

National Unit Specification: general information

UNIT Internet: Basics (Intermediate 1)

NUMBER D3HF 10

COURSE

SUMMARY

This unit is designed to introduce candidates to the use of the Internet for browsing and e-mail, and to appreciate the basic concepts and issues that underpin Internet usage.

OUTCOMES

- 1 Explain the structure, operation and applications of the Internet.
- 2 Use a Web browser to navigate and search the Internet.
- 3 Use an e-mail package to send, receive and manage e-mail.

RECOMMENDED ENTRY

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

- basic IT desktop skills
- basic browser navigation skills
- an appropriate level of literacy skills necessary to interpret concepts, which may comprise the attainment of Communications Level 3 or equivalent.

Administrative Information

Superclass: CD

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CREDIT VALUE

0.5 Credit at Intermediate 1.

CORE SKILLS

Information on the automatic certification of any core skills in this unit is published in *Automatic Certification of Core Skills in National Qualifications* (SQA, 1999).

National Unit Specification: statement of standards

UNIT Internet: Basics (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

Explain the structure, operation and applications of the Internet.

Performance criteria

- a) The operation of the Internet is accurately explained in terms of structure, key functions and applications for user groups.
- b) The mechanisms and processes for connection to the Internet are accurately described.
- c) Internet terminology is accurately explained.
- d) The main stages of the e-mail delivery process are accurately identified and explained.
- e) Potential applications of the Internet are accurately explained.
- f) The main features and benefits/limitations of the current range of Internet platforms are accurately explained.
- g) Key safety, health and safety, and security issues are accurately identified.

Note on range for the outcome

There are no specific requirements as to the range of contexts within which the outcome and performance criteria should be demonstrated. For further guidance on the range of content to be covered see the support notes.

Evidence requirements

Please refer to *Evidence requirements for the unit* at the end of the Statement of Standards.

OUTCOME 2

Use a Web browser to navigate and search the Internet.

Performance criteria

- a) Web sites are correctly accessed using given URLs.
- b) Web sites are effectively accessed in terms of correct use of standard browser functions.
- c) Web site addresses are stored effectively.
- d) Search engines are used effectively to locate and access Web sites.
- e) Multimedia applications that enhance Internet usage are located and utilised effectively in terms of their application for the individual's use.

National Unit Specification: statement of standards (cont)

UNIT Internet: Basics (Intermediate 1)

Note on range for the outcome

There are no specific requirements as to the range of contexts within which the outcome and performance criteria should be demonstrated. For further guidance on the range of content to be covered see the support notes.

Evidence requirements

Please refer to *Evidence requirements for the unit* at the end of the Statement of Standards.

OUTCOME 3

Use an e-mail package to send, receive and manage e-mail.

Performance criteria

- a) E-mail messages are effectively created, sent and replied to.
- b) E-mail addresses are effectively stored in a folder and retrieved.
- c) E-mail attachments are effectively accessed and stored.

Note on range for the outcome

There are no specific requirements as to the range of contexts within which the outcome and performance criteria should be demonstrated. For further guidance on the range of content to be covered see the support notes.

Evidence requirements

Please refer to *Evidence requirements for the unit* at the end of the Statement of Standards.

EVIDENCE REQUIREMENTS FOR THE UNIT

Outcome 1

Written or oral evidence that the candidate can describe the structure, operation and applications of the Internet and associated software and access platforms as identified in performance criteria (a) to (g).

Outcome 2

Performance evidence that the candidate can use a Web browser to navigate and search the Internet. Candidates should demonstrate the ability to successfully navigate Web sites using each of the three main navigation methods – entering URL, using back and forward buttons of browser, and using hyperlinks – and to store and access Web addresses. Candidates should also demonstrate the ability to locate Web sites using search engines and to identify and locate multimedia application plug-ins relevant to their needs.

National Unit Specification: statement of standards (cont)

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Outcome 3

Performance evidence that the candidate can use the basic functions of an e-mail package. Candidates should demonstrate the ability to send, retrieve and reply to e-mail, and to store these using a folder created for the purpose. Candidates should also demonstrate the ability to store and retrieve addresses using the address book function.

National Unit Specification: support notes

UNIT Internet: Basics (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

Corresponding to outcomes 1-3

Outcome 1

This outcome relates to the knowledge components which underpin the practical use of digital and Internet technologies. There is a considerable body of knowledge covered in this outcome and therefore it is necessary to outline the content/context of performance criteria individually.

