



## National Unit Specification: general information

**UNIT** Health Sector: Life Sciences Industry (Intermediate 1)

**CODE** F59A 10

### SUMMARY

This Unit has been designed as a mandatory Unit of the Intermediate 1 Health Sector Course, but can also be taken as a freestanding Unit. It is suitable for candidates who have no previous experience of the health sector.

The Unit introduces candidates to the range of product types made by the life sciences industry and their application in the health sector.

Candidates will participate in a practical activity which will help to develop knowledge and skills in the correct use of a biomedical device.

The health sector includes the National Health Service (NHS) (primary and secondary care), independent healthcare, complementary therapies, the life sciences and retail pharmaceutical industries and the community and voluntary sector.

### OUTCOMES

- 1 Investigate a range of product types made by the life sciences industry.
- 2 Demonstrate the use of a biomedical device for a specified task.

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#### Administrative Information

**Superclass:** RH

**Publication date:** February 2009

**Source:** Scottish Qualifications Authority

**Version:** 01

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## **National Unit Specification: general information (cont)**

**UNIT** Health Sector: Life Sciences Industry (Intermediate 1)

### **RECOMMENDED ENTRY**

Entry is at the discretion of the centre.

### **CREDIT VALUE**

0.5 credit at Intermediate 1 (3 SCQF credit points at SCQF level 4\*).

*\*SCQF credit points are used to allocate credit to qualifications in the Scottish Credit and Qualifications Framework (SCQF). Each qualification in the Framework is allocated a number of SCQF credit points at an SCQF level. There are 12 SCQF levels, ranging from Access 1 to Doctorates.*

### **CORE SKILLS**

There is no automatic certification of Core Skills in this Unit. Opportunities for developing aspects of Core Skills are highlighted in *Guidance on Learning and Teaching Approaches* for this Unit.

## National Unit Specification: statement of standards

### UNIT Health Sector: Life Sciences Industry (Intermediate 1)

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.

#### OUTCOME 1

Investigate a range of product types made by the life sciences industry.

##### Performance Criteria

- (a) Identify the main product types made by the life sciences industry.
- (b) Describe the purpose of the main product types.
- (c) Identify and describe a product from one of the main product types.
- (d) Describe a benefit to users of a specified product.

#### OUTCOME 2

Demonstrate the use of a biomedical device for a specified task.

##### Performance Criteria

- (a) Select the correct biomedical device for the task to be undertaken.
- (b) Use the device following instructions.
- (c) Comply with health and safety requirements throughout the task.

#### EVIDENCE REQUIREMENTS FOR THIS UNIT

Evidence must be produced to demonstrate that all Outcomes and Performance Criteria have been met.

#### Outcome 1 — Written and/or oral evidence

Evidence for Outcome 1 will be gathered in open-book conditions at appropriate points throughout the Unit. Evidence will be gathered in a candidate folio.

Candidates will investigate a range of product types made by the life sciences industry. Candidates will be given a brief for the investigation.

Candidates are required to:

- ◆ identify **three** main product types
- ◆ describe the purpose of **each** identified product type
- ◆ identify **one** product and describe the main features of the identified product
- ◆ describe **one** benefit of the product for **two** users

## National Unit Specification: statement of standards (cont)

### UNIT Health Sector: Life Sciences Industry (Intermediate 1)

The product types are:

- ◆ biomedical devices
- ◆ diagnostic imaging devices
- ◆ drugs and pharmaceutical products

Examples of product types are given in the support notes.

The users will be selected from the range below:

- ◆ patients
- ◆ customers
- ◆ relatives/carers
- ◆ doctors
- ◆ dentists
- ◆ pharmacists
- ◆ nurses
- ◆ Allied Health Professions
- ◆ ancillary and support staff

Candidates must organise and present findings in an appropriate format. A template for the investigation will be provided.

### **Outcome 2 — Performance Evidence of a Practical Activity**

Candidates will demonstrate the achievement of all Performance Criteria during a practical activity. The evidence will be gathered at an appropriate point in the Unit.

Centres will specify the task for which candidates will use the biomedical device.

Candidates are required to demonstrate that they can:

- ◆ select the appropriate device for the task to be undertaken
- ◆ use the device in the correct manner following instructions
- ◆ comply with Health and Safety requirements

An assessor observation checklist must be used to support the performance evidence.

The practical activity will be carried out in a real or simulated health sector environment. Further guidance on an appropriate practical activity can be found in the support notes.

The National Assessment Bank (NAB) pack provided for this Unit illustrates the standard that should be applied. It contains an investigation pro forma and an assessor observation checklist. If a centre wishes to design its own assessments for this Unit, they should be of a comparable standard.

