



Australian Government

ICT50513 Diploma of Telecommunications Planning and Design

Release 1

ICT50513 Diploma of Telecommunications Planning and Design

Modification History

Release	Comments
Release 2	This version first released with <i>ICT10 Integrated Telecommunications Training Package Version 3.0</i> . Additional elective units included.
Release 1	This version first released with <i>ICT10 Integrated Telecommunications Training Package Version 1.0</i> .

Description

This qualification reflects the role of an individual involving a technical specialist with a range of telecommunications skills and extensive knowledge of the core and access network capabilities of the service provider who can:

- plan the development of the customer access network infrastructure
- plan the development of the core network for the service provider and asset owner
- plan network capacity for new technology in products and services
- analyse demand data and evaluate network growth and impact on the network.

This qualification prepares individuals for the industry in planning and design for network additions and implementations to accommodate network growth and new technologies.

This is required for the national broadband infrastructure network planning.

Job Roles

Job roles and titles vary across different sectors of the industry. Possible job titles relevant to this qualification include:

- service provider network planner
- service provider network designer
- telecommunications planning specialist.
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Prerequisite units

There are no prerequisite requirements for individual units of competency.

Pathways Information

Pathways into the qualification

Preferred pathways for candidates considering this qualification include:

- after achieving ICT40510 Certificate IV in Telecommunications Network Planning or another relevant accredited Training Package qualification or relevant accredited course
- or
- providing evidence of competency in the core units required for ICT40510 Certificate IV in Telecommunications Network Planning or equivalent units with vocational experience
- or
- with substantial vocational experience but without a formal qualification.

Pathways from the qualification

For candidates seeking to develop more specialised technical skills and knowledge, the electives selected in ICT50513 Diploma of Telecommunications Planning and Design should be considered with a view to meeting pathways into ICT60110 Advanced Diploma of Optical Networks or ICT60210 Advanced Diploma of Telecommunications Network Engineering or a range of other Advanced Diploma qualifications or university programs.

Licensing/Regulatory Information

All training programs must be conducted with reference to the regulatory regime of the prevailing statutory authority (currently ACMA).

Entry Requirements

There are no entry requirements for this qualification.

Employability Skills Summary

Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • determining options to rectify faults and discussing them with customer so that necessary action is determined • documenting test methods and results • making a complete check of installation against installation plans • reading, interpreting and using equipment/system manuals and specifications and relevant enterprise policy and documentation • conveying information to clients, colleagues and other site personnel • providing feedback to customers on operating the equipment
Teamwork	<ul style="list-style-type: none"> • identifying members and roles of team • identifying and contributing to team tasks and goals • recognising and responding positively to conflict within team • working with team members to work with clients and install equipment • relating personal role to the industry • participating in a team structure by identifying team members, tasks and goals and recognising and responding positively to conflict • applying interpersonal skills with clients, employer, supervisors, work associates, team members and other contractors • giving and receiving feedback to assist in meeting team and organisational goals
Problem solving	<ul style="list-style-type: none"> • ranking causes of problems, working from system-wide impacts to specific impacts • diagnosing network security problems to secure the network • identifying barriers to installation and developing strategies to overcome them within time and budget restrictions • identifying faults or optimisation options • rectifying faults and adjusting system to optimal operation • determining cable routes taking into account building services, safety, industry codes and practices, and customer requirements • following up promptly on difficulties and known problem areas

