

**Victorian Purchasing Guide**

**for**

**ICT10 Integrated Telecommunications Training Package  
Version No 2**

**September 2013**



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## Victorian Purchasing Guide — Version History

Training Package Version	Date VPG Approved	Comments
ICT10 Integrated Telecommunications Training Package V2	12 September 2013	<ul style="list-style-type: none"> <li>• 5 new ICT units of competency</li> <li>• Three new qualifications:               <ul style="list-style-type: none"> <li>• ICT20613 Certificate II in National Broadband Network Construction</li> <li>• ICT30713 Certificate III in National Broadband Network Construction</li> <li>• ICT30813 Certificate III in Telecommunications Fixed Wireless Installation</li> </ul> </li> <li>• Two revised qualifications:               <ul style="list-style-type: none"> <li>• ICT20513 Certificate II in Telecommunications Fixed Wireless and Rigging Installation</li> <li>• ICT30513 Certificate III in Telecommunications Rigging Installation</li> </ul> </li> </ul>
ICT10 Integrated Telecommunications Training Package 1	25/08/2010	This Victorian Purchasing Guide reflects the changes made to ICT10 Integrated Telecommunications Training Package 1 Initial release following a full review of the ICT02 Telecommunications Training Package

# ICT10 Integrated Telecommunications Training Package Victorian Purchasing Guide

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## 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 nominal hour range (minimum-maximum) available for each qualification.
- Nominal hours for each unit of competency within the Training Package.
- Sample Training Programs

### ***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 Quality Framework (AQF).

The VRQA is the regulatory authority for Victoria that registers VET training organisations who provide courses to domestic students only and who only offer training in Victoria.

To register to provide training to international students and in other Australian states and territories you will need to apply with ASQA.

## QUALIFICATIONS

Code	Title	Qualification Nominal Hour Range	
		Minimum	Maximum
ICT20110	Certificate II in Telecommunications Technology	370	425
ICT20210	Certificate II in Telecommunications	306	550
ICT20310	Certificate II in Telecommunications Cabling	326	525
ICT20410	Certificate II in Telecommunications Digital Reception Technology	356	465
ICT20513	Certificate II in Telecommunications Fixed Wireless and Rigging Installation	401	701
ICT20613	Certificate II in National Broadband Network Construction	411	516
ICT30110	Certificate III in Broadband and Wireless Networks Technology	486	765
ICT30210	Certificate III in Telecommunications	366	620
ICT30310	Certificate III in Telecommunications Cabling	366	625
ICT30410	Certificate III in Telecommunications Digital Reception Technology	226	450
ICT30513	Certificate III in Telecommunications Rigging Installation	526	656
ICT30610	Certificate III in Broadband and Wireless Networks	356	605
ICT30713	Certificate III in National Broadband Network Construction	546	676
ICT30813	Certificate III in Telecommunications Fixed Wireless Installation	400	615
ICT40110	Certificate IV in Optical Networks	426	750
ICT40210	Certificate IV in Telecommunications Network Engineering	326	780
ICT40310	Certificate IV in Telecommunications Radio Communications	544	870
ICT40410	Certificate IV in Radio Frequency Networks	376	790
ICT40510	Certificate IV in Telecommunications Network Planning	530	580
ICT40610	Certificate IV in Telecommunications Networks Technology	591	1050
ICT50110	Diploma of Optical Networks	455	640
ICT50210	Diploma of Telecommunications Network Engineering	455	680
ICT50310	Diploma of Telecommunications Management	480	610
ICT50410	Diploma of Radio Frequency Networks	505	690
ICT50510	Diploma of Telecommunications Planning and Design	560	610
ICT60110	Advanced Diploma of Optical Networks	430	685
ICT60210	Advanced Diploma of Telecommunications Network Engineering	370	705
ICT70110	Vocational Graduate Certificate in Telecommunications Network Engineering	290	330
ICT80110	Vocational Graduate Diploma of Telecommunications Network Engineering	340	380

## UNITS OF COMPETENCY AND NOMINAL HOURS

RTOs are advised that there is a mapping inside the Training Package that describes the relationship between new units and superseded or replaced units from the previous version of ICT10 Integrated Telecommunications Training Package. Information regarding transition arrangements can be obtained from the state or national VET Regulating Authority (see Contacts and Links section).

You must be sure that all training and assessment leading to qualifications or Statements of Attainment from the Training Package is conducted against the Training Package units of competency and complies with the requirements in the assessment guidelines.

