OCR
Oxford Cambridge and RSA

Unit Title:	**Designing and developing a web site**
OCR unit number:	42
Unit reference number:	L/601/3315
Level:	4
Credit value:	15
Guided learning hours:	90

Evidence for this unit can only be achieved through actual work in a work environment. Simulation is not permissible for any competence based unit.

Unit aim

To provide the learner with the skills and competencies to carry out a Web site development from design to testing in a professional capacity, and to understand a range of issues concerned with Web development activities.

Learning Outcomes	**Assessment Criteria**	**Knowledge, understanding and skills**
The Learner will: 1 Design a Web site to address loosely-defined requirements	**The Learner can:** 1.1 Identify the key design features inherent within a requirements specification 1.2 Use planning tools and techniques to create a site map 1.3 Evaluate different design models and select the most appropriate to meet requirements	• the features that would be expected to be seen in a design specification e.g.: - navigation - accessibility - optimisation for search engines, pages, layout • how to produce a site map thinking about navigation, orphan pages • how to evaluate their different design models and then from this select and give some justification as to why they have selected this model

Learning Outcomes	Assessment Criteria	Knowledge, understanding and skills
2 Use web development tools to build (X)HTML- and CSS-based websites to address well-defined specifications	2.1 Describe the use of (X)HTML to develop websites 2.2 Describe how to use CSS to standardise the overall style of a website 2.3 Write the source code for a simple web page in clean XHTML according to a specification. 2.4 Write the source code for a CSS according to a specification 2.5 Explain the contextual application of a variety of web development tools 2.6 Explain the advantages and disadvantages of various web development methodologies and technologies	• how Mark up languages can be used within a website in order to build content • the use of CSS usage in web design and explain the benefits of using it for website creation • how to write the code in (X)HTML for a single webpage based on the given scenario and saved using recognised conventions and an awareness of mark up validation • how to write the source code for the CSS of a website as specified • explore the development stages of web technologies
3 Understand the technology and tools needed to use multimedia in the context of a website	3.1 Explain the advantages and disadvantages of various types of multimedia file format 3.2 Explain the advantages and disadvantages of different types of multimedia element in relation to different contexts 3.3 Embed functional multimedia components in an (X)HTML site	• different file formats for video, audio and images commenting on quality versus download times, pluggins and codex and explain the advantages and disadvantages of each (this could be in relation to method of delivery to the user eg broadband, 3G etc.) and the context to which they arte being used • how to embed their multimedia components into a (X)HTML site ensuring that links are dynamic
4 Develop test strategies and apply these to a Web site	4.1 Develop and apply a test strategy consistent with the design 4.2 Determine expected test results 4.3 Record actual test results to enable comparison with expected results 4.4 Analyse actual test results against expected results to identify discrepancies 4.5 Investigate test discrepancies to identify and rectify their causes 4.6 Explain the need for testing on different platforms and browsers	• how to create a detailed test strategy and test plan. Testing should be carried out with the target audience in mind and include user acceptance testing. The test should be carried out across different browsers and versions of browser eg Opera, IE, firefox etc and across different platforms eg PC, mobile phone, gaming platform etc • how to determine what results they would expect to see in some detail and then compare these with the actual results obtained and highlight any discrepancies which should then be rectified

Learning Outcomes	Assessment Criteria	Knowledge, understanding and skills
5 Understand the need for Web standards	5.1 Explain the role of the W3C 5.2 Explain W3C standards and their application in site coding 5.3 Discuss web accessibility and usability issues from the viewpoint of an IT professional	• explain what W3C is and the way it has lead to a standardisation of website formats • the latest standards with regard to site coding. • be aware of issues regarding accessibility and usability including device independence, web accessibility initiative (WAI)
6 Understand the concepts associated with using the Internet and the World Wide Web for business	6.1 Explain the underlying physical and operational properties of the Internet and World Wide Web, including the difference between the two 6.2 Discuss the Internet and the Web as a business tool, including (but not limited to) as a tool for communications, research, sales and marketing 6.3 Discuss the advantages and disadvantages of various internet-based models, in different contexts 6.4 Discuss the advantages and disadvantages of various e-Commerce models, in different contexts	• the internet (in its broadest sense including dissemination of information across its medium) and the World Wide web • how to look at the way the internet is used by businesses this may include web marketing, communications (email etc), viral marketing, flash mobs • e-commerce and the way that portals have been set up to other websites eg price comparison sites

Assessment

It is the assessor's role to satisfy themselves that evidence is available for all performance, knowledge and evidence requirements before they can decide that a candidate has finished a unit. Where performance and knowledge requirements allow evidence to be generated by other methods, for example by questioning the candidate, assessors must be satisfied that the candidate will be competent under these conditions or in these types of situations in the workplace in the future. Evidence of questions must include a written account of the question and the candidate's response. Observations and/or witness testimonies must be detailed and put the evidence into context i.e. the purpose of the work etc.

In addition to the recognition of other qualifications, candidates may claim accreditation of prior achievement for any of the elements assessment criteria or complete units of competence, as long as the evidence fully meets the criteria and the candidate can prove that it is all their own work. It is important also that assessors are convinced that the competence claimed is still current. If the assessors have some doubts, they should take steps to assess the candidate's competence directly. An initial assessment of candidates is recommended.

All the learning outcomes and assessment criteria must be clearly evidenced in the submitted work, which is externally moderated by OCR.

Results will be Pass or Fail.

Guidance on assessment

Evidence can reflect how the candidate carried out the process or it can be the product of a candidate's work or a product relating to the candidate's competence.

For example: The process that the candidate carries out could be recorded in a detailed personal statement or witness testimony. It is the assessor's responsibility to make sure that the evidence a candidate submits for assessment meets the requirements of the unit.

Questioning the candidate is normally an ongoing part of the assessment process, and is necessary to:

- test a candidate's knowledge of facts and procedures
- check if a candidate understands principles and theories *and*
- collect information on the type and purpose of the processes a candidate has gone through
- candidate responses must be recorded

It is difficult to give a detailed answer to how much evidence is required as it depends on the type of evidence collected and the judgement of assessors. The main principles, however, are as follows: for a candidate to be judged competent in a unit, the evidence presented must satisfy:

- all the items listed, in the section 'Learning Outcomes'
- all the areas in the section 'Assessment Criteria'

The quality and breadth of evidence provided should determine whether an assessor is confident that a candidate is competent or not. Assessors must be convinced that candidates working on their own can work independently to the required standard.

Additional information

For further information regarding administration for this qualification, please refer to the OCR document '*Admin Guide: Vocational Qualifications'* on the OCR website www.ocr.org.uk