Victorian Purchasing Guide

for

ICT Information and Communications Technology Training Package

Release 7.2

May 2021

Victorian Purchasing Guide — Release History

Note: RTOs should refer to the National Register for the detail of changes made in each Release. (See National Register for more information)

Training Package Release	Date VPG Approved	Comments
ICT Information and Communications Technology Release No 7.2	17 May 2021	This Victorian Purchasing Guide reflects a minor release for the ICT Information and Communications Technology Package as part of a national Critical Skills for Recovery (post-pandemic) project. The following changes occurred as part of Release 7.2: Units of competency: • Two (2) new, • Twenty-five (25) deleted as per Commonwealth project to remove low/zero enrolment training products For further information visit vetnet
ICT Information and Communications Technology Release 7	24 February 2021	This Victorian Purchasing Guide reflects a major release for the ICT Information and Communications Technology Package. The following changes occurred as part of Release 7: • Qualifications: Eleven (11) updated and all deemed not equivalent. Merging of these qualifications down to three (3) qualifications. • Skill sets: Addition of seven (7), fifteen (15) updated and three (3) removed. • Units of competency: Sixty five (65) updated with four (4) being not equivalent and sixty one (61) equivalent. Thirty nine (39) deleted. For further information visit vetnet.
ICT Information and Communications Technology Release 6	N/A	**Version 6.1 of this Victorian Purchasing Guide** corrects errors identified with the nominal hours for seventy-two (72) units of competency in the VPG published on 9 November 2020. Errors in the formulas of the Excel spreadsheet used to develop the VPG were discovered post-publication and have now been corrected.
ICT Information and Communications Technology Release 6	9 November 2020	This Victorian Purchasing Guide reflects a major release for the ICT Information and Communications Technology Package. As part of Release 6: • Four qualifications have been updated, all of which are not equivalent - 24 qualifications merged into four qualifications with specialisations. • Six-hundred and seventy-nine (679) units of competency including: Fifty-three (53) new, thirty-six (36) deleted and two hundred and seventy two (272) updated units consisting of seven (7) not equivalent and two hundred and sixty five (265) equivalent.

Training Package Release	Date VPG Approved	Comments

ICT Information and Communications Technology Release 5	23 October 2019	ICT Release 5 includes six updated and recoded qualifications, all of which are not equivalent:
		▪ ICT20219 Certificate II in Telecommunications Network Build and Operation
		▪ ICT20319 Certificate II in Telecommunications Technology
		▪ ICT30419 Certificate III in Telecommunications Network Build and Operation
		▪ ICT30519 Certificate III in Telecommunications Technology
		▪ ICT41119 Certificate IV in Telecommunications Network Design
		▪ ICT41219 Certificate IV in Telecommunications Engineering Technology
		Also 3 qualifications have been updated, all of which are equivalent:
		• ICT30118 (2) Certificate III in Information, Digital Media and Technology
		• ICT40215 (2) Certificate IV in Information Technology Support
		• ICT40418 (2) Certificate IV in Information Technology Networking
		The following qualifications have been deleted:
		▪ ICT30215 Certificate III in Telecommunications Digital Reception Technology
		▪ ICT30315 Certificate III in Telecommunications Rigging Installation
		Changes to units of competence are:
		▪ 13 new units of competence
		▪ 42 updated units of competence
		   ○ 27 remain equivalent
		   ○ 15 are not equivalent
		▪ 2 units of competence have been deleted.
		
		For further information visit vetnet.

ICT Information and Communications Technology Release 4	17 April 2019	ICT Release 4 includes nine upgraded and recoded qualifications, all of which are equivalent with the exception of: ▪ ICT40118 Certificate IV in Information Technology The two qualifications listed below have been superseded by the above qualification: ▪ ICT40615 Certificate IV in Information Technology Testing ▪ ICT40715 Certificate IV in Systems Analysis and Design The following qualification is deleted: ▪ ICT80215 Graduate Certificate in Information Technology Sustainability. Four new units of competency have been created: ▪ ICTICT424 Address cyber security requirements ▪ ICTICT425 Implement WHS, environmental sustainability and anti-discrimination practices in an ICT workplace ▪ ICTICT426 Identify and evaluate emerging technologies and practices ▪ ICTWEB431 Create and style simple markup language documents. Six units of competency have been deleted: ▪ ICTSAS401 Perform unit test for a class ▪ ICTSAS405 Identify and evaluate ICT industry vendor technologies ▪ ICTSUS401 Install and test renewable energy system for ICT networks ▪ ICTWEB301 Create a simple markup language document ▪ ICTWEB409 Develop cascading style sheets ▪ ICTWEB420 Write content for web pages.

Training Package Release	Date VPG Approved	Comments
		For further information visit vetnet.
ICT Information and Communications Technology Release 3	September 2016	Correction to qualification list – ICT20215 included
ICT Information and Communications Technology Release 3	July 2016	Corrections to maximum payable hours due to incorrect file uploaded for Release 3.
ICT Information and Communications Technology Release 3	18 April 2016	This release of the Victorian Purchasing Guide contains: • 2 Revised qualifications • 6 New Units of Competency
ICT Information and Communications Technology Release 2	Not Published	This release of the Victorian Purchasing Guide contains: • 12 Revised qualifications • 240 Revised Units of Competency
ICT Information and Communications Technology Release 1	08 Sept 2015 (Stage 2)	This Victorian Purchasing Guide includes the maximum payable hours for all Information and Communications Technology qualifications and Sample Training Programs in addition to the nominal hours information published in **Stage 1** (see below).

ICT Information and Communications Technology Training Package Release 7.2 Victorian Purchasing Guide

CONTENTS

INTRODUCTION

What is a Victorian Purchasing Guide?

The Victorian Purchasing Guide provides information for use by Registered Training Organisations (RTOs) in the provision of Victorian government subsidised training.

Specifically the Victorian Purchasing Guide provides the following information related to the delivery of nationally endorsed Training Packages in Victoria:

- The maximum and minimum payable hours available for each qualification.

- Nominal hours for each unit of competency within the Training Package.

