



Accredited

OCR LEVEL 2 CAMBRIDGE TECHNICAL CERTIFICATE/DIPLOMA IN IT

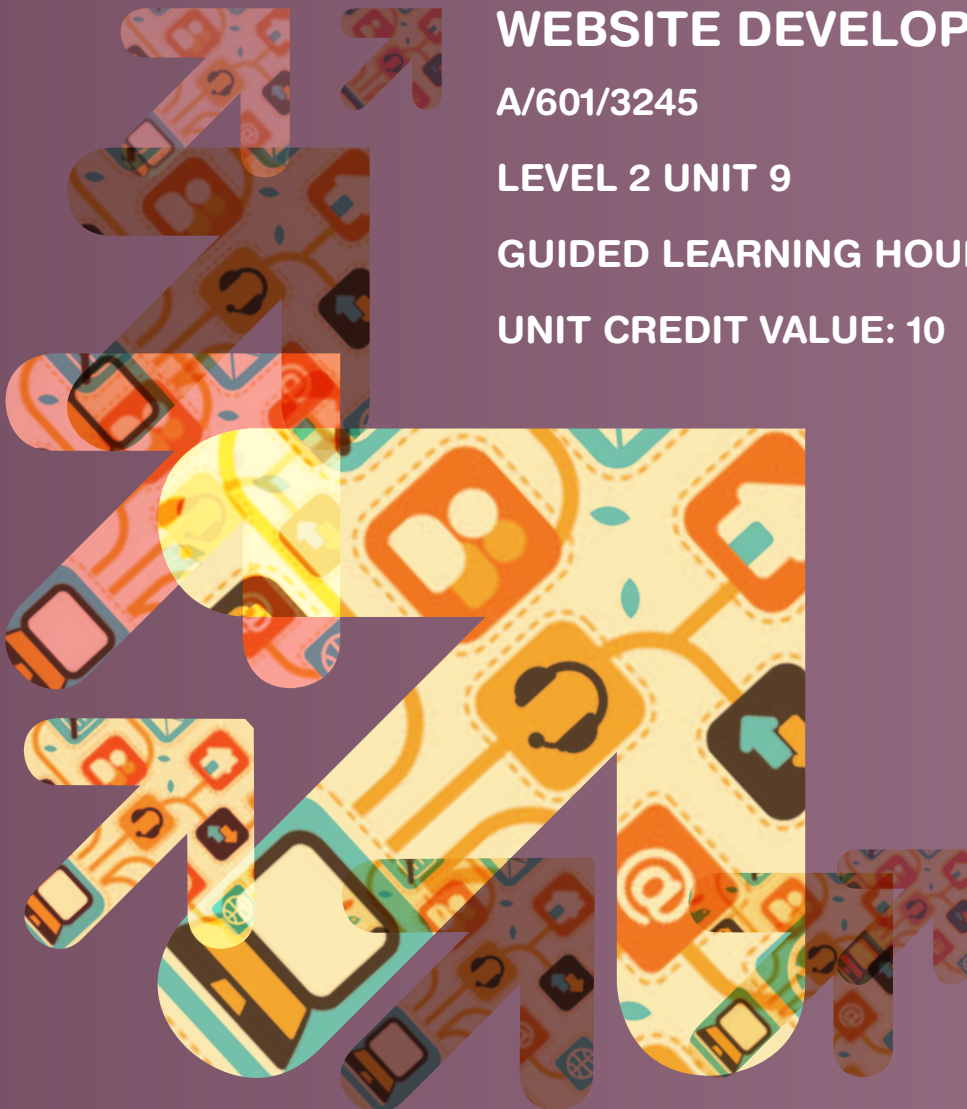
WEBSITE DEVELOPMENT

A/601/3245

LEVEL 2 UNIT 9

GUIDED LEARNING HOURS: 60

UNIT CREDIT VALUE: 10



WEBSITE DEVELOPMENT

A/601/3245

LEVEL 2

AIM OF THE UNIT

The Internet is an essential part of everyday life used for shopping, communication, leisure, gaming and finding information to name just a few. Websites are mostly aimed at a specific target audience, while others aim to be inclusive to a wide range of people and can comprise of a range of images, animation, video and sound to add to the user experience. Although including multimedia in websites can be eye-catching, it is important for these websites to be accessible for a variety of users and consider restrictive factors such as the speed of the user's Internet connection or version of browser they are using.

This unit will prepare learners to design, create and test a fully functioning website to meet a client's specification, while also providing the basic knowledge of the components that aid web accessibility.

