



Australian Government

CUADIG507 Design digital simulations

Release: 1

CUADIG507 Design digital simulations

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 design digital simulations of real world environments and processes.

It applies to individuals who work closely with subject experts to develop virtual environments for fields including architecture, science and engineering, medicine, conservation and manufacturing. They may also collaborate with programmers and software authors so the simulation is technically achievable.

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

Unit Sector

Visual Communication – Digital Content and Imaging

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. Identify project requirements	1.1 Confirm objectives and outcomes of project briefs in consultation with relevant personnel 1.2 Confirm target audience and determine format and delivery platform of simulations in discussion with relevant personnel
2. Research and plan approach	2.1 Investigate the real world environment to be simulated, to inform algorithms, rules, laws, physical and mathematical formulas that may be required 2.2 Evaluate designs, plans and other information relevant to the project brief that may assist in modelling the real world environment 2.3 Determine performance objectives, task complexity and user

ELEMENT	PERFORMANCE CRITERIA
	skill levels 2.4 Determine the required depth of physical and functional fidelity, taking into account production requirements 2.5 Research and suggest appropriate simulation authoring tools 2.6 Collaborate with relevant personnel and discuss ideas and creative solutions
3. Draft simulation design documents	3.1 Identify processes that determine the functional behaviour of the simulation and specify how this behaviour is to be represented by control objects 3.2 Define the underlying functionality in a model that specifies essential settings, states, conditions and parameters 3.3 Specify user interface controls that enable users to interact with simulations 3.4 Identify critical impacts, alerts or costs for incorrect user operation 3.5 Specify positive and negative feedback to user responses when interacting with simulations 3.6 Specify sequencing of difficulty levels, if required 3.7 Confirm proposed simulation is technically achievable, in consultation with relevant personnel 3.8 Present clear and detailed draft simulation design specifications in a format that can be used for discussion with and feedback from other team members
4. Finalise simulation design documents	4.1 Review designs against required project outcomes and performance objectives 4.2 Review designs against creative, technical and intellectual property requirements 4.3 Adjust design specifications as necessary after discussions with relevant personnel 4.4 Archive user interface controls for other projects

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	2.1, 2.2, 2.4, 2.5, 3.1-3.6, 4.1-4.3	- Interprets and comprehends a range of familiar and unfamiliar technical, descriptive, and legal textual information - Integrates prior knowledge with new technical research and feedback from relevant personnel
Writing	2.1, 2.3, 2.4, 3.1-3.6, 3.8, 4.1-4.3	- Documents information using correct formatting procedures, and uses appropriate, specialised vocabulary when drafting design documents - Accurately incorporates modifications and user feedback in specification documentation
Oral Communication	1.1, 1.2, 2.6, 3.7, 4.3	- Participates effectively in spoken interactions using language and features appropriate to the audience - Uses questioning and listening strategies to confirm project requirements and elicit relevant feedback
Navigate the world of work	4.2	Understands legislative requirements related to intellectual property
Interact with others	1.1, 1.2, 2.6, 3.7, 4.3	- Works collaboratively with production personnel throughout all stages of project - Selects and uses appropriate practices and protocols to communicate with a range of audiences
Get the work done	1.1, 1.2, 2.1-2.6, 3.1-3.7, 4.1-4.4	- Coordinates and plans tasks, taking responsibility for ensuring that project is continually assessed and evaluated to meet project requirements - Generates and continually evaluates ideas for the design, ensuring design integrity is maintained - Makes decisions that impact on the entire project - Uses digital tools to assist with design tasks

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
CUADIG507 Design digital simulations	CUFDIG507A Design digital simulations	Updated to meet Standards for Training Packages. Minor edits to performance criteria.	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 CUADIG507 Design digital simulations

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Performance Evidence

Evidence of the ability to:

- research and generate a range of ideas for simulations that meet the project brief and target audience
- develop draft design specifications for digital simulations that are clear, detailed and technically feasible
- review and seek feedback from relevant personnel and produce final design specifications.

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:

- describe typical formats and documentation for presenting simulation designs
- outline a range of authoring tools used for digital simulations
- describe the ways in which algorithms, laws, rules and mathematical formulas can represent real world processes
- outline intellectual property rights and how these are managed in design of digital simulations.

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:

- briefs for digital simulations on which designs can be based
- facilities and resources to develop design simulations.

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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