Registration

RTOs must be registered by either the Victorian Registration and Qualifications Authority (VRQA) or the Australian Skills Qualification Authority (ASQA) regulatory body to be eligible to issue qualifications and Statements of Attainment under the Australian Qualifications Framework (AQF).

The VRQA is the regulatory authority in Victoria responsible for the registration of Vocational Education and Training (VET) providers who offer courses to domestic students in Victoria only.

ASQA is the regulatory authority responsible for the registration of VET providers who offer training in Victoria, nationally and / or internationally.

Transition

The relationship between new units and any superseded or replaced units from the previous version of **ICT Information and Communications Technology Training Package Release 7.2** is provided in the Training Package Companion Volume Implementation Guide. (See Companion Volumes for more information).

Information regarding transition arrangements can be obtained from the state or national VET Regulatory Authority (see Contacts and Links section).

RTOs must ensure that all training and assessment leading to issuance of qualifications or Statements of Attainment from the **ICT Information and Communications Technology Training Package Release 7.2** is conducted against the Training Package units of competency and complies with the assessment requirements.

QUALIFICATIONS

Code	Title	Minimum Payable Hours	Maximum Payable Hours
ICT20120	Certificate II in Applied Digital Technologies	466	490
ICT20219	Certificate II in Telecommunications Network Build and Operation	466	490
ICT20319	Certificate II in Telecommunications Technology	518	545
ICT30120	Certificate III in Information Technology	504	530
ICT30419	Certificate III in Telecommunications Network Build and Operation	603	635
ICT30519	Certificate III in Telecommunications Technology	684	720
ICT40120	Certificate IV in Information Technology	893	940
ICT41119	Certificate IV in Telecommunications Network Design	684	720
ICT41219	Certificate IV in Telecommunications Engineering Technology	722	760
ICT50220	Diploma of Information Technology	1216	1280
ICT60220	Advanced Diploma of Information Technology	770	810

UNITS OF COMPETENCY AND NOMINAL HOURS

Unit Code	Unit Title	Nominal Hours
ICTBWN302	Install optical fibre splitters in fibre distribution hubs	40
ICTBWN303	Install lead-in module and cable for fibre to the premises	50
ICTBWN306	Use radio frequency measuring instruments	40
ICTBWN307	Use optical measuring instruments	40
ICTBWN308	Work safely on live optical fibre installations	40
ICTBWN309	Perform tests on optical communication system and components	40
ICTCBL205	Joint metallic conductor cable on customer premises	40
ICTCBL206	Alter services to existing cable system	50
ICTCBL210	Install a telecommunications service to a building	50
ICTCBL211	Install an above ground equipment enclosure	45
ICTCBL212	Erect aerial cable supports	40
ICTCBL219	Apply safe technical work practices for cabling registration when configuring an ADSL circuit	40
ICTCBL238	Install, maintain and modify customer premises communications cabling: ACMA Lift Rule	40
ICTCBL239	Install customer cable support systems	50
ICTCBL240	Place and secure customer cable	45
ICTCBL241	Terminate metallic conductor customer cable	30
ICTCBL242	Install functional and protective telecommunications earthing system	30
ICTCBL246	Install, maintain and modify customer premises communications cabling: ACMA Restricted Rule	60
ICTCBL247	Install, maintain and modify customer premises communications cabling: ACMA Open Rule	100

Unit Code	Unit Title	Nominal Hours
ICTCBL248	Install and terminate hard-line coaxial cable	40
ICTCBL249	Haul underground cable for installation and maintenance work	40
ICTCBL250	Haul and fix aerial cable	40
ICTCBL251	Install aerial and underground cable lead-ins	30
ICTCBL252	Joint and terminate coaxial cable	30
ICTCBL253	Construct underground telecommunications infrastructure	50
ICTCBL254	Joint metallic conductor cable in access network	50
ICTCBL301	Install, terminate and certify structured cabling installation	50
ICTCBL303	Install and terminate coaxial cable	20
ICTCBL305	Hand over cable systems and equipment	40
ICTCBL306	Locate and identify cable system faults	40
ICTCBL311	Install systems and equipment on customer premises	60
ICTCBL313	Modify and cutover cable	45
ICTCBL314	Install network cable equipment	50
ICTCBL316	Install ribbon fibre cable in the FTTX distribution network	60
ICTCBL319	Rearrange large size copper cable	40
ICTCBL320	Jumper metallic conductor cable in the access network	30
ICTCBL322	Install, test and terminate optical fibre cable on customer premises	40
ICTCBL323	Test cables and systems on customer premises	40
ICTCBL324	Cut over new systems and equipment on customer premises	40
ICTCBL325	Maintain cable network	40
ICTCBL326	Cut over metallic conductor cable in the access network	35

Unit Code	Unit Title	Nominal Hours
ICTCBL329	Install underground cable for communications applications	60
ICTCBL330	Splice and terminate optical fibre cable for telecommunications projects	40
ICTCBL331	Conduct basic identification and fault-finding within cabling networks and customer equipment	50
ICTCBL332	Locate, identify and rectify copper cable faults	40
ICTCBL333	Install aerial cable for communications applications	40
ICTCBL334	Install underground enclosures and conduit	60
ICTCBL335	Construct aerial cable supports	60
ICTCBL336	Install and cut over metallic conductor cable to access network cabinet	40
ICTCBL401	Prepare design drawings and specification for a cable installation	50
ICTCBL403	Supervise cabling project	40
ICTCBL404	Test cable bearers	40
ICTCBL405	Remotely locate and identify cable network faults	60
ICTCLD301	Evaluate characteristics of cloud computing solutions and services	40
ICTCLD401	Configure cloud services	60
ICTCLD501	Develop cloud disaster recovery plans	40
ICTCLD502	Design and implement highly-available cloud infrastructure	80
ICTCLD503	Implement web-scale cloud infrastructure	40
ICTCLD504	Improve cloud-based infrastructure	60
ICTCLD505	Implement cloud infrastructure with code	80
ICTCLD506	Implement virtual network in cloud environments	60
ICTCLD507	Build and deploy resources on cloud platforms	60