### Listing of the Units of Competency and Nominal Hours

Unit Code	Unit Title	Nominal Hours
ICTBWN3082A	Perform tests on optical communication system and components	40
ICTBWN3088A	Install optical fibre splitters in fibre distribution hubs	40
ICTBWN3090A	Install lead-in module and cable for fibre to the premises	50
ICTBWN3100A	Work safely with live fibre to test and commission a fibre to the x installation	50
ICTBWN3205A	Use optical and radio frequency measuring instruments	40
ICTCBL2005A	Install customer cable support systems	50
ICTCBL2006A	Place and secure customer cable	45
ICTCBL2008A	Terminate metallic conductor customer cable	30
ICTCBL2012A	Install functional and protective telecommunications earthing system	30
ICTCBL2016A	Joint metallic conductor cable on customer premises	40
ICTCBL2017A	Alter services to existing cable system	50
ICTCBL2064A	Haul underground cable	40
ICTCBL2065A	Splice and terminate optical fibre cable for carriers and service providers	40
ICTCBL2066A	Joint and terminate coaxial cable	30
ICTCBL2068A	Install a telecommunications service to a building	50
ICTCBL2131A	Install an above ground equipment enclosure	45
ICTCBL2132A	Erect aerial cable supports	40
ICTCBL2133A	Construct underground telecommunications infrastructure	50
ICTCBL2134A	Fix aerial cable	50
ICTCBL2135A	Joint metallic conductor cable in access network	50
ICTCBL2136A	Install, maintain and modify customer premises communications cabling: ACMA Restricted Rule	60
ICTCBL2137A	Install, maintain and modify customer premises communications cabling: ACMA Open Rule	100
ICTCBL2138A	Install, maintain and modify customer premises communications cabling: ACMA Lift Rule	40
ICTCBL2139A	Apply safe technical work practices for cabling registration	40
ICTCBL2162A	Install a cable lead-in	30
ICTCBL3009A	Install, terminate and certify structured cabling installation	50
ICTCBL3010A	Install and terminate optical fibre cable on customer premises	30

Unit Code	Unit Title	Nominal Hours
ICTCBL3011A	Install and terminate coaxial cable	20
ICTCBL3013A	Perform cable and system test on customer premises	40
ICTCBL3014A	Hand over systems and equipment	40
ICTCBL3015A	Locate and identify cable system faults	40
ICTCBL3018A	Install underground enclosures and conduit	60
ICTCBL3019A	Install underground cable	60
ICTCBL3020A	Construct aerial cable supports	60
ICTCBL3021A	Install aerial cable	40
ICTCBL3049A	Install systems and equipment on customer premises	60
ICTCBL3052A	Cut over new systems and equipment on customer premises	40
ICTCBL3067A	Modify and cut over cable	45
ICTCBL3069A	Install network cable equipment	50
ICTCBL3103A	Maintain cable network	40
ICTCBL3240A	Install ribbon fibre cable in the FTTX distribution network	60
ICTCBL4002A	Prepare design drawings and specification for a cable installation	50
ICTCBL4004A	Schedule and supply cabling installation	35
ICTCBL4023A	Supervise cabling project	40
ICTCBL4057A	Test cable bearers	40
ICTCBL4099A	Remotely locate and identify cable network faults	60
ICTCMP2022A	Organise and monitor cabling to ensure compliance with regulatory and industry standards	40
ICTCMP2239A	Perform restricted customer premises broadband cabling work: ACMA Restricted Rule	20
ICTCMP5176A	Undertake radio communications site audit	45
ICTDRE3156A	Install digital reception equipment	30
ICTDRE3157A	Locate and rectify digital reception equipment faults	40
ICTDRE3165A	Install a complex digital reception system	30
ICTDRE4166A	Integrate customer digital reception equipment	30
ICTDRE4167A	Integrate data delivery modes	40
ICTEDU3053A	Train customers in new technology	40
ICTEDU5025A	Develop and deliver training associated with new and modified products	60
ICTITU5144A	Test telecommunications network using virtual instruments	60
ICTITU7106A	Manage automated ICT system applications using unix	50
ICTNPL4107A	Apply business acumen to network planning	50
ICTNPL4108A	Plan the deployment of access network architectures	50
ICTNPL4109A	Evaluate the capability of access networks	50
ICTNPL4110A	Evaluate the planning requirements for provisioning a telecommunications building facility	50
ICTNPL4111A	Develop provisioning of telecommunications building works project	50



