



Australian Government

ICTDRE304 Design communications wiring systems for customer premises

Release: 1

ICTDRE304 Design communications wiring systems for customer premises

Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 2.0.

Application

This unit describes the skills and knowledge required to design a smart cable wiring system on a customer premises.

It applies to individuals employed in a technical capacity for the emerging information technologies and applications in domestic and small to medium enterprises.

Work functions in the occupational areas where this unit may be used are subject to regulatory requirements. Refer to the ICT Implementation Guide Companion Volume or the relevant regulator for details of licensing, legislative or certification requirements.

Pre-requisite Unit

ICTCBL237 Install, maintain and modify customer premises communications cabling:
ACMA Open Rule

Unit Sector

Telecommunications – Digital Reception Technology

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to design a wiring system for premises	1.1 Consult customer and visit worksite to determine immediate and future functional needs of the cabling system 1.2 Identify and document immediate and future location of cabling system customer interface elements, and seek confirmation from appropriate persons

ELEMENT	PERFORMANCE CRITERIA
	1.3 Review technology used to deliver functional needs 1.4 Identify specific service provider requirements and requirements of applicable standards, codes and regulations
2. Design a wiring system for premises	2.1 Follow work health and safety (WHS) procedures when carrying out work 2.2 Transfer functional needs of customer to architectural plans 2.3 Determine size and location of home distributor, security system, carrier and carriage service facilities, antennas and switch boards 2.4 Identify cable pathways and cable support systems 2.5 Select appropriate cable types to meet functional needs 2.6 Develop cable identification method to aid installation
3. Document cable wiring system design	3.1 Document customer interface elements room by room 3.2 Document requirements for home distributor, security system, carrier and carriage service facilities, antennas and switch boards 3.3 Document testing and commissioning requirements 3.4 Specify user documentation required after completion of installation 3.5 Provide customer quote that includes a bill of materials and a project schedule

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.3, 1.4, 2.2	- Reads and interprets plans, specifications and other documentation from a variety of sources and consolidates information to determine requirements - Analyses and consolidates test results and data from a range of sources, against defined criteria and requirements
Writing	1.1, 1.2, 2.2, 2.6,	Develops procedural material for a specific audience using clear and detailed language to

	3.1-3.4	convey explicit information, requirements and recommendations • Produces plans and specifications to industry standards conveying design function and operation
Oral Communication	1.1, 1.2	• Effectively participates in verbal exchanges using collaborative and inclusive techniques including active listening and questioning and reading of verbal and non-verbal signals to convey and clarify information
Numeracy	2.2, 2.3, 3.5	• Makes calculations appropriate for measuring and estimating materials and costing • Performs mathematical calculations to establish scale and dimensions of design plans
Navigate the world of work	1.4, 2.1	• Accepts responsibility and ownership for tasks and makes decisions on completion parameters and need for coordination with others • Explores and implements, where identified, implicit expectations of policies, procedures and regulatory requirements
Interact with others	1.1, 1.2	• Identifies and takes steps to follow accepted communication practices and protocols • Recognises common cultural and other differences of people in the work context and makes adjustments in addressing differences
Get the work done	2.2-2.6, 3.4	• Takes responsibility for planning, sequencing and prioritising tasks and own workload for efficiency, and effective outcomes • Makes routine decisions and implements standard procedures for routine tasks, using formal decision-making processes for more complex and non-routine situations • Identifies ideas for applications and considers them in current contexts

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTDRE304 Design communications wiring systems for	ICTDRE3248A Design communications	Updated to meet standards for Training	Equivalent unit

Code and title current version	Code and title previous version	Comments	Equivalence status
customer premises	wiring systems for customer premises	Packages	

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2>

Assessment Requirements for ICTDRE304 Design communications wiring systems for customer premises

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Performance Evidence

Evidence of ability to:

- capture customer functional needs for wiring system
- apply industry standards, regulations and codes of practice when designing a wiring system for a customer
- develop a detailed design in compliance with industry practices, including signal losses and/or expected measurements to be achieved at wall plates
- document the design, including a bill of materials, schedule of work and associated costs and submit to customer.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- identify and describe cabling standards, regulations and codes applicable to cable design
- determine building regulations that apply to installation of cabling systems
- identify and describe codes of practice and Australian Communications and Media Authority (ACMA) standards for home wiring
- determine carrier network delivery systems used in single dwelling and multi-dwelling units for:
 - fibre
 - fixed wireless
 - satellite
 - twisted copper pair
 - subscription TV
- evaluate cabling requirements of home technology applications taking into account:
 - the user needs including age and assisted living conditions

- communications
- digital home health
- energy management
- entertainment
- intelligent light and power
- security and safety
- identify and describe testing and commissioning methods and determine performance requirements for home technologies
- describe customer interface elements commonly considered when designing a wiring system
- identify common service providers clients may specify
- consider safety implications of the design for users
- identify design parameters for cable selection and support system of a wiring system
- identify documentation required when submitting a design to a customer.

Assessment Conditions

Gather evidence to demonstrate consistent performance in conditions that are safe and replicate the workplace. Noise levels, production flow, interruptions and time variances should be typical of those experienced in the Telecommunications – Digital Reception Technology industry and include access to:

- a contemporary dwelling design
- a specification of a customer's functional requirements
- current standards, codes of practice and regulations.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

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