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Who is this Guide for?

The Implementation Guide is designed to assist assessors, trainers, Registered Training Organisations (RTOs) and enterprises to deliver nationally endorsed industry training packages.

Nationally endorsed training packages are developed to meet the Standards for Training Packages (and accompanying policies) which were ratified by Commonwealth and State/Territory ministers in 2012.

As well as information relevant to all training packages, it provides specific information and advice about the history, structure, key features and application of the ICT Information and Communications Technology Training Package.

What is in the Implementation Guide?

This ICT Information and Communications Technology Training Package Implementation Guide provides:

• information relevant to all training packages
• specific information and advice about the history, structure, key features and application of the ICT Information and Communications Technology Training Package.

The Appendices section is provided as a separate document and contains:

• lists of qualifications, skill sets and units of competency
• mapping information for qualifications, skill sets and units of competency.

Version control and modification history

<table>
<thead>
<tr>
<th>Release number</th>
<th>Release date</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version 1</td>
<td>March 2015</td>
<td>Primary release of restructured ICT Information Communications Technology Training Package.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>This release of ICT Information Communications Technology Training Package contains: 32 qualifications, 27 skill sets and 417 native units of competency (comprising 417 units updated to meet Standards for Training Packages) and 106 imported units.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• ICT80115 – Graduate Certificate in Information Technology and Strategic Management (updated to meet AQF Requirements)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• ICT80215 – Graduate Certificate in Information Technology Sustainability (updated to meet AQF Requirements)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• ICT80415 – Graduate Diploma in Telecommunications Network Engineering (updated to meet AQF Requirements)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• ICT80315 – Graduate Certificate in Telecommunications - added</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• ICT80515 – Graduate Diploma of Telecommunications and Strategic Management - added</td>
</tr>
</tbody>
</table>
Notes on changes to ICT Information and Communications Technology Training Package

The packaging of core and elective units represents flexibility for participants to cross over from stream to stream with minimal disruptions. This has been possible by minimising the number of core units and allowing greater choice of elective units. The importation of units from training packages provides clear support to the information and communications technology qualifications in the area of sustainability, project management, digital media technologies and ICT convergence networks.

The Vocational Graduate Certificates at level 7 in the ICA11 Information and Communications Technology Training Package have now been updated to reflect the current AQF levels, are referred to as Graduate Certificates, and are now AQF level 8 qualifications.
What is a training package?

A training package is a set of nationally endorsed qualifications, units of competency and assessment requirements developed for a specific industry, sector or workplace. A training package:

• specifies the skills and knowledge required to perform effectively in the workplace
• provides consistent components for training, assessing or recognising skills
• enables nationally recognised qualifications to be awarded through direct assessment of workplace competencies
• promotes flexible modes of training to suit individual and industry requirements
• encourages learning and assessment in a work-related environment that leads to verifiable workplace outcomes
• may also provide support materials.

While a training package does specify workplace skills and knowledge requirements, it does not suggest how a learner should be trained. Users of training packages, such as trainers or assessors, must develop learning and assessment strategies that support the needs of their particular learners.

Components of IBSA training packages

Training packages consist of the following endorsed components:

• **Qualifications** which consist of units of competency combined into meaningful groups to meet workplace roles, and aligned to vocational qualification levels identified in the Australian Qualifications Framework (AQF)
• **Units of competency** which specify the standards of performance required in the workplace
• **Assessment requirements** which specify the performance evidence, knowledge evidence and conditions for assessment for each unit of competency
• **Credit arrangements** which specify details of existing credit arrangements between vocational and higher education qualifications in accordance with the AQF. Currently no credit arrangements exist between any IBSA training package qualifications and higher education qualifications.

Training packages may also include non-endorsed components, such as:

• **Skill sets** which are groups of endorsed units of competency that address a defined industry need or licensing or regulatory requirement
• **Companion volumes** (including this Implementation Guide) which provide support for delivery and assessment
• **User guides** which provide information about specific components.
Training package development and endorsement process

All training packages must be designed and developed to comply with the Australian Government’s Standards for Training Packages and accompanying policies, which were approved by Commonwealth and State/Territory ministers in 2012. More information about training package standards and policies is available at:


Training packages are developed to meet the training needs of specific industries and sectors. They differ from other education and training courses in that they must be created with industry involvement and extensive national consultation. They are regularly reviewed through a continuous improvement cycle, and updated to ensure they remain current and relevant. The following diagram demonstrates IBSA’s development or review process.
IBSA’s Training Package Development Process

**Scoping**
- Scoping brief, research and job role analysis
- Targeted consultation

**Initial Drafting**
- Targeted consultation with industry and other key stakeholders
- Draft initial materials

**Consultation**
- Consultation activities dependent on the scale of the project
- For example: workshops, email correspondence, phone consultations, facilitated online discussions

**Final Drafting**
- Draft final materials
- Initial quality assurance review

**Industry Validation**
- Seek industry validation of final draft; key industry support provided; peak associations, employee representatives
- Final quality assurance review

**Final Stakeholder Agreement**
- Seek State Training Authority support
- Publication of draft materials and Case for Endorsement

**Submission**
- Submit final product to Department of Education and Training for endorsement
- Product is Endorsed by Department of Education and Training

**Endorsed**
- Publish to training.gov.au (TGA)
- Advise relevant stakeholders of endorsement

**Scoping Report Project Plan**

**Consultation Draft Materials**

**Feedback**

**Feedback Validation Draft**

**Feedback Final Agreed Draft Case for Endorsement**

**Feedback**

**Feedback**

**Endorsed Product**
Who can deliver and assess a qualification?

For the purpose of national recognition, delivery and assessment must be conducted by an RTO with the qualifications or specific units of competency on its scope of registration.

All RTOs must comply with the requirements set out in applicable national frameworks and standards. The current registering bodies, frameworks and standards, and which type of RTO they apply to, are shown in the table on the following page. Users of this Implementation Guide are advised to check the applicable standards for their particular circumstances.

More information about national standards and standards for non-referring states can be found at:


RTOs must make sure that training and assessment complies with the relevant standards. This includes ensuring that training delivery and assessment is conducted by those who:

• have the necessary training and assessment competencies
• have the relevant vocational competencies at least to the level being delivered or assessed
• can demonstrate current industry skills directly relevant to the training/assessment being delivered
• continue to develop their VET knowledge and skills, industry currency and trainer/assessor competence.

In some cases RTOs may need to use team-based or collaborative approaches to bring together all the necessary skills and knowledge to train and assess the full range of skills within a program of vocational training.