ASSESSMENT AND GRADING CRITERIA

Learning Outcome (LO)	Pass The assessment criteria are the pass requirements for this unit. The learner will:	Merit To achieve a merit the evidence must show that, in addition to the pass criteria, the learner is able to:	Distinction To achieve a distinction the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
1 Know web architecture and components	P1 identify the hardware and software components which enable internet and web functionality		
	P2 describe the role of web architecture in website communications		
2 Understand how websites can be used by organisations	P3 explain the uses of websites in organisations		
3 Be able to design website components	P4 design website components, considering client needs	M1 produce annotated design documentation for an interactive website to meet client needs	
	P5 use appropriate formatting tools, styles and templates to prepare content for the website		
4 Be able to create website components	P6 create website components to meet client needs	M2 justify how components used will enhance a website	D1 use advanced techniques to improve a website, including accessibility features
	P7 review website components, suggesting improvements	M3 apply improvements identified from testing and client feedback	D2 evaluate how your site compares with commercially prepared sites

TEACHING CONTENT

The unit content describes what has to be taught to ensure that learners are able to access the highest grade.

Anything which follows an i.e. details what must be taught as part of that area of content.

Anything which follows an e.g. is illustrative, it should be noted that where e.g. is used, learners must know and be able to apply relevant examples to their work though these do not need to be the same ones specified in the unit content.

LO1 Know web architecture and components

Components:

- hardware (e.g. servers, routers)
- software (e.g. browser, communications, web).

Web architecture

- Internet Service Providers (ISP)
- web hosting services
- domain structure and name registrars
- worldwide web.

Web functionality

- web 2.0
- blogs
- wikis
- online applications
- commerce.

LO2 Understand how websites can be used by organisations

Uses of websites

- customer focussed (e.g. marketing, sales, business information, business updates)
- internal (e.g. intranets, repositories, training, shared resources).

LO3 Be able to design website components

Design

- planning (e.g. storyboards, site maps, navigations maps, mind maps, sample page visualisations)
- style (e.g. layout, organisational, logos, images, formats)
- resources (e.g. copyright/non-copyright assets).

Construction features

- templates and style sheets
- action buttons
- hyperlink options
- hotspots

- browser
- download speeds (e.g. browser specific, connection types, formats)
- interactive features (e.g. email links, forms, downloads).

Interactivity

- user input (e.g. keyboard, mouse, touchscreen/mobile options)
- form design and controls.

Client need

- target audience
- user needs (e.g. format, ease of navigation, fast download, accessibility)
- language
- images, interactive features
- appropriate formats (e.g. layout, colour, font, text size).

Legal requirements

- acknowledgement of sources
- permissions
- copyright law (e.g. on music downloads, use of images).

LO4 Be able to create website components

Software

- specialist software (e.g. Expression Web, Dreamweaver)
- embedded facility in other packages (e.g. Publisher, Word, Powerpoint)
- other (e.g. Flash)
- use of HTML
- pre-prepared formats (e.g. tables, frames)
- preparation software (e.g. Photoshop, Audacity, Premiere for assets preparation).

Format and edit

- common web functions (e.g. text, graphics, fonts, text formatting, colour schemes, images)
- simple HTML (e.g. editor programs, file extensions)
- HTML tags and conventions (e.g. <html>, <p>, <body>, closing tags)

- templates and style sheets
- editing and formatting tools
- combining information from different sources (e.g. scanner, digital camera, web, original assets, generated content).
- comparison to commercially prepared sites (e.g. content, style, functionality, usability, readability, accessibility).

Optimisation

- content (e.g. images, video, animation, sound)
- optimisation (e.g. file size, format, dimensions, compression techniques).

Good Practice

- consistent file and folder management
- appropriate naming conventions
- documentation of developments.

Publishing

- uploading files (e.g. to Intranet, to server)
- maintaining content
- file management (e.g. naming files, folder structures, moving files, deleting files).

Accessibility

- users with disabilities
- social factors
- technical factors
- accessibility aids (e.g. ALT tags, low graphics versions).

Checking

- functionality (e.g. links, working content, accessibility options)
- usability (e.g. clear navigation, easy to use, viewable in different browsers such as Chrome, Firefox, IE, Opera, Safari)
- readability (e.g. text, formatting, colours, proof read, spell checked, appropriate content)
- accessibility (e.g. ALT tags, additional features function)
- use of a test plan/table
- user feedback
- client feedback.

