



Australian Government

ICTGAM546 Create and combine 3-D digital games and components

Release: 1

ICTGAM546 Create and combine 3-D digital games and components

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 compound models using industry software applicable to animation production process, according to a defined set of parameters.

It applies to those with high-level technical and analytical skills working as modellers or artists, 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. Determine model creation requirements	1.1 Identify, analyse and follow design and model creation requirements, production documentation and organisational guidelines 1.2 Determine type of production for which 3-D digital models are being created 1.3 Research and select 3-D modelling software tools according to type of production for which 3-D digital models are being created
2. Research and create 3-D digital models using a variety of modelling techniques	2.1 Research and determine applicable modelling methodology 2.2 Apply a variety of modelling techniques according to

ELEMENT	PERFORMANCE CRITERIA
	model creation requirements 2.3 Create 3-D digital models according to model creation requirements 2.4 Seek feedback on 3-D digital models from required personnel and amend as required 2.4 Refine and confirm integrity of models according to organisational procedures
3. Combine 3-D models to create a scene	3.1 Combine 3-D models and create a scene according to design requirements 3.2 Submit models to required personnel and seek and respond to feedback
4. Render and finalise 3-D digital models using applicable render engine	4.1 Test rendering scene and adjust settings according to task requirements 4.2 Render final 3-D scene 4.3 Submit finalised model to required personnel and seek and respond to feedback
5. Back up work	5.1 Make required backup copies of files 5.2 Complete and lodge workplace documentation according to organisational policies and procedures

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
Numeracy	Uses whole numbers, decimals and percentages when manipulating measurement, scale, ratio, coordinates, colour, shading and other elements of 3-D animation
Oral Communication	Uses listening and questioning techniques and effective mode of communication to articulate complex concepts and present information using industry language for intended audience
Reading	- Interprets, analyses and comprehends briefs, documents and conceptual information - Analyses texts and images to inform implementation of specifications
Writing	Develops workplace documentation using industry specific language
Planning and	Takes responsibility for planning and organising tasks required to meet required outcomes

SKILL	DESCRIPTION
organising	
Problem solving	• Makes a range of critical and non-critical decisions in relatively complex situations, taking a range of factors into account • Analyses and applies some basic principles of analytical and lateral thinking when creating a concept
Self-management	• Implements actions as per plan, making slight adjustments if necessary and addressing some unexpected issues
Technology	• Uses a broad range of features in 3-D software applications for specific purposes • Manages and maintains files in a variety of storage media and formats

Unit Mapping Information

Supersedes and is equivalent to ICTGAM520 Create and combine 3-D digital games and components.

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 ICTGAM546 Create and combine 3-D digital games and components

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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:

- design, build and combine at least two 3-D models to an organisation's specifications on at least two occasions.
- In the course of the above, the candidate must:
- combine 3-D models to build a scene that meets design requirements
- produce, circulate and store the final render of the scene.

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:

- 3-D software interfaces for to creating and combining 3-D digital games and components
- capabilities and constraints of game engines
- game-play hardware and software products
- process of computer game development applicable to creating and combining 3-D digital games and components
- application of anatomy and physical movement to 3-D components
- graph curve editor and its application to 3-D digital component design
- physical attributes required to create effects, including weight and anticipation
- risk and critical path management applicable to creating and combining 3-D digital games and components
- techniques for applying concept-development skills
- techniques for applying concept-visualisation skills
- transfer methodology, including rotoscope, hand key and motion capture
- technology requirements and human resources required in the process of creating a game, including team members' skills
- budgeting and scheduling considerations for game design.

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:

- hardware and software
- design brief
- games engine
- file storage
- the internet.

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

Links

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