PC(a) The operation of the Internet is accurately explained in terms of structure, key functions and applications for user groups.

Organisational features

- the network of networks
- the global nature of the Internet
- client and server relationships
- intranets and extranets

Main services

- World Wide Web
- e-mail
- newsgroups
- chat

PC(b) The mechanisms and processes for connection to the Internet are accurately described.

Ways of connecting

- modem
- network
- ISDN
- ASDL

Provision of access

- ISPs
- dial-up accounts
- unmetered access

Hardware/software elements

- modem
- hard disk space
- e-mail and browser software

- telephone line
- ISP software for dial-up/network access

National Unit Specification: support notes (Cont)

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PC(c) Internet terminology is accurately explained.

Basic terms

HTML; HTTP; ISDN; ADSL; ISP; URL; server; modem; browser; intranet; extranet; plug-ins; access platforms; bandwidth.

PC(d) The main stages of the e-mail delivery process are accurately identified and explained.

Structural/network elements

- client
- server
- POP accounts

PC(e) Potential applications of the Internet are accurately explained.

Applications

- education/learning
- e-commerce
- entertainment
- information services

User Groups

- educationalists
- business and commerce
- home users

PC(f) The main features and benefits/limitations of the current range of Internet platforms are accurately explained.

Internet platforms

- personal computers
- digital television
- mobile communications devices – mobile and WAP phones
- games console

Features

- digital television – modes of transmission, channels, transmission quality, multimedia capacity, e-mail and Internet access
- PCs – Internet and e-mail access, modes of connection
- mobile communication devices – message, Internet access and content selection, WAP standard
- games console – Internet access and content, multimedia capacity, modes of connection

Benefits/limitations

- access speeds
- bandwidth issues
- multimedia capability
- Internet content and selection
- supplementary services

National Unit Specification: support notes (Cont)

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PC(g) Key safety, health and safety, and security issues are accurately identified.

Safety

- computer viruses
- virus protection software
- access control
- secure access sites
- content filter functions
- parental control options

Health and safety

- body posture
- screen positioning
- equipment issues
- work station set-up
- health risks – eye strain, RSI

Security

- data protection laws
- Internet copyright laws

Outcome 2

This outcome relates to the practical use of a Web browser for navigating and searching the World Wide Web. The candidate must be able to demonstrate, through practical assessment, the ability to use the basic functions of a Web browser. These would consist of the following: using the key function buttons to navigate backwards and forwards between Web sites; to navigate using hyperlinks; to navigate by entering a given URL in the address box; to access Home and Search facilities; saving and recalling Web addresses through the Favourites/Bookmark function. The candidates will go on to carry out simple searches using search engines, from given parameters, and navigate to sites found through this function.

The candidate may use any browser software which allows the specified basic functions.

The areas outlined above would comprise the essential knowledge and skill elements within this outcome, but there are additional components which it may be desirable to include. The teaching of Outcome 2 should build upon an understanding of how browsers operate and how navigation within the Internet functions – elements which have already been covered within Outcome 1, but which need to be drawn out and reinforced here. It would also be valuable for candidates to understand the functioning of search engines, and to be able to distinguish between different types – principally hierarchical search engines, keyword engines, and directories. An understanding of these principles

will enable candidates to carry out searches more effectively, and distinguish between different types of engines as being most appropriate for different search tasks.

National Unit Specification: support notes (Cont)

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Outcome 3

This outcome relates to the practical use of e-mail software for sending, replying to and managing e-mails. The candidate must be able to demonstrate, through practical assessment, the ability to construct and send e-mails; to receive and respond to e-mails; to access and view attachments; to add e-mail addresses to an address book; to send e-mail messages using an address stored in an address book; to store/file received messages in a folder created for that purpose.

The candidate may use any e-mail software which allows the specified function.

It should be noted that, while the stress of this outcome is on the practical use of e-mail software, it is important that the candidate should also understand the functioning of e-mail systems. This knowledge component has been included in Outcome 1 but it may be considered practical to link it to the material covered in Outcome 3. An understanding of e-mail systems will enable candidates to make more effective use of e-mail software and to remedy any software or delivery problems which may arise in daily use of the application.

GUIDANCE ON LEARNING AND TEACHING APPROACHES FOR THIS UNIT

Although this unit combines both theoretical and practical approaches to the use of digital and Internet technologies, it is important that the primary approach to teaching and learning should be practical, as the knowledge components are intended to underpin the practical skills. Therefore, every attempt should be made to use practical approaches to the teaching of the knowledge components, where appropriate and practical.