Unit Code	Unit Title	Nominal Hours
ICTCLD508	Manage infrastructure in cloud environments	50
ICTCLD601	Develop cloud computing strategies for businesses	40
ICTCLD602	Manage information security compliance of cloud service deployment	40
ICTCMP201	Organise and monitor cabling to ensure compliance with regulatory and industry standards	40
ICTCMP203	Perform restricted customer premises broadband cabling work: ACMA Restricted Rule	20
ICTCMP502	Conduct radio communications site audits	45
ICTCYS401	Design and implement network security infrastructure for an organisation	60
ICTCYS402	Identify and confirm cyber security incidents	40
ICTCYS403	Plan and implement information security strategies for an organisation	40
ICTCYS404	Run vulnerability assessments for an organisation	60
ICTCYS405	Develop cyber security incident response plans	60
ICTCYS406	Respond to cyber security incidents	40
ICTCYS407	Gather, analyse and interpret threat data	40
ICTCYS601	Create cyber security standards for organisations	40
ICTCYS602	Implement cyber security operations	40
ICTCYS603	Undertake penetration testing for organisations	80
ICTCYS604	Implement best practices for identity management	40
ICTCYS606	Evaluate an organisation's compliance with cyber security standards and law	40
ICTCYS607	Acquire digital forensic data	80
ICTCYS608	Perform cyber security risk assessments	40

Unit Code	Unit Title	Nominal Hours
ICTCYS609	Evaluate threats and vulnerabilities of IoT devices	40
ICTCYS610	Protect critical infrastructure for organisations	40
ICTCYS611	Configure security devices for organisations	80
ICTCYS612	Design and implement virtualised cyber security infrastructure for organisations	80
ICTCYS613	Utilise design methodologies for security architecture	40
ICTCYS614	Analyse cyber security insider risks and threats and devise recommendations	80
ICTCYS615	Detect and respond to cyber security insider risks and threats	80
ICTDAT401	Evaluate organisational compliance with data ethics legislation	40
ICTDAT402	Clean and verify data	50
ICTDAT501	Gather, analyse and verify data from different source inputs	60
ICTDAT502	Conduct significance tests	60
ICTDAT503	Use unsupervised learning for clustering	60
ICTDBS407	Monitor physical database implementation	50
ICTDBS413	Determine database requirements	80
ICTDBS414	Complete database backup and restore	30
ICTDBS415	Build a database	30
ICTDBS416	Create basic relational databases	40
ICTDBS417	Identify and resolve common database performance problems	30
ICTDBS418	Monitor and administer databases	50
ICTDBS503	Create a data warehouse	60
ICTDBS505	Monitor and improve knowledge management systems	20

Unit Code	Unit Title	Nominal Hours
ICTDBS506	Design databases	50
ICTDBS507	Integrate databases with websites	25
ICTDBS604	Build data warehouses	80
ICTDBS605	Develop knowledge management strategies	80
ICTDBS606	Determine database functionality and scalability	60
ICTDMT404	Create visual design components for digital media	40
ICTDMT405	Produce interactive animations	60
ICTDMT406	Produce and edit digital images	40
ICTDMT501	Incorporate and edit digital video	50
ICTDRE301	Install digital reception equipment	30
ICTDRE302	Locate and rectify digital reception equipment faults	40
ICTDRE303	Install a complex digital reception system	30
ICTDRE305	Develop integrated digital reception systems	40
ICTDRE308	Install a cable broadband multi-dwelling unit system	40
ICTDRE314	Design communications wiring systems for customer premises	40
ICTDRE401	Integrate customer digital reception equipment	30
ICTDRE402	Integrate data delivery modes	40
ICTEDU301	Train customers in new technology	40
ICTGAM301	Apply simple modelling techniques	50
ICTGAM302	Design and apply simple textures to digital art	50
ICTGAM303	Review and apply the principles of animation	60
ICTGAM418	Use simple modelling for animation	40

Unit Code	Unit Title	Nominal Hours
ICTGAM419	Build a database to support a computer game	30
ICTGAM420	Produce interactive games	60
ICTGAM421	Identify and apply games design and game play principles	40
ICTGAM422	Create design documents for interactive games	30
ICTGAM423	Apply artificial intelligence in game development	60
ICTGAM424	Develop story and content in digital games	30
ICTGAM425	Create visual design components in interactive games	40
ICTGAM426	Write narrative scripts for interactive games	60
ICTGAM427	Use 3-D software interface and toolsets	40
ICTGAM428	Create 3-D characters for interactive games	40
ICTGAM429	Develop 3-D components for interactive games	50
ICTGAM430	Design interactive media	40
ICTGAM431	Design and create 3-D digital models	50
ICTGAM432	Create audio for digital games	40
ICTGAM433	Prepare and complete image rendering processes	50
ICTGAM532	Create design concepts for digital games and 3-D media	30
ICTGAM533	Create complex 3-D interactive games	60
ICTGAM534	Manage interactive media productions	40
ICTGAM535	Develop complex 3-D software for games and interactive media	60
ICTGAM536	Design interactive 3-D applications for scientific and mathematical modelling	60
ICTGAM537	Prepare games for different platforms and delivery modes	50
ICTGAM538	Manage testing of games and interactive media	30

Unit Code	Unit Title	Nominal Hours
ICTGAM539	Create and implement designs for 3-D games environments	50
ICTGAM540	Design and create models for 3-D and digital effects environments	50
ICTGAM541	Design and create advanced particles, fluids and bodies for 3-D digital effects	50
ICTGAM542	Animate 3-D characters for digital games	40
ICTGAM543	Produce digital animation sequences	60
ICTGAM544	Animate physical attributes of models and elements	30
ICTGAM545	Manage technical art and rigging in 3-D animations	50
ICTGAM546	Create and combine 3-D digital games and components	30
ICTGAM547	Create interactive 3-D environments for digital games	30
ICTGAM548	Complete digital editing for 3-D and digital effects environments	20
ICTGAM549	Collaborate in design of 3-D game levels and environments	40
ICTGAM550	Integrate multiple data sources into interactive 3-D environments	30
ICTGAM551	Apply digital texturing for the 3-D environment in digital games	30
ICTGAM552	Create complex 3-D characters for games	60
ICTGAM553	Integrate database with online games	30
ICTGAM554	Create games for mobile devices	60
ICTGAM555	Analyse business opportunities in the digital games environments	30
ICTGAM556	Develop and implement physics in 3-D digital games	40
ICTGAM557	Complete compositing to create elements for 3-D and digital effects environments	40
ICTICT206	Install software applications	20
ICTICT207	Integrate commercial computing packages	60