Unit Code	Unit Title	Nominal Hours
ICTNPL4112A	Evaluate core network architectures	50
ICTNPL4113A	Plan the deployment of core network	50
ICTNPL4114A	Produce planning specifications for end to end service delivery	50
ICTNPL4150A	Apply knowledge of regulation and legislation for the telecommunications industry	60
ICTNPL4151A	Plan the telecommunications access network for an estate	60
ICTNPL5071A	Develop planning strategies for core network design	50
ICTNPL5096A	Develop planning strategies for access network design	60
ICTNPL5101A	Apply service measures and demand forecasting to products and services planning	50
ICTNPL5154A	Develop planning strategies for building environment design	50
ICTNPL6029A	Plan the development and growth of the telecommunications network	70
ICTNPL6030A	Forecast service demand	60
ICTNPL6046A	Undertake network performance analysis	90
ICTOHS2080A	Provide telecommunications services safely on roofs	50
ICTOHS2153A	Work safely near power infrastructure	30
ICTOHS2170A	Follow Occupational Health and Safety and environmental policy and procedures	40
ICTOPN4115A	Install and test a dense wavelength division multiplexing system	60
ICTOPN4116A	Use advanced optical test equipment	50
ICTOPN4117A	Prepare activity plans and specifications for a fibre to the x installation	60
ICTOPN5118A	Plan and configure dense wavelength division multiplexing systems	60
ICTOPN5119A	Perform acceptance and commissioning tests on optical network	50
ICTOPN5120A	Plan for an optical system upgrade and cut over	60
ICTOPN5121A	Test and commission a dense wavelength division multiplexing transmission system	50
ICTOPN5122A	Test the performance of specialised optical devices	45
ICTOPN5123A	Analyse and integrate specialised optical devices in the network	60
ICTOPN6124A	Manage optical ethernet transmission	60
ICTOPN6125A	Manage dense wavelength division multiplexing transmission system	60
ICTOPN6128A	Design a dense wavelength division multiplexing system	50
ICTOPN6129A	Analyse optical transmission systems	50
ICTPMG2130A	Prepare site for support installation	45
ICTPMG2173A	Plan, organise and undertake work activities	20
ICTPMG4048A	Schedule installation of customer premises equipment	20
ICTPMG4152A	Manage the delivery of network infrastructure	60
ICTPMG5027A	Develop customer premises equipment installation project plans	60
ICTPMG5031A	Prepare a project brief	60

Unit Code	Unit Title	Nominal Hours
ICTPMG5039A	Prepare project specifications	60
ICTPMG6033A	Develop a project management plan	70
ICTPMG6034A	Prepare a detailed design brief	40
ICTPMG7145A	Undertake a telecommunications project	50
ICTPMG8142A	Manage a telecommunications workplace	50
ICTPMG8143A	Manage a telecommunications project	50
ICTPMG8149A	Evaluate and use telecommunications management networks	80
ICTPRO5026A	Develop training, marketing and sales resources for telecommunications products	60
ICTRFN2163A	Install a satellite antenna	30
ICTRFN2164A	Install a terrestrial antenna	30
ICTRFN3055A	Install a radio communications antenna and feedline	40
ICTRFN3070A	Install mobile telecommunications in motor vehicles	60
ICTRFN3146A	Install WiMAX customer premises equipment broadband wireless access equipment	40
ICTRFN3155A	Construct and test a radio communications device	60
ICTRFN3175A	Operate and maintain radio communications technical instruments and field equipment	45
ICTRFN4095A	Conduct radio frequency measurements	40
ICTRFN4158A	Select an antenna system for radio communications	30
ICTRFN4159A	Test and repair cellular network equipment	60
ICTRFN4174A	Undertake radio communications signals monitoring	45
ICTRFN4177A	Install radio communications base station equipment	50
ICTRFN4178A	Maintain hybrid fibre coaxial broadband cable network	50
ICTRFN5097A	Test cellular handset enhancements and international roaming agreements	50
ICTRFN5148A	Test and measure cellular phone and network equipment performance	50
ICTRFN5179A	Evaluate and analyse radio frequency signal coverage plots	45
ICTRFN6098A	Monitor the capacity of and recommend changes to the cellular mobile network	60
ICTRFN6171A	Produce and evaluate architecture designs for WiMAX networks	80
ICTRFN7182A	Produce a radio link budget	50
ICTRFN8180A	Analyse a cellular mobile network system	70
ICTRFN8181A	Analyse a satellite communications system	60
ICTSMB4160A	Set up and operate a contractor business	40
ICTSMB4161A	Operate a contractor business with employees	20
ICTSUS4183A	Install and test renewable energy system for ICT networks	60
ICTSUS4184A	Install and test power saving hardware	60
ICTSUS4185A	Install and test power management software	50
ICTSUS4186A	Install thin client applications for power over ethernet	60

