

## National Unit Specification: general information

<b>UNIT</b>	Information and the Internet (Intermediate 1)
<b>NUMBER</b>	DF36 10
<b>COURSE</b>	Computing Studies (Intermediate 1)

### SUMMARY

This Unit is designed to develop knowledge and understanding of the principles of databases and information systems and to develop practical skills in the use of databases, information sources and web page authoring through the use of contemporary hardware and software. This knowledge, understanding and practical skills may then be applied by the candidate to solve practical problems related to information systems and the Internet. It is designed for candidates undertaking the Intermediate 1 Computing Studies Course, particularly those considering continuing to Intermediate 2 Information Systems, but also suitable for anyone interested in using the World Wide Web as a source of information.

### OUTCOMES

1. Demonstrate knowledge and understanding of a range of simple facts and terminology related to the features and uses of databases, information systems and the Internet, and the software development process.
2. Demonstrate practical skills in the context of databases, information sources and web page authoring using contemporary hardware and software.

### RECOMMENDED ENTRY

While entry is at the discretion of the centre, candidates would normally be expected to have attained one of the following, or equivalent:

- ◆ Access 3 Internet Applications Unit
- ◆ Access 3 Computing Cluster
- ◆ Standard Grade Computing Studies at Foundation level

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### Administrative Information

<b>Superclass:</b>	CB
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## **National Unit Specification: general information (cont)**

**UNIT** Information and the Internet (Intermediate 1)

### **CREDIT VALUE**

1 credit at Intermediate 1 (6 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 or Core Skill components in this Unit.

## **National Unit Specification: statement of standards**

### **UNIT**      Information and the Internet (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 the Scottish Qualifications Authority.

#### **OUTCOME 1**

Demonstrate knowledge and understanding of a range of simple facts and terminology related to the features and uses of databases, information systems and the Internet, and the software development process.

#### **Performance Criteria**

- a) Basic computing terminology is understood and used appropriately.
- b) Simple descriptions of the features and uses of databases, information systems and the Internet are correct.
- c) Descriptions of the stages involved in the software development process are correct.

#### **Evidence Requirements**

Written or oral evidence that the candidate can describe and explain the principles, features and purposes of information systems accurately and concisely. Evidence should be obtained using questions in a closed book test, under supervision, lasting no more than 45 minutes. The test must sample content (see Computing Studies (Intermediate 1) Course content) in each of the following areas:

- ◆ database terms
- ◆ information systems
- ◆ the Internet
- ◆ information sources
- ◆ software development process

(The content statements are also reproduced for convenience as a table in the support notes for this Unit).

The standard to be applied is illustrated in the National Assessment Bank items available for this Unit. If a centre wishes to design its own assessments for this Unit, they should be of a comparable standard.

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

### **UNIT**      Information and the Internet (Intermediate 1)

#### **OUTCOME 2**

Demonstrate practical skills in the context of databases, information sources and web page authoring using contemporary hardware and software.

#### **Performance Criteria**

- a) Basic features of hardware are used with guidance.
- b) Basic features of software are selected and used with guidance.
- c) Practical tasks in familiar contexts are carried out with guidance.

#### **Evidence Requirements**

Observation checklist showing that the candidate has demonstrated practical skills at an appropriate level in all of the following contexts:

- ◆ creating, searching and sorting a simple database
- ◆ accessing information from the Internet
- ◆ accessing information from CD-ROM based software
- ◆ web page authoring

Hard copy evidence should be provided of the database and website created.

These practical skills may all be demonstrated in a single extended task, or a number of smaller tasks.

The practical skills should be demonstrated in the context defined in the content statements (see Computing Studies (Intermediate 1) Course content).

The candidate will be allowed access to books, notes and online help while completing the task(s).

(The content statements are also reproduced for convenience as a table in the support notes for this Unit).

The standard to be applied is illustrated in the National Assessment Bank items available for this Unit. 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 Information and the Internet (Intermediate 1)

This part of the Unit Specification is offered as guidance.

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

The content for this Unit is detailed below (and also in the National Course Specifications: Course details.)

<b>Content Statement: Database Terms</b>
Description and demonstration of the following practical skills in an appropriate application package: <ul style="list-style-type: none"><li>◆ create a new database (design)</li><li>◆ edit records</li><li>◆ add new fields</li><li>◆ search on single/multiple fields</li><li>◆ sort on single/multiple fields</li><li>◆ output of record — table to form (card format to list format)</li></ul>
Correct identification of the following terminology: <ul style="list-style-type: none"><li>◆ fields</li><li>◆ record</li><li>◆ file</li><li>◆ field types (numeric, text, date/time, currency)</li><li>◆ field sizes</li><li>◆ search/sort</li></ul>

