



COMPUTING

Unit standards
Review and Development

CONSULTATION DOCUMENT

Consultation closing 13 September 2021
NZQA NATIONAL QUALIFICATION SERVICES

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Consultation on the review of Computing unit standards at Levels 2 – 5

Purpose of the consultation

NZQA National Qualifications Services (NQS) invites you to give feedback on the suite of reviewed and new Computing unit standards, including those designed for use as assessment tools for reviewed New Zealand Computing and IT qualifications at Levels 2-4.

Standards have been reviewed and developed to align with graduate profile outcomes (content and credit value) of the following qualifications:

- NZ Certificate in Computing (Foundation User) (Level 2) (60 credits) [Ref: [4132](#)]
- NZ Certificate in Computing (Intermediate User) (Level 3) (60 credits) [Ref: [2592](#)]
- NZ Certificate in Computing (Advanced User) (Level 4) (60 credits) [Ref: [2593](#)]
- NZ Certificate in Information Technology Essentials (Level 4) (60 credits) [Ref: [2594](#)]
- *NZ Certificate in Computing (User Fundamentals) (Level 2) (40 credits) [Ref: [2591](#)] - expiring*

This consultation document sets out the details of the review and consultation, key changes proposed, as well as providing some background on the review process. The appendices are designed to provide helpful summaries of information, and they include a summary list of proposed changes (current and new Computing standards), the landscape of proposed standards towards the reviewed qualifications, and a word version of the feedback survey.

This document is further supported by the new unit standard documents themselves. These can be found on the Computing unit standards review page, accessible from the NZQA website at <https://www.nzqa.govt.nz/qualifications-standards/standards/nzqa-led-standards-reviews-and-developments/computing-unit-standards-review/>.

The consultation is open for three weeks, **closing noon Monday 13 September 2021**.

Key changes proposed

In most cases current standards have been reviewed, with some new standards developed to fill gaps and/or merge or modify existing standards. The intent is to have a last date for assessment of prior versions of reviewed standards of 31 December 2023.

The **key changes proposed include:**

1. Ten standards to have **titles** changed to better align with and reflect the intent of the reviewed qualifications and current practice (18750, 29784, 29779, 29781, 29787, 29794, 29796, 29801, 29803, 29804).
2. Eleven standards to have **credits** increased (29769 – 29771, 29774, 29785-29787, 29799 -29801, 29803) and one standard to have credits reduced (29802) to better reflect complexity of current knowledge and skill requirements and practice, and to align with the reviewed qualifications (and many rounded to 5 credits).
3. Eleven **new standards** were developed as a result of combining and replacing existing standards and to better reflect the graduate outcomes of the reviewed Level 2-4 qualifications and current practice. The new standards do not yet have an ID# so are

referred to as follows in the interim:

- L2 GPO5, L2 GPO6, L2 ex 29783
- L3 GPO1, L3 GPO5, L3 ex 2797, L3 ex 18756
- L4 ITE1, L4 ITE2, L4 ITE3, L4 ITE4 ex 29813

4. Proposed **expiry of 24 standards**: Four standards (2797, 18756, 29783 and 29813) are proposed to expire with new replacement standards developed (Category C review). Twenty standards are proposed to expire without replacement (Category D review) as the panel determined they are no longer relevant, fit for purpose or duplicated content in new or current standards; and for Level 4 standards 29810-29812 & 29814-29816 no longer aligned with the reviewed qualification Ref: 2594. The intent is to expire replaced standards on 31 December 2024.
5. **Level 2 standards**: New Level 2 standards developed and current standards reviewed to align with the change from a 40 to 60 credit qualification [Ref: [4132](#)]. The current standards are generally considered a bit detailed in the range statements leading to a 'tick list' response. It is proposed that the approach taken in the Level 3 and 4 standards (where the intermediate or advanced skills are described in the guidance information, with less detail in the range statements) also be applied to the Level 2 suite.
6. **Technical**: Guidance information, legislation, outcomes, and performance criteria were updated to reflect terminology used in the current template, to better align the standards with the reviewed qualifications, updated legislation and current practice, and to ensure they remain relevant and current.
7. The table below summarises the **51 reviewed and 11 new Computing unit standards** by domain, with new standards shown in **bold**.

51 Reviewed & 11 New Computing Standards		
Subfield	Domain	ID – unit standard number
Computing	Computer Support (4)	18750, 29784, 29798, L4 ITE1 New
	Generic Computing (53)	2792, L3 networks new ex 2797 , 5946, 5968, 18734, 18743, L3 DB new ex 18756 , 18758, 25659, 29769-29782, L2 new ex 29783 , 29785-29809, L2 GPO5 new, L2 GPO6 new, L3 GPO1 new, L3 GPO5 new, L4 ITE2 new, L4 ITE3 new
	Software Development – Programming (4)	18739-18741, L4 ITE4 new ex 29813

8. The table below summarises the **24 Computing unit standards proposed to expire** by domain. 20 standards have no direct replacement relationship. The four standards with replacement relationships with new standards are shown in **bold**.

24 Standards proposed to expire – 31 December 2024

Subfield	Domain	ID – unit standard number
Computing	Computer Support (5)	6836, 6852, 26227, 29810, 29817
	Generic Computing (17)	2796, 2797 , 5943, 5951, 5955, 6745, 7910, 18756 , 25782, 26226, 26228, 29783 , 29811, 29812, 29814-29816
	Software Development – Programming (2)	6761, 29813

9. **Table of standards with changes:** Appendix 1 provides a summary of proposed changes with replacement relationships for all Computing unit standards at Levels 1 -5, including the detailed list of the 62 new (11) and reviewed (51) unit standards, and the 24 standards proposed to expire. The proposed draft reviewed and new standards are available from links on the [review consultation webpage](#).
10. **Landscape:** The Landscape of unit standards aligned to the Level 2-4 Computing and IT qualifications has been updated to reflect the changes made during the review – see appendix 2. It shows the graduate profile outcomes from the qualifications and potential alignment of unit standards to the:
- reviewed version 2 of the qualifications at Levels 3-4 [Ref: [2592](#), [2593](#) and [2593](#)],
 - expiring 40 credit Level 2 qual [Ref: [2591](#)] and new 60 credit Level 2 qual [Ref: [4132](#)].

Some standards may contribute to more than one qualification outcome, and/or to more than one qualification. The qualifications are available at <https://www.nzqa.govt.nz/qualifications-standards/qualifications/it-computing-quals/>.

Review working group and approach

Applications were sought for working group membership to review the current 75 Computing unit standards in late 2020. The group was selected with members collectively having the necessary computing and IT skills and experience with target learners, qualification development, and unit standard assessment. They represent a range of stakeholders from PTEs, ITPs, secondary schools, ICT sector representatives, professional associations, and moderator. This review was further supported by feedback from the email support network.

The panel met seven times between November 2020 and July 2021 to review the seventy-five standards, resulting in proposed changes to fifty-one unit standards, the development of eleven new unit standards, and the expiry of twenty-four unit standards (four with replacement relationships).

The review considered pre-review feedback and data, and was broken down into clusters:

- by level and aligned to qualifications
- other standards at Levels 2-5 not directly aligned with qualifications, and
- Level 1 Computing standards.

The working group updated the landscape of unit standards to align with the graduate profile outcomes of the four qualifications. This landscape and the draft reviewed standards were circulated to the email support network, and feedback considered to adjust the landscape and refine the proposed reviewed standards.

