



Australian Government

ICTGAM520 Create and combine 3-D digital games and components

Release: 1

ICTGAM520 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 1.0.

Application

This unit describes the skills and knowledge required to create compound models using recognised industry software suitable to the animation production process, according to a defined set of parameters.

It applies to individuals 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 Analyse and follow the design requirements, production documentation and organisational guidelines 1.2 Select the 3-D modelling software tools that best suit the type of production for which 3-D digital models are being created
2. Create 3-D digital models using a variety of modelling techniques	2.1 Determine the most efficient modelling methodology 2.2 Apply a variety of modelling techniques 2.3 Create the 3-D digital models 2.4 Progressively refine and check the integrity of the models

ELEMENT	PERFORMANCE CRITERIA
3. Combine 3-D models to create a scene	3.1 Combine the 3-D models to create a scene, based on the design requirements 3.2 Submit the models to the relevant personnel for comment, to determine whether the production requirements have been met, and make final adjustments, if required
4. Render 3-D digital models using appropriate render engine	4.1 Test the rendering scene and adjust the settings 4.2 Render the final 3-D scene 4.3 Submit the final model renders to the relevant personnel
5. Back up work	5.1 Make backup copies of the files 5.2 Complete the workplace documentation, according to predetermined procedures

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, 3.1, 5.2	- Interprets, analyses and comprehends briefs, documents and conceptual information - Analyses texts and images to inform the implementation of specifications
Writing	5.2	Develops readily understood administrative documentation, using detailed and workplace-specific language
Oral Communication	3.2, 4.3	- Speaks clearly and concisely, converting technical language and terminology to plain English, when providing information - Elicits information using effective listening and open questioning techniques - Provides practical advice, support and feedback, to colleagues and management
Numeracy	2.4, 3.2, 4.1	Uses whole numbers, decimals and percentages when manipulating measurement, scale, ratio, coordinates, colour, shading, and other elements of 3-D animation
Get the work	All	Takes responsibility for planning and organising tasks

done		required to efficiently meet required outcomes • Implements actions as per the plan, making slight adjustments if necessary, and addressing some unexpected issues • Makes a range of critical and non-critical decisions in relatively complex situations, taking a range of factors into account • Understands and explicitly applies, some basic principles of analytical and lateral thinking when creating a concept • Utilises a broad range of features within 3-D software applications for specific purposes • Manages and maintains files in a variety of storage media and formats
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Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTGAM520 Create and combine 3-D digital games and components	ICAGAM520A Create and combine 3-D digital games and components	Updated to meet Standards for Training Packages	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 ICTGAM520 Create and combine 3-D digital games and components

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Performance Evidence

Evidence of the ability to:

- create 3-D models according to design, production and organisational requirements
- combine 3-D models to build a scene that meets design requirements
- produce, circulate and store the final render of the scene.

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:

- provide a basic summary of 3-D software interfaces
- summarise the capabilities and constraints of game engines
- outline current game-play hardware and software products
- discuss the process of computer game development
- discuss the application of the anatomy, and physical movement, to 3-D components
- describe the graph curve editor and its application to animation
- explain the physical attributes required to create effects, such as weight and anticipation
- summarise risk and critical path management
- discuss the importance of shading and texturing as a requirement of 3-D games components
- explain the techniques for applying concept-development skills
- explain the techniques for applying concept-visualisation skills
- explain transfer methodology including rotoscope, hand key and motion capture
- outline the technology requirements and human resources required in the process of creating a game, including team members' skills
- outline the budgeting and scheduling considerations for game design.

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.

Links

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