Unit Code	Unit Title	Nominal Hours
ICTSUS5187A	Implement server virtualisation for a sustainable ICT system	80
ICTSUS6233A	Integrate sustainability in ICT planning and design projects	55
ICTSUS6234A	Establish a business case for sustainability and competitive advantage in ICT projects	55
ICTSUS7235A	Use ICT to improve sustainability outcomes	50
ICTSUS7236A	Manage improvements in ICT sustainability	55
ICTSUS8237A	Lead applied research in ICT sustainability	60
ICTSUS8238A	Conduct and manage a life cycle assessment for sustainability	60
ICTTCR2188A	Use rigging practices and systems on telecommunications network structures	45
ICTTCR2189A	Use operational safety in a telecommunications rigging environment	45
ICTTCR2190A	Use safe rigging practices to climb and perform rescues on telecommunications network structures	45
ICTTCR3062A	Build a telecommunications radio structure	60
ICTTCR3191A	Install radio plant and equipment on telecommunications structures	60
ICTTCR3192A	Protect against electromagnetic radiation and system hazards when working on telecommunications radio sites	40
ICTTEN2007A	Use electrical skills in telecommunications work	40
ICTTEN2105A	Install and test an internet protocol device in convergence networks	50
ICTTEN2140A	Use hand and power tools	40
ICTTEN2207A	Install and configure a home or small office network	60
ICTTEN2208A	Install and configure a small to medium business network	60
ICTTEN2209A	Build and maintain a secure network	80
ICTTEN2218A	Operate new media software packages	40
ICTTEN3054A	Provide infrastructure for telecommunications network equipment	60
ICTTEN3056A	Install telecommunications network equipment	60
ICTTEN3063A	Locate, identify and rectify recurrent network faults	50
ICTTEN3074A	Recover customer premises equipment	30
ICTTEN3075A	Refurbish customer premises equipment	30
ICTTEN3077A	Commission an electronic unit	50
ICTTEN3089A	Repair and replace telecommunications network hardware	60
ICTTEN3104A	Maintain an electronic system	40
ICTTEN3250A	Provide infrastructure for telecommunications customer equipment	60
ICTTEN4001A	Identify requirements for customer telecommunications equipment	40
ICTTEN4003A	Estimate and quote for customer telecommunications equipment installation	30
ICTTEN4040A	Assign a transmission path	40
ICTTEN4050A	Install and configure a wireless mesh network	60
ICTTEN4051A	Install configuration programs on PC based customer equipment	50
ICTTEN4072A	Effect changes to existing customer premises equipment systems and equipment	50

Unit Code	Unit Title	Nominal Hours
ICTTEN4073A	Cut over customer premises equipment major upgrades	40
ICTTEN4076A	Complete equipment and software upgrades	40
ICTTEN4078A	Commission an electronic system	50
ICTTEN4081A	Locate, diagnose and rectify faults	50
ICTTEN4085A	Monitor, analyse and action telecommunications network alarms	60
ICTTEN4086A	Undertake routine maintenance of the telecommunications network	60
ICTTEN4087A	Undertake remote diagnosis and repair of network faults	50
ICTTEN4102A	Repair telecommunication system faults	40
ICTTEN4126A	Install and configure internet protocol TV in a home network	50
ICTTEN4198A	Install, configure and test an internet protocol network	50
ICTTEN4199A	Install, configure and test a router	60
ICTTEN4202A	Install and test a radio frequency identification system	50
ICTTEN4210A	Implement and troubleshoot enterprise routers and switches	100
ICTTEN4211A	Design, install and configure an internetwork	100
ICTTEN4212A	Apply advanced routing protocols to network design	80
ICTTEN4213A	Configure and troubleshoot advanced network switching	80
ICTTEN4214A	Install and maintain a wide area network	80
ICTTEN4215A	Install and configure internet protocol TV in a service provider network	60
ICTTEN4229A	Design, install and configure a customer smart grid network	50
ICTTEN5024A	Provide consultancy and technical support in the customer premises equipment sector	60
ICTTEN5037A	Design a telecommunications project	70
ICTTEN5038A	Design an electronic system for a telecommunications network	80
ICTTEN5058A	Acceptance test new systems and equipment	70
ICTTEN5059A	Commission telecommunications network equipment	70
ICTTEN5060A	Integrate new systems and equipment into the telecommunications network	80
ICTTEN5061A	Cut over new and replacement network equipment	60
ICTTEN5083A	Locate, diagnose and rectify complex faults	60
ICTTEN5084A	Provide expert advice and support on complex faults	50
ICTTEN5092A	Undertake planned outage management	40
ICTTEN5147A	Administer a data communications network	60
ICTTEN5168A	Design and implement an enterprise voice over internet protocol and a unified communications network	60
ICTTEN5200A	Install, configure and test a local area network switch	60
ICTTEN5201A	Install, configure and test a server	60
ICTTEN5203A	Dimension and design a radio frequency identification system	60
ICTTEN5204A	Produce technical solutions from business specifications	50
ICTTEN5217A	Plan a wireless mesh network	60

