



**Australian Government**

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

# **ICA60105 Advanced Diploma of Information Technology**

**Release: 1**

## **ICA60105 Advanced Diploma of Information Technology**

### **Modification History**

Not Applicable

## Description

### Description

This qualification provides high level ICT, process improvement and business skills and knowledge to enable an individual to be effective in senior ICT roles within organisations. The qualification builds on a core management base with streaming and elective choice to suit particular ICT and business needs.

The qualification accommodates a number of qualifications from ICA99 Version 3, specifically:

This qualification also provides a logical next step as a capstone qualification for ICT Diploma graduates and could also be entered on a 'discipline transfer' basis for individuals without ICA05 qualifications.

It has 4 specialist streams each with definable vocational outcomes:

**Systems or Software Process Improvement Stream** Designed to equip people to undertake high level systems and software improvement. These process improvement activities may be ISA15504, ISO9000, CMMI or other equivalent system.

**Systems Development Stream** Focuses on the development of high level strategic planning and evaluation skills, which underpin ICT technical decision making in the development and execution of web, database and related systems technology solutions for business. It imports several units with research and security assessment, which round out the strong ICT technical and managerial base underpinning this stream.

**E-learning Stream** A 'blend' based on the common core of innovation, change and project management with the e-learning stream it provides a design and development focus in e-learning. By judicious choice of electives, it can inject the appropriate ICT robustness of technical foundations recommended for online and interactive delivery. Possible job titles include E-learning Business Development Manager, ICT Curriculum Manager, E-learning Developer, Online Training Manager.

**Knowledge Management Stream** This stream also incorporates a number of imported business units provide knowledge and skills for managing the acquisition, analysis and distribution of information and knowledge. In the context of growing commercial needs in this area, the stream is designed to provide individuals with the fundamental ICT skills to develop, implement and manage a range of systems, procedures and work practices to capture, share and leverage business information and knowledge. Based on a core of strong ICT skills covering fields such as data modelling, database design and warehousing, the stream also recognises other necessary skills by incorporating communication and business strategy and policy formulation. Possible job titles include Business Intelligence Consultant, Information Architect, Knowledge Manager.

The overall qualification structure provides flexibility to pick up studies in areas other than the listed 'streams' such as e-business, marketing, business development and project management based on the wide choice of electives from General Electives list and the opportunity to select up to 25 per cent of total units from any other Training Package.

### Job Roles

Vocational outcomes will vary with the fields of studies and streams selected. Guidance is provided within several streams above and additional information (adjusted for the different levels) can be found in Diploma level qualifications in the same area of ICT (software, database and web development).

## **Pathways Information**

Not Applicable

## **Licensing/Regulatory Information**

Not Applicable

## 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

#### ICA60105 Advanced Diploma of Information Technology

The following table contains a summary of the Employability Skills required for a Senior Systems Analyst/Programmer. 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	<ul style="list-style-type: none"> <li>negotiating with stakeholders and team members</li> <li>using a range of communication styles to suit different audiences and purposes</li> <li>using communication skills to achieve stakeholder engagement</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>coordinating groups and teams</li> <li>participating in teams including teams concerned with planning and evaluation functions</li> </ul>
Problem Solving	<ul style="list-style-type: none"> <li>managing processes related to business involves analysis, documentation and process re engineering across a broad range of technical and managerial functions, including identifying technical and human processes interactions</li> </ul>
Initiative and Enterprise	<ul style="list-style-type: none"> <li>generating ideas through the analysis of information and concepts at an abstract level</li> <li>initiating alternative approaches to skills or knowledge applications across a broad range of technical and/or management requirements, including evaluation and coordination</li> <li>participating in development of strategic initiatives</li> </ul>

<b>Employability Skill</b>	<b>Industry requirements for this qualification include:</b>
Planning and Organising	<ul style="list-style-type: none"> <li>analysing and planning approaches to technical problems or management requirements</li> <li>planning, implementing and monitoring information technology change</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>applying ethical decision making and problem-solving related to project management of complex projects</li> <li>having personal responsibility and autonomy in performing complex technical operations or organising others</li> <li>self directing application of knowledge and skills, with substantial depth in some areas where judgement is required in planning and selecting appropriate equipment, services and techniques for self and others</li> <li>taking responsibility for own outputs in relation to broad quantity and quality parameters</li> </ul>
Learning	<ul style="list-style-type: none"> <li>leading and mentoring people to achieve project outcomes</li> <li>transferring and applying theoretical concepts and/or technical or creative skills to a range of situations</li> </ul>
Technology	<ul style="list-style-type: none"> <li>identifying high level hardware, software and network requirements and implementing solutions</li> </ul>

## Packaging Rules

### Qualification Structure

To attain the ICA60105 Advanced Diploma of Information Technology 16 units must be achieved:

- 3 common core units; plus
- 5 specialist core stream units - Systems or Software Process Improvement; or
- 5 specialist core stream units - Systems Development; or
- 5 specialist core stream units - E-learning; or
- 5 specialist core stream units - Knowledge Management; plus
- 8 elective units

### Achieve 3 Common Core Units

#### Common Core

BSBEBUS605A Identify and implement e-business innovation

ICAI6187B Implement change management processes

PSPPM601B Direct complex project activities

**Achieve 5 Core Units Chosen from 1 of the following Specialist Core Streams** (Systems or Software Process Improvement, Systems Development, E-learning, Knowledge Management)

#### Specialist Core Stream - Systems or Software Process Improvement

BSBEBUS609A Develop a knowledge management strategy for an e-business

BSBMGT516A Facilitate continuous improvement  
 BSBFLM510B Facilitate and capitalise on change and innovation  
 ICAA6149B Implement quality assurance processes for business solutions  
 ICAA6157B Develop technical requirements for a business solution