The working group identified the skills and knowledge needed to ensure that learners could meet the graduate profile outcomes in each qualification. There was a particular focus on how to define the distinction between fundamental, intermediate and advanced users, and what this means for expectations of what is covered at each level regarding the use of applications. The working group then considered whether existing standards could be reviewed to cover those skills and knowledge, and also developed some new standards to ensure a better fit with the reviewed qualifications, in both content and credit value.

Responding to the consultation – feedback invited by 13 September 2021

We welcome your views on any aspect of the reviewed standards (or any standard/standards you have a particular interest in), including any issues or suggestions for improvement for each standard, or any overall comments.

To help gather your views, you may choose to **respond to the [electronic survey](#)** or you may prefer to complete the **word document survey** (see appendix 3 – also available from the review webpage), or send any general feedback (or tracked standards) to the review mailbox: computing.review@nzqa.govt.nz. This consultation **closes at noon on Monday 13 September 2021**.

In most cases, current standards have been reviewed for each qualification, with some new standards developed to fill gaps and/or merge or modify existing standards. Some Level 1 - 5 standards not directly aligned with the qualifications have also been reviewed. Some standards may contribute to more than one qualification outcome, and/or to more than one qualification – see appendix 2 landscape document for further detail. The proposed new standards are available from links on the [review consultation webpage](#).

We are particularly keen to get stakeholder feedback on any/all of the following proposed changes.

- 1. New standards:** 11 new standards were developed as a result of combining and replacing existing standards and to better reflect the graduate outcomes of the reviewed Level 2-4 qualifications and current practice. The new standards do not yet have an ID# so are referred to as follows in the interim:
 - L2 GPO5, L2 GPO6, L2 ex 29783
 - L3 GPO1, L3 GPO5, L3 ex 2797, L3 ex 18756
 - L4 ITE1, L4 ITE2, L4 ITE3, L4 ITE4 ex 29813 (4 x 15cr standards to align with the qual 2594).Any concerns/comments?
- 2. Title changes:** 10 standards with proposed changes to titles (18750, 29784, 29779, 29781, 29787, 29794, 29796, 29801, 29803, 29804). Any concerns/comments?
- 3. Credits:** 11 standards with increased credits (increased 29769 – 29771, 29774, 29785-29787, 29799 -29801, 29803) and one standard with decreased credits (29802). Any concerns or comments; or any feedback on credits for any other standards?

4. **Proposed expiring unit standards:** 24 standards proposed to expire, with only four having a specified replacement relationship with a new standard (2797, 18756, 29783, 29813). Summary document available. Any concerns/comments?
5. **Proposed expiry date & LDA** – is December 2023 or 2024 preferred for expiring standards? Also is December 2023 adequate for the last date for assessment of the previous version of the 51 reviewed standards?
6. **Landscape of Computing unit standards aligned to reviewed Level 2-4 qualifications** – draft update of the current landscape document (*work in progress*) that shows potential alignment of unit standards to the reviewed version of the qualifications and the new 60 credit Level 2 qual. Is this helpful or not, and what other information would be useful to support programme developers?

You may choose to respond to some or all of these, or alternatively you can provide general feedback or comment on any specific standard/s or other matter related to the review.

When considering the draft standards and your feedback, you may wish to consider the following prompt questions, and the QA criteria for listing unit standards on the DAS (<http://www.nzqa.govt.nz/providers-partners/development-of-assessment-standards/listing-unit-standards/>):

- | | | |
|---|----------------------------------|---|
| a | Title of the standard | Does the title accurately reflect the significant outcomes that the unit standard recognises? |
| b | Classification | Is the content of the unit standard consistent with the Computing subfield and proposed domain? |
| c | Levels | How well do the outcomes and evidence requirements of the standards match the level descriptors? Do the standards capture appropriate step-ups between the levels? |
| d | Credit value | How appropriate are the credits allocated to the unit standard (credits reflect a notional 10 hours of learning, practice, and assessment time with respect to the outcomes and contexts of the unit standard)? |
| e | Guidance information | How well do these assist in the interpretation of the unit standard and/or increase the likelihood of consistent assessment? |
| f | Outcome statements | How well do these describe what has to be achieved? |
| g | Performance criteria | How well do these specify the quality of the critical evidence required to meet the outcomes? |
| h | Range statements | How well do these distinguish the items that need to be considered and whether a sufficient breadth of evidence is required? |
| i | Replacement relationships | What impact will expiring existing standards have? |
| j | Connection to the qualifications | How well do the standards collectively meet the graduate profile outcomes in each qualification? Are there any gaps or suggestions for additional standards? |

The feedback will be used by NQS and/or the Toi Mai (Creative) Workforce Development Council (WDC) and the review working group to further refine the standards to ensure that they meet the needs of the sector before being submitted for quality assurance.

Thank you for taking the time to consider the Computing standards and to provide feedback to inform the review. We value your input.

Appendix 1: Summary of proposed changes to computing unit standards at Levels 1-5

Detailed list of reviewed unit standards – classification, title, level, and credits

The following summary shows the proposed changes to current standards as a result of the review. All changes are in **bold**. Unit standards categorised as **category C or D are proposed to expire at the end of December 2023/4**.

Some standards are part of more than one replacement relationship and therefore appear in the table(s) more than once. This is indicated through the use of the *.

Key to review category	
A	Dates changed, but no other changes are made - the new version of the standard carries the same ID and a new version number
B	Changes made, but the overall outcome remains the same - the new version of the standard carries the same ID and a new version number
C	Major changes that necessitate the registration of a replacement standard with a new ID
D	Standard will expire and not be replaced

Computing and Information Technology > Computing > Computer Support

ID	Title	Level	Credit	Review Category
6836	Apply the principles of resolving problems for single-user and multi-user computer operating systems	5	5	D
6852	Describe data communications	4	4	D
18750	Produce a learner focused electronic training package for organisation use Produce an interactive electronic training package for organisation use	3	5	B
26227	Describe and create a local area network	5	7	D
29784	Troubleshoot, fix and escalate simple or routine computing and connectivity problems Troubleshoot, fix and escalate simple or routine hardware, software and connectivity problems	2	2 2	B
29798	Troubleshoot, fix and escalate a range of common hardware and software problems	3	3	B
29810	Apply essential IT technical knowledge and concepts to provide support of a computer's hardware, software and network	4	10	D
29817	Repair a personal computer and peripherals to module level	5	10	D
L4 ITE1 new re GPO1&6	Apply IT technical knowledge and professional practice to provide support of a computer's hardware, software and network	4	15	New

Computing and Information Technology > Computing > Generic Computing

ID	Title	Level	Credit	Review Category
2792	Produce simple desktop published documents using templates	1	2	B
2796	Demonstrate knowledge of the principles of electronic logic gates in computing	4	9	D
2797	Demonstrate knowledge of the principles of computer networks	3	4	C
L3 ex 2797 Networks new	Demonstrate and apply knowledge of the principles of computer networks		5	New
5943	Investigate use of digital applications for leisure	1	2	D
5946	Use computer technology to create and deliver a presentation from given content	1	3	B
5951	Describe the concepts of information systems deployment	3	3	D
5955	Demonstrate an understanding of documentation for computer applications	3	5	D
5968	Discuss the social implications of information technology	3	3	B
6745	Demonstrate and apply knowledge of single-user and multi-user computer operating systems	4	5	D
7910	Demonstrate knowledge of computer data types and data structures	5	7	D
18734	Create a web page using a template	1	2	B
18743	Produce a spreadsheet from instructions using supplied data	1	2	B
18756	Use and maintain a computer database for business reporting and decision making	3	3	C
L3 DB ex 18756 new	Use and maintain a computer database to meet organisational requirements	3	3	New
18758	Find information using the Internet	1	2	B
25659	Create a web page using a mark-up language with a text editor	1	2	B
25782	Investigate the use of Information and Communications Technologies in an organisation	3	6	D
26226	Demonstrate knowledge of computer database management systems	4	3	D

