Australian Government

ICT41115 Certificate IV in Telecommunications Network Design

Release: 1

ICT41115 Certificate IV in Telecommunications Network Design

Modification History

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

Qualification Description

This qualification reflects the role of a technician with a range of telecommunications skills and extensive knowledge of the access, building and core networks and client capabilities of the service provider. Graduates can design the customer access network, design the building network, design the core network for the service provider and asset owner and design carrier equipment infrastructure.

This qualification prepares an individual for entry into design for network additions and implementations to accommodate network growth and new technologies within the industry. These skills are required for the telecommunications infrastructure network design.

Licensing/Regulatory Information

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 licencing, legislative or certification requirements.

Entry Requirements

Nil

Packaging Rules

Total number of units = 16

8 core units plus

8 electives units

The elective units consist of:

- 1 elective unit from Group A Workplace elective units, plus
- 7 elective units from Group B General elective units with no more than 2 at AQF Level 3 or below.

A maximum of 2 units from the Group B general elective units may be substituted with units from any endorsed Training Package or accredited course at Australian Qualifications Framework (AQF) Level 4 or 5. One of the 2 Group B general electives units may be substituted with a Group A workplace elective unit where required by a specific job role.

Elective units must be relevant to the work environment and the qualification, maintain the integrity of the AQF alignment and contribute to a valid, industry-supported vocational outcome.

Units selected from other Training Packages or accredited courses must not duplicate units selected from or available within the ICT Information and Communications Technology Training Package.

Core Units

ICTICT408 Create technical documentation

ICTNPL409 Apply knowledge of regulation and legislation for the telecommunications industry

ICTTEN426 Design network projects

ICTTEN427 Conduct site surveys to identify carrier installation requirements

ICTTEN428 Prepare design drawings and specifications for telecommunications installations

ICTTEN429 Estimate and quote for carrier telecommunications equipment installations

ICTWHS204 Follow work health and safety and environmental policies and procedures

ICTWOR201 Work effectively in telecommunications technology

Elective Units

Group A - Workplace elective units

BSBLDR402 Lead effective workplace relationships

BSBMGT401 Show leadership in the workplace

BSBSMB407 Manage a small team

ICTICT401 Determine and confirm client business requirements

ICTSMB401 Set up and operate a contractor business

ICTSMB402 Operate a contractor business with employees

Group B – General elective units

Network planning

ICTNPL401 Apply business acumen to network planning

ICTNPL402 Plan the deployment of access network architectures

ICTNPL403 Evaluate the capability of access networks

ICTNPL404 Evaluate the planning requirements for provisioning a telecommunications building facility

ICTNPL405 Develop provisioning of telecommunications building works project

ICTNPL406 Evaluate core network architectures

ICTNPL407 Plan the deployment of core network

ICTNPL408 Produce planning specifications for end-to-end service delivery

ICTNPL410 Plan the telecommunications access network for an estate

ICTNPL411 Apply compliance requirements to telecommunications work

Design

BSBDES401 Generate design solutions

BSBDES402 Interpret and respond to a design brief

BSBDES403 Develop and extend design skills and practice

BSBDES501 Implement design solutions

BSBDES502 Establish, negotiate and refine a design brief

Radio frequency networks

ICTRFN401 Conduct radio frequency measurements

ICTRFN402 Select an antenna system for radio communications

ICTRFN404 Undertake radio communications signals monitoring

ICTRFN406 Maintain hybrid fibre coaxial broadband cable network

ICTRFN502 Test and measure cellular phone and network equipment performance

Optical networks

ICTOPN401 Install and test a dense wavelength division multiplexing system

ICTOPN403 Prepare activity plans and specifications for a fibre to the x installation

Project management

ICTPMG402 Schedule installation of customer premises equipment

ICTPMG403 Manage the delivery of network infrastructure

ICTPMG503 Prepare a project brief

Sustainability

BSBSUS401 Implement and monitor environmentally sustainable work practices

Workplace effectiveness

ICTWOR401 Undertake a civil site survey

Telecommunications network engineering

ICTTEN401 Identify requirements for customer telecommunications equipment

ICTTEN402 Estimate and quote for customer telecommunications equipment installation

ICTTEN403 Assign a transmission path

ICTTEN406 Effect changes to existing customer premises equipment systems and equipment

ICTTEN407 Cut over customer premises equipment major upgrades

ICTTEN416 Install, configure and test an internet protocol network

ICTTEN417 Install, configure and test a router

ICTTEN420 Design, install and configure an internetwork

ICTTEN421 Apply advanced routing protocols to network design

ICTTEN425 Design, install and configure a customer smart technology network

ICTTEN430 Design infrastructure for telecommunications network installations

ICTTEN431 Design dense wavelength digital multiplexing installations

ICT use

ICTICT405 Develop detailed technical design

General

CPCCOHS1001A Work safely in the construction industry

ICTBWN304 Work safely with live fibre to test and commission a fibre to the x installation*

*Note the following prerequisite unit requirements:

Unit in this qualification	Prerequisite unit
ICTBWN304 Work safely with live fibre to test and commission a fibre to the x installation	ICTWHS204 Follow work health and safety and environmental policy and procedures ICTBWN305 Use optical and radio frequency measuring instruments

Qualification Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICT41115 Certificate IV in Telecommunications Network Design	ICT40713 Certificate IV in Telecommunications Network Design ICT40510 Certificate IV in Telecommunications Network Planning	Updated to meet Standards for Training Packages. Changed core units.	No equivalent qualification

Links

Companion Volume implementation guides are found in VETNet - https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2