



**Australian Government**

# **ICT60120 Advanced Diploma of Information Technology**

**Release 2**

# ICT60120 Advanced Diploma of Information Technology

## Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 6.0.
Release 2	Adding the following elective unit of competency: <ul style="list-style-type: none"><li>ICTNWK617 Configure and manage a storage area networks.</li></ul>

## Qualification Description

This qualification reflects the role of individuals in a variety of information and communications technology (ICT) roles who have significant experience in specialist technical skills, or managerial business and people management skills.

Individuals in these roles carry out complex tasks in a specialist field, working independently, leading a team or a strategic direction of a business. They apply their skills across a wide range of industries and business functions, or as a business owner (sole trader/contractor).

The skills required for these roles may include, but are not restricted to:

- advanced data management information: creating, designing and monitoring complex systems that store data, and optimising organisational knowledge management
- cyber security: protecting sensitive data and information through security architecture, and developing disaster recovery and contingency plans
- full stack web development: building advanced user interfaces, developing representational state transfer application program interfaces (REST APIs) and designing user experience solutions
- further programming: applying advanced ICT languages to maintain security and manage data
- IT strategy and organisational development: managing and communicating strategic ICT business solutions
- systems development and analysis: modelling and testing data objects, data processes and preferred ICT system solutions.

### Licensing, legislative, regulatory or certification considerations

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

## Entry Requirements

Nil

## Packaging Rules

**Total number of units = 16**

**6 core units** plus

**10 elective units**, of which:

- at least 7 units must be selected from the elective units listed below
- up to 3 units may be selected from the remaining listed elective units or from this or any currently endorsed Training Package or accredited course where the units are packaged in an Australian Qualification Framework (AQF) Level 5 or 6 qualification.

Elective units must be relevant to the work environment and the qualification, maintain the integrity of the AQF alignment and contribute to a valid, industry-supported vocational outcome.

Units selected from other Training Packages or accredited courses must not duplicate units selected from or available within the ICT Information and Communications Technology Training Package.

Where relevant, the choice of elective units set out in the packaging rules above can serve to provide the qualification with one or more of the following specialisations. The rules to achieve a specialisation are detailed at the qualification end.

- Advanced data management information
- Cyber security
- Full stack web development
- Further programming
- IT strategy and organisational development
- Systems development and analysis

### Core units

BSBCRT601 Research and apply concepts and theories of creativity  
BSBWOR502 Lead and manage team effectiveness  
BSBXCS402 Promote workplace cyber security awareness and best practices  
ICTICT608 Interact with clients on a business level  
ICTICT618 Manage IP, ethics and privacy in ICT environments  
ICTSAD609 Plan and monitor business analysis activities in an ICT environment

### Elective units

#### Group A Advanced Data Management Information Specialisation

ICTDBS604 Build data warehouses

ICTDBS605 Develop knowledge management strategies

ICTDBS606 Determine database functionality and scalability

ICTICT523 Gather data to identify business requirements

### **Group B Cyber Security Specialisation**

#### **ICTCYS604 Implement best practices for identity management**

ICTCYS606 Evaluate an organisation's compliance with relevant cyber security standards and law

#### **ICTCYS608 Perform cyber security risk assessments**

ICTCYS612 Design and implement virtualised cyber security infrastructure for organisations

### **Group C Full Stack Web Development Specialisation**

ICTICT530 Design user experience solutions

ICTPRG535 Build advanced user interfaces

ICTPRG553 Create and develop REST APIs

ICTSAD612 Implement and maintain uses of containerisation

### **Group D Further Programming Specialisation**

#### **ICTPRG537 Implement security for applications**

ICTPRG547 Apply advanced programming skills in another language

ICTPRG554 Manage data persistence using noSQL data stores

### **Group E IT Strategy and Organisational Development Specialisation**

ICTICT611 Develop ICT strategic business plans

ICTSAD604 Manage and communicate ICT solutions

ICTSAD608 Perform ICT-focused enterprise analysis

ICTSAD611 Manage assessment and validation of ICT solutions

### **Group F Systems Development and Analysis Specialisation**

ICTPRG605 Manage development of technical solutions from business specifications

ICTSAD610 Analyse stakeholder requirements

ICTSAD612 Implement and maintain uses of containerisation

ICTSAD613 Install and configure container orchestration services

### **Group G General electives**

#### ***Advanced Cloud Computing***

ICTCLD601 Develop cloud computing strategies for businesses

ICTCLD602 Manage information security compliance of cloud service deployment

#### ***Advanced Cyber Security***

ICTCYS603 Undertake penetration testing for organisations  
ICTCYS607 Acquire digital forensic data  
ICTCYS609 Evaluate threats and vulnerabilities of IoT devices

### ***Application and Software Development***

ICTPRG549 Apply intermediate object-oriented language skills  
ICTPRG603 Develop advanced mobile multi-touch applications  
ICTPRG614 Create cloud computing services

### ***Cyber Security Network Operations***

ICTCYS601 Create cyber security standards for organisations  
ICTCYS602 Implement cyber security operations  
ICTCYS611 Configure security devices for organisations

### ***Data Management***

ICTDBS505 Monitor and improve knowledge management systems

### ***Project Management***

BSBPMG513 Manage project quality  
BSBPMG517 Manage project risk  
BSBPMG520 Manage project governance  
ICTICT505 Determine acceptable developers for projects  
ICTICT529 Organise and lead agile projects  
ICTPMG612 Manage ICT project initiation  
ICTPMG613 Manage ICT project planning  
ICTPMG614 Manage ICT project delivery  
ICTPMG615 Manage ICT project closure  
ICTPMG616 Manage ICT project systems implementation  
ICTPMG617 Plan and direct complex ICT projects  
ICTSAS522 Manage the testing process

