Australian Government

Department of Education, Employment and Workplace Relations

ICA60308 Advanced Diploma of Information Technology (E-Security)

Release: 1

INDUSTRY SKILLS COUNCILS
Creating Australia's Future

ICA60308 Advanced Diploma of Information Technology (E-Security)

Modification History

Not Applicable

Description

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This qualification provides the skills and knowledge for an individual to manage complex and high-level ICT security systems and components. The qualification has a robust ICT technical base with appropriate security units aligned to the Certified Information Systems Security Professional (CISSP) and the IT Security Essential Body of Knowledge (EBK).

CISSP is an independent information security certification governed by the International Information Systems Security Certification Consortium (ISC).

EKB is a Competency and Functional Framework for IT Security Workforce Development. The EBK characterises the IT security workforce and provides a national baseline representing the essential knowledge and skills that IT security practitioners should have to perform specific roles and responsibilities.

The US Department of Homeland Security's (DHS), National Cyber Security Division worked with subject matter experts from government, the private sector, and academia to develop an umbrella framework that establishes a national baseline representing the essential knowledge and skills IT security practitioners must have to perform their jobs. The *IT Security EBK* builds directly on established work and is not intended to represent a standard, directive, or policy by DHS. Instead, it further clarifies key IT security terms and concepts for well-defined competencies, identifies notional security roles, and defines primary functional perspectives to help advance the IT security training and certification landscape as we strive to ensure that we have the most qualified and appropriately trained IT security workforce possible.

In previous versions of the ICA05 Training Package, the security of networks and systems was a priority and a number of units in the areas of risk management, websites and privacy were developed. These have been included in Advanced Diploma core along with several more traditional Property Services security units. A number of server, network and interface electives are offered to allow a further level of specialisation as required. The facility for selecting electives from ICA05 and other Training Packages enables other ICT oriented skill areas (e.g. programming or database development) or broader business units to be included. New units relating to e-security have been added at AQF level 4 that complement and extend security as a more holistic approach throughout the 'systems life cycle'. A new unit, ICAS6254A Manage IT security, has been added to the core units at the AQF level 6 to provide a holistic approach to management of e-security.

Consideration should be given to selecting these units as electives where they are relevant to workplace roles.

This qualification also provides a logical next step as a capstone qualification for ICT Diploma graduates particularly those that have progressed through the networking stream and AQF 3 to AQF 5 pathway. This qualification is particularly relevant to those that have developed technical specialisations in networking but an emphasis on the E-security units at the Diploma level. It is also possible to transition from other Diploma qualifications (e.g. Software Development or Systems Analysis and Design or Website development or General) if an appropriate selection of electives have been chosen especially with a focus on the E-security units.

Pathway

An appropriate pathway for this qualification is from the ICA50408 Diploma of Information Technology (Networking)

Job Roles

Possible job titles include:

- Database Security Expert
- E-risk Manager
- E-security Specialist
- ICT Security Consultants
- ICT Security Specialist
- Information Risk Manager (IRM)
- Internal Computer Audit Specialist
- IT Security Analyst/Engineer
- IT Security Specialist
- Lead Security Analyst
- Security Engineer
- Senior Software Engineer (Security)
- Systems Security Analyst
- Web Security Administrator
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Pathways Information

Not Applicable

Licensing/Regulatory Information

Not Applicable

Entry Requirements

Not Applicable

Employability Skills Summary

Employability skills summary
ICA60308 Advanced Diploma of Information Technology (E-security)
The following table contains a summary of the employability skills required for a Security Consultant. 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	• articulating complex security scenarios in a clear, concise manner relevant to all levels of the organisation • documenting information related to attacks, threats, risks and controls in a security plan • using report writing skills for business requiring depth in some areas, and analysis and evaluation of information in a defined range of areas, for example when documenting recommendations for improvement and referring them to appropriate technical specialists
Teamwork	• managing group facilitation and presentation skills in relation to transferring and collecting information, for example when senior management and auditor approval is obtained for the design of the controls • reviewing the security strategy with security approved key stakeholders
Problem Solving	• developing controls and contingencies to alleviate security threats • taking corrective action on system implementation breakdowns • using problem-solving skills for an evolving complex scenario of security threats
Initiative and Enterprise	• developing new criteria, applications, knowledge and procedures • generating ideas at an abstract level through the analysis of information and concepts • identifying and applying skill and knowledge areas to a wide variety of contexts, with depth in some areas
Planning and Organising	• developing security plans • planning for controls and contingencies when designing an IT security framework
Self-management	• having accountability and responsibility for self and others in achieving workplace outcomes • taking responsibility for own outputs in relation to broad quantity and quality parameters