Unit Code	Unit Title	Nominal Hours
ICTTEN6036A	Undertake qualification testing of new or enhanced equipment and systems	75
ICTTEN6042A	Undertake system administration	75
ICTTEN6043A	Undertake network traffic management	90
ICTTEN6044A	Coordinate fault rectification and restoration of service following network outages	60
ICTTEN6045A	Implement planned network changes with minimal impact to the customer	60
ICTTEN6047A	Manage a common channel signalling network	60
ICTTEN6091A	Analyse and organise repair of highly complex telecommunications network faults	60
ICTTEN6094A	Verify new software and hardware releases	50
ICTTEN6169A	Produce and evaluate architecture designs for convergent cellular mobile networks	80
ICTTEN6172A	Design and configure an IP-MPLS network with virtual private network tunnelling	80
ICTTEN6206A	Produce an ICT network architecture design	60
ICTTEN6216A	Design and manage internet protocol TV in a service provider network	60
ICTTEN7193A	Plan a transmission network	60
ICTTEN7219A	Manage alignment of systems with product and technology strategy	40
ICTTEN7220A	Translate domain and solution architectures into platform requirements and designs	60
ICTTEN7221A	Manage end to end architectural solutions across multiple domains	60
ICTTEN7222A	Manage solution architecture and impacts in line with organisational processes	60
ICTTEN7223A	Manage application layer solutions	60
ICTTEN7224A	Manage voice, data and internet protocol network solutions	60
ICTTEN7225A	Manage network testing strategies	60
ICTTEN7226A	Manage development and application of testing artefacts	60
ICTTEN7227A	Analyse business specifications to produce technical solutions	60
ICTTEN7228A	Manage project requirements and process implementations	60
ICTTEN7230A	Scope project requirements and process solutions	60
ICTTEN8194A	Investigate the application of cloud networks in telecommunications switching	60
ICTTEN8195A	Evaluate and apply network security	60
ICTTEN8196A	Evaluate and apply digital signal processing to communications system	60
ICTTEN8197A	Produce engineering solutions using numerical computations and simulation	60
ICTWHS2081A	Work safely in a radio frequency electromagnetic radiation environment	40
ICTWHS2170A	Follow work health and safety and environmental policies and procedures	40

Unit Code	Unit Title	Nominal Hours
ICTWOR2141A	Work effectively in a telecommunications technology team	20
ICTWOR3028A	Organise resources	20
ICTWOR3035A	Organise material supply	20
ICTWOR3041A	Schedule resources	30
ICTWOR3093A	Manage spare parts	20
ICTWOR3127A	Supervise worksite activities	30
ICTWOR3231A	Resolve technical enquiries using multiple information systems	40
ICTWOR3232A	Collect and analyse technical information	30
ICTWOR4032A	Undertake a civil site survey	20
ICTWOR4079A	Schedule equipment maintenance	40

## SAMPLE TRAINING PROGRAMS

A range of Sample Training Plans have been provided to demonstrate the flexibility of qualifications contained in the **ICT10 Integrated Telecommunications Training Package**, but are by no means mandatory.

<b>Occupation/ Workfunction</b>	Telecommunications Cabling Worker (new entrant)	
<b>Qualification Title</b>	Certificate II in Telecommunications Cabling	
<b>Qualification Code</b>	ICT20310	
<b>Description</b>	Appropriate for a person installing telecommunications and data cabling and cabling products on customer premises under the auspices of the industry registration scheme.	
<b>Notes</b>	For advice on how to choose electives others than those listed below, please refer to the <b>Integrated Telecommunications Training Package (ICT10)</b> and its Qualifications Packaging Rules or contact the CMM Engineering Industries on (03)9286 9880.	
<b>Unit Code</b>	<b>Unit Title</b>	<b>Hours</b>
<b>Core</b>		
BSBSUS201A	Participate in environmentally sustainable work practices	20
ICTOHS2170A	Follow Occupational Health and Safety and environmental policy and procedures	40
ICTTEN2007A	Use electrical skills in telecommunications work	40
ICTTEN2105A	Install and test an internet protocol device in convergence networks	50
ICTTEN2140A	Use hand and power tools	40
<b>Electives</b>		
ICTSMB4160A	Set up and operate a contractor business	40
ICTCBL2005A	Install customer cable support systems	50
ICTCBL2006A	Place and secure customer cable	45
ICTCBL2068A	Install a telecommunications service to a building	50
ICTCBL2136A	Install, maintain and modify customer premises communications cabling: ACMA Restricted Rule	60
ICTCBL2017A	Alter services to existing cable system	50
ICTCMP2022A	Organise and monitor cabling to ensure compliance with regulatory and industry standards	40
	<b>Total Hours</b>	<b>525</b>