Review:

- feedback
 - questionnaires
 - verbal discussion
 - identified criteria for feedback (e.g. appropriateness, clarity, content, speeds, navigation, font choice, colour combinations).
- improvements (e.g. download times, navigation, clarity)

DELIVERY GUIDANCE

Know web architecture and components

Learners should understand the different hardware and software used for the Internet. This could be delivered through hand out exercises and/or group research. It will be helpful for learners to be made aware of how they link to different applications on the web e.g. blogs, online applications.

A good way to introduce the architecture could be to give a brief overview of what each of the listed criteria are. This could be followed by a set group research task that gets learners to look up actual services, for example comparing web hosting service so they can find out what they offer. A mind map or diagram will help learners to appreciate how these all interlink.

Understand how websites can be used by organisations

Where possible it would be useful for learners to be shown and explore at least one example for each of the different uses i.e. customer focussed and internal. Learners can also be shown some examples of improving web functionality e.g. blogs, online applications. Although not key it would be useful for learners to analyse the websites that they see and discuss the functionality used and the purposes. This will be useful for when they analyse their own website and will identify common design principles that they can use when designing their components. This could simply be highlighting what looks good or does not look good on sites, evaluating how websites have made it easier for users to use and navigate their websites. It would be beneficial to show examples of websites from around the world to see similarities and differences, as well as examples of poor website design to enable learners to see where sites are not easily accessible.

Be able to design website components

Learners should be taught appropriate methods for designing components. They should understand the benefits of creating planning documentation such as a storyboard, site or navigation map and they could create these based on sites they may have evaluated or reviewed previously. The learner should then be encouraged to add details to this documentation such as layouts and formats and should be encouraged to further annotate these to allow the theoretical independent development by others. They could then try designing sites for an identified purpose and creating similar documentation. Group exercises where learners try

to create pages from design documentation created by another learner will identify any areas where more detail is required. As part of this process learners should also be taught to consider the copyright implications of assets used with a website. Learners should be made aware of legislation that could impact content (images, sound, video) that they may include on a website. It would be useful to show the consequences that have resulted where websites have not followed legislation and research should be carried out by learners to identify examples of this in the media.

It is important that learners are given enough time to learn how to use web design and editing packages. Tutor led demonstrations, step-by-step tutorials, or video tutorials are all excellent ways of introducing learners to new methods. It is important for learners to be aware of how to optimise the content they create by learning how to keep the file size of created components small to avoid slow loading web pages. Learners should be taught about using appropriate dimensions, compression and using appropriate file formats for images, sound, animation and video and discuss why the file types are different when the usage is not for web.

Be able to create website components

Following on from previous criteria, learners would benefit from practice exercises to introduce them to how they can make a well-designed, interactive website, while also considering good practice such as file management and appropriate naming conventions. Learners should be taught the scope of website components which range from buttons, banners and physical pages with layouts. They may have included several of these on their designs but need to understand the creation and usage within the website software.

Learners should discuss accessibility and why it is an important consideration and how it can be a major issue for a number of reasons, not only people with visual, auditory, physical and cognitive disabilities but also through technical (slow Internet connection, using different browsers and platforms), and social (multi-lingual) issues. Research exercises and group discussions could help identify different mechanisms that are used by websites to make their sites accessible e.g. ALT Tags, text size changer, multiple languages, pod casts, low graphic versions etc.

Learners should be taught effective methods for testing. A test plan/table would be a suitable way of doing this considering:

- Functionality (e.g. working internal/external navigation, content loads/works)
- Usability (e.g. clear navigation, viewable in different browsers, easy to use)
- Readability (e.g. proof read, spell checked, text readable with background colour, appropriate content, formatting)
- Accessibility (e.g. ALT tags included, additional features function).

This can be practiced on existing commercial websites looked at and evaluated, websites the learner has designed and created themselves and those created by other learners within the group.

Appropriate methods of gaining feedback can be researched. Learners should be encouraged to develop their own review and feedback documentation perhaps as part of group discussions to ensure that they have considered all aspects. Time should be spent on deciding how to ask questions that will provide the most useful feedback from clients and users. Early review work would be beneficial and provide a good basis on which learners can build, to examine existing sites of a similar genre or style to their own and discussing good and bad features, whether it meets the user needs and how the sites could be improved.