Check for specific assessor requirements in the Assessment conditions section of the assessment requirements for the unit of competency.
## Summary of Frameworks and Standards for RTOs

<table>
<thead>
<tr>
<th>Registering body</th>
<th>Framework</th>
<th>Standards</th>
<th>Applicable RTOs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australian Skills Quality Authority (ASQA)</td>
<td>Vocational Education and Training (VET) Quality Framework</td>
<td>Standards for Registered Training Organisations (RTOs) 2015</td>
<td>RTOs that deliver training in the Australian Capital Territory, New South Wales, the Northern Territory, South Australia, Queensland, or Tasmania RTOs in Victoria and Western Australia that offer training to overseas students and/or students (including online courses) in the Australian Capital Territory, New South Wales, the Northern Territory, South Australia, Queensland, or Tasmania</td>
</tr>
<tr>
<td>Victorian Registration and Qualifications Authority (VRQA) - Victoria</td>
<td>Australian Quality Training Framework (AQTF)</td>
<td>AQTF Essential Conditions and Standards for Initial Registration AQTF Essential Conditions and Standards for Continuing Registration</td>
<td>RTOs that deliver vocational education and training solely in Victoria and/or Western Australia and do not intend to apply to be registered on the Commonwealth Register of Institutions and Courses for Overseas Learners (CRICOS)</td>
</tr>
</tbody>
</table>
About the ICT Information and Communications Technology industry

The Australian ICT industry is a service industry rather than a specialised ICT focused industry, with the result that national ICT career pathways have become more vertical than horizontal, and are requiring the versatility to incorporate a mix of various ICT skills, rather than relying on the historically fixed specialist skills and pathways of the past.

Qualifications in the ICT Information and Communications Technology Training Package have been developed to enable a specialist outcome in the key ICT areas, combined with the flexibility to incorporate a diverse range of skill sets so as to provide a wider career pathway outcome.

Qualifications, skill sets and units of competency

The ICT Information and Communications Technology Training Package contains:

- 32 AQF aligned qualifications
- 27 skill sets
- 417 native units of competency
- 106 imported units of competency.

Please refer to Appendix 1 for the full list of qualifications, skill sets and units of competency.
Mapping to previous version of the training package

Mapping information can be useful for delivery and assessment as it:

• explains the main changes between the previous and current versions of qualifications, skill sets and units of competency
• shows whether the outcomes of the previous and current versions are equivalent or not equivalent
• shows new components as well as any components removed from the training package.

Please refer to Appendix 2 for mapping information for qualifications, skill sets and units of competency for the ICT Information and Communications Technology Training Package.

IBSA also recommends using the Compare Content Tool available on the training.gov.au (TGA) website for more information about specific changes. Visit https://www.youtube.com/watch?v=EjhNe3Bu0H4 to watch a video on how to use this tool.

<table>
<thead>
<tr>
<th>Sectors</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database</td>
<td>DBS</td>
</tr>
<tr>
<td>Digital media technologies</td>
<td>DMT</td>
</tr>
<tr>
<td>Game development</td>
<td>GAM</td>
</tr>
<tr>
<td>General ICT</td>
<td>ICT</td>
</tr>
<tr>
<td>Networking</td>
<td>NWK</td>
</tr>
<tr>
<td>Project management</td>
<td>PMG</td>
</tr>
<tr>
<td>Programming and software development</td>
<td>PRG</td>
</tr>
<tr>
<td>Radio Frequency Networks</td>
<td>RFN</td>
</tr>
<tr>
<td>Systems analysis and design</td>
<td>SAD</td>
</tr>
<tr>
<td>Systems administration and support</td>
<td>SAS</td>
</tr>
<tr>
<td>Sustainability</td>
<td>SUS</td>
</tr>
<tr>
<td>Telecommunications Network Engineering</td>
<td>TEN</td>
</tr>
<tr>
<td>Web</td>
<td>WEB</td>
</tr>
</tbody>
</table>
Regulation and licensing implications for implementation

Regulation or licensing issues are identified in the Application section of units of competency and the Qualification description section of qualifications. If there are no requirements, the following statement will appear: No licensing, legislative or certification requirements apply to this unit/qualification at the time of publication.

The ICT Information and Communications Technology Training Package has minimal licensing/registration requirements. The only units of competency requiring licensing/registration are the following elective units imported from the ICT10 Integrated Telecommunications Training Package into the Certificate IV in Information Technology Support:

- ICTCBL2136B Install, maintain and modify customer premises communications cabling: ACMA Restricted Rule
- ICTCBL2137B Install, maintain and modify customer premises communications cabling: ACMA Open Rule.

If these units are used, please contact the relevant State or Territory Department(s) to check if the licensing/registration requirements described below still apply, and to check if there are any others with which you must comply.
WHS implications in the industry

Work health and safety (WHS) requirements are covered either by:

- embedding requirements in the elements/performance criteria of units of competency
- including specific WHS units in qualifications.

In jurisdictions where the National Model WHS Legislation has not been implemented RTOs are advised to contextualise units of competency by referring to the existing State/Territory occupational health and safety (OHS) legislative requirements.

Requirements for assessors

Assessor requirements are identified in the Assessment conditions section of units of competency.

All assessors must meet the requirements set by the applicable registering body (refer to the section ‘Who can deliver and assess a qualification?’ in this Guide).

In order to conduct assessment in these units for statutory licensing or other industry registration requirements, assessors should meet the recommendations outlined in the following table, in addition to the ASQA requirements.

<table>
<thead>
<tr>
<th>License/registration</th>
<th>Jurisdiction</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restricted Registration</td>
<td>Australian Communications and Media Authority</td>
<td>Restricted Registered Cabler TITAB registered assessor</td>
</tr>
<tr>
<td>ICTCBL2136B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Open Registration</td>
<td>Australian Communications and Media Authority</td>
<td>Open Registered Cabler TITAB registered assessor</td>
</tr>
<tr>
<td>ICTCBL2137B</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Entry requirements

There are no specific entry requirements for qualifications in the ICT Information and Communications Technology Training Package. However, completion of a lower level qualification, or relevant work/life experience may assist individuals to complete higher level qualifications.
Access and equity considerations

Access and equity relates to the approaches used to make sure training and assessment practices consider and respond to the individual needs of learners, so that potential learning barriers are minimised. Individual needs that could present barriers to access, participation and achievement of learning outcomes include:

- age
- gender
- cultural or ethnic background
- disability
- sexuality
- language, literacy or numeracy skills
- employment status
- geographical location.

The design and content of this training package supports equitable access and progression for all learners. It is the responsibility of the RTO delivering and assessing qualifications to:

- ensure that training and assessment processes and methods do not disadvantage individual learners
- determine the needs of individual learners and to provide access to any educational and support services necessary.