Although Outcome 1 constitutes only one of three outcomes, the content in this part of the unit is substantial, and it is therefore appropriate that approximately half of the time allocated to the unit should be given to Outcome 1, with the remaining time divided evenly between Outcomes 2 and 3. However, it is both desirable and resource effective to integrate as many components of the teaching of Outcome 1 with those of 2 and 3, in particular Outcome 2.

The teaching/learning approaches should therefore, of necessity, be candidate-centred, focusing on practical activities, individual research and assignment, and the repetition of tasks intended to build skills. There is clearly a necessity for the use of some less candidate-centred strategies, such as tutor exposition, where unfamiliar theoretical concepts need to be introduced and assimilated, but where possible candidates should be encouraged to use the Internet as a practical tool for finding information, rather than simply being presented with this. For example, candidates, could be given the task of using browsers and search engines to find resource material on the current Data Protection legislation, or on Health and Safety aspects of computer use.

An important teaching resource in the delivery of this unit will therefore be the Internet itself, and efforts should be made to research a considerable background of Web sites to which candidates may be directed, or which can be used in navigation and search exercises for both Outcomes 1 and 2. Similarly, the teaching of Outcome 3 will require the creation of simulated e-mail traffic, with messages and attachments ready to be sent to the candidate. This will also require the setting up of a target e-mail account, to which candidates will be required to address mail, and from which they will receive similar.

National Unit Specification: support notes (Cont)

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Given the subject matter of this unit an on-line or distance-learning approach to this unit would be extremely suitable and would provide an extra means of reinforcing the use of Internet technology.

GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT

Centres may use the instruments of assessment which are considered to be most appropriate. Suggested instruments of assessment which could be used are as follows:

Outcome 1

Multiple choice questions drawn from a bank which covers the range of knowledge areas encompassed by Outcome 1. As the content of the outcome represents a very wide range of topics, it would be appropriate that the content should be sampled. As each of the performance criteria within this outcome represents a separate topic area, it would then be appropriate for each performance criterion to be represented with the questions selected. The questions would be presented on an unseen, closed book basis to the candidate, and a possible recommendation for quantity would be 2 questions per performance criterion, with a cutting score of 7. This approach to assessment would also fit well with a distance or on-line teaching/learning approach to the subject.

Outcome 2

A practical assessment would be an appropriate approach to the assessment of this outcome. Candidates would be required to navigate to a given URL or URLs and to navigate within a given Web site, using both hyperlinks and back/forwards buttons. They would also be required to store the URL or URLs using Bookmark or Favourites function. Further, the candidate would require to use a search engine, or search engines, to find a site, or sites, relevant to a given topic. Finally, candidates would be required to identify a multimedia plug-in on a given site, and either download or utilise this, as appropriate. A possible recommendation for the length of tasks set for the candidate may be navigation to and within two named URLs and storage of same; location through appropriate search engines of two sites related to a given topic; navigation to and utilisation of one Web site utilising multimedia plug-ins.

Outcome 3

Again a practical assessment would be an appropriate approach to the assessment of this outcome. Candidates would be required to access e-mails addressed to them, to reply to these, store mail in a folder created for the purpose and to detach and view attachments from the received mail. Candidates would also be required to store the address or addresses of sender(s) using the Address Book function. A possible recommendation for the length of tasks set for the candidate may be to receive and handle three e-mails, one of which should contain an attachment; to store the addresses of these e-mails in the Address Book; to reply to two of the three received messages appropriately using stored addresses.

Advice on Generating Evidence

During the work of this unit the candidate should have opportunity to develop their practical skills, and should be assessed formatively at suitable intervals to ensure the consideration of learning. It would also considerably benefit the candidate if theoretical ideas and terminology were presented within the context of practical tasks and every attempt should be made to achieve this, particularly at the formative assessment level. Centres must retain assessment evidence for external moderation

purposes. This would normally be in the form of paper records of completed assessments and mark sheets.

National Unit Specification: support notes (Cont)

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This unit could be delivered and assessed online. In this case it is acceptable to use alternative forms of evidence for external moderation purposes. But some verifiable record of candidate performance must be available. This could be electronic media or an online record of candidate achievement. For example, if the assessment for Outcome 1 was undertaken using an online assessment then the assessor would require to witness candidate achievement and record the candidate's score on some permanent medium (which could be paper or digital).

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 and Certification Arrangements for Candidates with Special Needs/Candidates whose First Language is not English* (SQA, 1998).