



Australian Government

CUAANM401 Create advanced 3D digital models

Release: 1

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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 prepare 3D digital models to a high level of finish, ready to use in a range of contexts.

It applies to individuals who prepare 3D digital models for use in animations, high-end games, virtual worlds or specialist digital resource materials in areas such as medicine, architecture, engineering and aeronautics. They work with minimum supervision and collaborate closely with other production team members, frequently under pressure, to deliver to schedule deadlines.

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

Pre-requisite Unit

CUAANM303 Create 3D digital models

Unit Sector

Visual Communication – Animation and Digital Effects

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. Clarify work requirements	1.1 Identify requirements and purpose for 3D digital models with reference to production documentation 1.2 Determine work flow sequences in consultation with relevant personnel, to ensure production schedule deadlines are met 1.3 Select modelling technique that suits production requirements 1.4 Select digital modelling software that suits production, delivery

ELEMENT	PERFORMANCE CRITERIA
	platform and modelling technique
2. Design and develop 3D models	2.1 Use features of digital modelling software to build detailed 3D models that meet design and aesthetic requirements 2.2 Adopt safe ergonomic practices when using screens and keyboards for extended periods of time 2.3 Use software features and geometry to shape models and apply various effects to simulate physical realism in characters and environments as required 2.4 Use scripting language to enhance functionality of the models as required 2.5 Create controls that are logical and easy to use, if required 2.6 Check models have not infringed copyright 2.7 Liaise with other team members to ensure models relate to other aspects of the production 2.8 Refine and check integrity of models until they meet design requirements 2.9 Confirm with relevant personnel that production requirements have been met and make adjustments as required
3. Finalise 3D digital models	3.1 Test models to identify faults, and adjust as required 3.2 Render final models in appropriate output file formats 3.3 Make back-up copies of files, and save and store 3D models using standard naming conventions 3.4 Submit final models to relevant personnel for approval by agreed deadlines 3.5 Review own work and processes used for constructing 3D digital models and note areas for future improvement

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, 1.1	Analyses textual information from relevant sources to identify project requirements
Writing	1.2, 2.4, 3.3, 3.5	Uses clear and technically specific language to clarify requirements and complete reports and documentation
Oral Communication	1.1, 1.2, 2.7, 2.9	- Speaks clearly using effective language to convey requirements and discuss improvements - Uses listening and questioning techniques to confirm understanding
Navigate the world of work	2.2, 2.6, 3.2, 3.3	- Follows enterprise procedures when managing files and directories including back-up of files - Conducts work according to legislative and organisational requirements
Interact with others	1.1, 1.2, 2.7, 2.9, 3.4	Maintains the production process in association with others through discussion and consultation
Get the work done	1.2-1.4, 2.1-2.6, 2.8, 2.9, 3.1-3.5	- Plans and implements workflow to prepare 3D digital models for production within deadlines Makes decisions directly related to task and role requirements - Selects software based on requirements of job and knowledge of software features - Uses digital tools to manage files and to develop refined, accurate 3D models in a range of styles

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
CUAANM401 Create advanced 3D digital models	CUFANM401A Prepare 3D digital models for production	Updated to meet Standards for Training Packages. Title changed. Elements and performance criteria edited for clarity.	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 CUAANM401 Create advanced 3D digital models

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Performance Evidence

Evidence of the ability to:

- create 3D digital models at a high level of finish that:
 - perform to specifications
 - meet technical, design and aesthetic requirements
- use animation software and scripting languages to produce digital modelling effects that create realism in the models
- store 3D models in appropriate file formats using industry naming conventions
- work collaboratively with others in the production team to ensure models are appropriate for other aspects of the production
- review own performance and the modelling process for improvement.

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 typical challenges with creating 3D models and how to handle these
- describe various techniques used in 3D modelling
- explain how geometry and an understanding of anatomy is used to simulate physical realism in modelling
- explain how effects, such as lighting, colour and composition influence the model appearance and characteristics
- identify and compare scripting languages used in 3D modelling
- describe the process of rendering as it applies to 3D modelling and how this differs for various delivery platforms
- explain the concept of integrity as it applies to 3D modelling
- outline the process for checking compliance with copyright requirements

- describe relevant work health and safety standards which relate to working with computers and keyboards.

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:

- production documents and briefs
- relevant personnel
- 3D modelling software.

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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