Unit Code	Unit Title	Nominal Hours
ICTICT208	Operate accounting applications	40
ICTICT210	Operate database applications	40
ICTICT213	Use computer operating systems and hardware	60
ICTICT214	Operate application software packages	60
ICTICT215	Operate digital media technology packages	40
ICTICT216	Design and create basic organisational documents	40
ICTICT219	Interact and resolve queries with ICT clients	20
ICTICT221	Identify and use specific industry standard technologies	40
ICTICT222	Research and share ICT solutions for Indigenous users	20
ICTICT302	Install and optimise operating system software	20
ICTICT303	Connect internal hardware components	20
ICTICT304	Implement system software changes	40
ICTICT306	Migrate to new technology	20
ICTICT309	Create ICT user documentation	20
ICTICT310	Identify and use industry specific technologies	60
ICTICT311	Customise packaged software applications	80
ICTICT312	Use advanced features of applications	40
ICTICT313	Identify IP, ethics and privacy policies in ICT environments	50
ICTICT424	Address cyber security requirements	80
ICTICT425	Implement WHS, environmental sustainability and anti-discrimination practices in an ICT workplace	50
ICTICT426	Identify and evaluate emerging technologies and practices	60

Unit Code	Unit Title	Nominal Hours
ICTICT427	Identify, evaluate and apply current industry-specific technologies to meet organisational needs	60
ICTICT428	Select cloud storage solutions	40
ICTICT429	Determine and confirm client business requirements	40
ICTICT430	Apply software development methodologies	20
ICTICT431	Use online tools for learning	30
ICTICT432	Develop detailed technical design	60
ICTICT433	Build graphical user interfaces	20
ICTICT434	Maintain website information standards	30
ICTICT435	Create technical documentation	20
ICTICT436	Develop macros and templates for clients using standard products	60
ICTICT437	Conduct post-implementation ICT system reviews	30
ICTICT438	Select, configure and deploy software and hardware testing tools	40
ICTICT440	Develop service level agreements	40
ICTICT441	Provide one-to-one instructions	20
ICTICT443	Work collaboratively in the ICT industry	30
ICTICT444	Develop client user interfaces	40
ICTICT445	Connect and configure devices and hardware components	40
ICTICT446	Apply ICT service management principles	20
ICTICT447	Work effectively in agile environments	60
ICTICT448	Prepare electronic portfolios of work	35
ICTICT449	Use version control systems in development environments	30
ICTICT450	Identify and use applications for a distributed ledger	50

Unit Code	Unit Title	Nominal Hours
ICTICT451	Comply with IP, ethics and privacy policies in ICT environments	60
ICTICT503	Validate quality and completeness of system design specifications	20
ICTICT505	Determine acceptable developers for projects	30
ICTICT506	Implement process re-engineering strategies	20
ICTICT517	Match ICT needs with the strategic direction of the organisation	50
ICTICT518	Research and review hardware technology options for organisations	20
ICTICT519	Develop detailed component specifications from project specifications	40
ICTICT520	Confirm transition strategy for new systems	10
ICTICT521	Select new technology supported business model	20
ICTICT522	Evaluate vendor products and equipment	20
ICTICT523	Gather data to identify business requirements	30
ICTICT524	Determine ICT strategies and solutions for organisations	40
ICTICT525	Identify and manage the implementation of industry specific technologies	60
ICTICT526	Verify client business requirements	40
ICTICT527	Develop and maintain blockchain solutions	80
ICTICT528	Deploy smart contracts	40
ICTICT529	Organise and lead agile projects	60
ICTICT530	Design user experience solutions	80
ICTICT531	Test network using virtual instruments	60
ICTICT532	Apply IP, ethics and privacy in ICT environments	40
ICTICT608	Interact with clients on a business level	40

Unit Code	Unit Title	Nominal Hours
ICTICT611	Develop ICT strategic business plans	30
ICTICT612	Develop contracts and manage contract performance	30
ICTICT613	Manage the use of development methodologies	30
ICTICT614	Identify and implement business innovation	60
ICTICT615	Implement knowledge management strategies	30
ICTICT616	Develop communities of practice	30
ICTICT617	Lead the evaluation and implementation of current industry specific technologies	80
ICTICT618	Manage IP, ethics and privacy in ICT environments	30
ICTICT818	Develop knowledge management strategies	80
ICTICT819	Lead analysis of information and communications technology business strategy	80
ICTICT822	Manage automated ICT system applications	50
ICTIOT501	Install IoT devices and networks	50
ICTIOT502	Program IoT devices	70
ICTIOT503	Design and test IoT devices and networks	40
ICTNPL402	Plan the deployment of access network architectures	50
ICTNPL410	Plan the telecommunications access network for an estate	60
ICTNPL412	Apply business acumen to network planning	50
ICTNPL413	Evaluate networking regulations and legislation for the telecommunications industry	60
ICTNWK307	Provide network systems administration	60
ICTNWK308	Determine and action network problems	50
ICTNWK309	Configure and administer network operating systems	70

Unit Code	Unit Title	Nominal Hours
ICTNWK310	Administer network peripherals	20
ICTNWK311	Install and test network protocols	40
ICTNWK416	Build security into virtual private networks	20
ICTNWK420	Install and configure virtual machines	50
ICTNWK421	Install, configure and test network security	50
ICTNWK422	Install and manage servers	40
ICTNWK423	Manage network and data integrity	40
ICTNWK424	Install and operate small enterprise branch networks	60
ICTNWK425	Build small wireless local area networks	20
ICTNWK426	Install and configure client-server applications and services	40
ICTNWK427	Configure desktop environments	40
ICTNWK428	Create scripts for networking	60
ICTNWK429	Install hardware to networks	40
ICTNWK430	Deploy software to networked computers	40
ICTNWK431	Create network documentation	40
ICTNWK432	Build an enterprise wireless network	80
ICTNWK433	Install backbone technologies in a local area network	80
ICTNWK434	Identify and implement industry standard virtualisation technologies	40
ICTNWK515	Develop configuration management protocols	30
ICTNWK529	Install and manage complex ICT networks	100
ICTNWK531	Configure an internet gateway	40
ICTNWK536	Plan, implement and test enterprise communication solutions	80

