National Unit Specification: general information

UNIT   Using Information (Intermediate 2)

NUMBER   DM4C 11

COURSE   Information Systems (Intermediate 2)

SUMMARY

This Unit is designed to develop knowledge and understanding of the principles, features and purposes of information and the systems used to retrieve, create and manipulate information. It also develops knowledge and understanding of the wide-ranging implications of the growing use of information systems within society. It provides an opportunity to develop practical skills in the use of contemporary information handling. Candidates may then apply this knowledge and skills to solve practical problems. The Unit is designed for candidates undertaking the Intermediate 2 Information Systems Course, but is also suitable for anyone wishing to develop a basic understanding of the use of computer applications in a variety of contexts.

OUTCOMES

1. Demonstrate knowledge and understanding of the principles, features and purposes of information, organisational information systems, information management software, and the social, legal, ethical and economic implications of information systems.
2. Demonstrate practical skills in the use of contemporary hardware and software in the context of creating, storing, processing and retrieving information.

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:

♦   Intermediate 1 Information and the Internet Unit
♦   Intermediate 1 Computing Studies Course
♦   Standard Grade Computing Studies at General level

Administrative Information

National Unit Specification: general information (cont)

UNIT Using Information (Intermediate 2)

CREDIT VALUE

1 credit at Intermediate 2 (6 SCQF credit points at SCQF level 5*).

* 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

This Unit gives automatic certification of the following:

| **Core Skill components for the Unit** | Critical Thinking | Int 2 |
| | Planning and Organising | Int 2 |

National Unit Specification: statement of standards

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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 the principles, features and purposes of information, organisational information systems, information management software, and the social, legal, ethical and economic implications of information systems.

Performance Criteria
a)   Basic terminology is used appropriately.
b)   Simple descriptions and explanations are related to practical and familiar contexts.
c)   Simple conclusions, predictions and generalisations are made from knowledge and understanding.

Evidence Requirements
Written or oral evidence that the candidate can describe, explain and apply the principles, features and techniques 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 Information Systems (Intermediate 2) Course Content) in each of the following areas:

♦   data and information
♦   organisational information systems
♦   information management software
♦   implications of information and communications technology

(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)

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OUTCOME 2
Demonstrate practical skills in the use of contemporary hardware and software in the context of creating, storing, processing and retrieving information.

Performance Criteria
a)   A range of appropriate hardware is used effectively.
b)   Common features of software are selected and used effectively.
c)   Practical tasks are planned and organised with detailed guidance.
d)   Practical tasks are undertaken in an appropriate range of simple contexts.

Evidence Requirements
Observation checklist showing that the candidate has carried out practical activities in each of the following contexts:

  ♦   Use of basic functions and features of an appropriate standard application package in the context of processing and retrieving information.
  ♦   Use of basic functions and features of an appropriate standard application package in the context of creating and storing information.

Hard copy evidence should be provided for both of these activities, involving two different types of application package.

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

The practical skills should be demonstrated in the context and at a level defined by the content statements (see Information Systems (Intermediate 2) Course Content).

The candidate will be allowed access to books, notes and online help while completing the tasks.

(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

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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

Content Statements: Data and Information

Definitions and exemplification of the following terms in the context of an information system:
   ♦   data
   ♦   information

Content Statements: Organisational Information Systems

Explanation of the following concepts in relation to organisational information systems:
   ♦   speed
   ♦   accuracy
   ♦   efficiency
   ♦   volume

Descriptions and exemplification of the functions of organisational information systems:
   ♦   gathering information
   ♦   storing information
   ♦   processing information
   ♦   outputting information

Explanation of the need for organisational information systems management strategies:
   ♦   network strategy
   ♦   security strategy
   ♦   backup strategy
   ♦   upgrade strategy
   ♦   software strategy

Description of the impact and advantages of a centralised database within an organisation.

National Unit Specification: support notes (cont)

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Content Statements: Information Management Software
Description and exemplification of personal and organisational uses of the following types of applications software: ♦ word processing ♦ spreadsheet ♦ database ♦ graphics design ♦ browsers ♦ email clients ♦ chat clients ♦ DTP ♦ presentation ♦ financial ♦ reference ♦ web authoring
Descriptions of standard word processing software in terms of data objects, operations and formatting functions.
Description of standard spreadsheet software in terms of data objects, operations and formatting functions.
Evaluation of different types of application software in terms of: ♦ range of data objects ♦ range of operations ♦ formatting functions ♦ HCI (including use of keyboard commands, menus and toolbars/icons) ♦ online help and online tutorials

Content Statements: Implications of ICT
Description and exemplification of the social implications of ICT in terms of: ♦ ease of access and availability of IS ♦ information rich/poor and the impact of IS on social structures ♦ educational qualifications and the need for citizens to be ICT aware ♦ the range of jobs in industries that employ knowledge worker ♦ online retail and changing shopping habits
Description and exemplification of the legal implications of information systems in terms of: ♦ Data Protection Act (1998): data protection principles; rights on data subject; responsibilities of data controller; role of the Information Commissioner ♦ Computer Misuse Act (1990) offences ♦ Copyright, Designs & Patents Act (1988): works covered; copyright ownership; use of copyrighted material ♦ health and safety regulations: seating, lighting, RSI, eye strain and radiation
Description and exemplification of the economic implications of ICT in terms of : ♦ the type of jobs and associated costs within various modern organisations ♦ the effect of new ICT on business and individuals productivity and profitability
Description and exemplification of the ethical implications of ICT in terms of: ♦ netiquette in both personal and business contexts ♦ Information Intellectual Property Rights

National Unit Specification: support notes (cont)

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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. For Outcome 2 the practical activities should be taught and used to illustrate and exemplify the knowledge and understanding required for Outcome 1.

Those delivering the Course should choose appropriate contexts to exemplify the concepts of the Course. Suitable contexts might include financial institutions, educational establishments, small and large businesses, manufacturing and retail, service industries.

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:

Data and Information	2 hours
Organisational Information Systems	6 hours
Information Management Software	18 hours
Implications of Information and Communications Technology	10 hours

1½ hours should be set aside to:
    a)   administer the Outcome 1 test
    b)   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.

National Unit Specification: support notes (cont)

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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 assessments 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 will normally be demonstrated in the context of a number of relatively short tasks. However, they may be demonstrated in the context of a single extended task. The tasks will normally be demonstrated by the candidate during 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 tasks.

To gain success in this Outcome, the candidate must demonstrate practical skills at an appropriate level in each of the following contexts, as defined in the content statements (see Information Systems (Intermediate 2) Course Content):

 ♦ Use of basic functions and features of an appropriate standard application package in the context of processing and retrieving information.
 ♦ Use of basic functions and features of an appropriate standard application package in the context of creating and storing information.

Hard copy evidence should be provided for both of these activities, involving two different types of application package.

An 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 Units. For information on these, please refer to the SQA document *Guidance on Special Assessment Arrangements* (SQA, September, 2003).