

## Higher National Unit Specification

### General information for centres

**Unit title:** Diagnostic Radiography: Introduction

**Unit code:** DW95 34

**Unit purpose:** This Unit introduces the candidate to the range of diagnostic examinations performed within a Radiology Department and the features and functions of the equipment required to perform radiographic procedures.

On completion of the Unit the candidate should be able to:

- 1 Describe the basic range of services provided by a Radiography Department and the radiography terminology commonly employed.
- 2 Explain the rules and regulations for the protection of staff and patients during general radiographic procedures.
- 3 Explain the main components of an x-ray suite and processing/image recording system.

**Credit points and level:** 1 HN Credit at SCQF level 7: (8 SCQF credit points at SCQF level 7\*)

*\*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.*

**Recommended prior knowledge and skills:** It is recommended that candidates should have studied the Units Patient Care in Radiography and Radiation Physics: Foundations, prior to this Unit and also to have undertaken or be currently studying General Radiographic Anatomy or have equivalent prior knowledge from their work in this field.

**Core Skills:** There are opportunities to develop the Core Skills of Communication at level 6 and Problem Solving and Working with Others at level 5 in this Unit, although there is no automatic certification of Core Skills or Core Skills components.

**Context for delivery:** If this Unit is delivered as part of a Group Award, it is recommended that it should be taught and assessed within the subject area of the Group Award to which it contributes. This Unit forms part of the framework for HNC Allied Health Professions: Diagnostic Imaging

**Assessment:** Holistic assessment is most appropriate to this Unit. This could take the form of an organisation study/patient information leaflet focusing on the candidate's specialism but gives an overview of the Unit content and covering the Evidence Requirements.

## **Higher National Unit specification: statement of standards**

**Unit title:** Diagnostic Radiography: Introduction

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The sections of the Unit stating the Outcomes, knowledge and/or skills, and Evidence Requirements are mandatory.

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. Candidates 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 basic range of services provided by a Radiography Department and the radiography terminology commonly employed

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

- ◆ Commonly used terminology in Radiography
- ◆ Processes and pathways within Radiography
- ◆ Overview of Radiographic imaging modalities including:
  - General radiography
  - Ultrasound
  - Computed tomography
  - Magnetic resonance imaging,
  - Fluoroscopy
  - Radionuclide imaging.

#### **Evidence Requirements**

Candidates will need to provide evidence to demonstrate their knowledge and/or skills by showing that they can:

- ◆ demonstrate their knowledge of the processes and pathways which a patient will encounter within a radiology department and the imaging modalities which they may access

#### **Assessment guidelines**

Holistic Unit assessment.

## **Higher National Unit specification: statement of standards (cont)**

**Unit title:** Diagnostic Radiography: Introduction

### **Outcome 2**

Explain the rules and regulations for the protection of staff and patients during general Radiographic procedures

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

- ◆ Protocols and procedures
- ◆ Local rules pertaining to radiation and safety
- ◆ Quality assurance systems
- ◆ The application of ionising radiation regulations in Radiology
- ◆ Relevant and current legislation

#### **Evidence Requirements**

Candidates will need evidence to demonstrate their knowledge and/or skills by showing that they can:

- ◆ interpret the radiation safety regulations
- ◆ explain how they would apply the radiation safety regulations in clinical practice

Candidates will also be required to show evidence of their knowledge of:

- ◆ quality assurance systems commonly used within a Radiology department

#### **Assessment guidelines**

Holistic Unit assessment.

### **Outcome 3**

Explain the main components of an x-ray suite and processing/image recording system

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

- ◆ Design and layout of an x-ray suite
- ◆ Basic components of an x-ray system for:
  - Conventional radiography
  - Computed radiography
  - Digital radiography
- ◆ Control and measurement devices
- ◆ Accessory Equipment
- ◆ Positioning equipment
- ◆ Processing /image recording systems/picture archiving systems and image transfer

## **Higher National Unit specification: statement of standards (cont)**

**Unit title:** Diagnostic Radiography: Introduction

### **Evidence Requirements**

Candidates will need evidence to demonstrate their knowledge of:

- ◆ the design and function of basic x-ray equipment
- ◆ Image recording appliances

### **Assessment guidelines**

Holistic Unit Assessment.

## Administrative Information

**Unit code:** DW95 34  
**Unit title:** Diagnostic Radiography: Introduction  
**Superclass category:** PB  
**Original date of publication:** September 2006  
**Version:** 01

### History of Changes:

Version	Description of change	Date

**Source:** SQA

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SQA acknowledges the valuable contribution that Scotland's colleges have made to the development of Higher National qualifications.