<b>Occupation/ Workfunction</b>	Telecommunications Tradesperson	
<b>Qualification Title</b>	Certificate III in Telecommunications	
<b>Qualification Code</b>	ICT30210	
<b>Description</b>	Appropriate for a person providing technical support for telecommunications equipment and products at either enterprise or customer premises. This role includes providing advice to clients, handling data on technical information and performing basic network administration.	
<b>Notes</b>	For advice on how to choose electives others than those listed below, please refer to the <b>Integrated Telecommunications Training Package (ICT10)</b> and its Qualifications Packaging Rules or contact the CMM Engineering Industries on (03)9286 9880.	
<b>Unit Code</b>	<b>Unit Title</b>	<b>Hours</b>
<b>Core</b>		
BSBSUS301A	Implement and monitor environmentally sustainable work practices	40
ICTBWN3205A	Use optical and radio frequency measuring instruments	40
ICTOHS2170A	Follow Occupational Health and Safety and environmental policy and procedures	40
ICTTEN2007A	Use electrical skills in telecommunications work	40
ICTTEN2140A	Use hand and power tools	40
ICTTEN3056A	Install telecommunications network equipment	60
<b>Electives</b>		
ICTWOR3231A	Resolve technical enquiries using multiple information systems	40
ICTBWN3100A	Work safely with live fibre to test and commission a fibre to the x installation	50
ICTCBL2136A	Install, maintain and modify customer premises communications cabling: ACMA Restricted Rule	60
ICTCBL2137A	Install, maintain and modify customer premises communications cabling: ACMA Open Rule	100
ICTCBL3049A	Install systems and equipment on customer premises	60
ICTTEN4198A	Install, configure and test an internet protocol network	50
	<b>Total Hours</b>	<b>620</b>



<b>Occupation/ Workfunction</b>	Telecommunications Technician	
<b>Qualification Title</b>	Certificate IV in Telecommunications Networks Technology	
<b>Qualification Code</b>	ICT40610	
<b>Description</b>	Appropriate for a person with a broad range of skills in installing, testing and fault finding telecommunications and computer network equipment.	
<b>Notes</b>	For advice on how to choose electives others than those listed below, please refer to the <b>Integrated Telecommunications Training Package (ICT10)</b> and its Qualifications Packaging Rules or contact the CMM Engineering Industries on (03)9286 9880.	
<b>Unit Code</b>	<b>Unit Title</b>	<b>Hours</b>
<b>Core</b>		
ICTBWN3205A	Use optical and radio frequency measuring instruments	40
ICTOHS2170A	Follow Occupational Health and Safety and environmental policy and procedures	40
ICTPMG4152A	Manage the delivery of network infrastructure	60
ICTSUS4185A	Install and test power management software	50
ICTTEN2007A	Use electrical skills in telecommunications work	40
ICTTEN2105A	Install and test an internet protocol device in convergence networks	50
ICTTEN2140A	Use hand and power tools	40
ICTTEN4081A	Locate, diagnose and rectify faults	50
<b>Electives</b>		
BSBSMB405B	Monitor and manage small business operations	45
ICANWK406A	Install, configure and test network security	50
ICANWK417A	Build an enterprise wireless network	80
ICTTEN4198A	Install, configure and test an internet protocol network	50
ICTTEN4210A	Implement and troubleshoot enterprise routers and switches	100
ICTTEN4211A	Design, install and configure an internet network	100
ICTTEN4212A	Apply advanced routing protocols to network design	80
ICTTEN4213A	Configure and troubleshoot advanced network switching	80
ICTTEN4214A	Install and maintain a wide area network	80
	<b>Total Hours</b>	<b>1035</b>

<b>Occupation/ Workfunction</b>	Computer and Network Officer	
<b>Qualification Title</b>	Diploma of Radio Frequency Networks	
<b>Qualification Code</b>	ICT50410	
<b>Description</b>	Appropriate for a person involved with the installation and management of computer and data communications equipment, including planning, testing and fault finding. It involves a high degree of autonomy and may include some supervision of others.	
<b>Notes</b>	For advice on how to choose electives others than those listed below, please refer to the <b>Integrated Telecommunications Training Package (ICT10)</b> and its Qualifications Packaging Rules or contact the CMM Engineering Industries on (03)9286 9880.	
<b>Unit Code</b>	<b>Unit Title</b>	<b>Hours</b>
<b>Core</b>		
BSBPMG510A	Manage projects	60
BSBSUS501A	Develop workplace policy and procedures for sustainability	50
ICTPMG5031A	Prepare a project brief	60
ICTTEN5037A	Design a telecommunications project	70
ICTTEN5217A	Plan a wireless mesh network	60
ICTRFN6171A	Produce and evaluate architecture designs for WiMAX networks	80
<b>Electives</b>		
ICTTEN5058A	Acceptance test new systems and equipment	70
ICTTEN5059A	Commission telecommunications network equipment	70
ICTTEN5060A	Integrate new systems and equipment into the telecommunications network	80
ICTSUS5187A	Implement server virtualisation for a sustainable ICT system	80
	<b>Total Hours</b>	<b>680</b>

