e-Quals Unit Syllabus

Level 3 Designing and creating advanced websites

7266 - 046

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Unit 046 Designing and creating advanced websites

Syllabus overview

Rationale

The aim of this unit is to provide candidates with an advanced level of skills and knowledge to competently prepare for, perform or supervise the performance of others in a variety of *web site tasks* using Information and Communication Technologies (ICT). Candidates will develop a more in depth understanding of web site design and the operating system in everyday usage and the ability to work in a supervisory role performing advanced tasks with a high degree of competence, using 'problem solving' skills and giving direction to others.

Learning outcomes

There are **five** outcomes to this unit. The candidate will be able to:

- Explain the fundamentals of advanced web page development
- Undertake formal user requirements analyses
- Use appropriate development tools to implement and test interactive web pages incorporating advanced design and information presentation techniques
- Use graphics applications to create and manipulate images
- Maintain and evaluate web sites

Guided learning hours

It is recommended that 90 hours should be allocated for this unit. This may be on a full time or part time basis.

Connections with other qualifications

This unit contributes towards the knowledge and understanding required for the following qualifications:

- N/SVQ in Customer Service, units
  - 201, 202, 203, 204
- ICS Customer Service Technical Certificate, units
  - 1.1, 1.2, 1.3, 1.4, 1.5, 1.6
  - 2.1, 2.4, 2.5, 2.7
  - 3.3, 3.4, 3.5

Assessment and grading

This unit will be assessed by an assignment covering practical skills.

Unit 046 Designing and creating advanced websites

Outcome 1 Explain the fundamentals of advanced web page development

Practical skills

The candidate will be able to:

1 describe how web pages can be made more interactive.(using eg: VRML, DHTML and Java applets)

2 explain the purposes of XML

3 outline the different uses of scripting languages (eg: CGI, VB Script, JavaScript)

4 explain scripting techniques used to interface a web page with a database to enable the presentation or interchange of up-to-date information.

Unit 046 Designing and creating advanced websites

Outcome 2 Undertake formal user requirements analyses

Practical skills

The candidate will be able to:

1 create 'Terms of Reference' for clients to include:

- a a statement of the requirement
- b a design for the web page using a suitable methodology eg: storyboarding.
- c style sheets describing the formats of text and paragraphs eg: font style, type, size andcolour, paragraph indents, line spacing, etc. to promote consistency within the web page.
- d an appropriate structure diagram demonstrating the linking structure of the web page eg: linear, hierarchical, mesh

2 produce project plans for the incremental development of web pages including the gathering of suitable resources and timeframes including where appropriate the use of other people.

Underpinning knowledge

The candidate will be able to:

1 explain the relevance, importance and contents of a 'Terms of Reference', when creating a web page for a third party

2 recognise the different components of a Terms of Reference.

3 explain the importance of a design style sheet when working either to a specification or within a team environment.

4 describe the constraints and limitations that must be considered when producing a web page (eg: file size/download times, timescale of production, quality of image resources).

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Outcome 3 Use appropriate development tools to implement and test interactive web pages incorporating advanced design and information presentation techniques

Practical skills

The candidate will be able to:

create web sites compatible with a range of browsers:

- a providing both a frame based and a non- frame based interface
- b incorporate JavaScript into a web page to achieve effects eg:
  - i scrolling text
  - ii rollover button graphics
- c incorporate a Java applet into a web page (eg: expanding menu tree)
- d using Dynamic HTML to enhance the interactivity or appeal of a web page eg
  - i layers
  - ii cascading style sheets (css)
- e interfacing a web page to a database in order to provide a web page presentation of responses to a simple query, eg:
  - i a telephone number linked to a name
  - ii a product price or quantity in stock from a product code
  - iii library book availability
- f incorporating into web pages suitable forms to enable the gathering of feedback or other information from users of web pages

2 test web sites:

- a verifying all links work
- b using different browsers to preview pages and verify all components appear as expected.

Underpinning knowledge

The candidate will be able to:

1 explain the importance of maintaining cross-browser compatibility

2 describe the advantages and disadvantages of a frame based interface.

3 select appropriate data to be collected using a form

4 describe the terms quality, timeliness and accuracy when applied to data collected from a web site.

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Outcome 4 Use graphics applications to create and manipulate images

Practical skills

The candidate will be able to:

1 create images to predefined specifications (pixel height/width; colour depth) suitable for inclusion in web pages eg: buttons used for linking

2 apply transparency to images

3 create animated GIF's for use within web pages.

Underpinning knowledge

The candidate will be able to:

1 explain the factors that affect the dimensions of a button, for example:

- a quantity of text
- b font type, size and style
- c size and style of applied border
- d available space for the button(s) on a web page

2 describe what is meant by the term anti-aliasing.

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Outcome 5 Maintain and evaluate web sites

Practical skills

The candidate will be able to:

1 create appropriate plans for the effective periodic maintenance and updating of web sites

2 check that a web site satisfies the 'Terms of Reference'

3 identify potential future enhancements to web sites

4 create suitable documentation for maintaining web sites to include, for each web page, a list of resources including the full path to a file name from a root directory of a web site.

Underpinning knowledge

The candidate will be able to:

1 explain the importance of documentation in maintaining a web site.

Unit record sheet

Use this form to track your progress through this unit.

Tick the boxes when you have covered each outcome. When they are all ticked, you are ready to be assessed.

Outcome		✓	Date
1	Explain the fundamentals of advanced web page development	☐	
2	Undertake formal user requirements analyses	☐	
3	Use appropriate development tools to implement and test interactive web pages incorporating advanced design and information presentation techniques	☐	
4	Use graphics applications to create and manipulate images	☐	
5	Maintain and evaluate web sites	☐	

Candidate Signature ..... **Date** .....

City & Guilds Registration Number .....

Quality nominee (if sampled) ..... **Date** .....

Assessor Signature ..... **Date** .....

External Verifier Signature (if sampled) ..... **Date** .....

Centre Name ..... **Centre Number** .....

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