Unit Code	Unit Title	Nominal Hours
ICTNWK537	Implement secure encryption technologies	20
ICTNWK538	Install and maintain valid authentication processes	25
ICTNWK539	Design and implement integrated server solutions	50
ICTNWK540	Design, build and test network servers	50
ICTNWK541	Configure, verify and troubleshoot WAN links and IP services	90
ICTNWK542	Install, operate and troubleshoot medium enterprise routers	120
ICTNWK543	Install, operate and troubleshoot medium enterprise switches	90
ICTNWK544	Design and implement a security perimeter for ICT networks	60
ICTNWK545	Develop, implement and evaluate systems and applications security	60
ICTNWK546	Manage network security	80
ICTNWK547	Manage system security on operational systems	50
ICTNWK548	Model preferred system solutions	30
ICTNWK549	Design ICT security frameworks	30
ICTNWK550	Design ICT system security controls	30
ICTNWK551	Build decks using wireless markup language	30
ICTNWK552	Install and configure network access storage devices	40
ICTNWK553	Configure enterprise virtual computing environments	60
ICTNWK554	Manage enterprise virtual computing environments	60
ICTNWK555	Determine best-fit topologies for local networks	30
ICTNWK556	Identify and resolve network problems	50
ICTNWK557	Configure and manage advanced virtual computing environments	40
ICTNWK558	Monitor and troubleshoot virtual computing environments	40

Unit Code	Unit Title	Nominal Hours
ICTNWK559	Install an enterprise virtual computing environment	60
ICTNWK560	Determine best-fit topologies for wide area networks	30
ICTNWK561	Design enterprise wireless local area networks	30
ICTNWK603	Plan, configure and test advanced internetwork routing solutions	120
ICTNWK604	Plan and configure advanced internetwork switching solutions	120
ICTNWK605	Design and configure secure integrated wireless systems	40
ICTNWK606	Implement voice applications over secure wireless networks	40
ICTNWK610	Design and build integrated VoIP networks	50
ICTNWK611	Configure call processing network elements for secure VoIP networks	40
ICTNWK612	Plan and manage troubleshooting advanced integrated IP networks	120
ICTNWK613	Develop plans to manage structured troubleshooting process of enterprise networks	40
ICTNWK615	Design and configure desktop virtualisation	80
ICTNWK617	Configure and manage a storage area network	50
ICTNWK618	Design and implement a security system	90
ICTNWK619	Plan, configure and test advanced server-based security	80
ICTNWK620	Design and implement wireless network security	60
ICTNWK621	Configure network devices for a secure network infrastructure	40
ICTNWK622	Configure and manage intrusion prevention system on network sensors	40
ICTNWK623	Manage ICT security	80
ICTOPN403	Prepare activity plans and specifications for a fibre to the x installation	60
ICTOPN404	Test optical communications systems and components	50

Unit Code	Unit Title	Nominal Hours
ICTOPN405	Install and test a dense wavelength division multiplexing system	60
ICTOPN507	Plan and configure dense wavelength division multiplexing optical networks	60
ICTOPN508	Perform acceptance and commissioning tests on optical networks	50
ICTOPN509	Plan for optical system upgrades	60
ICTOPN510	Test and commission dense wavelength division multiplexing transmission systems	50
ICTOPN511	Test performance of specialised optical devices	45
ICTOPN512	Analyse and integrate specialised optical devices	60
ICTOPN605	Manage optical ethernet transmission	60
ICTOPN606	Manage dense wavelength division multiplexing transmission systems	60
ICTOPN607	Design dense wavelength division multiplexing systems	50
ICTOPN608	Analyse optical transmission systems	50
ICTPMG201	Prepare site for support installation	45
ICTPMG202	Plan, organise and undertake work activities	20
ICTPMG301	Contribute as part of an IT project management team	80
ICTPMG402	Schedule installation of customer premises equipment	20
ICTPMG403	Manage the delivery of network infrastructure	60
ICTPMG411	Support small scale ICT projects	60
ICTPMG505	Manage ICT projects	80
ICTPMG506	Prepare network project briefs	60
ICTPMG612	Manage ICT project initiation	40
ICTPMG613	Manage ICT project planning	50

Unit Code	Unit Title	Nominal Hours
ICTPMG614	Manage ICT project delivery	40
ICTPMG615	Manage ICT project closure	40
ICTPMG616	Manage ICT project systems implementation	40
ICTPMG617	Plan and direct complex ICT projects	40
ICTPRG302	Apply introductory programming techniques	40
ICTPRG429	Maintain open-source code programs	20
ICTPRG430	Apply introductory object-oriented language skills	60
ICTPRG431	Apply query language in relational databases	60
ICTPRG432	Develop data-driven applications	60
ICTPRG433	Test software developments	50
ICTPRG434	Automate processes	40
ICTPRG435	Write scripts for software applications	40
ICTPRG436	Develop mobile applications	50
ICTPRG437	Build a user interface	50
ICTPRG438	Configure and maintain databases	50
ICTPRG439	Use pre-existing components	40
ICTPRG440	Apply introductory programming skills in different languages	60
ICTPRG441	Apply skills in object-oriented design	40
ICTPRG442	Apply mathematical techniques for software development	30
ICTPRG443	Apply intermediate programming skills in different languages	80
ICTPRG444	Analyse software requirements	60
ICTPRG446	Prepare software development review	30

