Australian Government

Department of Education, Employment and Workplace Relations

ICA50105 Diploma of Information Technology (General)

Release: 1

ISC INDUSTRY SKILLS COUNCILS
Creating Australia's Future

ICA50105 Diploma of Information Technology (General)

Modification History

Not Applicable

Description

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This qualification provides the skills and knowledge for an individual to be competent in a range of ICT fields at Diploma level. The qualification has a strong core ICT base sharing the same core competencies as several other ICT qualifications of the same level. Depending on the stream chosen, this qualification offers pathways into a number of ICT qualifications at Advanced Diploma level.

It is a broad and flexible qualification with multiple internal pathways and no direct equivalent in ICA99 Version 3. However, where the combination of core and elective units selected matches another ICA05 Diploma of IT equivalent, the latter award must be issued in preference to this 'general' qualification. Note: This alternative qualification must be on the RTO's scope of registration to issue the latter award. This will ensure that there is clear identification of the work-related area of specialisation that has been undertaken.

There are 8 streams provided for in this qualification:

- E-business and Management
- Client Support
- Communication and Documentation
- Hardware and Operating Systems
- Networks
- Software
- Multimedia and Websites
- Database

Job Roles

This qualification is designed to be very flexible with a wide selection of unit choices and options. It is intended that the qualification provides those skills and knowledge required by an individual to operate effectively in high level ICT technical support roles within organisations.

It is not feasible to identify one specific vocational outcome for this qualification because of the 'general' nature of this qualification and the diverse array of unit choices and streams available. The judicious choice of stream and electives units would provide for more specialist vocational outcomes associated with the streams. Job titles listed for other ICA05 Diploma qualifications that in part match the above streams could provide some guidance.

Prerequisite Requirements

A number of units within this qualification have prerequisites. These are detailed as follows:

Code and title	Prerequisite units required
ICAA5049B　Develop high-level object-oriented class specifications	ICAA4233B　Determine and apply appropriate development methodologies
ICAA5141C　Design and develop dynamic websites to meet technical requirements	ICAA4142C　Design a website to meet technical requirements #
ICAA5147B　Determine suitability of database functionality and scalability	ICAA4041C　Determine and confirm client business expectations and needs

Code and title	Prerequisite units required
ICAA5151B Gather data to identify business requirements	ICAA4041C Determine and confirm client business expectations and needs
	ICAA4233B Determine and apply appropriate development methodologies
ICAA5158B Translate business needs into technical requirements	ICAA4233B Determine and apply appropriate development methodologies
ICAA5245A Evaluate RFID systems	ICAA4041C Determine and confirm client business expectations and needs
	ICAD4217B Create technical documentation
ICAA5246A Design an RFID implementation	ICAA4041C Determine and confirm client business expectations and needs
	ICAD4217B Create technical documentation
ICAB4229B Apply intermediate programming skills in another language	ICAB4222B Apply introductory programming skills in another language
ICAB5159C Build a security shield for a network	ICAS5192B Configure an internet gateway [#]
ICAB5160C Build and configure a server	ICAA5140C Design a server [#]
ICAB5228B Maintain functionality of legacy code programs	ICAB4222B Apply introductory programming skills in another language [#]
ICAB5230B Maintain custom software	ICAB4222B Apply introductory programming skills in another language [#]
ICAD5092B Update and document operational procedures	ICAD3218B Create user documentation
	ICAD4217B Create technical documentation
ICAI5173B Install and configure a single-segment local area network switch	ICAI3101B Install and manage network protocols
	ICAI2015B Install software applications
ICAI5176C Install and configure router	ICAI3101B Install and manage network protocols
ICAI5250A Develop, implement and evaluate	ICAB4225B Automate processes

Code and title	Prerequisite units required
system and application security	
ICAI5252A Develop, implement and evaluate an incident response plan	ICAP4037B Contribute to the development of a strategy plan #
	ICAI5152B Implement risk management processes
ICAI5253A Implement and evaluate systems for regulatory and standards compliance	ICAA4041C Determine and confirm client business expectations and needs
ICAP5036B Determine appropriate IT strategies and solutions	ICAP4037B Contribute to the development of a strategy plan #
ICAP5039B Match IT needs with the strategic direction of the enterprise	ICAA4041C Determine and confirm client business expectations and needs
ICAS5103B Establish and maintain client user liaison during support activity	ICAW4027B Relate to clients on a business level
ICAS5104B Determine maintenance strategy	ICAT3025B Run standard diagnostic tests
ICAS5105B Coordinate change requests	ICAP4037B Contribute to the development of a strategy plan #
ICAT5083B Develop and conduct client acceptance test	ICAW4027B Relate to clients on a business level

This unit has prerequisite requirements.   Section 1.6 provides further details.

