



Information System Design and Development (National 4)

SCQF: level 4 (9 SCQF credit points)

Unit code: H226 74

Unit outline

The general aim of this Unit is for the learner to develop basic knowledge, understanding and practical problem-solving skills related to the design and development of information systems through a range of practical and investigative tasks. Learners will implement practical solutions using a range of development tools. They will also develop an understanding of computer hardware, software, connectivity and security issues, and relate these to one or more information systems.

Learners who complete this Unit will be able to:

- 1 Develop simple information systems, using appropriate development tools
- 2 Consider a number of basic factors involved in the design and implementation of an information system

This Unit is a mandatory Unit of the National 4 Computing Science Course and is also available as a free-standing Unit. The Unit Specification should be read in conjunction with the *Unit Support Notes*, which provide advice and guidance on delivery, assessment approaches and development of skills for learning, skills for life and skills for work. Exemplification of the standards in this Unit is given in *Unit Assessment Support*.

The *Added Value Unit Specification* for the National 4 Computing Science Course gives further mandatory information on Course coverage for learners taking this Unit as part of the National 4 Computing Science Course.

Recommended entry

Entry to this Unit is at the discretion of the centre. However, learners would normally be expected to have attained the skills, knowledge and understanding required by one or more of the following or equivalent qualifications and/or experience:

- ♦ National 3 Computing Science Course or relevant component Units
- ♦ National 3 Numeracy

In terms of prior learning and experience, relevant experiences and outcomes may also provide an appropriate basis for doing this Unit.

Core Skills

Achievement of this unit gives automatic certification of the following:

Core Skill component(s) for the Unit	Providing and Creating Information at SCQF level 4
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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. For further information, please refer to the *Unit Support Notes*.

Standards

Outcomes and assessment standards

Outcome 1

The learner will:

1 Develop simple information systems, using appropriate development tools, by:

- 1.1 Creating a structure and links
- 1.2 Integrating different media types
- 1.3 Identifying and rectifying errors

Outcome 2

The learner will:

2 Consider a number of basic factors involved in the design and implementation of an information system by describing, in simple terms:

- 2.1 Its basic features and functionality
- 2.2 Its hardware, software, storage and connectivity requirements
- 2.3 The security risks involved in digital communication

Evidence Requirements for the Unit

Assessors should use their professional judgement, subject knowledge and experience, and understanding of their learners, to determine the most appropriate ways to generate evidence and the conditions and contexts in which they are used.

Evidence of the assessment standards for Outcome 1 may be derived from a single information system, such as a database, a website, or a multimedia application (or a hybrid of these). Alternatively it may be obtained by developing a number of information systems, which may be of one or more types. Evidence for Outcome 2 may be oral or written.

Exemplification of assessment is provided in *Unit Assessment Support*. Advice and guidance on possible approaches to assessment is provided in the *Unit Support Notes*.

Development of skills for learning, skills for life and skills for work

It is expected that learners will develop broad, generic skills through this Unit. The skills that learners will be expected to improve on and develop through the Unit are based on SQA's *Skills Framework: Skills for Learning, Skills for Life and Skills for Work* and drawn from the main skills areas listed below. These must be built into the Unit where there are appropriate opportunities.

2 Numeracy

- 2.1 Number processes
- 2.3 Information handling

4 Employability, enterprise and citizenship

- 4.2 Information and communication technology (ICT)

5 Thinking skills

- 5.3 Applying

Amplification of these is given in SQA's *Skills Framework: Skills for Learning, Skills for Life and Skills for Work*. The level of these skills should be at the same SCQF level of the Unit and be consistent with the SCQF level descriptor. Further information on building in skills for learning, skills for life and skills for work is given in the *Unit Support Notes*.

Employability, enterprise and citizenship skills shown in this National Unit provide automatic certification of Core Skill component: Providing and Creating Information at SCQF level 4.

Administrative information

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Superclass: CB

History of changes to National Unit Specification

Version	Description of change	Authorised by	Date
1.1			

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Note: readers are advised to check SQA's website: www.sqa.org.uk to ensure they are using the most up-to-date version of the Unit Specification.

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