ID	Title	Level	Credit	Review Category
26228	Evaluate and recommend with justification the suitability of computer applications against user requirements	4	4	D
29769	Use the main features and functions of a word processing application for a purpose	2	3 4	B
29770	Use the main features and functions of a spreadsheet application for a purpose	2	3 4	B
29771	Use the main features and functions of a presentation application for a purpose	2	2 3	B
29772	Manage files and folders using digital devices	2	2	B
29773	Produce digital images for a range of digital media	2	3	B
29774	Use the main features and functions of a desktop publishing application to create documents	2	3 4	B
29775	Use the main features and functions of a web authoring and design tool to create a website	2	3	B
29776	Use the main features of an HTML editor to create a website	2	4	B
29777	Use the main features and functions of a database application to create and test a database	2	3	B
29778	Use the main features and functions of a schematic diagram application to create diagrams	2	2	B
29779	Create and test a software-controlled device built from components Create and test a microprocessor-controlled device built from components	2	3	B
29780	Configure and use contemporary and emerging digital devices	2	3	B
29781	Use the internet and common digital devices and software to gather information and connect with other users and devices Use the Internet and common digital devices and software to gather information and connect with other users and devices	2	7	B
29782	Demonstrate knowledge of computing hardware, software and terminology to select digital tools for specified purposes	2	5	B
29783	Implement basic security when using digital devices and software	2	3	C
L2 ex 29783 new	Use digital tools securely, safely, ethically and legally	2	5	New

ID	Title	Level	Credit	Review Category
29785	Use a word processing application to integrate images, spreadsheet and database data into documents	3	4 5	B
29786	Produce a spreadsheet for organisational use	3	3 5	B
29787	Produce and use a database to provide a solution for organisational use Produce and use a relational database to provide a solution for organisational use	3	3 5	B
29788	Develop and evaluate an interactive website for organisational use	3	5	B
29789	Use a presentation application to produce an interactive multimedia presentation	3	3	B
29790	Apply digital tools to create and monitor a project plan	3	3	B
29791	Capture and prepare digital media for integration into other applications	3	2	B
29792	Use a desktop publishing application to produce documents	3	4	B
29793	Investigate, plan, design and create digital outcome solutions to meet the requirements of a specified brief	3	5	B
29794	Implement security solutions when using digital tools Describe risks and implement security solutions when using digital tools	3	5	B
29795	Apply ethical behaviour when using digital tools	3	5	B
29796	Collaborate effectively with others in a digital environment Collaborate and communicate effectively with others safely in a digital environment	3	7	B
29797	Synchronise data across digital devices and multiple platforms	3	2	B
29799	Apply advanced word processing features and functions to produce complex documents	4	4 5	B
29800	Apply advanced spreadsheet features and functions to meet the requirements of a brief	4	4 5	B

ID	Title	Level	Credit	Review Category
29801	Plan, produce and deliver an interactive multimedia presentation using digital tools to meet requirements of a brief Plan, create and implement an interactive multimedia product to meet requirements of a brief	4	3 5	B
29802	Produce and use a relational database to address an organisational information system need	4	6 5	B
29803	Use a desktop publishing application to produce documents integrating media for a stakeholder Use a desktop publishing application to produce documents integrating media for a client	4	3 5	B
29804	Develop and evaluate an interactive website for a stakeholder Develop and evaluate an interactive website for a client	4	5 5	B
29805	Design and create an integrated digital solution to meet the requirements of a specified brief	4	5	B
29806	Use digital tools and critical thinking to analyse data and identify solutions to problems	4	10	B
29807	Communicate professionally in a range of digital contexts, to maintain relationships and achieve objectives	4	3	B
29808	Use digital technologies and systems securely, legally and ethically to gather, store, access and share information	4	5	B
29809	Investigate current and emerging trends in the use of digital tools to support operational efficiency and effectiveness	4	5	B
29811	Describe the role of information systems and information technology in organisations	4	4	D
29812	Apply knowledge and concepts of web design and scripting to plan, create and test an interactive user interface	4	10	D
29814	Apply and evaluate digital tools to support the development and implementation of an IT project	4	10	D
29815	Describe professional and ethical principles and practices, and comply with legal and organisational IT requirements	4	5	D
29816	Communicate information and maintain relationships in an IT context	4	5	D

ID	Title	Level	Credit	Review Category
L2 GPO5 new	Use problem solving techniques and critical thinking to make informed decisions about digital solutions.	2	5	New
L2 GPO6 new	Apply self-management skills to enhance own learning in a digital context	2	3	New
L3 GPO1 new	Maintain and update an interactive website for organisational use	3	4	New
L3 GPO5 new	Demonstrate the application of new skills achieved with self-directed learning in a digital context	3	3	New
L4 ITE2 new re GPO2&5&7	Plan, design, develop and test a relational database solution for an organisation using project management methodologies	4	15	New
L4 ITE3 new re GPO3&7	Apply knowledge of business analysis, user experience and interface design, to create and test interactive digital media	4	15	New

Computing and Information Technology > Computing > Software Development - Programming

ID	Title	Level	Credit	Review Category
6761	Demonstrate an understanding of the principles of computer programming	5	7	D
18739	Create and use simple command sequences in a computer language	1	2	B
18740	Create a simple computer program to meet a set brief	2	3	B
18741	Create a computer program to provide a solution	3	6	B
29813	Apply essential knowledge and concepts of software development to create a program	4	10	C
L4 ITE4 new ex 29813 re GPO4	Apply knowledge and concepts of software development to create applications		15	New

Appendix 2: Landscape of Computing unit standards towards NZ qualifications at Levels 2 - 4

Level 2 Computing User fundamentals 2591 (EXPIRING) – overview and landscape of unit standards published January 2017

Following the 2020 [qualification review](#), the 40 credit Level 2 qualification 2591 will be discontinued on 31 December 2023. Standards aligned to version 1 of the qualification will be current until at least the expiry date, so there should be no impact on existing approved programmes.

The purpose of the **Level 2** qualification was for graduates to have developed **introductory digital technology skills** and be confident and capable in the use of a range of digital tools. This focus on demonstrating competence in using the respective applications is reflected in the standards that have been developed/reviewed. Greater emphasis is placed on effective use and capability with features and functions of various applications and devices, than on the product that is generated.

- Sixteen Level 2 standards were suggested (seven optional) – version 1 of 29769 - 29784. Changes made in version 2 of some of these standards.
- Half the indicative credits for the qualification were allocated to graduate profile outcome one (GPO1) - 20 credits. The proposal was for four compulsory standards (10 credits) with six optional standards developed to provide flexibility in programme design for the balance of credits.

