



Australian Government

Department of Education, Employment and Workplace Relations

ICAB4064B Prepare software development review

Release: 1

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Modification History

Not Applicable

Unit Descriptor

Unit descriptor	<p>This unit defines the competency required to establish standards associated with IT technical requirements in the context of quality assurance processes applicable to software development.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.</p>
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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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.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Review software standards	<p>1.1. Ensure that <i>stakeholders</i> have an understanding of the <i>organisational requirements</i></p> <p>1.2. Document <i>software standards</i> according to <i>project standards</i></p>
2. Review implementation standards	<p>2.1. Assign <i>software standards</i> to functions according to detailed technical plan</p> <p>2.2. Take action to ensure that <i>communication</i> and distribution strategies are clear, coherent and meet overall project plan requirements</p> <p>2.3. Monitor and report on implementation of standards against acceptance criteria and detailed technical specifications</p>
3. Review software metrics and milestones	<p>3.1. Define metrics in relation to the project milestones, and timeframe and cost considerations</p> <p>3.2. Develop schedule of quality reviews</p> <p>3.3. Determine quality considerations by identifying in-process measurement points that relate to critical <i>organisational requirements</i></p> <p>3.4. Determine method to benchmark and scale achievement against stated <i>stakeholders</i> requirements and cost considerations</p> <p>3.5. Report metrics and milestones to <i>stakeholders</i> in a clear and coherent manner and take action to ensure written agreement</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE
This section describes the skills and knowledge required for this unit.
Required skills
<ul style="list-style-type: none"> • Data modelling skills for identifying, analysing and evaluating a range of solutions. • Problem solving skills for a defined range of unpredictable problems involving participation in the development of technical solutions. • Design and analysis skills for identifying, analysing and evaluating a range of solutions. • Communication skills in relation to analysis, evaluation and presentation of

REQUIRED SKILLS AND KNOWLEDGE

information (e.g. when all stakeholders are cognisant of the organisational standards and agree to adherence, and when communication and distribution strategies are clear, coherent and meet overall project plan requirements).

- Negotiation and influencing skills (e.g. when metrics and milestones are conveyed to client and developers in a clear and coherent manner, and their agreement in writing is ensured).
- Risk assessment skills for identifying, analysing and evaluating a range of solutions.

Required knowledge

- Broad general knowledge of the client business domain (e.g. when reviewing implementation standards).
- Broad knowledge of quality assurance practices and the identification of standards (e.g. when reviewing software standards, software metrics and milestones).
- Current industry-accepted software configuration management processes, with knowledge of general features and capabilities.
- Broad knowledge of software metrics development.

Evidence Guide

EVIDENCE GUIDE	
<p>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.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • Assessment must confirm the ability to establish the standards associated with the IT technical requirements, taking into account quality assurance processes that are in place for the development of software. <p>To demonstrate competency in this unit the person will require access to:</p> <ul style="list-style-type: none"> • Technical specifications • Organisational standards for documentation and version control • Project management process and hierarchy • Future organisational business processes • Software requirements specifications • Interface requirements specifications • System requirements • Design specifications • Project budget, timeframe
Context of and specific resources for assessment	<p>Preparing a software development review will usually include observation of real or simulated software processes and procedures.</p> <p>Data used in preparing the development review should be validated and come from other projects or related organisational activities.</p> <p>The breadth, depth and complexity of knowledge and skills in this competency would cover a broad range of varied activities or application in a wider variety of contexts most of which are complex and non-routine. Leadership and guidance would be involved when organising activities of self and others as well as</p>

EVIDENCE GUIDE	
	<p>contributing to technical solutions of a non-routine or contingency nature.</p> <p>Assessment must ensure:</p> <ul style="list-style-type: none"> • Performance of a broad range of skilled applications including the requirement to evaluate and analyse current practices, develop new criteria and procedures for performing current practices and provision of some leadership and guidance to others in the application and planning of the skills would be characteristic. • Applications may involve responsibility for, and limited organisation of, others.
Method of assessment	<p>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.</p> <ul style="list-style-type: none"> • 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 scenario.

EVIDENCE GUIDE**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 some theoretical concepts
- Apply solutions to a defined range of unpredictable problems
- Identify and apply skill and knowledge areas to a wide variety of contexts, with depth in some areas
- Identify, analyse and evaluate information from a variety of sources
- Take responsibility for own outputs in relation to specified quality standards
- Take limited responsibility for the quantity and quality of the output of others
- 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.

Stakeholders may include:

- sponsor
- user
- development team
- project team

Organisational requirements may include but is not limited to:

- how and what the organisation wants in regard to work environment
- problem solution processes

RANGE STATEMENT	
	<ul style="list-style-type: none"> • preventative maintenance and diagnostic policy • roles and technical responsibilities in the IT department • vendor and product service-level support agreements
<i>Standards</i> may include:	<ul style="list-style-type: none"> • ISO/IEC/AS standards • organisational standards • project standards (for further information refer to the Standards Australia website at: www.standards.com.au) • Java coding standards, GNU coding standard
<i>Documentation</i> may follow:	<ul style="list-style-type: none"> • ISO/IEC/AS standards • audit trails • naming standards • version control • project management templates and report writing • maintaining equipment inventory • client training • satisfaction reports
<i>Communication</i> may include:	<ul style="list-style-type: none"> • verbal methods (e.g. telephone, meetings, video conferencing) • non-verbal methods (e.g. written messages, emails, memos)
<i>Project standards</i> may include but is not limited to:	<ul style="list-style-type: none"> • development methodology • reporting mechanisms • project plan • change control • quality of software modules • sharing of code/libraries • ease of modification and maintenance • delivery against required milestones and budget

Unit Sector(s)

Unit sector	Build
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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