Employability Skill	Industry/enterprise requirements for this qualification include:
Initiative and enterprise	<ul style="list-style-type: none"> • prioritising urgent requests and acting according to organisational guidelines • identifying barriers to installation and developing strategies to overcome them within time and budget restrictions • adapting plan to suit specific features of site • identifying issues and possible solutions within established guidelines • interacting with enterprise personnel, customers and other contractors keeping a customer focus and considering customer needs
Planning and organising	<ul style="list-style-type: none"> • identifying realistic short and long-term career objectives • planning and provision to meet key dates and milestones • gathering data for the installation of systems and equipment • planning the installation of fibre cable, taking into account technical, scheduling and financial considerations • interpreting design and relating to site characteristics • prioritising work according to organisation guidelines • running a test of network security arrangements
Self-management	<ul style="list-style-type: none"> • identifying realistic short and long-term career objectives • identifying work to be completed • complying with all related WHS requirements and work practices • developing installation plans to ensure minimal disruption to the workplace • checking that tools and equipment are in safe working order and adjusted to manufacturer specification • relating own role to the industry and establishing own work schedule • using strategies to present a professional image to customers • interpreting and applying relevant regulations and standards
Learning	<ul style="list-style-type: none"> • relating current or intended role to career objectives in a positive manner • giving and receiving feedback to assist in meeting team and organisational goals • making clients aware of opportunities that exist for system upgrades, additional services and training • seeking assistance from team members when necessary • providing suitable training and assessment opportunities for work team members • providing training to customers on system, product, product

Employability Skill	Industry/enterprise requirements for this qualification include:
	features and facilities
Technology	<ul style="list-style-type: none">• checking that tools and equipment are in safe working order and adjusted to manufacturer specifications• converging many integrated and emerging technologies• testing and measuring of broadband network infrastructure• installing and operating telecommunications equipment and products• installing and operating equipment and products• identifying, replacing or repairing faulty parts and equipment• undertaking relevant acceptance tests and analysing results against specified performance criteria

Packaging Rules

Total number of units = 10

6 core units, plus

4 elective units

Elective units must be relevant to the work outcome, local industry requirements and the qualification level.

A maximum of two elective units may be substituted with two units of competency from any endorsed Training Package or accredited course at Diploma or Advanced Diploma level.

Units selected from other Training Packages or accredited courses must not duplicate units selected from or available within the ICT10 Integrated Telecommunications Training Package.

CORE UNITS

BSBPMG521A Manage project integration

BSBSUS501A Develop workplace policy and procedures for sustainability

ICTNPL5071A Develop planning strategies for core network design

ICTNPL5096A Develop planning strategies for access network design

ICTNPL5101A Apply service measures and demand forecasting to products and services planning

ICTNPL5154A Develop planning strategies for building environment design

ELECTIVE UNITS

Education

ICTEDU5025A Develop and deliver training associated with new and modified products

Financial management

BSBFIM501A Manage budgets and financial plans

FNSORG506A Prepare financial forecasts and projections

Product skills and advice

ICTPRO5026A Develop training, marketing and sales resources for telecommunications products

Project management

ICTPMG5031A Prepare a project brief

ICTPMG5039A Prepare project specifications

ICTPMG6033A Develop a project management plan

Network planning

ICTNPL6029A Plan the development and growth of the telecommunications network

Sustainability

ICTSUS5187A Implement server virtualisation for a sustainable ICT system

Telecommunications engineering networks

ICTTEN4241A Design network projects

ICTTEN4242A Conduct site surveys to identify carrier installation requirements

ICTTEN4243A Prepare design drawings and specifications for telecommunications installations

ICTTEN4244A Estimate and quote for carrier telecommunications equipment installations

ICTTEN5024A Provide consultancy and technical support in the customer premises equipment sector

(Emerging technologies)

ICTTEN5217A Plan a wireless mesh network

Selecting electives for different outcomes

The context of this qualification varies and this must guide the selection of elective units.

The following examples are designed to assist in the selection of appropriate electives for particular outcomes at this level but they are in no way prescriptive.

Commercial business

Core units plus:

- BSBFIM501A Manage budgets and financial plans
- FNSORG506A Prepare financial forecasts and projections.
- two additional units from elective units as appropriate to the specific job role

Project management

Core units plus:

- BSBFIM501A Manage budgets and financial plans
- ICTPMG5039A Prepare project specifications
- two additional units from elective units as appropriate to the specific job role

Customer focus

Core units plus:

ICTEDU5025A Develop and deliver training associated with new and modified products

ICTPRO5026A Develop training, marketing and sales resources for telecommunications products

two additional units from elective units as appropriate to the specific job role