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## Higher National Unit specification: support notes

### Unit title: Diagnostic Radiography: Introduction

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 40 hours.

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

It is expected that candidates for this Unit will be working in a diagnostic clinical environment. However simulation and role-play can be used to widen experience. Professional training videos are available which have particular relevance to this Unit. The concept of 'Patient Pathway' should underpin delivery of this Unit.

Useful information to help with this Unit can be found at the following web-sites:

**www.sor.org** (Society and College of Radiographers)

**www.BIR.ac.uk** (British Institute of Radiology)

and in the following professional journals:

Synergy  
Radiography  
Journal of Radiotherapy in Practice  
Clinical Oncology  
Clinical Radiology

### Outcome 1

Candidates should be able to describe the range of commonly used services provided and use correct terminology in relation to processes and pathways in a radiology department. Candidates should be familiar with all services within their own department. They must also be able to demonstrate a broad understanding of all of the following even where these services are not available within their local department:

- ◆ General radiography
- ◆ Ultrasound
- ◆ Computed tomography
- ◆ Magnetic resonance imaging
- ◆ Fluoroscopy
- ◆ Radionuclide imaging

## **Higher National Unit specification: support notes (cont)**

### **Unit title:** Diagnostic Radiography: Introduction

#### **Outcome 2**

Candidates should expand their knowledge of health and safety procedures and legislation to include those specific to the radiology department. This should include:

- ◆ Protocols and procedures
- ◆ Local rules pertaining to radiation and safety (IR(ME)R)
- ◆ Quality assurance systems
- ◆ The application of ionising radiation regulations in Radiology
- ◆ Relevant and current legislation

The importance of IR(ME)R to all of the above should be addressed.

#### **Outcome 3**

Candidates should understand the reasons governing the design and layout of an x-ray suite. They should be aware of the range of equipment (including accessory and positioning equipment) required and its basic components for:

- ◆ Conventional radiography
- ◆ Computed radiography
- ◆ Digital radiography

Routine equipment quality control processes should be understood including the function of processing/image recording systems.

### **Guidance on the delivery and assessment of this Unit**

The organisation study/patient information leaflet must contain information to support the Evidence Requirements specified in all three Outcomes. The study/leaflet guidelines will be issued at the commencement of this Unit and the candidates are advised to submit the study/leaflet on the date given which is at the end of the delivery of this Unit. The Unit tutor will explain the guidelines on how to complete the study/leaflet at the commencement of this Unit.

#### ***Opportunities for developing Core Skills***

There are opportunities to develop the Core Skills of Communication at level 6 and Problem Solving and Working with Others at level 5 in this Unit, although there is no automatic certification of Core Skills or Core Skills components.

#### **Open learning**

For information on normal open learning arrangements, please refer to the SQA guide *Assessment and Quality Assurance and Distance Learning* (SQA 2000).

## **Higher National Unit specification: support notes**

**Unit title:** Diagnostic Radiography: Introduction

### **Candidates with additional support needs**

This Unit specification is intended to ensure that there are no artificial barriers to learning or assessment. 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. For information on these, please refer to the SQA document *Guidance on Alternative Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs*, which is available on SQA's website: [www.sqa.org.uk](http://www.sqa.org.uk).

## General information for candidates

### Unit title: Diagnostic Radiography: Introduction

This Unit is designed to provide an introduction to diagnostic imaging in a Radiography department. An overview of a typical Radiography Department will initially be discussed with examples given of the types of radiographic examinations undertaken. The reasons for the use of a wide range of technologies within the department will be explained.

Most imaging systems use ionising radiation to produce the image therefore an understanding of the responsibilities of using radiation is important to protect you, your patients and colleagues. This Unit will study how to use radiation safely by applying the local rules, protocols and ionising radiation regulations.

Common x-ray equipment, accessories, control systems and processing systems will be covered to ensure that you have a thorough knowledge and understanding of the range of equipment that you may be expected to utilise in clinical practice.

For the Unit assessment you are requested to write an organisation study/patient information leaflet focusing on your specialism but gives an overview of the Unit content and covering the Evidence Requirements.

The study/leaflet guidelines outline the set criteria, which will assist in completing it. You are expected to use not only the information taught in lectures and seminar sessions but by accessing information in the library and Internet sources.

You will find useful information to help you with this Unit at the following web-sites:

**www.sor.org** (Society and College of Radiographers)

**www.BIR.ac.uk** (British Institute of Radiology)

and in the following professional journals:

Synergy  
Radiography  
Journal of Radiotherapy in Practice  
Clinical Oncology  
Clinical Radiology