SUGGESTED ASSESSMENT SCENARIOS AND TASK PLUS GUIDANCE ON ASSESSING THE SUGGESTED TASKS

Assessment Criteria P1, P2

Learners could evidence these criteria using a report or presentation document or a presentation delivered to a group that could be supported by a tutor observation sheet, or recorded evidence. Learners must identify and discuss what the hardware and software listed are and how they help with web functionality. The learner must also describe what each of the web architecture components are and what they are used for. Learners must provide real life examples and references to support their descriptions.

Assessment Criterion P3

Learners should explain the uses of websites in organisations, as listed in the teaching content. The evidence could be in the form of a report or presentation.

Assessment Criteria P4, M1

It is important for learners to be given a detailed client brief. It must include details of the target audience, what the user will require, the level of language to be used, the type of images to be included and appropriate file formats. The brief must be reviewed by the learners so they can identify the key requirements. They must create appropriate design documents which meet the needs of the client. Design documentation must include storyboards, a navigation map for a website of at least five pages and an explanation of what the house style will be (colours and text).

For merit criterion M1 the learner must produce annotated design documentation and page layouts. Navigation maps must be accurate and storyboards/visualisation must be detailed and annotated with all elements and assets to be used clearly identified with sources, appropriate layouts, colour schemes and font styles stated. Learners must ensure they have considered the client need carefully and must identify how their designs meet the user's needs e.g. clear navigation and they must identify how they have integrated the components they have designed. This could be an extension of P4 in the design documentation.

Assessment Criterion P5

This could be evidenced through annotated screenshots for each of their web pages highlighting where content they have created/edited has been used. This could also include where learners have set up styles for text, edited appropriate images for the site, created a template page and edited additional components e.g. video, animation, sound. Content for the site could be collected through a variety of methods and it would be beneficial but not mandatory for learners to create their own content e.g. using digital/video cameras, scanners instead of just using existing material.

Assessment Criteria P6, M2, D1

The completed website components will act as evidence for the assessment criterion which must consist of at least five pages, use a template, include hyperlinks, interactive features, a method of navigation and meet the client's needs. Centres may wish to consider setting a timed session for learners to create their website components to provide a more work-like feel and help them to focus on their development against a plan.

For merit criterion M2 the learner must justify how the components created for use in the website will enhance it. This could be included in addition to the annotations as part of the evidence for P5 or provided separately in a short report. Learners must explain the content chosen to be used (e.g. images, video, animation and sound), as well as styles and layouts, justifying how they are appropriate and will enhance the website.

For distinction criterion D1 learners will include a completed website towards the evidence. The completed website must contain a range (three or more) of advanced techniques as identified in the teaching content. It must also include at least one accessibility feature. The evidence will be the completed website, supported by learner's design and test plans.

NB This website must not be published in the public domain prior to successful achievement of this unit.

Assessment and Grading Criteria P7, M3, D2

This could be evidenced by a short report to cover functionality, readability, usability and accessibility (if included) of the website. The learner must discuss how their site meets the needs of the user and the client and suggest possible improvements.

For merit criterion M3 learners must apply improvements identified from testing and client feedback to their website. It could be evidenced by creating a test plan/table for each page of the uploaded web pages. Appropriate tests must be included that cover the functionality, readability, usability and accessibility (if included) of the website. It is not essential for errors to be found but the test plan/table should be detailed with at least six appropriate tests and any errors found must be evidenced, this could be through the use of before and after screenshots. This should be clearly evidenced and documented.

Learners must also produce a short questionnaire that obtains useful feedback from the target audience group. At least three questionnaires must be completed, which should suggest improvements. The learner must make at least two improvements to their site, one of their own and one from the feedback received. Evidence must include the completed test plans/tables, feedback sheets and could include before and after screenshots as evidence of the improvements made. Explanations must be provided for the improvements made.

For the distinction criterion D2 learners must identify two commercially prepared sites similar in topic or purpose to their own and include reference and evidence of these which would be achieved using screenshots. They must evaluate the functionality, readability, usability and accessibility of the commercially prepared websites and in comparison to their own sites. This could be presented in the form of a report or discussion document.

MAPPING WITHIN THE QUALIFICATION TO THE OTHER UNITS

Unit 10: Computer Graphics

Unit 11: Multimedia Design

LINKS TO NOS

6.1 Information Management



CONTACT US

Staff at the OCR Customer Contact Centre are available to take your call between 8am and 5.30pm, Monday to Friday.

We're always delighted to answer questions and give advice.

Telephone 02476 851509

Email cambridgetechnicals@ocr.org.uk

www.ocr.org.uk