# National Unit Specification: General Information

**UNIT**          The Internet (Higher)

**NUMBER**        D01N 12

**COURSE**

**SUMMARY**
Creating and linking hypertext pages and publishing this information on a web server.

**OUTCOMES**
1       Appreciate the characteristics of existing pages.
2       Create hypermedia pages using appropriate software tools.
3       Structure information using hyperlinks.
4       Upload pages to a web server.
5.      Notify users that the pages have been created.

**RECOMMENDED ENTRY**
Candidates should have completed The Internet (Intermediate 2) or possess equivalent experience.

**CREDIT VALUE**
1.0 Credit at Higher.

**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).

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## Administrative Information

**Superclass:**        CD

**Publication date:**  December 1998

**Source:**            Scottish Qualifications Authority

**Version:**           02  (*Version 01 is National Certificate Module 8260026*)

Additional copies of this specification can be purchased from the Scottish Qualifications Authority.  The cost is £2.50.

# 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
Appreciate the characteristics of existing pages.

**Performance Criteria**
a)      Exploration is effective in locating pages with diverse characteristics.
b)      The characteristics affecting quality and presentation of information are recognised.
c)      Examples of pages with good and bad characteristics are captured to local storage.

**Note on range for the outcome**
Characteristics:  technical characteristics (including page structure); design characteristics (including page layout).

**Evidence Requirements**
Print-outs of downloaded pages with annotations as detailed in Performance Criteria (a) to (c).  The annotations will highlight the technical and design characteristics of each print-out.  A minimum of four pages should be downloaded and printed illustrating diverse characteristics.

## OUTCOME 2
Create hypermedia pages using appropriate software tools.

**Performance Criteria**
a)      The use of software facilities is efficient and effective.
b)      The information contained within the page is fit for the purpose, accurate, concise and suited to the intended audience.
c)      The page is well designed and aesthetically pleasing.
d)      The selection of hypermedia elements is appropriate to the nature of the information and enhances presentation.

**Note on range for the outcome**
Hypermedia elements:  hypertext; graphics; sound.

**Evidence Requirements**
Evidence of a product in the form of pages of information containing hypermedia elements as detailed in Performance Criteria (a) to (d) for all classes in the range.  The sample print-outs will include annotations to describe how each print-out contributes to complete coverage of all classes in the range.  At least three pages must be created.

# National unit specification: statement of standards (cont)

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**OUTCOME 3**
Structure information using hyperlinks.

**Performance Criteria**
a)       Internal and external hyperlinks are planned prior to creation of web.
b)       Hypermedia elements are gathered prior to creation of web.
c)       Index page is created with hyperlinks to other main pages within the web.
d)       Hyperlinks facilitate the efficient navigation of the information contained within the web.
e)       External links are established to related pages on the World Wide Web.
f)       Links are tested and function correctly.

**Note on range for the outcome**
The range for this outcome is fully expressed within the performance criteria.

**Evidence Requirements**
Evidence of planning in the form of a schematic of the intended web as detailed in performance criterion (a).  The web must comprise at least three separate pages.

Performance evidence that the candidate can implement the planned web and structure information as detailed in performance criteria (b) to (f).

**OUTCOME 4**
Upload pages to a web server.

**Performance Criteria**
a)       The hypermedia elements within the pages are packaged in a suitable format for uploading.
b)       The pages are uploaded to the server in accordance with file transfer procedures and without loss of information.
c)       The uploaded pages are tested to ensure that hyperlinks within and between pages function correctly.
d)       Use of hardware and software is efficient and effective.

**Note on range for the outcome**
The range for this outcome is fully expressed within the performance criteria.

**Evidence Requirements**
Performance evidence that the candidate can upload pages to a web server as detailed in Performance Criteria (a) to (d).  A minimum of three pages should be uploaded and the Universal Resource Locator (URL) of the index page should be provided.

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**OUTCOME 5**
Notify users that the pages have been created.

**Performance Criteria**
a) The Universal Resource Locator for the index page is recorded.
b) The methods available to notify users are known and an appropriate strategy is established.
c) The contents of the page are summarised in accordance with the requirements of the communication system.
d) Internal communication systems are used to inform users.
e) External communication systems are used to inform users.

**Note on range for the outcome.**
The range for this outcome is fully expressed within the performance criteria.

**Evidence Requirements**
Written or oral evidence that the candidate knows the methods available to notify users as detailed in Performance Criterion (b).

The Universal Resource Locator and summary of the contents as detailed in performance criteria (a) and (c).

Performance evidence that the candidate can use internal and external communication systems as detailed in performance criteria (d) and (e).

# National unit specification: support notes

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This part of the unit specification is offered as guidance. None of the sections of the support notes is mandatory.

**GUIDANCE ON CONTENT AND CONTEXT**
Corresponding to outcomes 1-5:

This unit will be undertaken in the context of producing pages for publication on the World Wide Web (WWW) or an internal intranet. A wide range of web creation and authoring tools are available which can be used for Internet or intranet publishing.