<b>Occupation/ Workfunction</b>	Telecommunications Network Manager	
<b>Qualification Title</b>	Advanced Diploma of Telecommunications Network Engineering	
<b>Qualification Code</b>	ICT60210	
<b>Description</b>	Appropriate for a person involved with the design, installation and management of computer and data communications equipment, including planning, testing and fault finding. It involves a high degree of autonomy and may include some supervision of others.	
<b>Notes</b>	For advice on how to choose electives others than those listed below, please refer to the <b>Integrated Telecommunications Training Package (ICT10)</b> and its Qualifications Packaging Rules or contact the CMM Engineering Industries on (03)9286 9880.	
<b>Unit Code</b>	<b>Unit Title</b>	<b>Hours</b>
<b>Core</b>		
ICTPMG6033A	Develop a project management plan	70
ICTPMG6034A	Prepare a detailed design brief	40
ICTSUS6233A	Integrate sustainability in ICT planning and design projects	55
ICTTEN6206A	Produce an ICT network architecture design	60
<b>Electives</b>		
ICTNPL6029A	Plan the development and growth of the telecommunications network	70
ICTNPL6030A	Forecast service demand	60
ICTNPL6046A	Undertake network performance analysis	90
ICTTEN6036A	Undertake qualification testing of new or enhanced equipment and systems	75
ICTTEN6042A	Undertake system administration	75
ICTTEN6043A	Undertake network traffic management	90
	<b>Total Hours</b>	<b>685</b>

<b>Occupation/ Workfunction</b>	Telecommunications Network Technology Specialist	
<b>Qualification Title</b>	Vocational Graduate Certificate in Telecommunications Network Engineering	
<b>Qualification Code</b>	ICT70110	
<b>Description</b>	Appropriate for a person involved with the design, installation and management of telecommunications networks, including planning, testing and fault finding. It involves a high degree of autonomy and may include some supervision of others.	
<b>Notes</b>	For advice on how to choose electives others than those listed below, please refer to the <b>Integrated Telecommunications Training Package (ICT10)</b> and its Qualifications Packaging Rules or contact the CMM Engineering Industries on (03)9286 9880.	
<b>Unit Code</b>	<b>Unit Title</b>	<b>Hours</b>
<b>Core</b>		
ICTPMG7145A	Undertake a telecommunications project	50
ICTPMG8142A	Manage a telecommunications workplace	50
ICTSUS7235A	Use ICT to improve sustainability outcomes	50
<b>Electives</b>		
ICTTEN7193A	Plan a transmission network	60
ICTTEN7224A	Manage voice, data and internet protocol network solutions	60
ICTTEN7227A	Analyse business specifications to produce technical solutions	60
	<b>Total Hours</b>	<b>330</b>

<b>Occupation/ Workfunction</b>	Telecommunications Network Technology Specialist	
<b>Qualification Title</b>	Vocational Graduate Diploma of Telecommunications Network Engineering	
<b>Qualification Code</b>	ICT80110	
<b>Description</b>	Appropriate for a person involved with the design, installation and management of telecommunications networks, including planning, testing and fault finding. It involves a high degree of autonomy and may include some supervision of others.	
<b>Notes</b>	For advice on how to choose electives others than those listed below, please refer to the <b>Integrated Telecommunications Training Package (ICT10)</b> and its Qualifications Packaging Rules or contact the CMM Engineering Industries on (03)9286 9880.	
<b>Unit Code</b>	<b>Unit Title</b>	<b>Hours</b>
<b>Core</b>		
ICTPMG8143A	Manage a telecommunications project	50
ICTTEN8197A	Produce engineering solutions using numerical computations and simulation	60
ICTSUS8237A	Lead applied research in ICT sustainability	60
<b>Electives</b>		
ICTPMG8149A	Evaluate and use telecommunications management networks	80
ICTRFN8180A	Analyse a cellular mobile network system	70
ICTRFN8181A	Analyse a satellite communications system	60
	<b>Total Hours</b>	<b>380</b>