Some practical ways that access and equity issues could be addressed include:

- modifying assessment processes and techniques for learners who are located at a distance from a campus location
- checking that materials are culturally appropriate for learners and amending, as necessary
- making sure that activities and assessments are suitable for the language, literacy and numeracy skill levels of learners (while meeting the requirements of the unit of competency).

Reasonable adjustment

A legislative and regulatory framework underpins and supports the delivery of vocational education and training across Australia. Under this framework, providers of vocational education and training must take steps to ensure that learners with recognised disabilities can access and participate in education and training on the same basis as learners without disabilities.

Sometimes reasonable adjustments, are made to the learning environment, training delivery, learning resources and/or assessment tasks to accommodate the particular needs of a learner with a disability. An adjustment is reasonable if it can accommodate the learner’s particular needs, while also taking into account factors such as: the views of the learner; the potential effect of the adjustment on the learner and others; the costs and benefits of making the adjustment.

Adjustments must:

- be discussed and agreed to by the learner with a disability
- benefit the learner with a disability
- maintain the competency standards
- be reasonable to expect in a workplace.

Adjustments are not required if they could:

- cause the RTO unjustifiable hardship
- harm other learners.

Making reasonable adjustments requires the RTO to balance the need for change with the expense or effort involved in making this change. If an adjustment requires a disproportionately high expenditure or disruption it is not likely to be reasonable.
Foundation skills

Foundation skills are the non-technical skills that support an individual's participation in the workplace, in the community and in education and training.

In this training package (and all training packages developed by IBSA) the foundation skills incorporate the learning, language, literacy and numeracy (LLN) skills described in the Australian Core Skills Framework (ACSF), and the employability skills described in the Core Skills for Work Developmental Framework (CSfW). The skills included in these two frameworks are illustrated in the table.

<table>
<thead>
<tr>
<th>ACSF</th>
<th>CSfW</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Learning</td>
<td>• Navigate the world of work</td>
</tr>
<tr>
<td>• Reading</td>
<td>o Manage career and work life</td>
</tr>
<tr>
<td>• Writing</td>
<td>o Work with roles, rights and</td>
</tr>
<tr>
<td>• Oral Communication</td>
<td>protocols</td>
</tr>
<tr>
<td>• Numeracy</td>
<td>• Interact with others</td>
</tr>
<tr>
<td></td>
<td>o Communicate for work</td>
</tr>
<tr>
<td></td>
<td>o Connect and work with others</td>
</tr>
<tr>
<td></td>
<td>o Recognise and utilise</td>
</tr>
<tr>
<td></td>
<td>diverse perspectives</td>
</tr>
<tr>
<td></td>
<td>• Get the work done</td>
</tr>
<tr>
<td></td>
<td>o Plan and organise</td>
</tr>
<tr>
<td></td>
<td>o Make decisions</td>
</tr>
<tr>
<td></td>
<td>o Identify and solve problems</td>
</tr>
<tr>
<td></td>
<td>o Create and innovate</td>
</tr>
<tr>
<td></td>
<td>o Work in a digital world</td>
</tr>
</tbody>
</table>

Identifying foundation skills

Foundation skills that underpin competent performance are identified in each unit of competency in a foundation skills table. The foundation skills should be considered as an integrated part of the unit for delivery and assessment purposes.

The foundation skills table in each unit:
• identifies applicable underpinning skills
• lists the performance criteria numbers for each skill
• describes the application of each skill in context of the performance criteria.

The five skills from the ACSF are identified separately with descriptions identifying how the skill underpins the performance criteria. The three skill clusters from the CSfW are identified with descriptions that identify the respective skill or focus areas and how they underpin the performance criteria.

Resource and equipment requirements

RTOs must make sure that all resources and equipment required to train and assess units of competency are available.

Details of specific resources, including equipment and materials essential for assessment, are listed in the Assessment conditions sections of assessment requirements documents.
Modes of delivery

Training and assessment in simulated environments

Units of competency in the ICT Information and Communications Technology Training Package may be delivered and assessed in the workplace or in a simulated environment.

To maintain the integrity of training and assessment, RTOs, trainers and assessors need to keep pace with industry technologies and ensure that learning activities and assessments accurately reflect workplace activities. RTOs will need regular contact with industry to ensure the currency and validity of all activities conducted in simulated environments.

Workplace simulation criteria

In conducting training and assessment in a simulated workplace environment, trainers and assessors must make sure that the simulated environment gives the learner the opportunity to meet the following critical criteria:

1. Quality – The work is of the standard required for entry into the industry.
2. Productivity – The work is performed within a timeframe appropriate for entry to the industry.
3. Safety – The work is performed in a manner that meets industry safety standards.

Where simulations meet these criteria, RTOs can be confident that learners are ‘work ready’ on successful completion of units of competency.

Assessing in simulated environments

Simulations must provide opportunities for integrated assessment of competence that include:

- performing the task (task skills)
- managing a number of tasks (task management skills)
- dealing with workplace irregularities such as unexpected problems, breakdowns and changes in routine (contingency management skills)
- fulfilling the responsibilities and expectations of the job and workplace, including working with others (job/role environment skills)
- transferring competencies to new contexts.

Assessment activities must be realistic and reasonable in terms of scale. Assessment conducted under simulated conditions should reflect those typically found in the workplace. The following assessment checklist can be used to make sure that some key points are considered.

To further enhance the validity of assessment process using simulation, the assessor should consider:

- assessments covering a range of interconnected units of competency
- use of assessment checklists to ensure that all required performance and knowledge evidence requirements have been met
- use of self-assessment, peer assessment and debriefing activities
- use of authentic workplace documentation.

Assessment checklist

<table>
<thead>
<tr>
<th>Does the assessment allow the learner to:</th>
<th>Yes/No</th>
</tr>
</thead>
<tbody>
<tr>
<td>• deal with typical customers, including difficult customers and diverse types of customers?</td>
<td></td>
</tr>
<tr>
<td>• use facilities, equipment and materials that meet current industry standards?</td>
<td></td>
</tr>
<tr>
<td>• plan and prioritise multiple tasks to meet deadlines?</td>
<td></td>
</tr>
<tr>
<td>• experience the typical workflow for the industry?</td>
<td></td>
</tr>
<tr>
<td>• require adherence to service standards, workplace procedures, health and safety requirements?</td>
<td></td>
</tr>
<tr>
<td>• work with others as part of a team?</td>
<td></td>
</tr>
<tr>
<td>• consider constraints and pressures met in the workplace, e.g. budget, time, availability of resources?</td>
<td></td>
</tr>
</tbody>
</table>
Australian apprenticeships

Apprenticeships and traineeships are formal training arrangements between an employer and an employee that have been established by a State or Territory Training Authority (STA). STAs are the government departments in each State or Territory responsible for the operation of the VET system (including Australian Apprenticeships) within that jurisdiction. STAs establish specific industry training package qualifications which are available as apprenticeships and traineeships in each State or Territory.

