- the confidence to apply the skills, knowledge, understanding and values they develop in the next stage of their life

# Delivery of unit

This unit is a mandatory unit in the HNC Healthcare Practice nursing care pathway. You can also deliver it as a stand-alone unit for CPD.

The notional design length of the unit is 80 hours. We suggest the following distribution of time, including assessment:

**Outcome 1** — Explain the levels of organisation and body processes essential to maintain health and wellbeing (25 hours)

**Outcome 2** — Explain the structure and function of selected body systems and describe medical conditions associated with the different systems (20 hours)

**Outcome 3** — Investigate the categories of disease and explain predisposing causes of disease (20 hours)

**Outcome 4** — Explain how a knowledge of anatomy, physiology and the different categories and causes of disease can aid the nursing process (15 hours)

## **Additional guidance**

The guidance in this section is not mandatory. We recommend that you use these notes as the basis for planning teaching and learning sessions.

### **Content and context for this unit**

This unit is a mandatory clinical route unit in the HNC Healthcare Practice nursing care pathway. You should deliver it in 80 hours. It is primarily intended to help learners working in a care setting to contribute to the care of people by providing the appropriate underpinning anatomical knowledge essential for care support. It also helps learners to access further and degree-level care-related courses.

### **Explain the levels of organisation and body processes essential to maintain health and wellbeing (outcome 1)**

Learners should be able to explain how:

- living matter begins with simple chemicals formed into substances that make up cells, the basic units of life
- specialised groups of cells form tissues, and tissues function together as organs
- organs functioning together for the same general purpose make up organ systems
- organ systems work together to maintain the body

This understanding is essential, particularly for learners who have not studied the human body prior to this unit.

Learners must understand the importance of the role of fluid balance and distribution of fluid in the human body, and that the amount and composition of fluids must be regulated at all times. You should explain extracellular and intracellular fluids. This is essential in terms of understanding homeostasis and ultimately fluid movement through cellular membranes. The movement of substances across the plasma membrane is essential for learner understanding of the human body. It's important

that learners can describe a semi-permeable membrane. They should understand how water molecules are always able to penetrate with ease, however some particles, for example proteins, are too large to pass through.

## **Explain the structure and function of selected body systems and describe medical conditions associated with the different systems (outcome 2)**

This outcome looks at 10 body systems, including the cardiovascular, respiratory and digestive systems. Learners may wish to focus on systems that are most relevant to their future plans. However, you must teach all systems regardless of progression or employment. Learners must have a knowledge and understanding of the structures and functions of each system. You should assess them on a minimum of four systems, and they should be able to describe four medical conditions, such as:

- angina, myocardial infarction or hypertension
- asthma, chronic obstructive pulmonary disease or cystic fibrosis
- peptic ulcer, inflammatory bowel disorders or liver disease
- kidney failure, kidney stones or urinary tract infection
- diabetes, thyroid disorders or Addison's disease
- Parkinson's disease, cerebrovascular accident or multiple sclerosis
- arthritis, osteoporosis or muscular dystrophy
- psoriasis, melanoma or vitiligo
- HIV and AIDS, lupus or rheumatoid arthritis
- endometriosis, uterine fibroids or ovarian cancer
- testicular cancer, erectile dysfunction or enlarged prostate

## **Investigate the categories of disease and explain predisposing causes of disease (outcome 3)**

Learners have studied the healthy human body throughout outcomes 1 and 2. For outcome 3, they further investigate and understand disease. Categories of disease could cover the following:

- infection and disease producing organisms
- degenerative diseases and disorders that involve degeneration (breaking down) of tissues in any system, for example muscular dystrophy, Alzheimer's, and osteoporosis
- nutritional disorders, dietary lack of essential vitamins, proteins and minerals and obesity. Lack of dietary essentials can lead to scurvy, anorexia, and rickets
- metabolic disorders, for example diabetes, gout, digestive disorders and hereditary dysfunctions
- immune disorders, for example HIV and AIDS, allergies
- neoplasms ('new growth'), referring to cancers and other types of tumour

You should cover predisposing causes of disease, including:

- age:
  - tissue degeneration
  - general wear and tear
  - incidence of disease, for example whooping cough and osteoporosis
- sex (some diseases are more likely to be gender based):
  - early heart disease in men
  - diabetes in women
  - lung cancers increasing in women
- inherited diseases:
  - certain cancers
  - allergies

- lifestyle:
  - diet
  - physical activity
  - smoking
  - alcohol
  - drug usage
  - hygiene
  - living conditions
- physical and chemical damage, for example occupational diseases associated with professions such as mining
- accidents causing burns, fractures and crushing injuries
- air pollution and environmental causes, including pesticides
- pre-existing illnesses, for example diabetes and hypertension
- mental health, for example stress and anxiety

**Explain how a knowledge of anatomy, physiology and the different categories and causes of disease can aid the nursing process (outcome 4)**

Learners relate their knowledge and understanding of anatomy, physiology and the disease process to the signs and symptoms they observe in the individuals in their care. They explain the signs and symptoms in terms of anatomy and physiology, and understand how this knowledge can help in the nursing process.