Unit Code	Unit Title	Nominal Hours
ICTPRG447	Use extensible markup language	50
ICTPRG509	Build using rapid application development	40
ICTPRG530	Manage projects using software management tools	60
ICTPRG531	Prepare for application development using current methods	30
ICTPRG532	Apply advanced object-oriented language skills	80
ICTPRG533	Debug and monitor applications	40
ICTPRG534	Deploy applications to production environments	40
ICTPRG535	Build advanced user interfaces	60
ICTPRG536	Design application architecture	40
ICTPRG537	Implement security for applications	50
ICTPRG538	Create mashups	50
ICTPRG540	Maintain custom software	40
ICTPRG541	Monitor and support data conversion to new ICT systems	10
ICTPRG542	Review developed software	30
ICTPRG543	Develop integration blueprint for ICT systems	20
ICTPRG544	Install, test and evaluate pilot version of ICT systems	20
ICTPRG545	Monitor system pilots	20
ICTPRG546	Validate application designs against specifications	40
ICTPRG547	Apply advanced programming skills in another language	80
ICTPRG548	Develop high-level object-oriented class specifications	60
ICTPRG549	Apply intermediate object-oriented language skills	60
ICTPRG550	Perform ICT data conversions	20

Unit Code	Unit Title	Nominal Hours
ICTPRG551	Apply testing techniques for software development	40
ICTPRG553	Create and develop REST APIs	60
ICTPRG554	Manage data persistence using noSQL data stores	80
ICTPRG555	Implement Object Relational Mapping Framework for data persistence	60
ICTPRG556	Implement and use a model view controller framework	70
ICTPRG603	Develop advanced mobile multi-touch applications	80
ICTPRG605	Manage development of technical solutions from business specifications	40
ICTPRG614	Create cloud computing services	60
ICTRFN201	Install a satellite antenna	30
ICTRFN202	Install a terrestrial antenna	30
ICTRFN301	Install a radio communications antenna and feedline	40
ICTRFN304	Construct and test a radio communications device	60
ICTRFN305	Operate and maintain radio communications technical instruments and field equipment	45
ICTRFN402	Select antenna system for radio communications	30
ICTRFN405	Install radio communications base station equipment	50
ICTRFN406	Maintain hybrid fibre coaxial broadband cable network	50
ICTRFN407	Conduct radio frequency measurements	40
ICTRFN504	Test cellular handset enhancements and international roaming agreements	50
ICTRFN505	Test and measure cellular phone and network equipment performance	50
ICTRFN506	Evaluate radio frequency signal coverage plots	45

Unit Code	Unit Title	Nominal Hours
ICTRFN603	Monitor the capacity of and recommend changes to cellular mobile networks	60
ICTRFN804	Produce radio link budgets	50
ICTRFN805	Analyse cellular mobile network systems	70
ICTRFN806	Analyse satellite communications systems	60
ICTSAD402	Develop and present ICT feasibility reports	30
ICTSAD501	Model data objects	30
ICTSAD502	Model data processes	30
ICTSAD503	Minimise risk of new technologies to business solutions	30
ICTSAD507	Design and implement quality assurance processes for business solutions	30
ICTSAD508	Develop technical requirements for business solutions	30
ICTSAD509	Produce ICT feasibility reports	30
ICTSAD602	Conduct knowledge audits	40
ICTSAD604	Manage and communicate ICT solutions	40
ICTSAD605	Elicit ICT requirements	40
ICTSAD608	Perform ICT-focused enterprise analysis	40
ICTSAD609	Plan and monitor business analysis activities in an ICT environment	40
ICTSAD610	Analyse stakeholder requirements	40
ICTSAD611	Manage assessment and validation of ICT solutions	40
ICTSAD612	Implement and maintain uses of containerisation	50
ICTSAD613	Install and configure container orchestration services	50
ICTSAS203	Connect hardware peripherals	20

Unit Code	Unit Title	Nominal Hours
ICTSAS210	Update and maintain hardware, software and documentation inventories	10
ICTSAS211	Develop solutions for basic ICT malfunctions and problems	20
ICTSAS212	Record the requirements of client support requests	10
ICTSAS213	Maintain the integrity of ICT systems	20
ICTSAS214	Protect devices from spam and destructive software	10
ICTSAS215	Protect and secure information assets	20
ICTSAS216	Maintain ICT equipment and replace consumables	20
ICTSAS217	Connect a home based local wireless network	30
ICTSAS303	Care for computer hardware	20
ICTSAS304	Provide basic system administration	20
ICTSAS305	Provide ICT advice to clients	40
ICTSAS308	Run standard diagnostic tests	20
ICTSAS309	Maintain and repair ICT equipment and software	20
ICTSAS310	Install, configure and secure a small office or home office network	50
ICTSAS422	Scope implementation requirements	20
ICTSAS428	Hand over ICT system components to clients	20
ICTSAS432	Identify and resolve client ICT problems	40
ICTSAS433	Update ICT client support procedures and assist with policy development	20
ICTSAS434	Action change requests and present updated ICT system to clients	50
ICTSAS435	Resolve system faults on a live system	40
ICTSAS436	Evaluate ICT system status	20

Unit Code	Unit Title	Nominal Hours
ICTSAS437	Optimise ICT system performance	30
ICTSAS438	Implement maintenance procedures	10
ICTSAS439	Analyse ICT system capacity and implement enhancements	50
ICTSAS440	Monitor and administer security of ICT systems	30
ICTSAS441	Support ICT system software	50
ICTSAS442	Provide first-level remote help desk support	30
ICTSAS443	Support operating system users and troubleshoot applications	20
ICTSAS444	Repair operating systems boot up procedures	40
ICTSAS445	Configure and troubleshoot operating system software	40
ICTSAS446	Fault find and troubleshoot ICT equipment, hardware and software problems	40
ICTSAS502	Establish and maintain client user liaison	20
ICTSAS506	Update ICT system operational procedures	30
ICTSAS512	Review and manage delivery of maintenance services	20
ICTSAS517	Use network tools	50
ICTSAS518	Install and upgrade operating systems	50
ICTSAS519	Perform systems tests	30
ICTSAS520	Develop detailed test plans	30
ICTSAS521	Perform integration tests	30
ICTSAS522	Manage the testing process	20
ICTSAS523	Perform stress and load tests on integrated platforms	30
ICTSAS524	Develop, implement and evaluate an incident response plan	30
ICTSAS525	Develop and conduct client acceptance tests	40