The Australian Apprenticeships website offers information about traineeships and apprenticeships and includes links to the websites for STAs. Visit www.australianapprenticeships.gov.au for more information.

VET in schools

VET in schools (VETiS) provides for nationally recognised vocational education and training to be undertaken as part of a senior secondary certificate.

Successful completion of a VETiS program enables students to gain a nationally-recognised AQF qualification, usually at the same time as their school-based qualification.

VETiS programs are packaged and delivered in a variety of ways across Australia. There are three main types of delivery arrangements for VETiS programs:

- schools can be an RTO in their own right
- school sectoral bodies (such as Boards of Studies or regional offices) can hold RTO status on behalf of a group of schools
- schools can work together in partnership with an RTO.

In some State and Territory school systems, students who work part-time in an appropriate workplace may use this to fulfil work placement requirements. Virtual or simulated work placements may also be legitimate.

The following qualifications from the ICT Information and Communications Technology Training Package may be suitable for VETiS delivery:

- ICT20115 Certificate II in Information, Digital Media and Technology
- ICT30115 Certificate III in Information, Digital Media and Technology

RTOs are advised to check requirements with the relevant authorities in their State/Territory.
Training and assessment issues for schools

Implementation of the ICT Information and Communications Technology Training Package within the school sector, while encouraged, needs to ensure:

- the currency of skills and knowledge of those who train and assess students
- access to industry-current equipment, facilities and training resources so that students acquire a realistic view of the realities and conditions within the workplace
- comprehensive coverage of foundation skills, performance requirements and knowledge requirements as described in the unit and assessment requirements documents for each unit of competency
- current and realistic learning and assessment experiences.

Legal considerations for learners in the workplace/on placements

Legal requirements that apply to specific industries and VET vary across each State and Territory, and can regularly change. Contact the relevant State or Territory Department/s to check if legal requirements apply.
What is a qualification?

Qualifications are created by grouping units of competency into combinations that meet workplace roles. Qualifications come with ‘packaging rules’ which set out the overall requirements for delivering the qualification, for example, the number of core units; number and source of elective units.

Qualifications are aligned to Australian Qualifications Framework (AQF) qualification types. Vocational Education & Training (VET) qualifications are at levels 1, 2, 3, 4, 5, 6, and 8 of the AQF.

AQF provides a comprehensive, nationally consistent framework for all qualifications in post-compulsory education and training in Australia. In the VET sector it assists national consistency for all trainees, learners, employers and providers by enabling national recognition of qualifications and Statements of Attainment.

For a full explanation of the AQF, see the AQF website: http://www.aqf.edu.au

Qualifications in the ICT Information and Communications Technology Training Package

Please refer to Appendix 1 for a list of qualifications.

The ICT Information and Communications Technology Training Package qualifications need to cater for those seeking a professional career pathway in the ICT industry, as well as those seeking the ICT skills to support careers in a myriad of associated industries. It also needs to be acknowledged that information technology and ICT workers are spread across many diverse non-ICT industries, where their jobs may not be recognised in the ICT occupation skills classifications. Indications are that up to 80% of students undertaking ICT qualifications do not progress beyond AQF Certificate III level, but move horizontally with their ICT knowledge and skills into other non-ICT industries.
Technological convergence is affecting the way people work in the technical industries and ICT industry is no exception. The changing nature of the information and communications technology industries over the past decade will continue to impact on the ICT Information and Communications Technology Training Package to accommodate these changes as part of the continuous improvement process. The introduction late in 2013 of units of competency in cloud technologies and data warehousing illustrates the need for continued review.

The Australian ICT industry is a service industry rather than a specialised ICT focused industry, with the result that national ICT career pathways have become more vertical than horizontal, and are requiring the versatility to incorporate a mix of various ICT skills, rather than relying on the historically fixed specialist skills and pathways of the past.

The ICT Information and Communications Technology Training Package qualifications have been developed to enable a specialist outcome in the key ICT areas, combined with the flexibility to incorporate a diverse range of skill sets so as to provide a wider career pathway outcome.

Medium to small business enterprises are becoming more common in the industry. Due to their cost structures and business requirements, these enterprises need graduates with applied general IT skills, rather than with a full specialist qualification. While the need to develop specialist pathways is still critically important, ICT Information and Communications Technology Training Package needs to offer the flexibility to cater for broader cross-specialisation skill sets and career pathways.

Initiatives such as NBN, DER, computers in schools, and green and sustainable IT, are creating continued growth in the ICT industry in Australia, as well as potentially generating a rising demand for both general and niche specialist IT skills.

The convergence of traditional ICT job profiles and formal ICT occupational boundaries has resulted in competencies that integrate these technologies across ICT, including:

- 3D art
- big data and data warehousing
- digital literacy
- digital media technologies
- enhancements to content and network management capabilities
- entertainment
- green and sustainability technology requirements
- interactive and digital games development
- IP-based communications, broadcasting, switching and transmission
- mesh and cloud networks
- mobile applications
- network security
- networks (using wireless for data and voice) and overlay of broadband
- rendering
- social web technologies
- telecommunications.

To increase the flexibility and portability of ICT Information and Communications Technology Training Package qualifications, units of competency have been imported from the following endorsed Training Packages:

- BSB Business Services
- CPP07 Property Services
- CUF07 Screen and Media
- CUS09 Music
- CUV11 Visual Arts, Craft and Design
- ICT10 Integrated Telecommunications.
Qualification structure

Qualifications are based on templates prescribed by the NSSC Standards for Training Packages 2012. The table explains the contents of each field for qualifications in this training package.

<table>
<thead>
<tr>
<th>Qualification code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Each qualification has a unique eight-character code:</td>
</tr>
<tr>
<td>• the first three characters identify the training package</td>
</tr>
<tr>
<td>• the first number identifies the qualification level</td>
</tr>
<tr>
<td>• the next two numbers identify a qualification’s position in the sequence of qualifications at that level</td>
</tr>
<tr>
<td>• the last two numbers identify the year in which the qualification was endorsed.</td>
</tr>
</tbody>
</table>

For example:

![Diagram of qualification code example](image)

<table>
<thead>
<tr>
<th>Qualification title</th>
</tr>
</thead>
<tbody>
<tr>
<td>The title reflects the qualification outcomes and complies with the length specified in the AVETMIS standard (no more than 100 characters).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Qualification description</th>
</tr>
</thead>
<tbody>
<tr>
<td>This field describes the qualification outcomes, together with any licensing, legislative, regulatory or certification considerations.</td>
</tr>
</tbody>
</table>
Entry requirements
This is an optional field that specifies any mandatory entry requirements.

