



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **ICT40510 Certificate IV in Telecommunications Network Planning**

**Release: 1**

## ICT40510 Certificate IV in Telecommunications Network Planning

### Modification History

Not Applicable

### Description

#### Descriptor

This qualification reflects the role of a technician 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 asst 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 an individual for entry in planning and design for network additions and implementations to accommodate network growth and new technologies within the industry. 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:

- access network planner
- telecommunications technician planner.
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#### Prerequisite requirements

There are no prerequisite requirements for individual units of competency.

## Pathways Information

### Qualification Pathways

#### Pathways into the qualification

Preferred pathways for candidates considering this qualification include:

- after achieving a Certificate III qualification from this or another accredited Training Package or accredited course

or

- with substantial vocational experience but without a formal qualification.

### Pathways from the qualification

After achieving the ICT40510 Certificate IV in Telecommunications Network Planning, candidates may undertake the ICT50510 Diploma of Telecommunications Planning and Design, a qualification for those seeking to develop more specialised technical skills and knowledge, or a range of other Diploma qualifications.

## Licensing/Regulatory Information

### Licensing, legislative, regulatory or certification considerations

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

## Entry Requirements

### Entry requirements

There are no entry requirements for this qualification.

## Employability Skills Summary

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
Communication	<ul style="list-style-type: none"> <li>• liaising with market research to determine existing capacity and capability of network</li> <li>• liaising with survey researchers to determine potential network growth</li> <li>• documenting survey methods and results</li> <li>• reading, interpreting and using statistical network reports</li> <li>• conveying information to clients, colleagues and other site personnel</li> </ul>

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
	<ul style="list-style-type: none"> <li>• providing feedback to customers on market research surveys</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• identifying members and roles of team</li> <li>• identifying and contributing to team tasks and goals</li> <li>• recognising and responding positively to conflict within team</li> <li>• working with team members to work with clients and install equipment</li> <li>• relating personal role to the industry</li> <li>• participating in a team structure by identifying team members, tasks and goals and recognising and responding positively to conflict</li> <li>• applying interpersonal skills with clients, employer, supervisors, work associates, team members and other contractors</li> <li>• giving and receiving feedback to assist in meeting team and organisation goals</li> </ul>
Problem solving	<ul style="list-style-type: none"> <li>• ranking causes of problems, working from system-wide impacts to specific impacts</li> <li>• diagnosing network security problems to secure the network</li> <li>• identifying barriers to installation and developing strategies to overcome them within time and budget restrictions</li> <li>• identifying planning scenarios or optimisation options</li> <li>• determining transmission routes taking into account building services, safety, industry codes and practices, and customer requirements</li> <li>• following up promptly on difficulties and known problem areas</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• prioritising urgent requests and acting according to organisational guidelines</li> <li>• identifying barriers to installation and developing strategies to overcome them within time and budget restrictions</li> <li>• adapting plan to suit specific features of site</li> <li>• identifying issues and possible solutions within established guidelines</li> <li>• interacting with enterprise personnel, customers and other contractors keeping a customer focus and considering customer needs</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• identifying realistic short and long-term career objectives</li> <li>• planning and provision to meet key dates and milestones</li> <li>• gathering data for the installation of systems and equipment</li> <li>• planning the installation of fibre cable, taking into account technical, scheduling and financial considerations</li> <li>• interpreting design and relating to site characteristics</li> <li>• prioritising work according to organisation guidelines</li> </ul>

<b>EMPLOYABILITY SKILLS QUALIFICATION SUMMARY</b>	
	<ul style="list-style-type: none"> <li>• running a test of network security arrangements</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• identifying realistic short and long-term career objectives</li> <li>• identifying work to be completed</li> <li>• complying with all related OHS requirements and work practices</li> <li>• developing installation plans to ensure minimal disruption to the workplace</li> <li>• checking that tools and equipment are in safe working order and adjusted to manufacturer specification</li> <li>• relating own role to the industry and establishing own work schedule</li> <li>• using strategies to present a professional image to customers</li> <li>• interpreting and applying relevant regulations and standards</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• relating current or intended role to career objectives in a positive manner</li> <li>• giving and receiving feedback to assist in meeting team and organisation goals</li> <li>• making clients aware of opportunities that exist for system upgrades, additional services and training</li> <li>• seeking assistance from team members when necessary</li> <li>• providing suitable training and assessment opportunities for work team members</li> <li>• providing training to customers on system, product, product features and facilities</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• checking that tools and equipment are in safe working order and adjusted to manufacturer specifications</li> <li>• converging many integrated and emerging technologies</li> <li>• testing and measuring of broadband network infrastructure</li> <li>• installing and operating telecommunications equipment and products</li> <li>• installing and operating equipment and products</li> <li>• identifying, replacing or repairing faulty parts and equipment</li> <li>• undertaking relevant acceptance tests and analysing results against specified performance criteria</li> </ul>

## Packaging Rules

Packaging Rules

**Packaging Rules**

**Total number of units = 11**

**6 core units, plus**

**1 elective unit from Group A workplace units, plus**

**2 elective units from Group B specialist units, plus**

**2 elective units from Group C general units**

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

A maximum of two units from Group C general elective units may be substituted with two units of competency from any endorsed Training Package or accredited course at Certificate IV or Diploma level. One of those two units from Group C general elective units may be substituted from Group A workplace elective units where required by a specific job role.

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**

BSBINM302A Utilise a knowledge management system

ICTNPL4107A Apply business acumen to network planning

ICTNPL4114A Produce planning specifications for end to end service delivery

ICTNPL4150A Apply knowledge of regulation and legislation for the telecommunications industry

ICTPMG4152A Manage the delivery of network infrastructure

ICTSUS4185A Install and test power management software

**ELECTIVE UNITS****Group A - Workplace elective units**

BSBMGT401A Show leadership in the workplace

BSBWOR401A Establish effective workplace relationships

**Packaging Rules****Group B - Specialist elective units**

ICTNPL4108A Plan the deployment of access network architectures

ICTNPL4109A Evaluate the capability of access networks

ICTNPL4110A Evaluate the planning requirements for provisioning a telecommunications building facility

ICTNPL4111A Develop provisioning of telecommunications building works project

ICTNPL4112A Evaluate core network architectures

ICTNPL4113A Plan the deployment of core network

ICTNPL4151A Plan the telecommunications access network for an estate

**Group C - General Elective Units****Project management**

BSBSMB407A Manage a small team

ICTPMG4048A Schedule installation of customer premises equipment

**Telecommunications engineering networks**

ICTTEN4040A Assign a transmission path

ICTTEN4085A Monitor, analyse and action telecommunications network alarms

***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.

**Access Network**

Core units plus one Group A workplace elective unit plus:

- ICTNPL4108A Plan the deployment of access network architectures
- ICTNPL4109A Evaluate the capability of access networks
- two additional units from Group C general elective units, with a maximum of one of those additional units from Group A workplace elective units as appropriate to the specific job role.

**Building Infrastructure**

**Packaging Rules**

Core units plus one workplace unit plus:

- ICTNPL4110A Evaluate the planning requirements for provisioning a telecommunications building facility
- ICTNPL4111A Develop provisioning of telecommunications building works project
- two additional units from Group C general elective units, with a maximum of one of those additional units from Group A workplace elective units as appropriate to the specific job role.

**Core Network**

Core units plus one Group A workplace elective unit plus:

- ICTNPL4112A Evaluate Core Network architectures
- ICTNPL4113A Plan the deployment of Core Network
- two additional units from Group C general elective units, with a maximum of one of those additional units from Group A workplace elective units as appropriate to the specific job role.