The replacement qualification is the 60 credit NZ Certificate in Computing (Foundation User) (Level 2) (Ref: 4132] which retains the intent of the expiring 2591 qualification – **see next section for aligned standards.**

Landscape of suggested unit standards towards the NZ Certificate in Computing (User Fundamentals) (Level 2) (40 credits) [Ref: 2591] - EXPIRING					
Qualification graduate profile outcome (GPO)	Unit standard ID	Title – Unit standards	Level	Credits	v2 change
GPO1 Use the main features, functions and settings of common digital devices and software to create, access, organise, present and store information and data relevant to the context. (20 Credits) Programmes must include: <ul style="list-style-type: none"> • Word processing, spreadsheets, presentations, and may include other application software; • File and folder management; • Use of a range of digital devices. 	29769 L2 Comp 1a Word	Use the main features and functions of a word processing application for a purpose.	2	3	4 credits
	29770 L2 Comp 1b Spreadsheet	Use the main features and functions of a spreadsheet application for a purpose.	2	3	4 credits
	29771 L2 Comp 1c Presentation	Use the main features and functions of a presentation application for a purpose.	2	2	3 credits
	29772 L2 Comp 1d File & Folder Mgmt	Manage files and folders using digital devices.	2	2	
	29773 L2 Comp 1e (opt) Digital images	Produce digital images for a range of digital media.	2	3	
	29774 L2 Comp 1f - (opt) Desktop publ	Use the main features and functions of a desktop publishing application to create documents.	2	3	4 credits
	29775 L2 Comp 1g (opt) Web authoring tool	Use the main features and functions of a web authoring and design tool to create a website.	2	3	

Landscape of suggested unit standards towards the NZ Certificate in Computing (User Fundamentals) (Level 2) (40 credits) [Ref: 2591] - EXPIRING					
Qualification graduate profile outcome (GPO)	Unit standard ID	Title – Unit standards	Level	Credits	v2 change
	29776 L2 Comp 1h (opt) Web mark-up language	Use the main features and functions of an HTML editor to create a website.	2	4	
	29777 L2 Comp 1i (opt) Database	Use the main features and functions of a database application to create and test a database.	2	3	
	29778 L2 Comp 1j (opt) Schematic diagrams	Use the main features and functions of a schematic diagram application to create diagrams.	2	2	
	29779 L2 Comp 1k (opt) Software-controlled device	Create and test a software microprocessor -controlled device built from components	2	3	Title changed
GPO2 Use internet and common digital devices and software to connect with other users and devices. (10 Credits)	29780 L2 Comp 2a = L3 Comp 6a Use digital devices	Configure and use contemporary and emerging digital devices.	2	3	
	29781 L2 Comp 2b Connectivity	Use the Internet and common digital devices and software to gather information and connect with other users and devices.	2	7	
GPO3 Demonstrate knowledge of the types and purpose of common computing hardware, software and terminology to assist with choosing the right tool for the task. (5 Credits)	29782 L2 Comp 3 Knowledge of ICT	Demonstrate knowledge of computing hardware, software and terminology to select digital tools for specified purposes.	2	5	
GPO4 Recognise basic security risks and compliance requirements when using digital devices and software, and identify procedures and solutions to implement basic security in a home, work or study context. (3 Credits)	29783 L2 Comp 4 Risks & Security	Implement basic security when using digital devices and software.	2	3	Expiring - replaced
GPO5 Troubleshoot and fix simple or routine computing and connectivity problems. (2 Credits)	29784 L2 Comp 5 Troubleshoot	Troubleshoot, fix and escalate a range of common hardware and software problems simple or routine computing and connectivity problems.	2	2	Title changed

Level 2 Computing Foundation User – overview and landscape of unit standards reviewed 2021 (New 4132 v1 qualification – 60 credits, replacing 2591)

A result of the 2020 [IT and Computing qualifications review](#) is a new 60 credit qualification - NZ Certificate in Computing (Foundation User) (Level 2) (Ref: [4132](#)). It retains the intent of the 40 credit Level 2 Computing qualification Ref: [2591](#) (which will be discontinued on 31 December 2023), but with adjusted and new graduate profile outcomes (GPOs).

The new 4132 qualification remains similar to the replaced expiring 2591 qualification, but with 20 additional credits (extra 5 credits to GPO1, strengthening critical thinking in GPO5, adding soft skills into GPOs 5 & 6, and embedding GPO conditions into the GPOs).

The purpose of the **Level 2** qualification is for graduates to have developed **introductory/foundation digital technology skills** and be confident and capable in the use of a range of digital tools. This focus on demonstrating competence in using the respective applications is reflected in the standards that have been developed/reviewed. Greater emphasis is placed on effective use and capability with features and functions of various applications and devices, than on the product that is generated.

- A range of standards are suggested, with some recommended and some optional. There is also a list of possible standards from other domains (at end).
- Nearly half of the indicative credits for the qualification are allocated to graduate profile outcome one (GPO1) - 25 credits. The proposal is for four compulsory standards (29769-29772 - 13 credits) with nine optional standards suggested to provide flexibility in programme design for the balance of 12 credits (including two from the BusAdmin suite 32002 or 32000), although there may be other standards that are also suitable. Note 29769 – 29771 and 29774 each increased by 1 credit.
- 29783 has increased from 3 to 5 credits with a revised title to better align with the qualification GPO4.
- Two new standards have been developed to align with the reviewed qualification GPO5 (XXXX New L2 re GPO5#) and the additional GPO6 (XXXX New L2 re GPO6# 3 credits). Two standards 9680 and 7117 (from other domains) are also suggested to make up the other 5 credits of new GPO6, however some other alternatives that better support the learning for the target audience for specific programmes may be considered, and some options are listed.

Landscape of suggested unit standards towards the NZ Certificate in Computing (Foundation User) (Level 2) (60 credits) [Ref: 4132]					
Qualification graduate profile outcome (GPO)	Unit standard ID	Title – Unit standards	Level	Credits	Comments
GPO1 Use the main features, functions and settings of a range of common digital devices and software (word processing, spreadsheets, presentations) to create, access, organise, present and store information and data relevant to the context. (25 Credits)	29769 L2 Comp 1a Word	Use the main features and functions of a word processing application for a purpose.	2	3 4	Increased to 4 cr
	29770 L2 Comp 1b Spreadsheet	Use the main features and functions of a spreadsheet application for a purpose.	2	3 4	Increased to 4 cr
	29771 L2 Comp 1c Presentation	Use the main features and functions of a presentation application for a purpose.	2	2 3	Increased to 3 cr
	29772 L2 Comp 1d File & Folder Mgmt	Manage files and folders using digital devices.	2	2	
	29773 L2 Comp 1e	Produce digital images for a range of digital media.	2	3	

Landscape of suggested unit standards towards the NZ Certificate in Computing (Foundation User) (Level 2) (60 credits) [Ref: 4132]

Qualification graduate profile outcome (GPO)	Unit standard ID	Title – Unit standards	Level	Credits	Comments
	(opt) Digital images				
	29774 L2 Comp 1f - (opt) Desktop pub	Use the main features and functions of a desktop publishing application to create documents.	2	3 4	Increased to 4 cr
	29775 L2 Comp 1g (opt) Web author tool	Use the main features and functions of a web authoring and design tool to create a website.	2	3	
	29776 L2 Comp 1h (opt) Web mark-up language	Use the main features of an HTML editor to create a website.	2	4	
	29777 L2 Comp 1i (opt) Database	Use the main features and functions of a database application to create and test a database.	2	3	
	29778 L2 Comp 1j (opt) Schematic diagrams	Use the main features and functions of a schematic diagram application to create diagrams.	2	2	
	29779 L2 Comp 1k (opt) Microprocessor-controlled device	Create and test a microprocessor -controlled device built from components	2	3	<i>Changed title, same intent</i>
	32002 (opt) Compose text	Compose and enter text to create and manage business documents	2	3	<i>BusAdmin option</i>
	32000 (opt) L1 keyboarding	Enter prescribed text accurately using basic keyboarding skills and identify safe ergonomic practices	1	3	<i>BusAdmin option</i>
GPO2 Use Internet and common digital devices and a range of relevant communication and collaboration application software to connect with other users and devices, recognising ethical responsibilities and applying conventions of online etiquette. (10 Credits)	29780 L2 Comp 2a Use digital devices	Configure and use contemporary and emerging digital devices.	2	3	
	29781 L2 Comp 2b Connectivity	Use the Internet and common digital devices and software to gather information and connect with other users and devices.	2	7	
GPO3 Demonstrate knowledge of the types and purpose of common computing hardware, operating systems, networks, software and terminology to choose the appropriate tool for a given task. (5 Credits)	29782 L2 Comp 3 Knowledge of ICT	Demonstrate knowledge of computing hardware, software and terminology to select digital tools for specified purposes.	2	5	

