National Unit specification: general information

Unit title: Mobile Technology: Web Page Creation (SCQF level 5)

Unit code: H1T2 11

Superclass:	CB
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Summary

The purpose of this Unit is to provide candidates with an opportunity to develop their knowledge and understanding of the fundamental design considerations in web pages for mobile devices. Candidates will also develop practical skills in the creation of mobile web pages and considerations that must be brought into the design process.

This Unit is aimed at candidates who are interested in developing media for mobile technology. The Unit is suitable for candidates who have no prior knowledge of mobile technology or web design experience. A working knowledge of the basics of a computer operating system would be an advantage.

This Unit is an optional Unit in the National Progression Award in Mobile Technology, but is also available for candidates wishing to study the Unit on its own.

Outcomes

1 Identify the basic technical and design considerations in creation of a website for a mobile device.
2 Produce and optimise media suitable for viewing in a range of mobile devices.
3 Create a web page for use on a web server that will be viewed on a mobile device.

Recommended entry

While entry is at the discretion of the centre, candidates would normally be expected to have some experience of using computer application software and be familiar with managing computer files.

General information (cont)

Credit points and level

1 National Unit credit at SCQF level 5 (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

Opportunities to develop aspects of Core Skills are highlighted in the Support Notes of this Unit specification.

There is no automatic certification of Core Skills or Core Skill components in this Unit.

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 SQA.

Outcome 1

Identify the basic technical and design considerations in creation of a website for a mobile device.

Performance Criteria

(a)   Identify the main purposes of Hyper Text Markup Language (HTML) tags.
(b)   Identify the copyright and ethical considerations related to web-based content.
(c)   Identify common file formats and related issues in contemporary web-based media elements.
(d)   Identify the design issues related to web-based content.

Outcome 2

Produce and optimise media suitable for viewing in a range of mobile devices.

Performance Criteria

(a)   Produce digital media for the WWW.
(b)   Optimise digital media for the WWW.
(c)   Document the steps involved in producing and optimising the digital media.

Outcome 3

Create a web page for use on a web server that will be viewed on a mobile device.

Performance Criteria

(a)   Create web pages using the basic HTML features and validated in accordance with W3C guidelines.
(b)   Format the web page is formatted using Cascading Style Sheets features and validated in accordance with W3C guidelines.
(c)   Check the web page against a given design brief.
(d)   Upload and verify the web page as operational on a web server.

National Unit specification: statement of standards (cont)

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Evidence Requirements for this Unit

Written and/or oral recorded evidence is required to demonstrate that the candidate has achieved Outcome 1 to the standard specified in the Outcome and Performance Criteria. The evidence for this Outcome should be obtained under controlled, closed-book, supervised conditions.

Outcome 1

Evidence must include:

♦ identification of the purpose of at least three Hyper Text Markup Language tags
♦ identification of the role of the World Wide Web Consortium (W3C) in relation to web standards
♦ identification of the key copyright considerations related to web-based content which must include:
   — the concept of Intellectual Property
   — copyright free media
   — copyright theft
♦ identification of ethical issues of publishing on the WWW
♦ identification of three file formats from the common file formats used in the following areas: web pages, graphics, sound, animation, video and interactive media. Each file format should be from a different area.
♦ identification of the principal accessibility and usability issues which must be considered when designing mobile web pages
♦ identification of the basic principles of mobile web design
♦ identification of the principles of file optimisation and download speeds

Outcome 2

Product evidence in the form of electronic files is required to demonstrate that the candidate has achieved Outcome 2 to the standard specified in the Outcome and Performance Criteria.

♦ production of at least two different types of digital media files
♦ the file will be suitably optimised if the file quality is not poor and the download speed does not impair the user's experience of the site
♦ production of a report which must include the basic steps that the candidate has followed to produce and optimise the media. They should also mention the source of the original file and what software that they have used

National Unit specification: statement of standards (cont)

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Outcome 3

The file must be produced by the candidate and be in accordance with copyright law.

Candidates must upload a webpage to a web-server and verify the page as operational.

The minimum requirements for the operational pages are that they include the following basic HTML features:

♦   headings
♦   hyperlinks
♦   div tags
♦   tables
♦   lists
♦   images

Formatted web page must include the basic CSS features:

♦   text formatting
♦   margins
♦   padding
♦   colour

Any pages submitted must validate with the current W3C guidelines.

Written and/or oral recorded evidence detailing that the candidate has checked the webpage against the list of requirements within the brief.

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

This Unit is aligned to the following eSkills Sector Skills Council's National Occupational Standards:

♦   WS: B1 Create structures and styles for websites
♦   WS: B2 Use website software tools to prepare content for websites
♦   WS: B3 Publish websites

The content of Outcome 1 should focus on the theory underpinning the development of webpages for a mobile device.

At this level, content should be limited to basic facts, presented within the context of creating a website suitable for a mobile device.

