



Australian Government

ICTGAM539 Create and implement designs for 3-D games environments

Release: 1

ICTGAM539 Create and implement designs for 3-D games environments

Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 6.0.

Application

This unit describes the skills and knowledge required to create and implement designs within the context of a 3-D games environment.

It applies to individuals with highly developed communication and technical skills working as concept artists, game designers, games programmers, animators, and other personnel working in the game development industry.

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.Prepare to create designs	1.1 Establish task, design and user requirements and analyse game environment according to organisational procedures 1.2 Discuss and select 3-D modelling software for production of designs, and ramifications of using selected software with required personnel 1.3 Discuss and select 2-D image-editing software for textures with required personnel according to task requirements 1.4 Determine and document 3-D production considerations for available hardware 1.5 Create file archiving system for storing 3-D components, models and versions according to organisational procedures

ELEMENT	PERFORMANCE CRITERIA
	1.6 Establish project development pipeline and production deadlines, according to task requirements
2. Develop designs for 3-D games	2.1 Establish design theme and determine required modelling assets according to design requirements 2.2 Prioritise design components according to task requirements 2.3 Produce new document and create designs according to production pipeline, theme, and deadlines
3. Implement and finalise designs	3.1 Test functionality of designs on different browsers and devices 3.2 Confirm design meets task and user requirements 3.3 Implement design into applicable game environment, according to organisational procedures 3.4 Document work performed according to organisational procedures 3.5 Obtain final sign-off from required personnel

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Reading	Interprets, analyses and comprehends conceptual information to inform job requirements
Writing	- Prepares documents detailing findings and work performed using appropriate layout and required descriptive language in a cohesive and well-structured manner - Develops material regarding the advantages, and limitations of, different technologies using explicit language to convey information and requirements
Oral Communication	Uses listening and questioning techniques to obtain required information using appropriate industry language for intended audience
Initiative and enterprise	Uses creativity and initiative in 3-D game design
Planning and organising	Plans, organises and completes work according to defined requirements and schedules taking responsibility for decisions and sequencing tasks
Self-management	Sources, analyses, and evaluates applications with potential to meet 3-D game design requirements

Skill	Description
	• Uses a systematic process to evaluate work and implement improvements
Technology	• Completes design tasks using key features of specific digital systems and tools • Identifies importance of file structure and takes responsibility for data integrity and management

Unit Mapping Information

Supersedes and is equivalent to ICTGAM512 Create and implement designs for a 3-D games environment.

Links

Companion Volume Implementation Guide is found on VETNet -

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

Assessment Requirements for ICTGAM539 Create and implement designs for 3-D games environments

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Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- create and implement at least two designs for a specified 3-D games environment.

In the course of the above, the candidate must:

- discuss and identify the most applicable technology for 3-D games development
- create and develop design documents for 3-D effects, including timelines for completion and file archiving system
- identify purpose of games design and establish target audience
- discuss and analyse design requirements for at least two different browsers and at least two different devices
- render designs on at least one small device and one large device and confirm pixels are optimised.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- concepts of animation techniques and digital effects generation relating to creating designs for 3-D game environments
- design principles applicable to 3-D game designs
- features of different 3-D game environments
- features and functions of industry standard 2-D and 3-D graphics editing software
- different modelling assets used in design creation for 3-D environments
- project development processes applicable to design creation for 3-D environments
- design functionality testing processes
- industry standard graphics formats for different 3-D games
- organisational procedures applicable to creating and implementing designs for 3-D games.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- project brief
- hardware and software required to create and implement designs
- games engine
- file storage
- browsers and devices
- organisational procedures applicable to creating and implementing designs for 3-D games.

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

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