Landscape of suggested unit standards towards the NZ Certificate in Computing (Foundation User) (Level 2) (60 credits) [Ref: 4132]					
Qualification graduate profile outcome (GPO)	Unit standard ID	Title – Unit standards	Level	Credits	Comments
GPO4 Recognise basic security risks and compliance requirements when using digital devices and software, and implement and maintain basic digital safety and security in a home, work or study context. (5 Credits)	29783 L2 Comp 4 Risks & Security L2 New ex 29783	Implement basic security when using digital devices and software. Use digital tools securely, safely, ethically and legally.	2	3	<i>Increase to 5 credits – aligns with change to GPO4 5cr</i>
	29784 L2 Comp 5 Troubleshoot	Troubleshoot, fix and escalate simple or routine computing and connectivity problems. Troubleshoot, fix and escalate simple or routine hardware, software and connectivity problems.	2	2	
GPO5 Investigate and use problem solving techniques and critical thinking to make informed decisions about digital solutions, and to trouble-shoot and fix simple or routine hardware, software and connectivity problems. (7 credits)	L2 GPO5 new - Prob solve/ Critical thinking	Use problem solving techniques and critical thinking to make informed decisions about digital solutions.	2	5	NEW re GPO5
	L2 GPO6 new – enhance own learning	Apply self-management skills to enhance own learning in a digital context	2	3	NEW re GPO6
GPO6 Apply basic communication, collaboration and self-management skills to enhance own learning in a digital context. (8 Credits) <i>Note: Panel considered 9680 and 7117 to be suitable, and 3 credits for new enhance own learning standard. Also 29781 meets some of the collaboration requirements of this GPO.</i>	9680 (opt)	Communicate within a specified organisational context	2	3	<i>Comms - option</i>
	7117 (opt)	Develop strategies to enhance own learning	2	2	<i>Core skills - option</i>
	9677 (alt opt)	Communicate in a team or group which has an objective	2	3	<i>Comms - option</i>

Standards from other domains that might contribute as options....

In addition to Computing unit standards there are some standards in the table below from additional domains that may be options worth considering to align with the qualification outcomes. GPO1 options – 32002, 32000; GPO6 recommended 9680 & 7117, or other options such as 1277, 12349, 496, 9677, 3492, 7118. We have also included the Level 1 and 2 programming standards 18739 and 18740 for those interested in a programme leaning more towards an IT Professional pathway. This is not intended as an exhaustive list, and other standards may also be suitable for programme development.

Standard ID #	Standard title	Level	Credits	Comments
32002	Compose and enter text to create and manage business documents	2	3	GPO1 option
32000	Enter prescribed text accurately using basic keyboarding skills and identify safe ergonomic practices	1	3	GPO1 option
7123	Apply a problem-solving method	2	3	GPO5 option
9695	Examine problem-solving models and explain associated techniques	3	3	GPO5 option
30910	Develop strategies to respond to cyberbullying	1	2	GPO5/6 option
9680	Communicate within a specified organisational context	2	3	GPO6 Recommended
7117	Develop strategies to enhance own learning	2	2	GPO6 Recommended
1277	Communicate information in a specified workplace	2	3	GPO6 option
9677	Communicate in a team or group which has an objective	2	3	GPO6 option
3492	Write a short report	2	3	GPO6 option
496	Produce, implement, and reflect on a plan to improve own personal wellbeing	1	3	GPO6 option
12349	Demonstrate knowledge of time management	2	3	GPO6 option
7118	Manage own learning in a programme	2	3	GPO6 option
18739	Create and use simple command sequences in a computer language	1	2	
18740	Create a simple computer program to meet a set brief	2	3	

Level 3 Intermediate User - overview and landscape of unit standards reviewed 2021 (2592 version 2, May 2020)

Following the 2020 [qualification review](#), the intent and purpose of 2592 remain unchanged. However, several changes have been made to the qualification including respreading the 35 credits between GPOs 1 and 2, merging old GPOs 3 and 4, replacing old GPO6 with new, and embedding GPO conditions into the GPOs where possible. There is also a new GPO5 for which a new standard has been developed (NEW L3 Manage own learning).

The Level 3 qualification also now contains an overarching general condition regarding scope (copied under GPO1 below).

The purpose of the **Level 3** qualification is for graduates to have developed **intermediate level digital technology skills** and be confident and capable in the intermediate level use of a range of digital tools. This focus on demonstrating competence in using the respective applications is reflected in the standards that have been reviewed. There is a strong emphasis on effective use and capability with features and functions of various applications and devices, but also on the quality of the product/outcome that is generated. Level 3 also includes a range of soft skills.

- A range of standards are suggested, with some recommended and some optional. Most are Level 3, but there are some Level 2 standards proposed.
- A range of integrated 'learn how to use apps and apply it' standards are suggested for graduate profile outcome one (GPO1), and then a 'design and create solutions' standard for GPO2 (29793) – still 35 credits for both, but reallocated. Note that the standard for GPO2 is still only 5 credits (the qualification GPO is 10 credits), with the other 5 credits covered by product created in the GPO1 suite of standards.
- There has been rounding to multiples of five credits for the 29785 – 29787 standards aligning to GPO1, along with a new standard related to maintaining/updating a website (XXXXX). The GPO1 optional 18756 standard related to maintaining a database has been replaced by XXXXX.
- A new standard XXXXX is proposed to align with new GPO5. The standards linked with the old GPO5 (29780 using digital devices and 29797 synchronising data) are still seen as relevant options towards the holistic qualification GPOs so have been maintained.
- Standards 5968, 18741, 18750 and L3 networks new ex 2797 are included as options for programmes with a more IT professional pathway focus.