<b>Content Statement: Information Systems</b>
Description of the difference between public and private information systems Identification of examples of each: <ul style="list-style-type: none"><li>◆ private (including DVLC, police, government)</li><li>◆ public (including library, newspapers, telephone directories, Yellow Pages)</li></ul>
Description of the difference between manual and electronic information systems Identification of examples of each: <ul style="list-style-type: none"><li>◆ manual (including newspapers, telephone directories, Yellow Pages, address books)</li><li>◆ electronic (including newspapers, telephone directories, Yellow Pages, address books)</li></ul>
Description of advantages/disadvantages of manual/electronic databases
Description of the differences between data and information
Identification of examples which breach the following legislation: <ul style="list-style-type: none"><li>◆ Data Protection Act (1998)</li><li>◆ Copyright, Designs and Patent Act (1988)</li><li>◆ Computer Misuse Act (1990)</li></ul>
Description of the Internet as a large network of computer networks Description of the World Wide Web (WWW) as a collection of interlinked pages of information on the Internet
Identification of the benefits of networking of computers in information systems

## National Unit Specification: support notes (cont)

### UNIT Information and the Internet (Intermediate 1)

<b>Content Statement: The Internet</b>
Identification of the requirements relating to WWW (Internet) access <ul style="list-style-type: none"><li>◆ computer system — processor, RAM</li><li>◆ modem (speed of access of link, dial-up or broadband)</li><li>◆ access to telephone line, cable, satellite and cost of calls</li><li>◆ Internet service provider (ISP) costs</li><li>◆ communications software — browser, e-mail software</li></ul> Identification of costs relating to WWW (Internet) access: <ul style="list-style-type: none"><li>◆ setup or initial costs including cost of hardware, software, installation and training</li><li>◆ running costs including ISP subscription, call charges, maintenance, helplines, updating hardware and software</li></ul>
Identification of the security issues with using the Internet: <ul style="list-style-type: none"><li>◆ user IDs and passwords</li><li>◆ filtering</li><li>◆ secure sites for e-commerce</li></ul>

<b>Content Statement: Information Sources</b>
Demonstration of information retrieval from CD-ROMs and WWW sites in the following contexts: <ul style="list-style-type: none"><li>◆ shopping/advertising</li><li>◆ sport</li><li>◆ leisure</li><li>◆ education</li><li>◆ news</li></ul>

<b>Content Statement: Software Development Process</b>
Identification of each stage of the software development process in the context of web authoring: <ul style="list-style-type: none"><li>◆ analysis: clarifying what is required</li><li>◆ design: identifying the layout and elements</li><li>◆ implementation: creating the pages</li><li>◆ testing: checking the pages and links look and behave correctly</li><li>◆ documentation: user and technical guide</li><li>◆ evaluation: does it fulfill the specification; could it be improved</li></ul>
Creation of: <ul style="list-style-type: none"><li>◆ a web site with separate web pages</li><li>◆ links from a home page to other pages</li><li>◆ pages containing text and graphics</li></ul>

## National Unit Specification: support notes (cont)

### UNIT Information and the Internet (Intermediate 1)

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

Candidates will require individual access to appropriate computer hardware and software throughout this Unit.

The two Outcomes should be delivered in an integrated way rather than sequentially. For Outcome 2, the practical activities should be taught and used to illustrate and exemplify the knowledge and understanding required for Outcome 1.

The amount of time spent on each area of content will vary depending on the teaching methodology used and the ability and prior experience of the candidates. However, the following times are suggested as a rough guide:

databases — terminology and practical work	10 hours
information systems	4 hours
the Internet	4 hours
information retrieval from Internet and CD ROMs	8 hours
software development process — creating a small web site	10 hours

The small website created by the candidates could be based on the information retrieved in the preceding section of the work.

1½ hours should be set aside to:

- ◆ administer the Outcome 1 test
- ◆ gather evidence for Outcome 2

A further 2½ hours is allowed for remediation and re-assessment if required.

If the Unit is delivered as part of a Course, the Course documentation will provide further information on teaching and learning in a Course context, including the identification of a number of ‘themes’ to facilitate holistic learning across the Course.

#### GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT

National Assessment Bank tests have been created specifically to assess Outcome 1 of the Unit. This assessment consists of a closed book test, and must be conducted under examination conditions. In order to gain success in this Outcome, the candidate must achieve at least the cut-off score for the test. If a centre wishes to design its own assessment for this Unit, they should be of a comparable standard.

Outcome 2 requires the candidate to demonstrate practical skills while using contemporary hardware and software. These practical skills may be demonstrated as a single extended task or a number of relatively small tasks. The task(s) will normally be undertaken by the candidate as part of the teaching and learning activities of the Unit, rather than as separate formal assessment activities. The candidate will be allowed access to books, notes and online help while completing the task(s). The practical skills should be demonstrated in the context defined in the content statements (see Computing Intermediate 1 Course content).

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

### **UNIT**      Information and the Internet (Intermediate 1)

To gain success in this Outcome, the candidate must demonstrate practical skills in the following contexts:

- ◆ creating, searching and sorting a simple database
- ◆ accessing information from the Internet
- ◆ accessing information from CD-ROM based software
- ◆ web page authoring

Hard copy evidence should be provided of the database and website created.

A pro-forma observation checklist for Outcome 2 is provided in the National Assessment Bank materials.

All evidence must be retained by the centre. The assessment of this Unit is subject to moderation by SQA.

#### **SPECIAL NEEDS**

This Unit Specification is intended to ensure that there are no artificial barriers to learning or assessment. Special needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments or considering special alternative Outcomes for Unit. For information on these, please refer to the SQA document *Guidance on Special Assessment Arrangements* (SQA, September, 2003).