### **Specialist Core Stream - Systems Development**

ICAA5035C Research and review hardware technology options for organisations  
 ICAA6149B Implement quality assurance processes for business solutions  
 ICAA6157B Develop technical requirements for a business solution  
 ICAP6040B Develop contracts and manage contracted performance  
 PRSTS301A Identify technical security requirements

### **Specialist Core Stream - E-Learning**

CUFDIG502A Design web environments  
 TAAASS501B Lead and coordinate assessment systems and services  
 TAADEL503B Provide advanced facilitation to support learning  
 TAADES501B Design and develop learning strategies  
 TAAENV501B Maintain and enhance professional practice

### **Specialist Core Stream - Knowledge Management**

BSBEBUS511A Implement a knowledge management strategy for an e-business  
 BSBEBUS609A Develop a knowledge management strategy for an e-business  
 ICAI5216B Monitor and improve knowledge management system  
 ICAA5150C Evaluate vendor products and equipment  
 ICAA5138B Determine acceptable developers for projects

Achieve 8 elective units chosen from the following sources (listed in preferential order)

- any ICA60105 Specialist Core Stream above (units not already taken); and/or
- any ICA60105 Specialist Electives Stream below; and/or
- ICA60105 General Electives list below; and/or
- ICA05 Information and Communications Technology Training Package at Diploma or Advanced Diploma level units and which have not been previously counted in a Diploma qualification; and/or
- any other Training Package units at Advanced Diploma (to a maximum of 4 units) based on documented industry or enterprise needs

### **Specialist Electives Stream - Systems or Software Process Improvement**

BSBEBUS505A Implement new technologies for business  
 BSBMGT516A Facilitate continuous improvement  
 BSBWOR502A Ensure team effectiveness  
 BSBFLM514A Manage people  
 BSBMGT608B Manage innovation and continuous improvement  
 BSBPMG508A Manage project risk  
 ICAP5036B Determine appropriate IT strategies and solutions  
 ICAP6038B Develop strategic and action plans

### **Specialist Electives Stream - Systems Development**

ICAA5046B Model preferred system solutions  
 ICAA5050B Develop detailed component specifications from project specifications  
 ICAA5139B Design a database  
 ICAA5141C Design and develop dynamic websites to meet technical requirements  
 ICAA5146B Develop website information architecture  
 ICAA5147B Determine suitability of database functionality and scalability

- ICAA5148B Select new technology models for business
- ICAA5153B Model data objects
- ICAA5154B Model data processes
- ICAB5068B Build using rapid application development
- ICAB5165B Create dynamic web pages
- ICAB5180C Integrate database with a website
- ICAS5118C Manage system security
- ICAS5199B Manage business websites and servers
- ICAS5203B Evaluate and select a web hosting service
- ICAT5081B Perform systems test
- ICAT5083B Develop and conduct client acceptance test
- ICAU5208B Use site server tools for transaction management

**Specialist Electives Stream - E-Learning**

- BSBEBUS501A Evaluate e-business opportunities
- BSBEBUS505A Implement new technologies for business
- BSBEBUS513A Plan e-learning
- BSBEBUS514A Implement e-learning
- BSBEBUS515A Facilitate e-learning
- BSBWOR502A Ensure team effectiveness
- BSBMGT615A Contribute to organisational development
- BSBRKG608B Plan management of records over time
- CUFWRT601A Write scripts
- CUFWRT07A Write an interactive sequence for multimedia
- CUSGEN03A Collaborate with colleagues in planning and producing a project
- ICAA5035C Research and review hardware technology options for organisations
- ICAA5143C Implement process re-engineering strategies in an organisation
- ICAS5199B Manage business websites and servers
- ICAS5203B Evaluate and select a web hosting service

**Specialist Electives Stream - Knowledge Management**

- BSBEBUS512A Implement electronic communication policy
- ICAA5143C Implement process re-engineering strategies in an organisation
- ICAP5155B Plan process re-engineering strategies for business
- ICAB5062B Perform data conversion
- ICAB5063B Monitor and support data conversion
- ICAB5164B Create a data warehouse
- ICAI5096B Complete data transition

**General Electives**

- BSBEBUS501A Evaluate e-business opportunities
- BSBEBUS503A Design an e-business
- BSBEBUS504A Implement an e-business strategy
- BSBEBUS505A Implement new technologies for business
- BSBEBUS510A Manage e-business outsourcing
- BSBEBUS601A Develop an e-business strategy
- BSBPMG505A Manage project quality
- BSBPMG601A Direct the integration of multiple projects/programs
- BSBPMG602A Direct the scope of multiple projects/programs
- BSBPMG603A Direct time management of multiple projects/programs
- BSBPMG604A Direct cost management of multiple projects/programs



BSBPMG605A	Direct quality management of multiple projects/programs
BSBPMG606A	Direct human resources management of multiple projects/programs
BSBPMG607A	Direct communications management of multiple projects/programs
BSBPMG608A	Direct risk management of multiple projects/programs
BSBPMG609A	Direct procurement and contracts of multiple projects/programs
ICAI5152B	Implement risk management processes
ICAI5253A	Implement and evaluate systems for regulatory and standards compliance
ICAP5036B	Determine appropriate IT strategies and solutions
ICAP6040B	Develop contracts and manage contracted performance
ICTTC168A	Design and implement an enterprise VoIP&unified communications network

## Prerequisite Requirements

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There are no specific prerequisites for ICA05 core units in this qualification, however prerequisite arrangements for non-ICA05 core and any elective units should be checked with the originating Training Package.