Packaging rules
This field:
• specifies the total number of units of competency required to achieve the qualification
• specifies the number of core and elective units
• lists all core and elective unit codes and titles, including prerequisite units where they apply.

Qualification mapping information
This field specifies the code and title of any equivalent qualification.

Links
This field provides a link to the Companion Volume Implementation Guide.

Qualification pathways and occupational outcomes
A pathway is the route or course of action taken to get to a destination. A training pathway generally means the learning activities or experiences used to attain the competencies needed to achieve career goals. There is no single pathway that applies to everyone; each individual has specific needs and goals.

Achievement of AQF qualifications provides opportunities for individuals to pursue and achieve their career goals. Qualifications can be achieved in various ways, including:
• off-the-job training, e.g. attending classroom-based learning programs
• on-the-job training, e.g. apprenticeships, traineeships
• recognition of prior learning
• credit transfer.

The following information and charts explain possible occupational outcomes for qualifications in this training package, together with pathways between qualifications.
Computer Systems Technology Pathway

ICT80415 Graduate Diploma of Telecommunications Network Engineering
ICT80515 Graduate Diploma of Telecommunications and Strategic Management

ICT80315 Graduate Certificate in Telecommunications
ICT80115 Graduate Certificate in Information Technology and Strategic Management
ICT80215 Graduate Certificate in Information Technology Sustainability

ICT60515 Advanced Diploma of Computer Systems Technology
ICT60115 Advanced Diploma of Information Technology

ICT50115 Diploma of Information Technology

ICT41015 Certificate IV in Computer Systems Technology

ICT30115 Certificate III in Information, Digital Media and Technology VETiS

ICT20115 Certificate II in Information, Digital Media and Technology VETiS

ICT10115 Certificate I in Information Digital Media and Technology
Digital and Interactive Games Pathway

- **ICT80415** Graduate Diploma of Telecommunications Network Engineering
- **ICT80515** Graduate Diploma of Telecommunications and Strategic Management

- **ICT80315** Graduate Certificate in Telecommunications
- **ICT80115** Graduate Certificate in Information Technology and Strategic Management
- **ICT80215** Graduate Certificate in Information Technology Sustainability

- **ICT60415** Advanced Diploma of Information Technology Project Management

- **ICT50215** Diploma of Digital and Interactive Games

- **ICT40915** Certificate IV in Digital and Interactive Games

- **ICT30115** Certificate III in Information, Digital Media and Technology VETiS

- **ICT20115** Certificate II in Information, Digital Media and Technology VETiS

- **ICT10115** Certificate I in Information Digital Media and Technology
Digital Media Technologies Pathway

**ICT80415** Graduate Diploma of Telecommunications Network Engineering  
**ICT80515** Graduate Diploma of Telecommunications and Strategic Management

**ICT80315** Graduate Certificate in Telecommunications  
**ICT80115** Graduate Certificate in Information Technology and Strategic Management  
**ICT80215** Graduate Certificate in Information Technology Sustainability

**ICT60415** Advanced Diploma of Information Technology Project Management

**ICT50915** Diploma of Digital Media Technologies

**ICT40815** Certificate IV in Digital Media Technologies

**ICT30115** Certificate III in Information, Digital Media and Technology VETiS

**ICT20115** Certificate II in Information, Digital Media and Technology VETiS

**ICT10115** Certificate I in Information Digital Media and Technology
Information Technology Pathway

- **ICT80415** Graduate Diploma of Telecommunications Network Engineering
- **ICT80515** Graduate Diploma of Telecommunications and Strategic Management

- **ICT80315** Graduate Certificate in Telecommunications
- **ICT80115** Graduate Certificate in Information Technology and Strategic Management
- **ICT80215** Graduate Certificate in Information Technology Sustainability

- **ICT60515** Advanced Diploma of Computer Systems Technology
- **ICT60115** Advanced Diploma of Information Technology

- **ICT50115** Diploma of Information Technology

- **ICT40115** Certificate IV in Information Technology

- **ICT30115** Certificate III in Information, Digital Media and Technology VETiS

- **ICT20115** Certificate II in Information, Digital Media and Technology VETiS

- **ICT10115** Certificate I in Information Digital Media and Technology
Information Technology Networking Pathway

- **ICT80415** Graduate Diploma of Telecommunications Network Engineering
- **ICT80515** Graduate Diploma of Telecommunications and Strategic Management

- **ICT80315** Graduate Certificate in Telecommunications
- **ICT80115** Graduate Certificate in Information Technology and Strategic Management
- **ICT80215** Graduate Certificate in Information Technology Sustainability

- **ICT60215** Advanced Diploma of Network Security

- **ICT50415** Diploma of Information Technology Networking

- **ICT40415** Certificate IV in Information Technology Networking

- **ICT30115** Certificate III in Information, Digital Media and Technology VETiS

- **ICT20115** Certificate II in Information, Digital Media and Technology VETiS

- **ICT10115** Certificate I in Information Digital Media and Technology
Information Technology Support Pathway

- **ICT80415** Graduate Diploma of Telecommunications Network Engineering
- **ICT80515** Graduate Diploma of Telecommunications and Strategic Management
- **ICT80315** Graduate Certificate in Telecommunications
- **ICT80115** Graduate Certificate in Information Technology and Strategic Management
- **ICT80215** Graduate Certificate in Information Technology Sustainability
- **ICT60415** Advanced Diploma of Information Technology Project Management
- **ICT50315** Diploma of Information Technology Systems Administration
- **ICT40215** Certificate IV in Information Technology Support
- **ICT30115** Certificate III in Information, Digital Media and Technology VETiS
- **ICT20115** Certificate II in Information, Digital Media and Technology VETiS
- **ICT10115** Certificate I in Information Digital Media and Technology
Information Technology Testing Pathway

- **ICT80415** Graduate Diploma of Telecommunications Network Engineering
- **ICT80515** Graduate Diploma of Telecommunications and Strategic Management

- **ICT80315** Graduate Certificate in Telecommunications
- **ICT80115** Graduate Certificate in Information Technology and Strategic Management
- **ICT80215** Graduate Certificate in Information Technology Sustainability

- **ICT60415** Advanced Diploma of Information Technology Project Management

- **ICT50515** Diploma of Database Design and Development

- **ICT40615** Certificate IV in Information Technology Testing

- **ICT30115** Certificate III in Information, Digital Media and Technology VETiS

- **ICT20115** Certificate II in Information, Digital Media and Technology VETiS

- **ICT10115** Certificate I in Information Digital Media and Technology
Programming Pathway