## **Resources**

The following text is useful as a resource:

- Waugh, A., Grant, A. (2018) *Ross and Wilson: Anatomy and Physiology in Health and Illness*, 13th ed, Spain: Churchill Livingstone Elsevier

## **Approaches to delivery**

We recommend that you deliver the unit through:

- practical classroom activities
- group work
- research tasks
- lectures
- visiting speakers

You should provide learners with the opportunity to relate their learning to conditions they encounter during their practice placement, and to look at those conditions in the wider context of predisposing factors. This may also link to some aspects that they cover in the Professional Practice in Healthcare Settings unit, such as health inequalities, influences on health, and the social context of health. We recommend that you link the theory in this unit to content contained in other units in the pathway.

You should be aware that the design of the qualification allows for only 80 hours for this unit. This is challenging for both learners and tutors. You should use a variety of teaching methods to stimulate and promote independent learning in addition to taught hours.

## **Approaches to assessment**

Evidence can be generated using different types of assessment. The following are suggestions only. There may be other methods that would be more suitable to learners.

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 assessment for this unit could be by multiple-choice and/or restricted-response questions for outcomes 1 and 2 and a report or case study for outcomes 3 and 4.

The assessment for outcome 2 should comprise of a maximum of four body systems and four medical conditions. Learners should not know which systems they'll be assessed on prior to the assessment.

For outcomes 3 and 4, you can assess learners further on the same selected body systems or, alternatively, they can choose other disorders or diseases affecting other systems. This could be by a report, leaflet, slide presentation, an academic poster or a Sway. Learners must submit a reference and/or bibliography page, and research common conditions statistically relevant to the context of health in contemporary Scotland.

We recommend a pass mark of 60% for each assessment, ensuring that learners have met the specified evidence requirements. Remediation should occur for learners achieving 56 to 59% for each assessment. For those learners achieving 55% and under, you must provide an alternative assessment.

We suggest that learners achieving between 56 and 59% need only be assessed on those parts that were not achieved, and learners achieving 55% and under should be reassessed using a different assessment instrument.

# Equality and inclusion

This unit is designed to be as fair and as accessible as possible with no unnecessary barriers to learning or assessment.

You must consider the needs of individual learners when planning learning experiences, selecting assessment methods or considering alternative evidence.

Guidance on assessment arrangements for disabled learners and those with additional support needs is available on the [assessment arrangements web page](#).

# Information for learners

## The Human Body in Health and Illness (SCQF level 7)

This information explains:

- what the unit is about
- what you should know or be able to do before you start
- what you need to do during the unit
- opportunities for further learning and employment

### Unit information

This unit enables you to demonstrate a knowledge and understanding of the normal functioning of the human body and its systems. Human physiology is the study of the functions, processes and mechanisms of the human body in health and disease.

There are four outcomes in the unit, all of them requiring independent study in addition to the taught classes.

In outcome 1, the emphasis is on how the body is organised and how water and other substances are distributed and controlled. You are introduced to new concepts and language associated with the body. You must grasp the knowledge and understanding in outcome 1 to progress to the other outcomes.

Outcome 2 covers the structures and functions of all body systems. You are assessed on four of these systems and four medical conditions for each of the body systems.

In outcome 3, you study the body in terms of the disease process and further explain a particular disease or disorder in detail. You may be able to link this outcome to learning from other units in the HNC.

Outcome 4 covers the ways in which a knowledge of anatomy, physiology and the different categories and causes of disease can aid the nursing process.

You may have a combined assessment for outcomes 1 and 2 and a report or case study for outcomes 3 and 4.

This is a challenging unit that provides essential underpinning knowledge that helps you to progress to further education or degree-level study, or in the workplace.

This unit contributes to your overall final grade.

## **Meta-skills**

Throughout this unit, you develop meta-skills that are useful for the healthcare sector.

Meta-skills are transferable behaviours and abilities that help you adapt and succeed in life, study and work. There are three categories of meta-skills: self-management, social intelligence and innovation.

## **Self-management**

This meta-skill includes

- focusing:
  - researching
  - evaluating understanding on an ongoing basis through formative assessment
- integrity:
  - discussing and evaluating own values and personal development
- adapting:
  - accommodating new ideas through research and practical experience
- initiative:
  - independently researching
  - collaborating with other professionals to share enthusiasm and knowledge

## **Social intelligence**

This meta-skill includes:

- communicating:
  - sharing ideas and perspectives
  - discussing practical tasks
  - communicating with individuals and colleagues when working on group tasks
- feeling:
  - showing empathy
- collaborating:
  - teamworking
  - completing practical tasks in practice
  - communicating with individuals and colleagues when working on group tasks

## **Innovation**

This meta-skill includes:

- curiosity:
  - researching and making observations, to understand the link between theory and practice
- sense-making:
  - researching
  - evaluating understanding
- critical thinking:
  - analysing research
  - making informed decisions

## Learning for Sustainability

Throughout this unit, you develop skills, knowledge and understanding of sustainability.

You learn about social, economic and environmental sustainability principles and how they relate to the healthcare sector. You also develop an understanding of the [United Nations Sustainable Development Goals](#).

# Administrative information

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**Superclass:** PA

## History of changes

| Version | Description of change | Date |
|---------|-----------------------|------|
|         |                       |      |
|         |                       |      |
|         |                       |      |

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