Pathways Information

Not Applicable

Licensing/Regulatory Information

Not Applicable

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Entry Requirements

Entry Requirements

The following units contain the basic fundamentals of ICT knowledge and skills for all qualifications at Certificate III in IT and above. These units or demonstrated equivalence are required for entry into this qualification:

BSBCMN106A   Follow workplace safety procedures
ICAD2012B   Design organisational documents using computing packages
ICAU1128B   Operate a personal computer
ICAU2005B   Operate computer hardware
ICAU2006B   Operate computing packages
ICAU2013B   Integrate commercial computing packages
ICAU2231B   Use computer operating system
ICAW2001B   Work effectively in an IT environment
ICAW2002B   Communicate in the workplace

Employability Skills Summary

Employability Skills Summary
ICA50105 Diploma of Information Technology (**General**)
The following table contains a summary of the Employability Skills required for a General Application Support Officer. The Employability Skills facets described here are broad industry requirements that may vary depending on qualification packaging options.

Employability Skill	**Industry requirements for this qualification include**:
Communication	- analysing, evaluating and presenting information about computing systems and information technology in conjunction with stakeholders - negotiating the provision of goods and services with service and product suppliers
Teamwork	- working with a project team to identify business critical functions and the security environment - working with key stakeholders to gather, analyse and report on information
Problem Solving	solving a range of unpredictable problems, for example when validating system design specifications or preparing a disaster recovery plan
Initiative and Enterprise	- initiating alternative approaches to problem-solving - participating in the development of strategic initiatives
Planning and Organising	- identifying problems, planning solutions and validating results - using project planning skills to take into account scope, time, cost, quality, communications, and risk analysis and management

Employability Skill	Industry requirements for this qualification include:
Self-management	• using personal responsibility and autonomy in performing complex technical operations and organising others
Learning	• transferring and applying theoretical concepts, technical information and creative skills in a range of situations
Technology	• identifying technology needs, sourcing, purchasing, using and testing system components • understanding conflicts and integration capabilities between diverse pieces of equipment

Packaging Rules

Qualification Structure

To attain the *ICA50105 Diploma of Information Technology* (*General*) 21 units must be achieved:

- 6 common core units; plus
- 9 specialist core stream units (3 units chosen from any   3 specialist core stream units - E-business and Management, Client Support, Communication and Documentation, Hardware and Operating Systems, Networks, Software, Multimedia and Websites, Database); plus
- 6 elective units

Achieve 6 Common Core Units
Common Core
BSBPMG505A   Manage project quality
ICAA5056B   Prepare disaster recovery and contingency plans
ICAA5158B   Translate business needs into technical requirements
ICAP5039B   Match IT needs with the strategic direction of the enterprise
ICAS5202B   Ensure privacy for users
PSPPM502B   Manage complex projects
Achieve 9 specialist core stream units (by choosing 3 units from any   3 specialist core streams below - E-business and Management, Client Support, Communication and Documentation, Hardware and Operating Systems, Networks, Software, Multimedia and Websites, Database)
Specialist Core Stream - **E-business and Management**
ICAA5054C   Validate quality and completeness of system design specifications
ICAA5138B   Determine acceptable developers for projects
ICAA5148B   Select new technology models for business
ICAA5151B   Gather data to identify business requirements
ICAI5088B   Evaluate and negotiate vendor offerings
ICAI5152B   Implement risk management processes
ICAS5111B   Review and manage delivery of maintenance services
Specialist Core Stream - **Client Support**
BSBWOR502A   Ensure team effectiveness

ICAA5143C   Implement process re-engineering strategies in an organisation
ICAI5216B   Monitor and improve knowledge management system
ICAP5036B   Determine appropriate IT strategies and solutions
ICAT5083B   Develop and conduct client acceptance test

Specialist Core Stream - **Communication and Documentation**
(Note: There is no electives list for this stream)
ICAB5161B   Build a document using extensible mark-up language
ICAD5092B   Update and document operational procedures
ICAD5210B   Analyse information and assign meta-tags
ICAS5102B   Establish and maintain client user liaison
ICAS5103B   Establish and maintain client user liaison during support activity
ICAS5105B   Coordinate change requests