Landscape of suggested unit standards towards the NZ Certificate in Computing (Intermediate User) (Level 3) (60 credits) [Ref: 2592]					
Qualification graduate profile outcome (GPO)	Unit standard ID	Title – Unit standards	Level	Credits	Comments
GPO1 Use a wide range of features, functions and settings of digital devices, software and techniques to search, access, create, combine, manipulate, store and share data, and explore current and emerging trends in the use of digital tools. (25 credits) <i>Programmes must include the intermediate level use of a variety of relevant software applications including word processing, spreadsheet, interactive web pages, presentation, database; use of digital media and image editing software; and use of collaboration tools.</i>	29785 L3 Comp 1a Word integration	Use a word processing application to integrate images, spreadsheet and database data into documents	3	4 5	Increase to 5 credits
	29786 L3 Comp 1b Spreadsheet	Produce a spreadsheet for organisational use	3	3 5	Increase to 5 credits
	29787 L3 Comp 1c Database	Produce and use a relational database to provide a solution for organisational use	3	3 5	Increase to 5 credits
	18756 (alternative database) L3 DB new (opt) replacement standard	Use and maintain a computer database for business reporting and decision making (<i>proposed to expire</i>) Use and maintain a computer database to meet organisational requirements	3	3	<i>Title adjusted; replacement standard created</i>
	29788 L3 Comp 1d Interactive website	Develop and evaluate an interactive website for organisational use	3	5	

Landscape of suggested unit standards towards the NZ Certificate in Computing (Intermediate User) (Level 3) (60 credits) [Ref: 2592]

Qualification graduate profile outcome (GPO)	Unit standard ID	Title – Unit standards	Level	Credits	Comments	
	L3 GPO1 New Web maintenance (Opt)	Maintain, update and test an interactive website for organisational use	3	5	<i>Draft new standard</i>	
	29789 L3 Comp 1e Presentation	Use a presentation application to produce an interactive multimedia presentation	3	3		
	29790 L3 Comp 1f (Opt) Project plan tools = L4 Comp 2b	Apply digital tools to create and monitor a project plan	3	3		
	29791 L3 Comp 1g Digital media integ.	Capture and prepare digital media for integration into other applications	3	2		
	29792 L3 Comp 1h (Opt) Desktop publishing & images	Use a desktop publishing application to produce documents	3	4		
	29797 – L3 Comp (opt) was 6b Synchronise data	Synchronise data across digital devices and multiple platforms.	3	2	<i>Option – see also GPO6, and contribute to GPOs 3,4, 5</i>	
	29780 L2 Comp 2a (Opt) Use dig devices	Configure and use contemporary and emerging digital devices.	2	3	<i>(contributes to several GPOs)</i>	
	29772 L2 Comp 1d (Opt) File & Folder mgt	Manage files and folders using digital devices.	2	2		
	29778 L2 Comp 1j (Opt) Schematic diags	Use the main features and functions of a schematic diagram application to create diagrams.	2	2		
GPO2 Investigate, plan, consult, design and develop integrated solution(s) to meet the requirements of a specified brief. (10 credits)	29779 L2 Comp 1k (Opt) Microprocessor-controlled device	Create and test a microprocessor -controlled device built from components	2	3	<i>Adjusted title</i>	
	29793 L3 Comp 2 Design solutions	Investigate, plan, design and create digital outcome solutions to meet the requirements of a specified brief	3	5		
	GPO3 Identify risks and consistently apply appropriate ethics and practices when using digital tools and digitally stored and transmitted information to securely and legally operate in a digital environment. (10 credits)	29794 L3 Comp 3 Risks & security	Describe risks and implement security solutions when using digital tools	3	5	<i>Title change</i>
		29795 L3 Comp 3 Ethics & compliance	Apply ethical behaviour when using digital tools	3	5	

Landscape of suggested unit standards towards the NZ Certificate in Computing (Intermediate User) (Level 3) (60 credits) [Ref: 2592]					
Qualification graduate profile outcome (GPO)	Unit standard ID	Title – Unit standards	Level	Credits	Comments
GPO4 Collaborate and communicate effectively with others in a range of formal and informal digital environments, using appropriate communication principles, etiquette and tools. (7 credits)	29796 L3 Comp 4 = L4 Comp 4b Collaboration	Collaborate and communicate effectively with others safely in a digital environment	3	7	Title change
GPO5 (NEW) Manage own learning and work effectively in a digital context. (3 credits)	L3 GPO5 New Manage own learning	Demonstrate the application of new skills achieved with self-directed learning in a digital context	3	3	Draft new standard
GPO6 Use problem solving techniques to trouble-shoot, fix or escalate a range of common hardware and software problems by selecting from known solutions. (5 credits)	29798 L3 Comp 6 Troubleshoot & fix	Troubleshoot, fix and escalate a range of common hardware and software problems	3	3	
	29797 – L3 Comp <i>(optional)</i> Synchronise data	Synchronise data across digital devices and multiple platforms.	3	2	<i>Option – GPO1, also contribute to GPOs 3,4, 5</i>
	9695 L3 problem solving <i>(optional)</i>	Examine problem-solving models and explain associated techniques	3	3	
Optional standards – not directly aligned with any specific GPO, but relevant for IT skill development	5968	<i>Discuss the social implications of information technology</i>	3	3	<i>Option – part GPO1, 6?</i>
	<i>L3 networks new (Opt) replacing 2797</i>	<i>Demonstrate and apply knowledge of the principles of computer networks</i>	3	5	<i>Option - Part GPOs 2,3,6?</i>
	18741	<i>Create a computer program to provide a solution</i>	3	6	<i>Option- Part GPO1 & 2?</i>
	18750	<i>Produce an interactive electronic training package for organisation use</i>	3	5	<i>Option- Part GPO 2?</i>

Level 4 Advanced User - overview and landscape of unit standards reviewed 2021 (2593 version 2, May 2020)

Following the 2020 [qualification review](#), the intent and purpose of 2593 remain unchanged with no changes to qualification credit allocations. However graduate profile outcomes (GPOs) have been updated as associated conditions have been removed and/or embedded into the GPOs.

The purpose of the **Level 4** qualification is for graduates to have developed **advanced level digital technology skills** and be confident and capable in the advanced use of a range of digital tools. This focus on demonstrating competence in using the respective applications is reflected in the standards that have been reviewed. The emphasis is on both the effective use and capability with features and functions of various applications and devices, and the quality of the product/outcome that is generated.

The qualification no longer specifies which applications must be covered – simply ‘productivity software’ and other tools. Panels recommend the inclusion of advanced word processing and spreadsheeting as a minimum, with flexibility to choose a combination of other standards to enable specialisation or contextualising programmes. The Level 4 qualification also includes a range of soft skills reflecting professional capabilities.

- A range of integrated ‘advanced use of applications’ standards are suggested for graduate profile outcome one (GPO1 – 20 credits). A selection from eleven potential standards including two recommended (29799 and 29800 – advanced word processing and spreadsheet), and options to make up a programme for the 20 credits related to GPO1. There has been some rounding to multiples of five credits for the 29799 – 29803 standards aligning to GPO1.
- Seven standards are suggested for GPOs 2-6 including two Level 3 standards (GPO2 - 29790 Project plan tool use; GPO4 - 29796 Collaboration). Note that the standards aligned to GPO2 total only 8 credits (the qualification GPO2 is 10 credits), and it is proposed that the other 2 credits are covered by optional standards and product created in the GPO1 suite.
- There are a selection of standards suggested from the Level 2 and 3 suites (29791, 18756 replacement, 29772, 29778, 29779) along with a range of optional Level 4 standards to provide flexibility for programme development in a range of contexts.

