ICAT5077B Develop detailed test plan

Release: 1

ICAT5077B Develop detailed test plan

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit defines the competency required to plan for testing by collating documentation of conditions and expected results sufficient to allow for thorough system testing. No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Application of the Unit

Application of the unit	

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.

Elements and Performance Criteria Pre-Content

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

ELEMENT	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 objectives of the testing ensuring adherence 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 2.2. Correlate schedules with related functionality 2.3. Check *testing schedule* prior to validation 2.4. Prepare test drivers/stubs for test harness 2.5. Register test plan, and initiate log entries 2.6. Take action to ensure adherence 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

REQUIRED SKILLS AND KNOWLEDGE
This section describes the skills and knowledge required for this unit.
Required skills
• Skills involving participation in critical areas (e.g. access control, pathing) • Communication skills in relation to analysis, evaluation and presentation of information (e.g. when all documentation and checklists are completed) • Application usage skills in relation to analysis, evaluation and presentation of information • Planning skills in relation to communications and risk management (e.g. when test plan is walked through according to project requirements) • Research skills for identifying, analysing and evaluating broad features of system testing and best practice in system testing, for example when critical areas to test

REQUIRED SKILLS AND KNOWLEDGE

are determined such as the use of application skills

Required knowledge

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

Innovation and Business Skills Australia

Evidence Guide

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 following is essential: • Assessment must confirm sufficient knowledge of interpreting software specifications and the ability to consistently and accurately develop a comprehensive test plan. Assessment of this competency requires access to project documentation such as: • System engineering management plan • Test and evaluation program plan • Project plan • System/application suitable for testing To demonstrate this unit of competency the test plan will need to document: • Test conditions/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	A test plan describes the scope, approach, resources, and schedule of intended testing activities. It identifies test items, the features to be tested, the testing tasks, who will do each task, and any risks requiring contingency planning. The breadth, depth and complexity covering planning and initiation of alternative approaches to skills or knowledge applications across a broad range of technical and/or management requirements, evaluation and coordination would be characteristic.

EVIDENCE GUIDE	
	Assessment must ensure: • The demonstration of competency may also require self-directed application of knowledge and skills, with substantial depth in some areas where judgement is required in planning and selecting appropriate equipment, services and techniques for self and others. • Applications involve participation in development of strategic initiatives as well as personal responsibility and autonomy in performing complex technical operations or organising others. It may include participation in teams including teams concerned with planning and evaluation functions. Group or team coordination may also be involved.
Method of assessment	The purpose of this unit is to define the standard of performance to be achieved in the workplace. In undertaking training and assessment activities related to this unit, consideration should be given to the implementation of appropriate diversity and accessibility practices in order to accommodate people who may have special needs. Additional guidance on these and related matters is provided in ICA05 Section 1. • Competency in this unit should be assessed using summative assessment to ensure consistency of performance in a range of contexts. This unit can be assessed either in the workplace or in a simulated environment. However, simulated activities must closely reflect the workplace to enable full demonstration of competency. • Assessment will usually include observation of real or simulated work processes and procedures and/or performance in a project context as well as questioning on underpinning knowledge and skills. The questioning of team members, supervisors, subordinates, peers and clients where appropriate may provide valuable input to the assessment process. The interdependence of units for assessment purposes may vary with the particular project or

EVIDENCE GUIDE	
	scenario.
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.
	An individual demonstrating this competency would be able to:
	• Demonstrate understanding of a broad knowledge base incorporating theoretical concepts, with substantial depth in some areas
	• Analyse and plan approaches to technical problems or management requirements
	• Transfer and apply theoretical concepts and/or technical or creative skills to a range of situations
	• Evaluate information, using it to forecast for planning or research purposes
	• Take responsibility for own outputs in relation to broad quantity and quality parameters
	• Take some responsibility for the achievement of group outcomes
	• Maintain knowledge of industry products and services

Range Statement

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 take into account but is not limited to:	• dependency • importance • testability • complexity • security • X-factor, where X is an unknown and may or may not impact on the test schedule

RANGE STATEMENT	
Quality benchmarks may include:	- AS 4043-1992 Software configuration management - AS 4042-1992 Software configuration management plans - AS 3925.1-1994 Software quality assurance - plans - AS/NZS 4258:1994 Software user documentation process - AS/NZS ISO/IEC 12207:1997 Information technology - software life cycle processes - AS/NZS 14102:1998 Information technology - guideline for evaluation and selection of CASE tools

Unit Sector(s)

Unit sector	Test

Co-requisite units

Co-requisite units		

Competency field

Competency field	