



**Australian Government**

# **ICA50511 Diploma of Database Design and Development**

**Release 2**

# ICA50511 Diploma of Database Design and Development

## Modification History

Release	Comments
Release 2	<i>This version first released with ICA11 Information and Communications Technology Training Package Version 2.</i> Addition of new unit of competency to electives.
Release 1	<i>This Qualification first released with ICA11 Information and Communications Technology Training Package version 1.0</i>

## Description

This qualification provides skills and knowledge for an individual to be effective in the design and development of ICT database systems. The qualification builds on a base core of design and development competencies with elective choices covering business needs analysis, quality assurance and project management.

### Job roles

Possible job titles relevant to this qualification include:

- assistant database designer
- assistant database developer
- assistant database specialist.

## Pathways Information

### *Pathways into the qualification*

Preferred pathways for candidates considering this qualification include:

- after achieving ICA40211 Certificate IV in Information Technology Support, or other relevant qualifications or units equivalent to the core of ICA40211

OR

- with demonstrated vocational experience in a range of database design and development areas.

### *Pathways from the qualification*

ICA11 Advanced Diploma or Vocational Graduate Certificate qualifications or other higher education sector qualifications.

## **Licensing/Regulatory Information**

There is no link between this qualification and licensing, legislative or regulatory requirements. However users should confirm requirements with the relevant federal, state or territory authority. There may be some alignment with industry standard certification competencies.

## **Entry Requirements**

There are no entry requirements for this qualification.

## Employability Skills Summary

The following table contains a summary of the employability skills required by industry for this qualification. The employability skills facets described here are broad industry requirements that may vary depending on qualification packaging options.

Employability skill	Industry/enterprise requirements for this qualification
Communication	<ul style="list-style-type: none"> <li>• articulating complex scenarios in a clear and concise manner relevant to all levels of the organisation</li> <li>• documenting information related to database requirements and solutions</li> <li>• writing and presenting complex technical reports, with supporting documentation</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• coordinating group and presenting on key project activities</li> <li>• reviewing the database with team members and key stakeholders</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• developing controls and contingencies to alleviate security threats</li> <li>• taking corrective action on system implementation breakdowns</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• anticipating potential problems and devising solutions</li> <li>• conducting research to determine client business requirements</li> <li>• integrating sustainability in ICT planning and design projects</li> <li>• matching client IT requirements with the strategic direction of the enterprise</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• developing project plans</li> <li>• planning for quality controls and contingencies when designing database system</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• managing own time and work priorities against project plan and schedule</li> <li>• taking accountability and responsibility for self and others in achieving work outcomes</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• keeping up-to-date with current industry-accepted database, web and programming products</li> <li>• participating in learning and development opportunities</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• coordinating implementation of technology needs</li> <li>• assessing the technological capability of various products against architecture requirements and making recommendations on the best IT solution</li> <li>• examining current and future ICT capability against a client's future requirements and modelling preferred systems solutions</li> </ul>

## Packaging Rules

**Total number of units = 20**

**9 core units** plus

**11 elective units, of which:**

- **7 units must be** from the elective units listed below
- the remaining units may be from the elective units below or from elsewhere in ICA11 or any other Training Package or accredited course at Certificate IV, **Diploma or Advanced Diploma level.**

The elective units chosen must be relevant to the work outcome and meet local industry needs.

### Core units

ICADBS502A Design a database

ICAICT418A Contribute to copyright, ethics and privacy in an IT environment

ICAICT502A Develop detailed component specifications from project specifications

ICANWK514A Model preferred system solutions

ICAPRG425A Use structured query language

ICAPRG509A Build using rapid application development

ICASAD501A Model data objects

ICASAD502A Model data processes

ICTSUS6233A Integrate sustainability in ICT planning and design projects

### Elective units

ICADBS504A Integrate database with a website

ICAICT423A Select cloud storage strategies

ICAICT509A Gather data to identify business requirements

ICAICT511A Match IT needs with the strategic direction of the enterprise

ICAICT514A Identify and manage the implementation of current industry-specific technologies

ICAPMG501A Manage IT projects

ICAPMG606A Manage IT project quality

ICAPRG501A Apply advanced object-oriented language skills

ICAPRG503A Debug and monitor applications

ICAPRG504A Deploy an application to a production environment

ICAPRG505A Build advanced user interface

ICAPRG507A Implement security for applications

ICAPRG511A Monitor and support data conversion to new IT system

ICAPRG514A Prepare for software development using rapid application development

ICAPRG515A Review developed software

ICAPRG523A Apply advanced programming skills in another language

ICASAD506A Produce a feasibility report

ICASAS502A Establish and maintain client user liaison

ICASAS505A Review and update disaster recovery and contingency plans

ICAWEB502A Create dynamic web pages

ICTTEN5204A Produce technical solutions from business specifications