Landscape of suggested unit standards towards the NZ Certificate in Computing (Advanced User) (Level 4) (60 credits) [Ref: 2593 v2]					
Qualification graduate profile outcome (GPO)	Unit standard ID	Title – Unit standards	Level	Credits	Comments
GPO1 Use digital tools and advanced techniques, including customising productivity software, to efficiently extract, organise, integrate and share relevant information, and produce specified outcomes in a variety of settings. (20 credits)	29799 L4 Comp 1a (Rec) Adv word	Apply advanced word processing features and functions to produce complex documents	4	5	<i>Increased to 5 cr</i>
	29800 L4 Comp 1b (Rec) Adv spreadsheets	Apply advanced spreadsheet features and functions to meet the requirements of a brief	4	5	<i>Increased to 5 cr</i>
	29801 L4 Comp 1c (Opt) Adv presentation	Plan, produce and deliver create and implement an interactive multimedia product presentation using digital tools to meet requirements of a brief	4	5	<i>Increased to 5 cr; 29801 title changed</i>
	29802 L4 Comp 1d = L4 ITE 2B (Opt) Database IS	Produce and use a relational database to address an organisational information system need	4	5	<i>Decreased to 5 cr</i>

Landscape of suggested unit standards towards the NZ Certificate in Computing (Advanced User) (Level 4) (60 credits) [Ref: 2593 v2]					
Qualification graduate profile outcome (GPO)	Unit standard ID	Title – Unit standards	Level	Credits	Comments
	29803 L4 Comp 1e (Opt) Desktop publishing	Use a desktop publishing application to produce documents integrating media for a stakeholder client	4	5	<i>Increased to 5 cr; 29803 title changed</i>
	29804 L4 Comp 1f (Opt) Website	Develop and evaluate an interactive website for a client stakeholder	4	5	<i>Title changed</i>
	29791 L3 Comp 1g (Opt) Digital media integration	Capture and prepare digital media for integration into other applications	3	2	
	18756 (Opt) L3 DB ex 18756 NEW replacement (Optional)	<i>Use and maintain a computer database for business reporting and decision making (proposed to expire)</i> Use and maintain a computer database to meet organisational requirements	3	3	Replacement std – 18756 to expire Draft new standard
	29772 L2 Comp 1d (Opt) File & Folder Mgmt	Manage files and folders using digital devices.	2	2	
	29778 L2 Comp 1j (Opt) Schematic diagrams	Use the main features and functions of a schematic diagram application to create diagrams.	2	2	
	29779 L2 Comp 1k (Opt) Microprocessor-controlled device	Create and test a software microprocessor - controlled device built from components	2	3	<i>29779 Changed title – same intent</i>
GPO2 Investigate, plan, consult, design and create solutions integrating the advanced use of several different applications and project planning tools and techniques, to meet the requirements of specified briefs. (10 credits)	29805 L4 Comp 2a Integrate & create	Design and create an integrated digital solution to meet the requirements of a specified brief	4	5	
	29790 L3 Comp 1f opt Project plan tools use = L4 Comp 2b	Apply digital tools to create and monitor a project plan	3	3	
GPO3 Use critical thinking skills, statistical analysis applications, and problem solving and decision making techniques to research and analyse problems, interpret data, make informed decisions, and identify solutions.	29806 L4 Comp 3 Critical thinking	Use digital tools and critical thinking to analyse data and identify solutions to problems.	4	10	

Landscape of suggested unit standards towards the NZ Certificate in Computing (Advanced User) (Level 4) (60 credits) [Ref: 2593 v2]					
Qualification graduate profile outcome (GPO) (10 credits)	Unit standard ID	Title – Unit standards	Level	Credits	Comments
GPO4 Communicate and collaborate clearly and professionally with colleagues and stakeholders in a range of contexts, using a variety of collaborative tools and platforms, to maintain relationships and achieve objectives. (10 credits)	29807 L4 Comp 4a Comms & relationships	Communicate professionally in a range of digital contexts, to maintain relationships and achieve objectives	4	3	
	29796 L3 Comp 5 Comms & collaboration = L4 Comp 4b	Collaborate and communicate effectively with others safely in a digital environment	3	7	<i>Title adjusted</i>
GPO5 Use digital technologies and systems securely, legally and ethically when gathering, storing, accessing and sharing information using standard professional conventions. (5 credits)	29808 L4 Comp 5 Security & ethics	Use digital technologies and systems securely, legally and ethically to gather, store, access and share information	4	5	
GPO6 Explore and evaluate current and emerging trends relating to using digital tools and digitally stored and transmitted information to support operational efficiency and effectiveness. (5 credits)	29809 L4 Comp 6 Emerging trends	Investigate current and emerging trends in the use of digital tools to support operational efficiency and effectiveness	4	5	

Level 4 IT Essentials - overview and landscape of unit standards reviewed 2021 (2594 version 2, May 2020)

Whilst the intent and purpose remain unchanged, there are changes in version 2 of the qualification to both the emphasis and credits allocated to the technical skills outcomes. In version 1 of the qualification there were equally weighted GPOs 1-4 at 10 credits each, which have been reviewed and changed to 12 - 6 - 12 - 15 credits respectively; and a reduction in GPO5 (Project management) credits from 10 to 5.

The purpose of the **Level 4 IT Essentials** qualification is for graduates to have the **essential skills for further study that will equip them to work in the field of Information Technology (IT) as a profession**. The focus is on enabling programmes to provide experiential learning of base knowledge and concepts in preparation for any of the main IT Professional pathways (IT infrastructure, database, information systems/user interface, software development); along with essential skills in project management and planning, professional practice, communications and relationships required for any of the chosen pathways.

A challenge for the working group has been how to provide scope to build essential skills in IT (likely target audience is second chance learners who have not necessarily come through digital technologies achievement standards in schools), while embedding the more generic skills with a specific IT focus.

- The review panel propose four new standards, and the expiry of the seven Level 4 standards 29810 – 29816.
- The four new standards are each 15 credits and focus on the technical skills, whilst integrating the project management, professional and soft skills (rather than keeping these separate as they are in the current unit standards)
 - **L4 ITE 1** New GPO1 & part 6 - Infrastructure & prof practice:
Apply IT technical knowledge and professional practice to provide support of a computer's hardware, software and network
 - **L4 ITE 2** New GPO2 & part 5 & 6 & 7 – Database, project mgt, prof practice and comms:
Plan, design, develop and test a relational database solution for an organisation using project management methodologies
 - **L4 ITE 3** New GPO3 & part 6 & 7 (BA UX interface):
Apply knowledge of business analysis, user experience and interface design, to create and test interactive digital media
 - **L4 ITE 4** New GPO4 Software Dev & part 5 (Project mgt) (*replace 29813*):
Apply knowledge and concepts of software development to create applications

Landscape of suggested unit standards for NZ Certificate in IT Essentials (Level 4) (60 credits) [Ref: 2594]					
Qualification graduate profile outcome (GPO)	Unit standard ID	Title – Unit standards	Level	Credits	Comments
GPO1 Apply knowledge of computer hardware, operating systems, applications, networks, storage and security to provide support for hardware and software resources and a foundation for infrastructure in the IT Profession. (12 credits)	29810 L4 ITE 1 Infrastructure	Apply essential IT technical knowledge and concepts to provide support of a computer's hardware, software and network (<i>proposed to expire</i>)	4	10	Expire 29810;
	L4 ITE1 New GPO1 & part 6 Infrastructure & prof practice	Apply IT technical knowledge and professional practice to provide support of a computer's hardware, software and network	4	15	<i>New 15cr standard – GPO1 infrastructure (12 cr) and 3cr of prof practice ex GPO6</i>
GPO2 Apply knowledge of database design, development, queries and management, to	29811 L4 ITE 2A IT in Bus Orgs	Describe the role of information systems and information technology in organisations (<i>proposed to expire</i>)	4	4	29811 to expire;
	29802	Produce and use a relational database to address an organisational information system need	4	6	29802 retained as part of the L4 Adv computing qual