The basic features and operation of HTML and CSS should be considered, along with the importance and role of the World Wide Web Consortium in developing the HTML and other web standards.

Candidates should be able to identify the purpose of at least three Hyper Text Markup Language (HTML) tags for example:

♦   paragraph
♦   heading
♦   horizontal rule
♦   anchor
♦   table tags

Accessibility (use of clear, common fonts, acceptable font sizes, alternative text for images, use of colour schemes for those with visual impairments) and copyright issues should be considered in terms of how to remain within the boundaries of current legislation, and the penalties for breaching that legislation. Contemporary file formats for web-based media elements should be identified and examples of each should be provided.

The features of these file formats, such as compression, typical uses, interoperability and plug-in requirements should be covered. The practicalities and reasoning behind accessibility and usability should be discussed, with reference to current legislation.

A simple knowledge of usability should be demonstrated, ie give examples of good and bad layout of web pages. Design principles that are particular to mobile devices should be delivered in the context of web design and examples of good and bad use of design should be demonstrated.

National Unit specification: support notes (cont)

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Candidates are expected to take a project based approach to Outcomes 2 and 3. Outcome 2 should see the candidate develop their own media file to be used in their mobile website. This should be suitably optimised, sized and in context with the given brief. This file can be of type; image, sound or video.

The candidate should write a short report on the steps involved in the creation of the file.

The web pages that are to be developed in Outcome 3 it should be hand-coded, although use of the code editor in a WYSIWYG package is acceptable.

Candidates should upload a webpage to a web-server (either a web-server on an internal network, or a web-server accessible on the internet).

Candidates should be encouraged to apply design, usability and accessibility principles in developing their web pages.

Any pages submitted must validate with the current W3C guidelines. An appropriate validator can be found at http://validator.w3.org

Guidance on learning and teaching approaches for this Unit

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

Practical activities in Outcomes 2 and 3 should be taught and used to illustrate and exemplify the knowledge and understanding required for Outcome 1.

Discussions of relevant up-to-date issues surrounding development, Markup languages and websites that the candidates are familiar with will help with many of the aspects tackled in Outcome 1. Short answer questions should help to consolidate the knowledge needed to pass this.

Learning by observing and then practical exercises will help the candidate to be able to work with the necessary media files to allow them to learn the skills to complete Outcome 2 would be helpful. Allowing the candidate to work with graphic, sound or media files that are of interest to them (whichever the tutor wishes) would be the best way of keeping the candidates interested and motivated.

To allow the candidate to concentrate on the learning of the languages used to create webpages in Outcome 3, brief demonstrations of the basic HTML tags to the entire group, followed by short tasks combining the skills learned should consolidate the knowledge of the candidates. Once the basic HTML skills and CSS skills have been taught, the candidates should try and build individual pages using their new skills. Once confident enough, they should try building the site that they will submit for Outcome 3.

National Unit specification: support notes (cont)

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Opportunities for developing Core Skills

In this Unit candidates will use computer applications software to create, capture and edit graphics and to create and upload web pages. These activities provide good opportunities to develop the Core Skill of *Information and Communication Technology (ICT).*

Guidance on approaches to assessment for this Unit

Outcome 1 should be assessed separately, and it may be useful to assess this after the candidates have had an adequate mix of theory and practice. Assessment could be by multiple choice questions.

Outcomes 2 and 3 could be combined into the production of a website, with the media used in Outcome 2 being used in the production of the webpages in Outcome 3. These Outcomes could be assessed in the form of a project or separately if the tutor wishes. A suggestion for Outcome 3 could be that the candidates are given a brief to create a two-page website on a suggested topic (or one of their own choosing that has been approved by the lecturer). The web pages should be submitted to a web server (either local or on the WWW) for viewing and assessment by the tutor.

In Outcome 3 the evidence required may be produced under open-book conditions at appropriate points throughout the Unit rather than on one assessment occasion. The centre must however satisfy itself that the evidence submitted is the work of the individual candidates and assessors should maintain a record of discussions with each candidate relating to the production of the web page and associated media used within the web page.

Opportunities for the use of e-assessment

E-assessment may be appropriate for some assessments in this Unit. By e-assessment we mean assessment which is supported by Information and Communication Technology (ICT), such as e-testing or the use of e-portfolios or e-checklists. Centres which wish to use e-assessment must ensure that the national standard is applied to all candidate evidence and that conditions of assessment as specified in the Evidence Requirements are met, regardless of the mode of gathering evidence. Further advice is available in *SQA Guidelines on Online Assessment for Further Education (AA1641, March 2003), SQA Guidelines on e-assessment for Schools (BD2625, June 2005).*

Disabled candidates and/or those with additional support needs

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering whether any reasonable adjustments may be required. Further advice can be found on our website **www.sqa.org.uk/assessmentarrangements**

History of changes to Unit

Version	Description of change	Date