Australian Government

Department of Education, Employment and Workplace Relations

ICASAS513A Develop detailed test plans

Release: 1

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Modification History

Release	Comments
Release 1	This Unit first released with *ICA11 Information and Communications Technology Training Package version 1.0*

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to plan for testing by collating documentation of conditions and expected results sufficient to allow for thorough system testing.

Application of the Unit

This unit applies to information technology (IT) staff in a variety of areas who are required to test IT systems, including software development, systems administration, networking, and web development. Group or team coordination may also be involved.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement but users should confirm requirements with the relevant federal, state or territory authority.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Element	Performance Criteria
Elements describe the essential outcomes of a unit of competency.	*Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.*

Elements and Performance Criteria

1. Prepare test environment and gather tools	1.1 Determine structure of system and user accounts to understand the test environment 1.2 Determine areas to test and test objectives, according to organisational standards 1.3 Ensure accessibility of documentation 1.4 Notify user representatives or approval authorities of objectives and scheduled test 1.5 Notify operations staff of scheduled test to ensure preparedness and an understanding of implications
2. Prepare test data	2.1 Gather test schedules, according to organisational standards 2.2 Correlate schedules with related functionality, according to organisational standards 2.3 Check ***testing schedule*** prior to validation, according to organisational standards 2.4 Prepare test drivers or stubs for test harness, according to organisational standards 2.5 Register test plan, and initiate log entries, according to organisational standards
3. Complete test plan and acceptance processes	3.1 Use software metrics where appropriate 3.2 Validate test and acceptance processes 3.3 Ensure documentation and reporting comply with test plan and ***quality benchmarks***

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to:
  - conduct presentations
  - liaise with system users and other internal staff
  - participate in teams
- literacy skills to:
  - analyse and evaluate information
  - interpret business and organisational requirements
  - prepare documentation and reports
- planning and organisational skills to develop strategic initiatives
- technical skills to:
  - participate in critical areas, including access control and pathing
  - identify, analyse and evaluate broad features of system testing and best practice in system testing.

Required knowledge

- at least three different operating systems, with detailed knowledge of operating systems relevant to project requirements
- automated test tools, with detailed knowledge of features and processes in some areas
- organisational requirements
- system or application being tested
- testing techniques.

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	

Critical aspects for assessment and evidence required to demonstrate competency in this unit	Evidence of the ability to:
	• interpret software specifications
	• consistently and accurately develop a comprehensive test plan that documents:
	  • test conditions or cases to be applied
	  • data to be processed
	  • automated testing coverage
	  • expected results
	  • activities, dependencies and effort required to conduct the system test.

Context of and specific resources for assessment	Assessment must ensure access to: • appropriate learning and assessment support when required • modified equipment for people with special needs • system engineering management plan • test and evaluation program plan • system or application suitable for testing plus its associated documentation • organisational plans and documentation.

Method of assessment	A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:
	• direct observation of candidate preparing test data
	• verbal or written questioning to assess candidate's knowledge of:
	  • items to be tested
	  • features to be tested
	  • tasks involved in testing
	  • personnel involved
	  • any risks requiring contingency planning
	• evaluation of candidate's test plan describing the scope, approach, resources, and schedule of intended testing activities.

Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, where appropriate.

	Assessment processes and techniques must be culturally appropriate, and suitable to the communication skill level, language, literacy and numeracy capacity of the candidate and the work being performed. Indigenous people and other people from a non-English speaking background may need additional support. In cases where practical assessment is used it should be combined with targeted questioning to assess required knowledge.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Testing schedule may relate to:	• complexity • dependency • importance • security • testability • X-factor, where X is an unknown and may or may not impact on the test schedule.
Quality benchmarks may include:	• AS3925.1-1994 Software quality assurance - plans • AS4042-1992 Software configuration management plans • AS4043-1992 Software configuration management • AS/NZS 14102:1998 Information technology - guideline for evaluation and selection of computer-aided software engineering (CASE) tools • AS/NZS 4258:1994 Software user documentation process • AS/NZS ISO/IEC 12207:1997 Information technology - Software life cycle processes.

Unit Sector(s)

Systems administration and support