Landscape of suggested unit standards for NZ Certificate in IT Essentials (Level 4) (60 credits) [Ref: 2594]					
Qualification graduate profile outcome (GPO)	Unit standard ID	Title – Unit standards	Level	Credits	Comments
support organisational information systems requirements (6 credits)	L4 ITE2 New GPO2 & part 5 & 6 & 7 – Database, project mgt, prof practice and comms	Plan, design, develop and test a relational database solution for an organisation using project management methodologies	4	15	<i>New 15cr standard – GPO2 database (6 cr) and GPO5 PMgt (5cr), plus comms & prof practice ex GPO6&7</i>
GPO3 Apply knowledge and concepts of business analysis, user experience and interface design, to create interactive digital media. (12 credits)	29812 L4 ITE 3 User interface L4 ITE3 New GPO3 & part 6 & 7 (BA UX interface)	Apply knowledge and concepts of web design and scripting to plan, create and test an interactive user interface <i>(proposed to expire)</i>	4	10	<i>Expire 29812; New 15 cr standard – GPO3 BA, UX, Interface (12 cr) plus comms and prof practice ex GPO6&7</i>
		Apply knowledge of business analysis, user experience and interface design, to create and test interactive digital media	4	15	
GPO4 Apply knowledge of programming fundamentals, mathematical and logical concepts that underpin computational thinking, and concepts of software development to write code and create simple applications (15 credits)	29813 L4 ITE 4 Software Development L4 ITE4 New GPO4 & part 5 (Project mgt) ex 29813	Apply essential knowledge and concepts of software development to create a program <i>(proposed to expire)</i>	4	10	<i>Expire 29813 replaced by New 15 cr standard – GPO4 SD (15 cr) embedding part of project mgmt. (GPO5)</i>
		Apply knowledge and concepts of software development to create applications		15	
GPO5 Apply industry relevant project management and planning tools and methodologies to meet the requirements of specified briefs. (5 credits)	29814 L4 ITE 5 Project management tools	Apply and evaluate digital tools to support the development and implementation of an IT project <i>(proposed to expire)</i>	4	10	<i>Expire 29814; New standard – GPO2 database (6 cr) and GPO5 PMgt (5cr), plus comms and prof practice ex GPO6&7. (PM also in SD std)</i>
GPO6 Apply appropriate professional and ethical principles and practices to comply with essential legal and organisational requirements in a range of contexts within the IT industry. (5 credits)	29815 L4 ITE 6 Professional practice & compliance	Describe professional and ethical principles and practices and comply with legal and organisational IT requirements. <i>(proposed to expire)</i>	4	5	<i>Expire 29815 – embedded in new L4 ITE 1 plus other technical stds</i>
GPO7 Communicate and collaborate clearly and professionally to maintain relationships and achieve objectives in a range of contexts within the IT industry. (5 credits)	29816 L4 ITE 7 Communications & relationships	Communicate information and maintain relationships in an IT context <i>(proposed to expire)</i>	4	5	<i>Expire 29816 – embedded in new L4 ITE 2 plus other technical stds</i>

Appendix 3: Survey and feedback form – Computing standards review 2021

Introduction

NZQA National Qualifications Services (NQS) invites you to give feedback on the suite of reviewed and new Computing unit standards, including those designed for use as assessment tools for reviewed New Zealand Computing and IT qualifications at Levels 2 – 4.

A suite of standards has been proposed to align with the graduate profile outcomes in content and credit value for the following qualifications:

- NZ Certificate in Computing (Foundation User) (Level 2) (60 credits) [Ref: [4132](#)]
- NZ Certificate in Computing (Intermediate User) (Level 3) (60 credits) [Ref: [2592](#)]
- NZ Certificate in Computing (Advanced User) (Level 4) (60 credits) [Ref: [2593](#)]
- NZ Certificate in Information Technology Essentials (Level 4) (60 credits) [Ref: [2594](#)]
- *NZ Certificate in Computing (User Fundamentals) (Level 2) (40 credits) [Ref: [2591](#)] - expiring*

Please refer to the [computing unit standards review consultation webpage](#) which has links to relevant documents, including the consultation document, draft reviewed unit standards, and summaries of proposed changes (new, reviewed, expiry and replacement relationships).

The following survey is to gather your feedback, and you are welcome to complete this, the [electronic survey](#) or provide general feedback to the review if you prefer.

This consultation **closes at noon on Monday 13 September 2021**. Please return the completed consultation form and/or any other feedback about the review, to email: computing.review@nzqa.govt.nz.

Survey

The following questions are designed to prompt thinking and feedback as you consider the changes detailed in the consultation pages. You may choose to provide feedback by responding to all or some of the questions, and are welcome to respond in general terms to computing.review@nzqa.govt.nz rather than to the survey.

1. Do you use any of the current 75 Computing unit standards?

- Yes
 No

If yes, please specify which standards and for what.

2. Do you have any feedback on any aspects of the 11 proposed new Computing standards?

Level 2: L2 GPO5, L2 GPO6, L2 replace 29783

Level 3: L3 GPO1, L3 GPO5, L3 replace 2797, L3 replace 18756

Level 4: L4 ITE1, L4 ITE2, L4 ITE3, L4 ITE4 [4 x 15cr standards to align with the qual 2594]

- Yes
 No

Please provide further comments and/or suggestions for improvement.

3. Do you have any feedback on proposed changes to titles for these 10 current standards?

(18750, 29784, 29779, 29781, 29787, 29794, 29796, 29801, 29803, 29804)

Yes

No

If yes, please provide further comment on which ones and why.

4. Do you have any feedback on proposed changes to credits for these 12 current standards?

Increased credits: 29769-29771, 29774, 29785-29787, 29799-29801, 29803

Reduced credits: 29802

Yes

No

If yes, please specify which standards and for what?

5. Do you have any other general feedback on the reviewed Computing standards (perhaps by level)?

Yes

No opinion

No

If yes, please specify which standards and for what?

6. Do you have any feedback on proposed expiry of 24 current Computing standards? (including a proposed expiry date of 31 December 2023 or 2024)?

(2796, **2797**, 5943, 5951, 5955, 6745, 6761, 6836, 6852, 7910, **18756**, 25782, 26226 -26228, **29783**, 29810-29812, **29813**, 29814-29817)

Note that the four standards highlighted in **bold** have been replaced by a new standard.

Yes

No

If yes, please specify which standards and for what?

If applicable, please provide your reasons for not expiring specific existing standards.

7. Do the proposed changes to current Computing standards pose any issues for attainability of NZ qualifications or programmes or training schemes?

Yes

No opinion

No

If yes, please specify which standards and for what?

8. Please provide any overall comments about the landscape of standards aligned to the reviewed Computing qualifications at Levels 2-4. Is this helpful, and what other information would be useful to support programme developers?

- Yes
- No opinion
- No

9. Please provide any overall comments.

About you

It is helpful to understand who our respondents are. This information will be used to analyse this survey and may be used to contact you to obtain clarification of any points raised in the feedback.

10. Is your response a personal view or the view of your organisation?

- Personal view
- Organisation view

11. Please indicate the stakeholder group to which you most closely relate:

- Te Pukenga or Polytechnic or Institute of Technology (ITP)
- Transitional Industry Training Organisation (TITO)
- Private Training Establishment (PTE)
- Wānanga
- Secondary school
- Community group
- Student/individual
- IT sector or business organisation
- Other (please specify)

12. Your contact details (optional) – name, email

Thank you for taking the time to consider the Computing standards and to provide feedback to inform the review. We value your input.

Please return the completed consultation form and/or any other feedback about the review, to email: computing.review@nzqa.govt.nz by **noon on Monday 13 September 2021**.