### ***IT Work Ready Skills***

ICTICT522 Evaluate vendor products and equipment  
ICTICT612 Develop contracts and manage contract performance  
ICTICT613 Manage the use of development methodologies  
ICTICT616 Develop communities of practice  
ICTICT617 Lead the evaluation and implementation of current industry specific technologies  
ICTSAD602 Conduct knowledge audits  
ICTSAD605 Elicit ICT requirements  
ICTSUS601 Integrate sustainability in ICT planning and design projects  
PSPPCM023 Manage strategic contracts

***Network Security***

CPPSEC3124 Prepare and present evidence in court  
CPPSEC5003 Assess security risk management options  
CPPSEC5004 Develop security risk management plans  
CPPSEC5005 Implement security risk management plans  
CPPSEC5006 Develop strategies to implement advanced technology security systems  
ICTNWK537 Implement secure encryption technologies  
ICTNWK538 Install and maintain valid authentication processes  
ICTNWK539 Design and implement integrated server solutions  
ICTNWK540 Design, build and test network servers  
ICTNWK541 Configure, verify and troubleshoot WAN links and IP services  
ICTNWK544 Design and implement a security perimeter for ICT networks  
ICTNWK549 Design ICT security frameworks  
ICTNWK552 Install and configure network access storage devices  
ICTNWK553 Configure enterprise virtual computing environments  
ICTNWK554 Manage enterprise virtual computing environments  
ICTNWK556 Identify and resolve network problems  
ICTNWK557 Configure and manage advanced virtual computing environments  
ICTNWK558 Monitor and troubleshoot virtual computing environments  
ICTNWK559 Install an enterprise virtual computing environment  
ICTNWK603 Plan, configure and test advanced internetwork routing solutions  
ICTNWK604 Plan and configure advanced internetwork switching solutions  
ICTNWK605 Design and configure secure integrated wireless systems  
ICTNWK606 Implement voice applications over secure wireless networks  
ICTNWK610 Design and build integrated VoIP networks  
ICTNWK611 Configure call processing network elements for secure VoIP networks  
ICTNWK612 Plan and manage troubleshooting advanced integrated IP networks  
ICTNWK613 Develop plans to manage structured troubleshooting process of enterprise networks  
ICTNWK615 Design and configure desktop virtualisation  
ICTNWK617 Configure and manage a storage area network  
ICTNWK618 Design and implement a security system  
ICTNWK619 Plan, configure and test advanced server-based security  
ICTNWK620 Design and implement wireless network security  
ICTNWK621 Configure network devices for a secure network infrastructure  
ICTNWK622 Configure and manage intrusion prevention system on network sensors  
ICTSAS517 Use network tools

***Strategy and Business Management***

BSBINN601 Lead and manage organisational change  
BSBMGT608 Manage innovation and continuous improvement  
BSBPMG518 Manage project procurement

ICTICT614 Identify and implement business innovation

ICTICT615 Implement knowledge management strategies

ICTSAD507 Design and implement quality assurance processes for business solutions

ICTSAD508 Develop technical requirements for business solutions

ICTSAS602 Implement change management processes

### ***Web design and Development***

ICTWEB513 Build dynamic websites

ICTWEB514 Create dynamic web pages

ICTWEB517 Create web-based programs

ICTWEB519 Develop complex web page layouts

## **Specialisations**

As stated above, where relevant, the choice of elective units set out in the packaging rules at qualification outset can serve to provide the qualification with one or more of the following specialisations. The rules to achieve a specialisation are detailed below.

The achievement of more than one specialisation may be indicated on the same testamur as follows:

- ICT60120 Advanced Diploma of Information Technology (Advanced Data Management Information)
- ICT60120 Advanced Diploma of Information Technology (Cyber Security)
- ICT60120 Advanced Diploma of Information Technology (Full Stack Web Development)
- ICT60120 Advanced Diploma of Information Technology (Further Programming)
- ICT60120 Advanced Diploma of Information Technology (IT Strategy and Organisational Development)
- ICT60120 Advanced Diploma of Information Technology (Systems Development and Analysis).

### **Packaging rules to achieve a specialisation**

#### **Advanced Data Management Information**

- Select all 4 elective units from Group A Advanced Data Management Information Specialisation

#### **Cyber Security**

- Select all 4 elective units from Group B Cyber Security Specialisation

#### **Full Stack Web Development**

- Select all 4 elective units from Group C Full Stack Web Development Specialisation

#### **Further Programming**

- Select all 3 elective units from Group D Further Programming Specialisation

### **IT Strategy and Organisational Development**

- Select all 4 elective units from Group E IT Strategy and Organisational Development Specialisation

### **Systems Development and Analysis**

- Select all 4 elective units from Group F Systems Development and Analysis Specialisation

## **Qualification Mapping Information**

No equivalent qualification. Supersedes and is not equivalent to:

- ICT60115 Advanced Diploma of Information Technology
- ICT60215 Advanced Diploma of Network Security
- ICT60315 Advanced Diploma of Information Technology Business Analysis
- ICT60415 Advanced Diploma of Information Technology Project Management
- ICT60515 Advanced Diploma of Computer Systems Technology
- ICT80115 Graduate Certificate in Information Technology and Strategic Management.

## **Links**

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2>