**ICT80415** Graduate Diploma of Telecommunications Network Engineering  
**ICT80515** Graduate Diploma of Telecommunications and Strategic Management

**ICT80315** Graduate Certificate in Telecommunications  
**ICT80115** Graduate Certificate in Information Technology and Strategic Management  
**ICT80215** Graduate Certificate in Information Technology Sustainability

**ICT60415** Advanced Diploma of Information Technology Project Management

**ICT50715** Diploma of Software Development

**ICT40515** Certificate IV in Programming

**ICT30115** Certificate III in Information, Digital Media and Technology VETiS

**ICT20115** Certificate II in Information, Digital Media and Technology VETiS

**ICT10115** Certificate I in Information Digital Media and Technology
Systems Analysis and Design Pathway

ICT80415 Graduate Diploma of Telecommunications Network Engineering
ICT80515 Graduate Diploma of Telecommunications and Strategic Management

ICT80315 Graduate Certificate in Telecommunications
ICT80115 Graduate Certificate in Information Technology and Strategic Management
ICT80215 Graduate Certificate in Information Technology Sustainability

ICT60315 Advanced Diploma of Information Technology Business Analysis

ICT50815 Diploma of Systems Analysis and Design

ICT40715 Certificate IV in Systems Analysis and Design

ICT30115 Certificate III in Information, Digital Media and Technology VETiS

ICT20115 Certificate II in Information, Digital Media and Technology VETiS

ICT10115 Certificate I in Information Digital Media and Technology
Web-Based Technologies Pathway

- **ICT80415** Graduate Diploma of Telecommunications Network Engineering
- **ICT80515** Graduate Diploma of Telecommunications and Strategic Management

- **ICT80315** Graduate Certificate in Telecommunications
- **ICT80115** Graduate Certificate in Information Technology and Strategic Management
- **ICT80215** Graduate Certificate in Information Technology Sustainability

- **ICT60415** Advanced Diploma of Information Technology Project Management

- **ICT50615** Diploma of Website Development

- **ICT40315** Certificate IV in Web-Based Technologies

- **ICT30115** Certificate III in Information, Digital Media and Technology VETiS

- **ICT20115** Certificate II in Information, Digital Media and Technology VETiS

- **ICT10115** Certificate I in Information Digital Media and Technology
Selecting electives for different employment outcomes

The qualifications include elective units that should be selected according to the learning and pathway needs of the learner. The choice of elective units is generally negotiated between the learner and/or employer, and the RTO conducting the training program.

Electives can be selected from within the training package, from other training packages and from accredited courses.

IBSA recommends that elective units should be used to provide a vocational focus for the qualification and should be relevant to the:

• qualification level
• job role
• work outcomes
• local industry needs.

The following table provides assistance in selecting electives for particular employment outcomes.
## Selecting electives for different employment outcomes