## CONTACTS AND LINKS

<b>Industry Skills Council (ISC)</b>		
EE-Oz Training Standards	This ISC is responsible for developing this <b>ICT10 Integrated Telecommunications Training Package</b> and can be contacted for further information. You can also source copies of the Training Package and support material.	Ground Floor 68 Campbell Street, Surry Hills, NSW, 2010 Phone: (02) 9280 2566 Fax: (02) 9280 1600 Email: <a href="mailto:ee-oz@ee-oz.com.au">ee-oz@ee-oz.com.au</a> Web: <a href="http://www.eeqsba.com.au">http://www.eeqsba.com.au</a>
<b>National Register for VET in Australia</b>		
Training.gov.au (TGA)	TGA is the Australian governments' official National Register of information on Training Packages, qualifications, courses, units of competency and RTOs.	training.gov.au
<b>Australian Government</b>		
The Department of Industry, Innovation, Science, Research and Tertiary Education (DIISRTE)	DIISRTE provides a range of services and resources to assist in delivery of Training Packages. Search the DIISRTE website for links to a range of relevant resources and publications.	<a href="http://www.innovation.gov.au">http://www.innovation.gov.au</a> You may also find Department of Education and Workplace Relations website of use. <a href="http://www.deewr.gov.au">http://www.deewr.gov.au</a>
<b>State Government</b>		
Department of Education and Early Childhood Development Higher Education and Skills Group	Higher Education and Skills Group is responsible for funding and the implementation of Vocational Education and Training (VET) in Victoria, including Apprenticeships and Traineeships.	General information: <a href="http://www.skills.vic.gov.au">www.skills.vic.gov.au</a> Approved Training Schemes: <a href="http://www.skills.vic.gov.au/corporate/publications/brochures-and-fact-sheets/apprenticeships-and-traineeships-in-victoria-industry-guides">http://www.skills.vic.gov.au/corporate/publications/brochures-and-fact-sheets/apprenticeships-and-traineeships-in-victoria-industry-guides</a>
<b>Curriculum Maintenance Manager (CMM)</b>		
Engineering Industries	The CMM service is provided by Executive Officers located within Victorian TAFE institutes on behalf of Higher Education and Skills Group.	George Adda Box Hill Institute of TAFE, Private Bag 2014, Box Hill, Victoria, 3128 Phone: (03) 9286 9880 Fax: (03) 9286 9800 Email: <a href="mailto:g.adda@bhtafe.edu.au">g.adda@bhtafe.edu.au</a> Web: <a href="http://trainingsupport.skills.vic.gov.au/cmminf.cfm">http://trainingsupport.skills.vic.gov.au/cmminf.cfm</a>

<b>State VET Regulatory Authority</b>		
Victorian Registration and Qualifications Authority (VRQA)	The VRQA is a statutory authority responsible for the registration of education and training providers in Victoria to ensure the delivery of quality education and training.	<a href="http://www.vrqa.vic.gov.au">www.vrqa.vic.gov.au</a> Phone: 03 9637 2806
<b>National VET Regulatory Authority</b>		
Australian Skills Quality Authority (ASQA)	ASQA is the national regulator for Australia's VET sector vocational education and training sector.  ASQA regulates courses and training providers to ensure nationally approved quality standards are met.	<a href="http://www.asqa.gov.au">www.asqa.gov.au</a> Info line: 1300 701 801
<b>Industry Regulatory Body</b>		
Australian Communications Authority (ACA)	The industry Regulatory body can provide advice on licensing, legislative or regulatory requirements which may impact on the delivery of training or the issuance of qualifications in this Training Package.	Southern Australia Regional Office 15th Floor 200 Queen Street Melbourne, 8010  Phone: (03) 9963 6988 Fax: (03) 9963 6989 Email: <a href="mailto:saro@aca.gov.au">saro@aca.gov.au</a> Web site: <a href="http://www.aca.gov.au">http://www.aca.gov.au</a>
<b>WorkSafe</b>		
WorkSafe Victoria	WorkSafe needs to provide written verification before High Risk Work Units can be added to an RTO's scope of registration.	<a href="http://www.worksafe.vic.gov.au">www.worksafe.vic.gov.au</a> Info line: 1800 136 089

## GLOSSARY

<b>Code</b>	Nationally endorsed Training Package qualification code.
<b>Title</b>	Nationally endorsed Training Package qualification title.
<b>Unit Code</b>	Nationally endorsed Training Package unit code.
<b>Unit Title</b>	Nationally endorsed Training Package unit title.
<b>Nominal Hours</b>	The anticipated hours of supervised learning or training deemed necessary to conduct training and assessment activities associated with the program of study. These hours are determined by the Victorian State Training Authority. Nominal hours may vary for a qualification depending on the units of competency selected.
<b>Scope of Registration</b>	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.