Landscape of Computing unit standards towards new and reviewed NZ qualifications at Levels 2 – 4

Level 2 Computing User fundamentals (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: ● 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 (opt) Digital images	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*
	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	*Changed title, same intent*
	32002 (opt) Compose text	Compose and enter text to create and manage business documents	2	3	*BusAdmin option*
	32000 (opt) L1 keyboarding	Enter prescribed text accurately using basic keyboarding skills and identify safe ergonomic practices	1	3	*BusAdmin option*
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.	**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***
(5 Credits)					
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 5	*Increase to 5 credits – aligns with change to GPO4 5cr*
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)**	**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	***Maintained 29874 and new XXXXX std added for GPO5***
	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***
GPO6 Apply basic communication, collaboration and self-management skills to enhance own learning in a digital context. **(8 Credits)** *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.*	**L2 GPO6 new – enhance own learning**	**Apply self-management skills to enhance own learning in a digital context**	**2**	**3**	***NEW re GPO6***
	9680 (opt)	**Communicate within a specified organisational context**	**2**	**3**	*Comms - option*
	7117 (opt)	**Develop strategies to enhance own learning**	**2**	**2**	*Core skills - option*
	9677 (alt opt)	Communicate in a team or group which has an objective	2	3	*Comms - option*

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

In addition to computing unit standards there are some standards in the table below from other 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)** ***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***.	**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 *(proposed to expire)* **Use and maintain a computer database to meet organisational requirements**	3	3	*Title adjusted; replacement standard created*
	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	***Draft new standard***
	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	*Option – see also GPO6, and contribute to GPOs 3,4, 5*
	29780 L2 Comp 2a (Opt) Use dig devices	Configure and use contemporary and emerging digital devices.	*2*	*3*	*(contributes to several GPOs)*
	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	
	29779 L2 Comp 1k (Opt) Microprocessor-controlled device	Create and test a **microprocessor**-controlled device built from components	2	3	*Adjusted title*
GPO2 Investigate, plan, consult, design and develop integrated solution(s) to meet the requirements of a specified brief. **(10 credits)**	**29793 L3 Comp 2** Design solutions	Investigate, plan, design and create digital outcome solutions to meet the requirements of a specified brief	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*
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 i**mplement security solutions when using digital tools	3	5	*Title change*
	29795 L3 Comp 3 Ethics & compliance	Apply ethical behaviour when using digital tools	3	5	
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)**	**NEW L3 GPO5 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 *(optional)* Synchronise data	Synchronise data across digital devices and multiple platforms.	3	2	*Option – GPO1, also contribute to GPOs 3,4, 5*
	9695 L3 problem solving *(optional)*	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*	*Discuss the social implications of information technology*	*3*	*3*	*Option – part GPO1, 6?*
	New L3 networks (Opt) updated 2797	*Demonstrate and apply knowledge of the principles of computer networks*	*3*	*5*	*Option - Part GPOs 2,3,6?*
	18741	*Create a computer program to provide a solution*	*3*	*6*	*Option- Part GPO1 & 2?*
	18750	*Produce an interactive electronic training package for organisation use*	*3*	*5*	*Option- Part GPO 2?*

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**	*Increased to 5 cr*
	29800 L4 Comp 1b (Rec) Adv spreadsheets	Apply advanced spreadsheet features and functions to meet the requirements of a brief	4	**5**	*Increased to 5 cr*
	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**	*Increased to 5 cr; 29801 title changed*
	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**	*Decreased to 5 cr*

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**	*Increased to 5 cr; 29803 title changed*
	29804 L4 Comp 1f (Opt) Website	Develop and evaluate an interactive website for a **client** ~~stakeholder~~	4	5	*Title changed*
	29791 L3 Comp 1g (Opt) Digital media integration	Capture and prepare digital media for integration into other applications	3	2	
	18756 (Opt) L3 DB NEW replacement (Optional)	*Use and maintain a computer database for business reporting and decision making (proposed to expire)* **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	*29779 Changed title – same intent*
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	

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*
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. **(10 credits)**	**29806 L4 Comp 3** Critical thinking	Use digital tools and critical thinking to analyse data and identify solutions to problems.	4	10	
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	*Title adjusted*
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 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
  * **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
  * **L4 ITE3 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 ITE4 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~~ **New L4 ITE 1 & part 6 - Infrastructure & prof practice**	~~Apply essential IT technical knowledge and concepts to provide support of a computer's hardware, software and network~~ *(proposed to expire)* **Apply IT technical knowledge and professional practice to provide support of a computer's hardware, software and network**	4 4	~~10~~ **15**	*Expire 29810;* *New 15cr standard – GPO1 infrastructure (12 cr) and 3cr of prof practice ex GPO6*
GPO2 Apply knowledge of database design, development, queries and management, to	~~29811 L4 ITE 2A~~ ~~IT in~~ ~~Bus~~ **Orgs** ~~29802~~	~~Describe the role of information systems and information technology in organisations~~*(proposed to expire)* ~~Produce and use a relational database to address an organisational information system need~~	4 4	4 6	*29811 to expire; 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)**	**New L4 ITE 2 & 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**	*New 15cr standard – GPO2 database (6 cr) and GPO5 PMgt (5cr), plus comms & prof practice ex GPO6&7*
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~~ **New L4 ITE 3 & part 6 & 7 (BA UX interface)**	~~Apply knowledge and concepts of web design and scripting to plan, create and test an interactive user interface~~ *(proposed to expire)* **Apply knowledge of business analysis, user experience and interface design, to create and test interactive digital media**	4 4	~~10~~ **15**	*Expire 29812; New 15 cr standard – GPO3 BA, UX, Interface (12 cr) plus comms and prof practice ex GPO6&7*
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 **New L4 ITE 4 & part 5 (Project mgt)**	Apply essential knowledge and concepts of software development to create a program *(proposed to expire)* **Apply knowledge and concepts of software development to create applications**	4	10 **15**	*Expire 29813 replaced by New 15 cr standard – GPO4 SD (15 cr) embedding part of project mgmt. (GPO5)*
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~~ *(proposed to expire)*	4	~~10~~	*Expire 29814; New std – GPO2 DBA (6 cr) and GPO5 PMgt (5cr), plus comms and prof practice ex GPO6&7. (PM also in SD std)*
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.~~ *(proposed to expire)*	4	~~5~~	*Expire 29815 – embedded in new L4 ITE 1 plus other technical stds*
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~~ *(proposed to expire)*	4	~~5~~	*Expire 29816 – embedded in new L4 ITE 2 plus other technical stds*