<table>
<thead>
<tr>
<th>Qualification</th>
<th>Employment outcome</th>
<th>Recommended elective units</th>
</tr>
</thead>
</table>
| **ICT40215 - Certificate IV in Information Technology Support** | Practical application plus technician | BSBUS5301 Implement and monitor environmentally sustainable work practices  
ICTSAS307 Install, configure and secure a small office or home office network  
ICTICT421 Connect, maintain and configure hardware components  
ICTSAS425 Configure and troubleshoot operating system software  
ICTSAS426 Locate and troubleshoot ICT equipment, system and software faults  
ICTICT401 Determine and confirm client business requirements |
| | Practical networking plus technician | ICTSAS307 Install, configure and secure a small office home office network  
ICTNWK401 Install and manage a server  
ICTNWK404 Install, operate and troubleshoot a small enterprise branch network  
ICTNWK406 Install, configure and test network security |
| | Certified networking technician | ICTNWK404 Install, operate and troubleshoot a small enterprise branch network  
ICTNWK405 Build a small wireless local area network  
ICTTEN4199 Install, configure and test a router |
| **ICT40415 - Certificate IV in Information Technology Networking** | Certified networking technician | ICTNWK404 Install, operate and troubleshoot a small enterprise branch network  
ICTNWK405 Build a small wireless local area network  
ICTTEN4199 Install, configure and test a router  
ICTNWK403 Manage network and data integrity  
ICTNWK408 Configure a desktop environment |
| | Certified technology specialist – graphical user interfaces (GUI) | ICTNWK403 Manage network and data integrity  
ICTNWK408 Configure a desktop environment |
| | Certified technician or technology specialist – small server configuration | ICTNWK401 Install and manage a server |
| | Certified IT enterprise, security or server administrator | ICTNWK406 Install, configure and test network security  
ICTNWK403 Manage network and data integrity |
<p>| | Certified SQL associate or specialist | ICTPRG425 Use structured query language |</p>
<table>
<thead>
<tr>
<th>Qualification</th>
<th>Employment outcome</th>
<th>Recommended elective units</th>
</tr>
</thead>
</table>
| **ICT50615 - Diploma of Website Development** | Web administration | ICTSAS504 Develop and conduct client acceptance test  
ICTWEB508 Develop website information architecture  
ICTSAS503 Perform systems tests  
ICTSAS505 Review and update disaster recovery and contingency plans  
ICTWEB509 Use site server tools for transaction management  
ICTICT503 Validate quality and completeness of system design specifications |
| | Web design | ICTWEB504 Build a document using eXtensible markup language  
ICTWEB506 Develop complex cascading style sheets  
ICTWEB505 Develop complex web page layouts |
| | Web programming | ICTPRG501 Apply advanced object-oriented language skills  
ICTPRG523 Apply advanced programming skills in another language  
ICTPRG527 Apply intermediate object-oriented language skills  
ICTPRG418 Apply intermediate programming skills in another language  
ICTPRG406 Apply introductory object-oriented language skills  
ICTICT406 Build a graphical user interface |
| **ICT50415 - Diploma of Information Technology Networking** | Certified technology specialist – communications technologies | ICTNWK501 Plan, implement and test enterprise communication solutions |
| | Certified technology specialist – network and applications infrastructure | ICTNWK505 Design, build and test a network server |
| | Certified technician or technology specialist – infrastructure configuration | ICTNWK505 Design, build and test a network server  
ICTNWK503 Install and maintain valid authentication processes |
| | Certified network associate specialist | ICTNWK529 Install and manage complex ICT networks  
ICTNWK506 Configure, verify and troubleshoot WAN links and IP services in a medium enterprise network  
ICTNWK507 Install, operate and troubleshoot medium enterprise routers  
ICTNWK508 Install, operate and troubleshoot medium enterprise switches |
<table>
<thead>
<tr>
<th>Qualification</th>
<th>Employment outcome</th>
<th>Recommended elective units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certified security and architect specialist</td>
<td></td>
<td>ICTNWK529 Install and manage complex ICT networks</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ICTNWK503 Install and maintain valid authentication processes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ICTNWK511 Manage network security</td>
</tr>
<tr>
<td>Certified technology specialist – internet security</td>
<td></td>
<td>ICTNWK509 Design and implement a security perimeter for ICT networks</td>
</tr>
<tr>
<td><strong>ICT50815 - Diploma of Systems Analysis and Design</strong></td>
<td>Analyst programmer</td>
<td>ICTPRG418 Apply intermediate programming skills in another language</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ICTPRG527 Apply intermediate object-oriented language skills</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ICTPRG509 Build using rapid application development</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ICTPRG514 Prepare for software development using rapid application development</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ICTPRG524 Develop high-level object-oriented class specifications</td>
</tr>
<tr>
<td></td>
<td>System designer</td>
<td>ICTNWK514 Model preferred system solutions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ICTSAD501 Model data objects</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ICTSAD502 Model data processes</td>
</tr>
<tr>
<td><strong>ICT50715 - Diploma of Software Development</strong></td>
<td>Systems design</td>
<td>ICTICT403 Apply software development methodologies</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ICTICT509 Gather data to identify business requirements</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ICTICT511 Match ICT needs with the strategic direction of the enterprise</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ICTNWK514 Model preferred system solutions</td>
</tr>
<tr>
<td></td>
<td>Programming</td>
<td>ICTPRG505 Build advanced user interface</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ICTPRG506 Design application architecture</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ICTPRG507 Implement security for applications</td>
</tr>
<tr>
<td><strong>ICT60215 - Advanced Diploma of Network Security</strong></td>
<td>Network security</td>
<td>ICTNWK608 Configure network devices for a secure network infrastructure</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ICTNWK609 Configure and manage intrusion prevention system on network sensors</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ICTNWK612 Plan and manage troubleshooting advanced integrated IP networks</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Four additional units from elective units as appropriate to the specific job role.</td>
</tr>
<tr>
<td>Qualification</td>
<td>Employment outcome</td>
<td>Recommended elective units</td>
</tr>
<tr>
<td>---------------</td>
<td>--------------------</td>
<td>---------------------------</td>
</tr>
</tbody>
</table>
| Network infrastructure | ICTNWK603 Plan, configure and test advanced internetwork routing solutions  
ICTNWK604 Plan and configure advanced internetwork switching solutions  
ICTNWK612 Plan and manage troubleshooting advanced integrated IP networks  
Four additional units from elective units as appropriate to the specific job role. | |
| Wireless networks | ICTNWK605 Design and configure secure integrated wireless systems  
ICTNWK606 Implement voice applications over secure wireless networks  
ICTNWK607 Design and implement wireless network security  
ICTNWK612 Plan and manage troubleshooting advanced integrated IP networks  
Three additional units from elective units as appropriate to the specific job role. | |
| Voice 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  
Four additional units from elective units as appropriate to the specific job role. | |
| ICT60415 - Advanced Diploma of Information Technology Project Management | IT project management consultant | ICTPMG606 Manage ICT project quality  
ICTPMG607 Manage and control ICT project risks  
ICTPMG608 Manage ICT project systems implementation  
ICTPRG602 Manage the development of technical solutions from business specifications |
| ICT60315 - Advanced Diploma of Information Technology Business Analysis | Business analysis | ICTPMG603 Manage ICT project planning  
ICTPRG602 Manage the development of technical solutions from business specifications  
ICTSAD505 Develop technical requirements for business solutions |
<table>
<thead>
<tr>
<th>Qualification</th>
<th>Employment outcome</th>
<th>Recommended elective units</th>
</tr>
</thead>
</table>
| ICT80215 - Graduate Certificate in Information Technology Sustainability | IT sustainability systems consultant | ICTSUS804 Use ICT to improve sustainability outcomes  
ICTICT809 Facilitate business analysis  
One additional unit from elective units as appropriate to the specific job role. |
|                                                 | IT sustainability solutions architect  | ICTICT806 Direct outsourced ICT services  
ICTICT807 Direct research and business response to new ICT technology  
One additional unit from elective units as appropriate to the specific job role. |
|                                                 | IT sustainability project manager      | ICTSUS8238 Conduct and manage a life cycle assessment for sustainability  
ICTICT806 Direct outsourced ICT services  
ICTICT810 Synchronise ICT projects  
BSBREL701A Develop and cultivate collaborative partnerships and relationships |
|                                                 | IT sustainability technology specialist| ICTSUS804 Use ICT to improve sustainability outcomes  
ICTSUS8237 Lead applied research in ICT sustainability  
ICTSUS8238 Conduct and manage a life cycle assessment for sustainability |
|                                                 | IT sustainability business manager     | ICTICT806 Direct outsourced ICT services  
ICTICT807 Direct research and business response to new ICT technology  
ICTICT809 Facilitate business analysis |
|                                                 | IT sustainability requirements manager | ICTSUS8237 Lead applied research in ICT sustainability  
ICTSUS8238 Conduct and manage a life cycle assessment for sustainability  
One additional unit from elective units as appropriate to the specific job role. |
What is a skill set?

Skill sets consist of one or more endorsed units of competency that have been packaged together to address a defined industry need or specific licensing or regulatory requirement. Skill sets are not qualifications.

Skill sets in the ICT Information and Communications Technology Training Package

Please refer to Appendix 1 for a list of skill sets.
Skill set structure

Skill sets themselves are non-endorsed components of training packages (however, they consist of endorsed units of competency). Skill sets use a standard format developed by IBSA. The table explains the contents of each field.

<table>
<thead>
<tr>
<th><strong>Skill set code</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>This is a unique code in the format: &lt;Training package code&gt; &lt;SS&gt; &lt;five digit code&gt; e.g. BSBSS00001. For example:</td>
</tr>
</tbody>
</table>

```
ICT
Information and Communications Technology Training Package

Example
ICTSS00031

SS
Skill Set identifier

00031
This is the 31st skill set in the sequence
```

<table>
<thead>
<tr>
<th><strong>Skill set name</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>The title reflects the skill set outcomes.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Description</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>This field explains how the skill set meets the industry need or regulatory requirement.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Pathways information</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>This field explains the skill set’s relationship with a qualification.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Suggested title and words for Statement of Attainment</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>This field provides advice on a suitable title and words to use on a Statement of Attainment.</td>
</tr>
<tr>
<td><strong>Target group</strong></td>
</tr>
<tr>
<td>------------------</td>
</tr>
<tr>
<td><strong>Links</strong></td>
</tr>
</tbody>
</table>
What is a unit of competency?

