Australian Government

Department of Education, Employment and Workplace Relations

BSBDES501A Implement design solutions

Revision Number: 1

ISC INDUSTRY SKILLS COUNCILS
Creating Australia's Future

BSBDES501A Implement design solutions

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the performance outcomes, skills and knowledge required to take a design concept or solution to the implementation stage.
	No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Application of the Unit

Application of the unit	This unit applies to individuals who implement concepts and solutions in response to a design challenge in any industry context. It takes BSBDES401A Generate design solutions, to the next stage focusing on the resourcing and testing of a design concept.
	The outcome of work could be a completed product, object, system or service, but is more likely to be a complete or partial prototype or model for the design.
	The focus of the unit is on a general knowledge of design techniques and processes, and practical application to a specific design context.

Licensing/Regulatory Information

Not applicable.

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. Organise resources for realising the design solution	1.1. Confirm the nature and scope of the proposed design solution 1.2. Research *resources* required for developing the design concept to *implementation stage* 1.3. Investigate different *factors that impact on the selection and use of resources* 1.4. Select and prepare resources based on research and other *legislative or organisational requirements*
2. Test the design solution	2.1. Experiment with a range of different *techniques and processes to test the design solution* 2.2. Evaluate, challenge and refine testing processes 2.3. Gain input and feedback from *key stakeholders* during the testing process 2.4. Accurately document outcomes of testing 2.5. Select final design solution based on outcomes of testing and input from others
3. Develop the prototype or model	3.1. Create prototype or model based on agreed approaches 3.2. Where appropriate, select and organise materials, tools and equipment according to chosen design solution 3.3. Expose model or prototype to quality checks and ongoing analysis, enhancement and refinement 3.4. Compare completed prototype or model against *identified needs and other considerations* and make adjustments as required
4. Present the prototype or model	4.1. Identify key stakeholders to whom design should be presented 4.2. Select *appropriate format* for presentation based on nature of the audience and design 4.3. Present prototype or model in a way that optimises clarity, conciseness and appeal

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Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

- communication skills to consult with others on testing and refinement of the design solution
- creative thinking skills to develop and adapt responses to experimentation and testing processes
- literacy skills to interpret and develop a wide range of visual and written information sources
- planning and organisational skills to organise resources and to coordinate a testing process, including liaison and consultation with others during the design process
- problem-solving skills to respond to unpredictable issues and challenges that arise during the testing process.

Required knowledge

- copyright, moral rights and intellectual property issues and legislation that impact on design in the relevant context
- elements and principles of design and their application in the relevant design context
- features of the wider industry, economic, social and historical context for the design solution
- other designs and the work of other design practitioners in the relevant context
- sources of information that support the development of technical and other knowledge
- technical knowledge of the area for which design solutions are being implemented - in terms of relevant resources, materials, tools, equipment, techniques and industry processes and procedures.

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: • critical analysis, testing and development of a model, prototype or aspect of a design solution to meet an identified need • knowledge of design trends and technologies in the relevant industry context.
Context of and specific resources for assessment	Assessment must ensure: • interaction with others to reflect the collaborative nature of the design process • access to resources required to test a design solution in a given industry context (e.g. finance, materials, tools, equipment, expertise).
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 questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • evaluation of a design solution implemented by the candidate against an original brief, set of criteria or guiding objectives • evaluation of the processes used to test and refine the solution • oral or written questioning to assess knowledge of technical and context issues that impact on design in a given industry context.
Guidance information for assessment	The design process does not occur in isolation. Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended. Combined assessment with the following unit is appropriate: • BSBDES401A Generate design solutions.

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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.	

Resources will depend on the nature of the design, but may be:	• financial:
	  • budget allocation
	  • grants
	  • in kind contributions
	  • sponsorship
	 • human expertise:
	  • creative
	  • financial
	  • management
	  • technical
	 • physical:
	  • hardware or software
	  • materials
	  • tools
	  • workspaces

Implementation stage could be the point at which:	• marketing can commence • production can commence • production is confirmed • staff can be employed
Factors that impact on the selection and use of resources may relate to:	• environmental considerations • industry context • social or ethical issues • sustainability • technologies
Legislative or organisational requirements may relate to:	• commonwealth or state/territory legislation • licensing requirements • local regulations and standards • policies or procedures
Techniques and processes to test the design solution will depend on the nature of the design, and may	• colour tests • mock ups • models

RANGE STATEMENT	
include:	• practice pieces • samples • scenario testing • stress tests
Key stakeholders may include:	• client • employer • end user • peers • supervisor • technical experts • work colleagues
Identified needs and other considerations may relate to:	• access to and availability of resources • aesthetic considerations • budgetary constraints • ease of manufacture • opportunities for innovation • specifications of a brief • wider industry trends
Appropriate format may include:	• drawings or sketches - manual or computer aided design and drafting (CADD) • electronic presentation • verbal presentation • written notes with rationale or description

Unit Sector(s)

Unit sector	

Competency field

Competency field	Design - Design Process

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Co-requisite units

Co-requisite units		

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