Title	Develop and evaluate an interactive website for a client		
Level	4	Credits	5

Purpose	People credited with this unit standard are able to: plan and design an interactive website that displays on a range of digital devices for a client; develop a prototype interactive website for a client; produce an interactive website for a client; test, modify and evaluate the website, documenting any changes. This unit standard has been developed primarily for assessment as an option within programmes leading to the New Zealand Certificate in Computing (Advanced User) (Level 4) [Ref: 2593].

Classification	Computing > Generic Computing

Available grade	Achieved

Guidance Information

1   Recommended skills and knowledge:
     Unit 29788, *Develop, test and evaluate an interactive website for organisational use*, or demonstrate equivalent knowledge and skills.

2   Unit 29773, *Produce digital images for a range of digital media* or Unit 29791, *Capture and prepare digital media for integration into other applications* could be used to prepare media for integration into the website. Editing of the media is not required apart from preparation to allow insertion into the final website, such as adjusting resolution, file size, video format.

3   Assessment, where applicable, will be conducted in and for the context of a real or realistic situation and/or setting, and be relevant to current and/or emerging practice. For the purposes of assessment, the client must be authentic and may include the learner's assessor, real clients, family members, or other learners. The assessment context for this unit standard must be suitable to meet the criteria for level 4 in the NZQF Level Descriptors, which are available by searching for "level descriptors" at www.nzqa.govt.nz.

4   The learner must decide with the client the type of website that best meets the requirements of the client. Learners are required to create an interactive website for a client with embedded media, using an HTML editor. The finished website must be of a standard suitable for live use. Some text, graphics, and page layout preferences may be provided by the client, along with the sources for acknowledgement.

5   A *plan* outlines how the requirements of the brief will be realised. For this unit standard, the planning is done in conjunction with the conceptual design and will include pre-task documented components.

6   Definitions
        Accessibility means the web pages can be opened and viewed on a variety of browsers and configured to be viewed by people with disabilities such as visual impairment.
        Advanced layout for responsive web design refers to using semantically correct HTML and CSS to create structure, content and style elements according to good practice. Such techniques may include elements such as font face, font colour, rotating elements, drop shadows, rounded corners, page layouts, validating.
        Breadcrumbs, or *breadcrumb trail* refer to a website navigation technique, that reveals the user's location in a website and offers users a way to trace the path back to their original landing point.
        A *brief* is a clear description of both the desirable outcomes sought and the constraints to be met by the solution. It contains design specifications against which the success or otherwise of the website can be evaluated. The brief can be either created as part of the learner's employment (in the case of workplace assessment) or in response to client specifications.
        Conceptual design is a representation clearly indicative of the final product.
        Data validation means data that is input by the user is checked for errors and an error message posted when errors are found. Validation may include but is not limited to – interactive or post-validation. Errors may be processed as field-by-field or batch errors.
        Digital devices refer to electronic computing devices that can receive, store, process or send digital information, such as personal computers (desktop or laptop), tablets, smart phones, or other emerging digital technologies.
        Enhancement refers to special features that may improve the customer experience and may include the use of widgets, HTML5 web applications, image sliders, responsive code, web forms, and accessibility.
        HTML editor is a computer program for editing HTML and CSS, the markup languages of a webpage. The markup language will have text entered by use of an HTML editor according to the conventions of the selected language and will include the use of HTML structural elements, HTML attributes and HTML styles. This does not include word processing, desktop publishing, presentation applications or online web builders.
        Interactive means the website will respond to basic user interactions such as widgets, hyperlinks, embedded code in different ways, depending on the nature of the input. Such response may include but is not limited to – completing and submitting an online form, accessing a menu, creating a shopping cart.
        Original media refers to media created by the learner or provided by a client.
        Presentation means the website produced must show consistent application of the principles of page/screen layout, which refer to composition of elements upon the page, text hierarchy, consistent typography, balance, harmony, proportion, sequence, contrast repetition, alignment, and proximity. In this standard it also refers to the readability and functionality of the website on a range of digital devices.
        Prototype refers to a completed outcome ready for use or a functional model of the outcome.
        Responsiveness means the webpage will adjust depending on the digital device that the website is displayed on.