## National Unit Specification: support notes

### UNIT Health Sector: Life Sciences Industry (Intermediate 1)

This part of the Unit Specification is offered as guidance. The support notes are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 20 hours.

#### GUIDANCE ON THE CONTENT AND CONTEXT FOR THIS UNIT

This Unit has been designed as a mandatory Unit of the Intermediate 1 Health Sector Course, but can also be taken as a freestanding Unit. It is suitable for candidates who have no previous experience of the health sector.

The Unit introduces candidates to the range of product types made by the life sciences industry and their application in the health sector.

Candidates will participate in a practical activity which will help to develop knowledge and skills in the correct use of a biomedical device.

The health sector includes the National Health Service (NHS) (primary and secondary care), independent healthcare, complementary therapies, the life sciences and retail pharmaceutical industries and the community and voluntary sector.

The Unit will involve candidate research which will encourage the development of time management, information retrieval and research skills.

#### Outcome 1

This Outcome is designed to give candidates a broad overview of the range of products made by the life sciences industry. Where the Unit is being taken as part of the Intermediate 1 Health Sector Course, candidates will have gained knowledge of the types of provision and services provided in the health sector in Outcome 1 of the Unit *Health Sector: An Introduction (Intermediate 1)*. Candidates will have the opportunity to further develop that knowledge into an awareness of the types of products made by the life sciences industry and their application in the fields of prevention, diagnosis and treatment of disease and disability. Candidates will also further develop the skills of researching information and how to organise and present findings.

The services provided by the life sciences industry include research, development, manufacture and testing of products. The products made by the life sciences industry are used by health professionals in the screening, diagnosis and treatment of illness. They are also used by patients and their relatives to monitor conditions and to improve the quality of life for people with disabilities and/or long term health problems. There is an opportunity to develop appropriate language and attitudes towards people with disabilities.

The investigation will be recorded in a candidate folio and include all Performance Criteria specified. The folio could be produced in a variety of formats eg a presentation which could be in an electronic form, display, poster or leaflet. The range of product types and users is provided within the Evidence Requirements.

## National Unit Specification: support notes (cont)

### UNIT Health Sector: Life Sciences Industry (Intermediate 1)

Examples of product types are given below:

Biomedical devices	all products except medicines used in healthcare such as blood glucose monitors, replacement joints, walking frames, beds, surgical instruments, splints
Diagnostic imaging devices	machines that produce images which are used to diagnose injury or disease such as x-ray machines, MRI scanners, ultrasound scanners
Drugs and pharmaceutical products	include prescription medicines, vaccines and dental health products, over-the-counter medicines and nutritional drinks

### Outcome 2

This Outcome is intended to provide candidates with opportunities to demonstrate specified employability skills and attitudes within practical activities. The practical activities can be carried out on a mannequin. Alternatively, candidates could work in pairs. When carrying out practical activities, candidates need not complete a moving and handling course, but need to be aware that they must not move or handle someone without prior training. The practical activity will have to be risk assessed by a competent person to ensure that all Health and Safety requirements are complied with. Teachers/lecturers should ensure that candidates comply with organisational policy and guidelines relating to health and safety, infection control and equality and diversity.

Examples of relevant practical activities could include:

- ◆ use of a diagnostic biomedical device — heart rate, blood pressure, height, weight, temperature, body mass index, glucose levels
- ◆ application of a biomedical device — bandage, cervical collar, compression hosiery, oxygen mask, wrist support
- ◆ use of a biomedical device to facilitate mobility — standing aid, wheelchair, walking aid

### Employability Skills

In this Unit candidates will generate evidence for the following employability skills:

- ◆ understanding of roles and responsibilities in the workplace
- ◆ awareness of health and safety
- ◆ ability to follow instructions
- ◆ awareness of infection control procedures
- ◆ awareness of organisational standards for quality

Although not directly assessed in this Unit, there may be opportunities to develop the following employability skills:

- ◆ positive attitude to learning and the workplace
- ◆ self respect and respect and consideration for others
- ◆ willingness to listen to others and respond constructively to feedback
- ◆ awareness of equality and diversity

## National Unit Specification: support notes (cont)

### UNIT Health Sector: Life Sciences Industry (Intermediate 1)

- ◆ willingness to contribute to team work
- ◆ reflecting on own abilities
- ◆ awareness of organisational standards for appearance and behaviour
- ◆ understanding of care values

These skills can be practised in real or simulated workplace environments and individual or group classroom activities.