Employability skill	Industry requirements for this qualification include:
Learning	• having knowledge of current industry accepted hardware and software products, including broad knowledge of security features and capabilities
Technology	• identifying technology needs, sourcing, purchasing, installing, configuring and testing components including software and hardware • using technological capability assessment skills involving analysis, diagnosis and evaluation, for example when evaluating various products against architecture requirements to determine the best IT solution, and for estimating current and future capacity requirements and evaluating against client's future requirements

Packaging Rules

Qualification structure

To attain the ICA60308 Advanced Diploma of Information Technology (E-security) 17 units must be achieved:

- 12 core units; plus
- 5 elective units

Achieve 12 Core Units
Core
ICAA5056B   Prepare disaster recovery and contingency plans
ICAA6052B   Design an IT security framework
ICAA6053B   Design system security and controls
ICAB5159C   Build a security shield for a network
ICAB5237B   Build a high performance security perimeter
ICAB5238B   Build a highly secure firewall
ICAI5152B   Implement risk management processes
ICAI5252A   Develop, implement and evaluate an incident response plan
ICAI5250A   Develop, implement and evaluate system and application security
ICAS5192B   Configure an internet gateway
ICAS6254A   Manage IT security
PSPPM601B   Direct complex project activities

Achieve 3 elective units chosen from the ICA60308 electives list below which have not previously counted in a Diploma qualification
Electives
ICAA5044C   Develop system infrastructure design plan
ICAD5092C   Update and document operational procedures
ICAI5098C   Install and manage complex networks
ICAI5100C   Build an internet infrastructure
ICAI5176C   Install and configure router

ICAI5196C   Implement secure encryption technologies
ICAI5197C   Install and maintain valid authentication processes
ICAI5253A   Implement and evaluate systems for regulatory and standards compliance
ICAI6187B   Implement change management processes
ICTTC168A   Design and implement an enterprise VoIP&Unified Communications
PRSSM504A Prepare security risk management plan
PRSTS301A   Identify technical security requirements

Achieve 2 elective units chosen from the following sources, **which have not previously counted in a Diploma qualification** (**listed in recommended order**)

* ICA60308 electives list; and/or
* ICA05 Information and Communications Technology Training Package or BSB07 Business Services Training Package at Diploma or Advanced Diploma; and/or
* any other Training Package at Advanced Diploma (to a maximum of 2 units) based on documented industry or enterprise needs
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Prerequisite Requirements

Prerequisites Requirements
Prerequisite arrangements for any elective units should be checked with the originating Training Package.
A number of the core units within this qualification have prerequisites. These are detailed as follows:

Code and title	Prerequisite units
ICAA6052B Design an IT security framework	ICAA4041C Determine and confirm client business expectations and needs
ICAB5159C Build a security shield for a network	ICAS5192B Configure an internet gateway #
ICAI5252A Develop, implement and evaluate an incident response plan	ICAP4037B Contribute to the development of a strategy plan # ICAI5152B Implement risk management processes
ICAI5250A Develop, implement and evaluate system and application security	ICAB4225C Automate processes
ICAS5192B Configure an internet gateway	ICAI4097B Install and configure a network #
ICAS6254A Manage IT security	ICAI4249A Implement and evaluate data security # ICAI4251A Implement and evaluate network and telecommunication security #

Code and title	Prerequisite units
	ICAI5250A Develop, implement and evaluate system and application security #
	ICAI5252A Develop, implement and evaluate an incident response plan #