Testing plan refers to the detail of how the website is going to be tested for operation to ensure that it meets the specification of the brief and client, including data validation and accessibility testing.
Typography may involve selecting typefaces/web fonts, font size, line length, line-spacing (leading), letter-spacing (tracking), adjusting the space within letters pairs (kerning) and font colours.
W3C refers to the World Wide Web Consortium, which is the main international standards organisation for the World Wide Web (WWW or W3).

7   Legislation relevant to this unit standard may include but is not limited to the:
Copyright Act 1994
Copyright (New Technologies) Amendment Act 2008
Health and Safety at Work Act 2015
Privacy Act 2020
Unsolicited Electronic Messages Act 2007
and any subsequent amendments.
Current legislation and regulations can be accessed at http://legislation.govt.nz.

8   References
ACC5637 Guidelines for Using Computers - Preventing and managing discomfort, pain and injury. Accident Compensation Corporation - Department of Labour, 2010; available from Worksafe New Zealand, at https://www.worksafe.govt.nz/topic-and-industry/work-related-health/musculoskeletal-disorders/ergonomics/safely-using-computers-at-work/.

Outcomes and performance criteria

Outcome 1

Plan and design an interactive website that displays on a range of digital devices for a client.

Range   multi-page interactive website with a minimum of three linked pages

Performance criteria

1.1   A brief is formulated that describes the client's requirements for the website.

          Range   includes but is not limited to – purpose, target audience, key objectives, constraints.

1.2   Design specifications to be met by the website in order to provide a solution, are defined in the brief.

          Range   includes but is not limited to – scripting language, enhancements, placement of media, interactivity, accessibility, navigation, data validation, data constraints, digital devices.

1.3   How the requirements of the brief will be realised is outlined in planning for the development of the interactive website.

        Range   planning includes but is not limited to – project milestones, resource requirements, client consultation, testing procedures, sitemap, directory structure, testing plan;
includes tracking progress and updating at each project milestone.

1.4   A conceptual design of each page of the interactive website is produced and modified if needed at each project milestone.

Outcome 2

Develop a prototype interactive website for a client.

Range   prototype website does not need to be fully functioning, but must be representative of the layout and design proposed within the brief and conceptual design

Performance criteria

2.1   The prototype is produced in accordance with the design specifications.

2.2   The prototype is presented to the client for feedback, revised if necessary and signed off in accordance with the project milestones.

Outcome 3

Produce an interactive website for a client.

Range   multi-page interactive website with a minimum of three linked pages.

Performance criteria

3.1   Web pages are produced in accordance with the design specifications and coding standards.

        Range   may include but is not limited to – HTML (latest specification) and CSS (latest specification) as defined by W3C; advanced layout using CSS; semantically correct HTML structure; responsive CSS for multiple devices.

3.2   Media are selected and integrated in accordance with the specifications of the brief, and must meet appropriate legal, ethical and moral considerations.

        Range   may include but is not limited to – static and/or moving images; audio; widgets;
use of embedded code to display content from another website; at least two different original media.

3.3   Design specification requirements for website navigation are met.

         Range   may include but is not limited to – navigation bar, breadcrumbs, table, search facility.

Outcome 4

Test, modify and evaluate the website, documenting any changes.

Performance criteria

4.1   The website is tested, following documented procedure contained in the plan, and is verified as realising the design specifications and client expectations.

4.2   The website is tested to review operation and responsiveness of the website, and any improvements needed are made and documented.

         Range   may include but is not limited to – accessibility, readability, legibility, presentation, links, sequence, accuracy, use on at least two different types of digital devices.

4.3   An evaluation report is prepared that identifies strengths and limitations of the website and recommends possible improvements for future developments.

Planned review date	31 December 2026

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	19 January 2017	31 December 2024
Review	2	28 April 2022	N/A

Consent and Moderation Requirements (CMR) reference	0099

This CMR can be accessed at http://www.nzqa.govt.nz/framework/search/index.do.

Comments on this unit standard

Please contact Toi Mai Workforce Development Council qualifications@toimai.nz if you wish to suggest changes to the content of this unit standard.