



Australian Government

CUADES402 Research and apply techniques in product design

Release: 1

CUADES402 Research and apply techniques in product design

Modification History

Release	Comments
Release 1	This version first released with CUA Creative Arts and Culture Training Package version 2.0.

Application

This unit describes the skills and knowledge required to test and apply techniques for the design and construction of product design prototypes.

It applies to individuals who generate product designs as part of their working environment. Products may include soft furnishings, furniture, toys, decorative objects and kitchenware.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Design – design process

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan and organise requirements	1.1 Interpret design briefs in consultation with clients or colleagues 1.2 Research financial, physical and human resources required for developing design concept to prototype stage 1.3 Investigate environmental, ethical and technical factors that impact on selection and use of resources 1.4 Select and prepare resources based on research into designs and approaches used for similar objects, and relevant standards or legislative requirements
2. Test design approaches	2.1 Produce preliminary visuals 2.2 Experiment with range of techniques and processes to test design approaches

ELEMENT	PERFORMANCE CRITERIA
	2.3 Evaluate, challenge and refine testing processes 2.4 Critique own work and seek feedback as required 2.5 Document outcomes of testing 2.6 Select final design approach based on outcomes of testing and input from others
3. Make prototypes of products	3.1 Scope work and determine requirements for object fabrication 3.2 Select and organise materials, tools and equipment for fabrication according to design approach 3.3 Make prototype or sample consistent with design concepts and briefs 3.4 Respond to feedback and refine work as required 3.5 Present prototypes within agreed timeframes

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.1-1.4	Evaluates detailed textual and visual information to determine conceptual and production requirements, including relevant legislation and standards
Writing	1.2, 1.4, 2.5	Uses clear, specific language and industry-related terminology to document resources information and outcomes from the idea development and testing process
Oral Communication	1.1, 2.4, 2.6, 3.4, 3.5	- Uses questioning and active listening techniques to elicit feedback and confirm understanding - Participates in discussions using language and non-verbal features appropriate to audience and context
Numeracy	1.2, 3.1	Identifies financial needs and calculates resource requirements for prototype production
Navigate the world of work	1.3, 1.4	Understands purpose of own role, and related responsibility for compliance with legal and ethical requirements and design standards

Interact with others	1.1, 2.4, 2.6, 3.4, 3.5	• Collaborates with others to discuss work process and outcomes, elicit feedback and identify improvements • Selects and uses appropriate communication conventions and techniques to respond to feedback and present prototypes to others
Get the work done	1.2, 1.4, 2.1-2.3, 2.6, 3.1-3.4	• Plans, organises and completes tasks required to meet project and time requirements • Makes a series of analytical decisions about design options and appropriate resources required for a range of design outcomes and their representation, using input from others when required • Directs own exploration of techniques and processes, and critically evaluates effectiveness of test samples

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
CUADES402 Research and apply techniques in product design	CUVDES404A Research and apply techniques in product design	Updated to meet Standards for Training Packages. Minor edits to elements and performance criteria to clarify intent.	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1db201d9-4006-4430-839f-382ef6b803d5>

Assessment Requirements for CUADES402 Research and apply techniques in product design

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Performance Evidence

Evidence of the ability to:

- interpret requirements in a design brief in consultation with relevant people
- identify and prepare resources required to respond to the design brief
- test and use a range of approaches and techniques for the design of products, and document the results of testing
- create a prototype based on selected design approach.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- outline factors that impact on the selection and use of resources
- identify materials, tools and equipment, and their capabilities and application to product design and manufacture
- outline the role of experimentation and testing in the design process
- describe the techniques and processes used to test design approaches
- outline legislation and standards relevant to product design and production.

Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in creative arts industry environments. The assessment environment must include access to:

- product design briefs
- equipment, tools and materials used to produce prototypes of products
- a suitable work space.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational educational and training legislation, frameworks and/or standards.

Links

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