1      This outcome requires the candidate to explore the characteristics of existing pages to gain experience of good and bad practice with respect to page construction and design. These pages may be stored on internal or external web servers. Access to the World Wide Web (WWW) is desirable for this outcome given the number and diversity of WWW pages. Candidates will require guidance in their exploration and tutors/trainers may direct them to specific pages with good and bad characteristics. It is also anticipated that candidates will make use of the available search services to locate specific pages. Candidates are required to comment on technical and design characteristics. Technical characteristics include page structure (ie. the use of hyperlinks) and the technical aspects of multimedia; design characteristics include page layout and the aesthetic aspects of multimedia. Candidates should be made aware of the technical capabilities of different browsing programs and the current and emerging standards with respect to page content.

2      This outcome involves the candidate in creating hypertext pages. Candidates can use a number of page creation tools ranging from WP programs to fully fledged hypertext authoring systems. At the time of writing, HTML is the standard language for the production of hypertext and a large number of support tools are available for this language. Candidates should be permitted to produce pages related to an area of personal or vocational interest. The pages are required to involve text, graphics and sound. The term 'graphics' is used to encompass a wide range of objects such as drawings, diagrams, graphs and charts, clipart, animations and video. The text must be fit for the intended purpose, accurate, concise and suited to the intended audience. The graphics and sound should enhance the presentation of the information and the overall design should be aesthetically pleasing. The focus of the page should be the information that it contains rather than aspects of graphic design although the design of the page should enhance the presentation of the information.

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3        The candidate is required to create a web comprising a number of inter-linked pages. Tutors/trainers should emphasise the importance of planning before the establishment of a web and candidates are required to produce evidence of prior planning. This may be in the form of a hand drawn diagram illustrating the structure of the intended web. Some contemporary web creation programs can perform this task electronically. Internal links relate to the links within a page; external links point to pages outside the page (which may be pages within the web or pages on the World Wide Web). The candidate is required to create an index (or 'home') page with links to other pages on the web. The entire web should be structured in such a way as to facilitate the smooth and efficient navigation of the information. The required hyperlinks will be internal (ie. within a page) and external (ie between pages). External links may not only relate to pages within the web but may also link with pages on the World Wide Web and such links are required when pages refer to external sources of information. This may involve the candidate in researching the URL of appropriate sites. So, for example, if the candidate constructs a web relating to a football team then it is expected that s/he would include hyperlinks to the WWW sites of other football teams or related information. Once the web has been created the candidate is required to test the hyperlinks to ensure that errors do not occur when specific links are selected. Of course, external links to the WWW can only be tested on-line but internal links or external links to pages within the web can be tested off-line prior to uploading to a web server.

4        This outcome may be undertaken in the context of WWW publishing or intranet publishing. In the case of intranet publishing then uploading simply involves the transfer of the web from a client machine to the internal web server. This outcome complements Outcome 3 in that the previous outcome relates to the creation of a web and this outcome relates to the uploading of that web to a web server. Some servers require the components of the web to be packaged in a specific way. For example the different elements of the web (text, images, binaries etc.) may have to be located in specific folders. The procedure for uploading pages will vary from system to system but the most common method at the time of writing involves the use of the FTP protocol to upload pages to an external web server (assuming access rights have been granted). Of course, the procedure for an Internet intranet will differ from this. Once uploaded the candidate is required to test the web site to ensure that the information is intact and that the hyperlinks operate correctly. This would normally involve accessing the index page using a web browser and testing the integrity of each page and each hyperlink. The efficient and effective use of hardware and software simply relates to the candidate's use of the available facilities. For example, it is not acceptable that the candidate repeatedly fails to upload a web to a server because of incorrect user ID or password.

# National unit specification: support notes (cont)v

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5    This outcome requires the candidate to notify other users of the existence of the information.  The URL of the index page must be known and recorded and this must be communicated to interested parties along with a summary of the contents of the web.  This may be done using internal or external means of communication.  Internal communication may include traditional communications (such as memos) or electronic means (such as e-mail).  External communications may involve e-mail or the use of external agencies to publicise the existence of the pages.  Most internet search services have a facility to register new pages and some companies specialise in the notification of new WWW pages (such as Submit it! which is located at http://www.submit-it.com).  Candidates must be aware of the diverse means of communicating the existence of the new web and be able to establish a strategy for publicising their new site.

## GUIDANCE ON TEACHING AND LEARNING APPROACHES

A candidate-centred, resource-based learning approach is recommended.  During the work of the unit, candidates should have several opportunities to develop their practical skills and should be assessed at appropriate points.  Terminology should be presented in context throughout the unit.  Where the candidate is unsuccessful in achieving an outcome, provision should be made for remediation and re-assessment.  The suggested assessment procedures (below) could be easily modified to produce integrated assessments.  For example, the assessment for Outcomes 2, 3, 4 and 5 could be combined into a single assessment activity requiring the candidate to plan, create, link and upload a number of web pages thereby covering four outcomes with a single instrument of assessment.

## GUIDANCE ON APPROACHES TO ASSESSMENT

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

Outcome 1    Practical assignment involving the candidate in exploring existing pages and identifying good and bad examples of hypermedia information.

Outcome 2    Practical assignment involving the candidate in creating a number of hypermedia pages.

Outcome 3    Practical assignment involving the candidate in planning and creating web hypertext pages.

Outcome 4    Practical exercise involving the candidate in uploading the pages to a web server.

Outcome 5    Practical assignment involving the candidate in notifying users that the pages have been created.

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**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 alternative outcomes for units. For information on these, please refer to the SQA document *Guidance on Special Assessment and Certification Arrangements* (SQA, 1998).