Unit Code	Unit Title	Nominal Hours
ICTSAS526	Review and update disaster recovery and contingency plans	30
ICTSAS527	Manage client problems	20
ICTSAS528	Review and develop ICT maintenance strategies	30
ICTSAS529	Prioritise ICT change requests	20
ICTSAS602	Implement change management processes	40
ICTSMB401	Set up and operate a contractor business	40
ICTSUS402	Install and test power saving hardware	60
ICTSUS403	Install and test power management software	50
ICTSUS404	Install thin client applications for power over ethernet	60
ICTSUS502	Install and test virtual infrastructure	80
ICTSUS603	Integrate sustainability in ICT planning and design projects	55
ICTSUS604	Prepare business cases for sustainability and competitive advantage in ICT projects	55
ICTSUS811	Conduct and manage life cycle assessments for sustainability	60
ICTSUS812	Lead applied research in ICT sustainability	60
ICTTCR203	Use safe rigging practices to climb and perform rescues on telecommunications network structures	45
ICTTEN202	Use hand and power tools	40
ICTTEN203	Install and configure a home or small office network	60
ICTTEN204	Install and configure a small to medium business network	60
ICTTEN205	Build and maintain a secure network	80
ICTTEN206	Operate new media software packages	40
ICTTEN207	Install and test internet protocol devices in convergence networks	50

Unit Code	Unit Title	Nominal Hours
ICTTEN208	Use electrical skills when working with telecommunications networks	40
ICTTEN210	Install underground telecommunications infrastructure	20
ICTTEN211	Work effectively in a telecommunications network environment	30
ICTTEN301	Provide infrastructure for telecommunications network equipment	60
ICTTEN310	Remove and replace electronic circuit boards in carrier equipment	20
ICTTEN312	Install telecommunications network equipment	60
ICTTEN313	Work on and resolve recurrent network faults	50
ICTTEN315	Determine and apply technologies within a telecommunications system	40
ICTTEN316	Conduct basic tests and analyses of telecommunications copper cabling	50
ICTTEN317	Locate, identify and rectify telecommunications network faults	40
ICTTEN318	Inspect, clean and handle optical fibre cable and connectors	20
ICTTEN320	Commission an electronic unit	50
ICTTEN321	Maintain an electronic system	40
ICTTEN322	Provide infrastructure for telecommunications network customer equipment	60
ICTTEN402	Estimate and quote for customer telecommunications equipment installation	30
ICTTEN403	Assign a transmission path	40
ICTTEN404	Install and configure a wireless mesh network	60
ICTTEN406	Effect changes to existing customer premises equipment systems and equipment	50
ICTTEN408	Complete equipment and software upgrades	40
ICTTEN409	Commission an electronic system	50

Unit Code	Unit Title	Nominal Hours
ICTTEN410	Locate, diagnose and rectify faults	50
ICTTEN411	Monitor, analyse and action telecommunications network alarms	60
ICTTEN412	Undertake routine maintenance of the telecommunications network	60
ICTTEN413	Undertake remote diagnosis and repair of network faults	50
ICTTEN414	Repair telecommunication system faults	40
ICTTEN415	Install and configure internet protocol TV in a home network	50
ICTTEN417	Install, configure and test a router	60
ICTTEN418	Install and test a radio frequency identification system	50
ICTTEN419	Implement and troubleshoot enterprise routers and switches	100
ICTTEN420	Design, install and configure an internetwork	100
ICTTEN421	Apply advanced routing protocols to network design	80
ICTTEN422	Configure and troubleshoot advanced network switching	80
ICTTEN423	Install and maintain a wide area network	80
ICTTEN425	Design, install and configure a customer smart technology network	50
ICTTEN426	Design network projects	80
ICTTEN427	Conduct site surveys to identify carrier installation requirements	40
ICTTEN428	Prepare design drawings and specification for telecommunications installations	50
ICTTEN429	Estimate and quote for carrier telecommunications equipment installations	30
ICTTEN432	Identify requirements for customer telecommunications equipment	40
ICTTEN433	Install configuration programs on PC based customer equipment	50
ICTTEN434	Install, configure and test internet protocol networks	50

Unit Code	Unit Title	Nominal Hours
ICTTEN435	Solve electrical-based telecommunications circuitry and cabling problems	40
ICTTEN519	Design network building projects	70
ICTTEN520	Commission network equipment	70
ICTTEN521	Integrate network systems and equipment	80
ICTTEN522	Cut over new and replacement network equipment	60
ICTTEN523	Locate, diagnose and rectify complex system equipment faults	60
ICTTEN524	Diagnose and organise repair of complex equipment faults	50
ICTTEN525	Install, configure and test local area network switches	60
ICTTEN526	Dimension and design a radio frequency identification system	60
ICTTEN527	Plan wireless mesh networks	60
ICTTEN613	Assess integration of international network equipment into Australian networks	75
ICTTEN614	Conduct network system optimisation and administration	75
ICTTEN615	Manage network traffic	90
ICTTEN616	Rectify client services following network outages and faults	60
ICTTEN617	Manage common channel signalling networks	60
ICTTEN618	Analyse and organise repair of highly complex networks	60
ICTTEN619	Test new software and hardware releases	50
ICTTEN620	Produce and evaluate architecture designs for convergent cellular mobile networks	80
ICTTEN621	Design and configure IP-MPLS networks with virtual private network tunnelling	80
ICTTEN622	Produce ICT network architecture designs	60

Unit Code	Unit Title	Nominal Hours
ICTTEN623	Design and manage internet protocol TV in a service provider network	60
ICTTEN817	Plan transmission networks	60
ICTTEN818	Align systems with product and technology strategy	40
ICTTEN819	Translate domain and solution architectures into platform requirements and designs	60
ICTTEN820	Manage end to end architectural solutions across multiple domains	60
ICTTEN821	Manage solution architecture and impacts	60
ICTTEN822	Manage application layer solutions	60
ICTTEN823	Manage voice, data and internet protocol network solutions	60
ICTTEN824	Manage network testing strategies	60
ICTTEN825	Investigate applications of cloud networks in network switching	60
ICTTEN826	Evaluate and apply digital signal processing to communication systems	60
ICTTEN827	Produce engineering solutions	60
ICTTEN828	Manage development and application of testing artefacts	60
ICTWEB304	Build simple web pages	40
ICTWEB305	Produce digital images for the web	40
ICTWEB306	Develop web presence using social media	30
ICTWEB423	Ensure dynamic website security	30
ICTWEB430	Produce server-side script for dynamic web pages	60
ICTWEB431	Create and style simple markup language documents	40
ICTWEB432	Design website layouts	40
ICTWEB433	Confirm accessibility of websites	10