Units of competency are the nationally agreed statements of the skills and knowledge required for effective performance in a particular job or job function. Units of competency describe work outcomes as agreed by industry. As such, they do not describe the procedures necessary to perform a particular role, but rather, identify the skills and knowledge, as outcomes, that contribute to the whole job function. Each unit of competency describes:

• a specific work activity and what it involves
• particular skills (and level of skills) that are needed to perform the work activity
• conditions under which the work activity may be conducted
• knowledge and skills required to perform the work activity
• foundation skills required to perform the work activity
• how learners can show they are competent in the work activity
• performance and knowledge evidence that must be considered in assessing competency of the unit
• conditions under which evidence for assessment must be gathered.

Units of competency are not aligned to levels within the AQF because units of competency can be included across a range of qualification levels. However, the qualification in which a unit is first packaged in a training package is indicated in the unit code.
What is competency?

The broad concept of industry competency is the ability to perform particular tasks and duties to the standard of performance expected in the workplace. Competency covers all aspects of workplace performance and involves:

- performing individual tasks
- managing a range of different tasks
- responding to contingencies or breakdowns
- dealing with the responsibilities of the workplace, including working with others.

Workplace competency is the ability to apply relevant skills and knowledge consistently over time and in the required workplace situations and environments.

Competency standards are determined by industry to meet industry skill needs and focus on what is expected of a competent individual in the workplace.

Units of Competency in the ICT Information and Communications Technology Training Package

As well as native units, a range of units of competency have been imported into the ICT Information and Communications Technology Training Package to provide greater flexibility, choice and transferability of skills within the industry.

Please refer to Appendix 1 for a list of units of competency. This includes:

- units of competency native to this training package
- imported units of competency
- units of competency with prerequisites.
Unit of competency structure

Units of competency are based on templates prescribed by the NSSC Standards for Training Packages 2012. Under these Standards, a unit of competency comprises two separate documents, i.e. a unit of competency document and an assessment requirements document. The tables explains the contents of each field.

Unit of competency

<table>
<thead>
<tr>
<th>Unit code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Each unit of competency has a unique code, which is assigned when the training package is endorsed, or when new units of competency are added to an endorsed training package:</td>
</tr>
<tr>
<td>• the first three characters identify the training package</td>
</tr>
<tr>
<td>• the next three characters indicate the competency stream or group</td>
</tr>
<tr>
<td>• the first number indicates the AQF qualification in which the unit is first packaged</td>
</tr>
<tr>
<td>• the next two numbers identify a unit’s position in the sequence of units in that competency stream or group.</td>
</tr>
</tbody>
</table>

**Example**

ICT DBS 4 01

This is the 1st unit in the sequence in the Database stream

This unit was first packaged within a Certificate IV

<table>
<thead>
<tr>
<th>Unit title</th>
</tr>
</thead>
<tbody>
<tr>
<td>The title describes the unit outcome and complies with the length specified in the AVETMIS Standard (no more than 100 characters).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unit application</th>
</tr>
</thead>
<tbody>
<tr>
<td>This field describes how the unit is practically applied, who would typically use it and the unit of competency’s relationship to licensing, legislative or certification requirements.</td>
</tr>
</tbody>
</table>
### Prerequisite units

This is an optional field that specifies any unit(s) in which the learner must already be competent prior to the achieving competency in this unit.

### Unit sector

This field is used to categorise units of competency in relation to industry sectors or types of work.

### Elements of competency

Elements of competency describe the outcomes of the significant functions and tasks that make up the competency. Elements describe actions or outcomes that are demonstrable and assessable.

### Performance criteria

Performance criteria specify the required performance in relevant tasks, roles, skills (including foundation skills) and the applied knowledge that enables competent performance.

### Foundation skills

This field describes the language, literacy, numeracy and employment skills that are essential to performance.

### Range of conditions

This is an optional field that specifies different work environments and conditions that may affect performance. Range is restricted to essential operating conditions and any other variables essential to the work environment, so it is quite different from the previous Range statement.

### Unit mapping information

This field specifies the code and title of any equivalent unit of competency.

### Links

This field provides a link to the Companion Volume Implementation Guide.
# Assessment requirements

**Title**

This field uses the format: Assessment Requirements for [Unit of Competency Code and Title]

**Performance evidence**

Performance evidence, as the name implies, specifies what individuals must do to show that they satisfy the performance standards in the unit of competency.

**Knowledge evidence**

Knowledge evidence, as the name implies, specifies what individuals must know in order to carry out the work tasks described in the unit of competency safely and effectively.

**Assessment conditions**

This field describes mandatory conditions for assessment, e.g. details of equipment and materials; contingencies; physical conditions; relationships with other people; timeframes. It also specifies assessor requirements.

**Links**

This field provides a link to the Companion Volume Implementation Guide.
Contextualisation of units of competency by RTOs

RTOs may contextualise units of competency to reflect local skill needs. Contextualisation could involve additions or amendments to the unit of competency to suit particular delivery methods, learner profiles, or specific enterprise requirements. Any contextualisation must ensure the integrity of the outcome of the unit of competency is maintained.

Industry requirements, as described in training or job specifications, can be used to contextualise a unit of competency.
Contacts and links

Companion volumes/
training package
information

All IBSA Companion Volumes can be found on the IBSA website:
https://ibsa.org.au/companion_volumes

Innovation and Business Skills Australia

Level 11, 176 Wellington Parade
East Melbourne Vic 3002
Tel: 03 9815 7000
Fax: 03 9815 7001
Web: www.ibsa.org.au
Email: reception@ibsa.org.au

General

Australian Apprenticeships
www.australianapprenticeships.gov.au

http://www.aqf.edu.au/

Australian Skills Quality Authority (ASQA)
http://www.asqa.gov.au

Industry Skills Councils
http://www.isc.org.au

TGA website, training packages

Training Accreditation Council (Western Australia)
http://www.tac.wa.gov.au

Victorian Registration and Qualifications Authority (VRQA)
State and Territory Training Authority

Australian Capital Territory

New South Wales

Northern Territory
http://www.dob.nt.gov.au

Queensland

South Australia

Tasmania
http://www.skills.tas.gov.au/

Victoria

Western Australia
http://www.education.wa.edu.au

About IBSA

This Guide has been developed by Innovation and Business Skills Australia (IBSA). IBSA is a national organisation working closely with industry to identify skill needs and to develop training products and services to fill those needs.

IBSA is authorised and funded by the Australian government to produce training packages for its six industries:

- Business services
- Financial services
- Information and communication technologies
- Cultural industries
- Printing and graphic arts
- Education and training.

Visit www.ibsa.org.au for more information.