



Australian Government

ICTGAM410 Develop 3-D components for interactive games

Release: 1

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Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to design, and to create, 3-D components within a games environment.

It applies to individuals who support the design, development and programming of basic digital games as part of a larger development team.

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

Unit Sector

Game development

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. Confirm 3-D component requirements within the game context	1.1 Identify the definition and purpose of 3-D components, with examples 1.2 Identify the context of 3-D component design within the game design document 1.3 Create a list of required 3-D components
2. Identify 3-D component integration methods within game architecture	2.1 Discuss the 3-D component format, file extensions and the ramifications of choice with the relevant personnel 2.2 Establish the methods of 3-D component loading and usage
3. Establish the content creation pipeline	3.1 Finalise the required 3-D component list 3.2 Discuss the hardware and software required for the creation of

ELEMENT	PERFORMANCE CRITERIA
	3-D components and assets 3.3 Discuss the methods of naming 3-D components and assets, and file archiving 3.4 Establish the deadlines for 3-D component creation
4. Integrate 3-D components for testing and analysis	4.1 Identify the evaluation methods for quality assurance 4.2 Ensure that the produced 3-D components meet the established quality requirements 4.3 Make changes to 3-D components, as required, by testing and evaluation 4.4 Submit the finalised assets with the archiving format outlined in the assignment brief

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, 4.1, 4.3	- Identifies and interprets briefs and related technical documentation containing complex task-specific terminology - Interprets and comprehends computer generated text, diagrams, icons, symbols, numbers and letters necessary to use 3-D application software
Writing	1.1, 1.3, 3.1, 3.4	Uses correct spelling, grammar, technical terminology and organisational templates/document structures to develop lists and schedules
Oral Communication	1.1, 1.2, 2.1, 2.2, 3.2, 3.3, 3.4, 4.1, 4.4	- Employs effective listening and open questioning techniques to obtain information - Participates in a verbal exchange of ideas and solutions using plain English and games development terminology, summarising the main points to ensure understanding
Numeracy	1.2, 2.1, 2.2, 3.4, 4.2, 4.3	Uses whole numbers, decimals and percentages relevant to file size, software and hardware specifications, measurement, font size, scale, ratio, coordinates, colour, shading and other attributes/variables in the development of 3-D

		components and timelines • Defines timeframes in accordance with schedule requirements
Get the work done		• Makes routine decisions and implements standard procedures for routine tasks, using formal decision-making processes for more complex and non-routine situations • Uses a systematic process to evaluate work and to implement improvements • Uses key features of specific digital systems and tools, effectively to complete routine tasks • Understands the importance of file format and takes responsibility for data integrity and management

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTGAM410 Develop 3-D components for interactive games	ICAGAM410A Develop 3-D components for interactive games	Updated to meet Standards for Training Packages. Minor edits to clarify intent of the performance criteria.	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2>

Assessment Requirements for ICTGAM410 Develop 3-D components for interactive games

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Performance Evidence

Evidence of the ability to:

- identify and confirm 3-D component designs
- identify component integration
- establish the component development pipeline
- generate 3-D components for games
- test and analyse component integration
- submit final product.

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:

- discuss and explain current game hardware and software products
- discuss and explain game-engine architecture and methods used in component importing
- outline processes and techniques related to:
 - the creation of 3-D objects within industry-standard modelling software
 - the use of industry formats for the development of 3-D models and objects.

Assessment Conditions

Gather evidence to demonstrate consistent performance in conditions that are safe and replicate the workplace. Noise levels, production flow, interruptions and time variances must be typical of those experienced in the game development field of work, and include access to:

- computer hardware and software
- games engines
- file storage.

Assessors must satisfy NVR/AQTF assessor requirements.

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