Unit Code	Unit Title	Nominal Hours
ICTWEB434	Transfer content to websites	20
ICTWEB435	Maintain website performance	30
ICTWEB436	Monitor traffic and compile website traffic reports	15
ICTWEB437	Create website testing procedures	20
ICTWEB438	Conduct operational acceptance tests of websites	20
ICTWEB439	Confirm basic website security	20
ICTWEB440	Use web authoring tools	20
ICTWEB441	Produce basic client-side script	40
ICTWEB442	Produce interactive web animation	80
ICTWEB443	Implement search engine optimisations	50
ICTWEB444	Create responsive website layouts	40
ICTWEB445	Implement content management systems	80
ICTWEB446	Integrate social web technologies	40
ICTWEB447	Build basic website using development software and ICT tools	20
ICTWEB448	Confirm website content meets technical protocols and standards	30
ICTWEB449	Confirm website access and useability	15
ICTWEB450	Evaluate and select a web hosting service	15
ICTWEB451	Apply structured query language in relational databases	60
ICTWEB452	Create a markup language document	20
ICTWEB513	Build dynamic websites	60
ICTWEB514	Create dynamic web pages	40
ICTWEB517	Create web-based programs	60

Unit Code	Unit Title	Nominal Hours
ICTWEB518	Build a document using extensible markup language	30
ICTWEB519	Develop complex web page layouts	40
ICTWEB520	Develop complex cascading style sheets	40
ICTWEB521	Customise complex ICT content management systems	80
ICTWEB522	Develop website information architecture	30
ICTWEB523	Manage transactions using site server tools	20
ICTWEB524	Analyse information and assign meta tags	20
ICTWEB525	Implement quality assurance process for websites	20
ICTWEB526	Implement and use web services	50
ICTWEB527	Research and apply emerging web technology trends	80
ICTWHS201	Provide telecommunications services safely on roofs	50
ICTWHS202	Work safely in a radio frequency electromagnetic radiation environment	40
ICTWHS204	Follow work health and safety and environmental policy and procedures	40
ICTWHS205	Work safely near power infrastructure at a telecommunications workplace	30
ICTWOR202	Work effectively in the digital and telecommunications industry	20
ICTWOR301	Organise resources	20
ICTWOR302	Organise material supply	20
ICTWOR303	Schedule resources	30
ICTWOR304	Manage spare parts	20
ICTWOR305	Supervise worksite activities	30
ICTWOR306	Resolve technical enquiries using multiple information systems	40

Unit Code	Unit Title	Nominal Hours
ICTWOR307	Collect and analyse technical information	30
ICTWOR308	Provide customer service to telecommunications customers	40
ICTWOR401	Undertake a civil site survey	20

CONTACTS AND LINKS

Curriculum Maintenance Manager (CMM)		
Business Industries	The CMM Service is provided on behalf of Higher Education and Skills. CMM Service Executive Officers can assist with questions on payable and nominal hours.	Alan Daniel Executive Officer C/- Chisholm Institute P O Box 684 Dandenong VIC 3175, Ph: (03) 9238 8501 Email: Alan Daniel
Engineering Industries (Electrical/Electronics)	For qualifications/units included in the ICT Training Package.	George Adda Ph: 03 9286 9880 Email: George Adda C/- Box Hill Institute Private Bag 2014 Box Hill VIC 3128
Service Skills Organisation (SSO)		
SSO Name	This SSO is responsible for developing this **ICT Information and Communications Technology Training Package** and can be contacted for further information.	PwC's Skills for Australia website can be found here Ph: 1800 714 819 Email: here
National Register for VET in Australia		
Training.gov.au (TGA)	TGA is the Australian government's official National Register of information on Training Packages, qualifications, courses, units of competency and RTOs.	See the National Register for more information.
Australian Government		
Department of Education, Skills and Employment	The Commonwealth Department is responsible for national policies and programmes that help Australians access quality vocational education and training.	See the Commonwealth Department of Education, Skills and Employment website for more information.
State Government		
Department of Education and Training (DET)	DET is the State Training Authority responsible for supporting implementation of Vocational Education and Training (VET) in Victoria.	(03) 9637 2000 See the Victorian Department of Education and Training website for more information.
National VET Regulatory Authority		

Australian Skills Quality Authority (ASQA)	ASQA is the national regulator for Australia's VET sector.	Info line: 1300 701 801 See the ASQA website for more information.
Victorian State VET Regulatory Authority		
Victorian Registration and Qualifications Authority (VRQA)	The VRQA is a statutory authority responsible for the registration and regulation of Victorian RTOs and for the regulation of apprenticeships and traineeships in Victoria.	(03) 9637 2806 See the VRQA website for more information.

GLOSSARY

Code	Nationally endorsed Training Package qualification code.
Title	Nationally endorsed Training Package qualification title.
Unit Code	Nationally endorsed Training Package unit code.
Unit Title	Nationally endorsed Training Package unit title.
Maximum Payable Hours	The maximum number of hours the Victorian Government will subsidise under Skills First funding for the achievement of the minimum realistic vocational outcome of the qualification, as determined by the qualification packaging rules. The Maximum Payable Hours do not cover every possible combination of core and elective units available for a specific qualification. Minimum payable hours reflect a calculated minimum number of hours that could deliver a minimum realistic vocational outcome, based on efficiencies of contextualisation and integration.
Scope of Registration	Scope of registration specifies the AQF qualifications and/or units of competency the training organisation is registered to issue and the industry training and/or assessment services it is registered to provide.
Nominal Hours	Nominal hours reflect the anticipated time taken to deliver and assess the outcomes of a unit of competency excluding unsupervised delivery or the time taken for repeated practical application of skills. Nominal hours are determined by the Victorian State Training Authority (DET) and are primarily developed for funding purposes in Victoria.