Specialist Core Stream - **Hardware and Operating Systems**   (Note: There is no electives list for this stream)
ICAA5150C   Evaluate vendor products and equipment
ICAB5160C   Build and configure a server
ICAI5087B   Acquire system components
ICAS5104B   Determine maintenance strategy

Specialist Core Stream - **Networks**
ICAA5145B   Identify best-fit topology for a wide area network
ICAB5159C   Build a security shield for a network
ICAI5173B   Install and configure a single-segment local area network switch
ICAI5176C   Install and configure router

Specialist Core Stream - **Software**
ICAB5062B   Perform data conversion
ICAB4229B   Apply intermediate programming skills in another language
ICAB5228B   Maintain functionality of legacy code programs
ICAB5230B   Maintain custom software
ICAT4242B   Perform unit test for a class
ICAT5079B   Perform integration test

Specialist Core Stream - **Multimedia and Websites**
CUFANM01A   Develop and implement designs for animation
CUFRAD01A   Originate and develop the concept
CUFWRT07A   Write an interactive sequence for multimedia
ICAA5141C   Design and develop dynamic websites to meet technical requirements
ICAB5165B   Create dynamic web pages
ICAB5177B   Build Java applets
ICAB5180C   Integrate database with a website
ICAS5203B   Evaluate and select a web hosting service
ICAU5208B   Use site server tools for transaction management

Specialist Core Stream - **Database**
ICAA5046B   Model preferred system solutions
ICAA5049B   Develop high-level object-oriented class specifications
ICAA5050B   Develop detailed component specifications from project specifications
ICAA5147B   Determine suitability of database functionality and scalability

Achieve 3 Elective Units Chosen from the ICA50105 specialist core (above) or specialist elective streams (below) not already selected

Specialist Electives Stream - **E-business and Management**

BSBEBUS510A   Manage e-business outsourcing
BSBEBUS511A   Implement a knowledge management strategy for an e-business
BSBFLM514A   Manage people
BSBPMG508A   Manage project risk
BSBEBUS505A   Implement new technologies for business
BSBEBUS510A   Manage e-business outsourcing
ICAA5150C   Evaluate vendor products and equipment
ICAP5155B   Plan process re-engineering strategies for business
ICAA5143C   Implement process re-engineering strategies in an organisation

Specialist Electives Stream - **Client Support**
BSBEBUS510A   Manage e-business outsourcing
BSBMGT516A   Facilitate continuous improvement
ICAS4116B   Undertake capacity planning

Specialist Electives Stream - **Networks**
ICAA5045C   Produce network architecture design
ICAS5123C   Manage network security
ICAA5140C   Design a server
ICAA5245A   Evaluate RFID systems
ICAA5246A   Design an RFID implementation
ICAB5162B   Install, configure and test a payment gateway
ICAI5250A   Develop, implement and evaluate system and application security
ICAI5252A   Develop, implement and evaluate an incident response plan
ICAI5253A   Implement, and evaluate systems for regulatory and standards compliance
ICTTC168A   Design and implement an enterprise VoIP and unified communications network

Specialist Electives Stream - **Software**
ICAA5048B   Develop configuration management protocols
ICAB5065B   Prepare for the build phase
ICAB5066B   Coordinate the build phase
ICAB5072B   Develop integration blueprint
ICAB5179B   Build decks using wireless mark-up language
ICAB5223B   Apply intermediate object-oriented language skills
ICAT5081B   Perform systems test

Specialist Electives Stream - **Multimedia and Websites**
ICAA5146B   Develop website information architecture
ICAS5199B   Manage business websites and servers
CUFANM403A   Create titles for screen production
ICPPP325B   Create graphics using a graphics application
ICPMM321B   Capture a digital image
ICPKN315B   Apply knowledge and requirements of the multimedia sector

Specialist Electives Stream - **Database**
ICAA5139B   Design a database
ICAA5153B   Model data objects
ICAA5154B   Model data processes
ICAB4170B   Build a database

Achieve 3 Elective Units Chosen from the Following Sources   (Listed in Recommended Order)

- any of the above core or electives sources; and/or

- elsewhere in the *ICA05 Information and Communications Technology Training Package* (at Certificate IV [maximum 2 units], Diploma or Advanced Diploma); and/or
- any other Training Package (at Diploma or Advanced Diploma) based on documented industry or enterprise needs
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