### GUIDANCE ON LEARNING AND TEACHING APPROACHES FOR THIS UNIT

#### Outcome 1

Candidates must identify a range of product types made by the life sciences industry. This will be in the form of an investigation. The investigation will require candidates to gather information from a variety of sources. This could include:

- ◆ visiting speakers
- ◆ Internet
- ◆ library
- ◆ interviews with workers in the life sciences industry
- ◆ workplace visits
- ◆ product information leaflets or manuals

It may be beneficial for candidates to work in groups and share information although the final investigation must be the candidate's own work. Candidates should discuss and agree with the teacher/lecturer a suitable format for presenting the information. Initial discussions can be carried out in groups and whole class expositions. There is the opportunity for candidates to practise and develop skills of verbal and non verbal communication, planning and respect and consideration for others. The language and materials used throughout should promote equality and diversity and avoid cultural stereotypes. Visiting speakers and workplace visits can provide valuable insights into the benefits to a range of users of products made by the life sciences industry. This could include individuals who have benefited from the use of biomedical devices. Candidates could also draw on personal experiences.

#### Outcome 2

Experiential learning is the main approach recommended for this Outcome. This involves learning through practical experiences and activities. Candidates should be encouraged to undertake practical activities in pairs as they develop their skills in using a range of biomedical devices in a correct and safe manner. The activities should be undertaken in a real or simulated work environment. The teacher/lecturer should provide a demonstration of the safe and correct method of using each biomedical device prior to candidates undertaking any practical activity. Teachers/lecturers should ensure that positive images of disability are promoted throughout and that the purpose of biomedical devices is to enable individuals to be as independent and self managing as possible. The importance of ensuring the dignity and privacy of individuals while carrying out practical activities should be stressed and candidates should use appropriate language and attitudes throughout. This includes body language and facial expression.

## National Unit Specification: support notes (cont)

### UNIT Health Sector: Life Sciences Industry (Intermediate 1)

Delivery of this Unit could incorporate a variety of teaching and learning methods including:

- ◆ teacher/lecturer presentations and demonstrations
- ◆ group work and discussions
- ◆ handouts
- ◆ visiting speakers
- ◆ workplace visits
- ◆ practical activities
- ◆ individual and group research
- ◆ internet searches
- ◆ interviews with health professionals/patients/relatives

### OPPORTUNITIES FOR CORE SKILL DEVELOPMENT

In this Unit candidates will be involved in an investigation and a practical activity. There may be opportunities for candidates to work with others which would enable them to develop effective communication and interpersonal skills. If the candidate uses a computer while undertaking any part of this Unit, they will have the opportunity to develop Information Technology skills.

### GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT

When delivering this Unit as part of the Intermediate 1 Health Sector Course, there is the possibility of assessment integration with the practical activity in Outcome 2 of the Unit *Health Sector: Health Awareness:(Intermediate 1)* and Outcome 2 of this Unit.

#### Outcome 1

The evidence will be gathered in an individual folio of evidence which will include information on three product types.

The information will include

- ◆ identification of three main product types
- ◆ description of the purpose of each product type
- ◆ description of an identified product
- ◆ description of one benefit of the product for two users

The evidence will be gathered in open-book conditions at appropriate points in the Unit.

Candidates should be given a choice as to their preferred method of submission. Evidence could be presented in the format of:

- ◆ written information
- ◆ diagrams or charts
- ◆ an electronic slide show
- ◆ a display or exhibition
- ◆ a multimedia presentation



## **National Unit Specification: support notes (cont)**

### **UNIT        Health Sector: Life Sciences Industry (Intermediate 1)**

#### **Outcome 2**

Performance evidence for Outcome 2 will be based on a practical activity, specified by the teacher/lecturer, which must be observed using an observation checklist.

Candidates should be given the opportunity to practise the skills before being assessed.

The National Assessment Bank (NAB) pack provided for this Unit illustrates the standard that should be applied. It contains an investigation pro forma and an assessor observation checklist. If a centre wishes to design its own assessments for this Unit, they should be of a comparable standard.

#### **Opportunities for the use of 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 communications technology (ICT), such as e-testing or the use of e-portfolios or e-checklists. Centres which wish to use e-assessment must ensure that the national standard is applied to all candidate evidence and that conditions of assessment as specified in the Evidence Requirements are met, regardless of the mode of gathering evidence. Further advice is available in *SQA Guidelines on Online Assessment for Further Education (AA1641, March 2003)*, *SQA Guidelines on e-assessment for Schools (BD2625, June 2005)*.

#### **CANDIDATES WITH DISABILITIES AND/OR ADDITIONAL SUPPORT NEEDS**

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering alternative Outcomes for Units. Further advice can be found in the SQA document *Guidance on Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs (www.sqa.org.uk)*.