Australian Government

Department of Education, Employment and Workplace Relations

CUFDIG504A Design games

Revision Number: 1

CUFDIG504A Design games

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the performance outcomes, skills and knowledge required to design games and document the process for developing them. Game design requires a high degree of collaboration between script writers, programmers and graphic designers. Low-end games can be constructed using interactive authoring tools, but for video game productions, designers need to work with high level programmers to ensure that designs are technically feasible. No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Application of the Unit

Application of the unit	A lead designer typically applies the skills and knowledge described in this unit, which relate to generating and then working on a game idea until the mechanics and design of the game are fully documented. A lead designer communicates the vision for a game to the rest of the team, takes ideas submitted during design meetings and analyses them to ensure they fit the game's intended objectives. This vision is captured in the game design document. Depending on the size of an enterprise, a lead designer may supervise assistant or level designers and would typically report to a design or creative director. Skills associated with story-telling are covered in: • CUFWRT402A Write extended stories.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
Identify project requirements	1. Confirm the objective and desired outcomes of a game proposal or brief in consultation with ***relevant personnel*** 2. Identify ***factors*** that may have an impact on how a game is designed 3. Clarify target audience to determine format and ***delivery platform*** of the game through discussion with relevant personnel
Research games and generate ideas	4. Select ***state of the art games*** from different genres to play as a source of inspiration 5. Search ***game literature*** for each game and identify the games' objectives 6. Generate range of ideas for game designs that are technically feasible, respond to the proposal or brief, and provide creative solutions to design issues 7. Discuss ideas and collaborate, as required, with relevant personnel to ensure contribution of a range of ideas and creative solutions to initial concepts
Select a game genre	8. Identify and present a range of ***game genres*** to relevant personnel for consideration in terms of their characteristics, differences and ability to meet requirements of proposal or brief 9. Consult with relevant personnel to ensure that a full range of genres has been identified and sourced 10. Select the game genre that best meets the creative, technical and production requirements of proposal or brief
Draft game design document	11. Establish the game strategy outcomes 12. Use ***design techniques*** to develop the structure of a game ensuring that all elements, including style and ***game mechanics***, are fully documented 13. Use a range of ***criteria*** to determine the scope of a prototype to be used in the development phase 14. Ensure that the prototype selected is capable of ***testing the effectiveness*** of the proposed game 15. Include a register of ***game assets*** in consultation with relevant personnel 16. Present draft ***game design document*** for discussion with and feedback from other team members
Finalise game design	17. Re-evaluate game design objectives on the basis of feedback on the prototype and draft game design

ELEMENT	PERFORMANCE CRITERIA
document	document 18. Discuss and confirm additional requirements or modifications to the game design with relevant personnel 19. Specify the game ***production specifications***, including appropriate ***testing strategies*** 20. Write final game design document to reflect all additional requirements or modifications

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication, teamwork and literacy skills sufficient to:
  - interpret and clarify written proposals and creative briefs
  - work collaboratively in a team environment
  - present game design ideas for discussion and feedback from team members
  - document game design specifications clearly and concisely
- initiative, enterprise and creativity in the context of:
  - generating innovative ideas for game designs
  - thinking laterally when developing concepts
  - undertaking background research into game ideas
  - maintaining design integrity
- technical skills sufficient to create complex designs using storyboards, maps and other diagrams to specify the architecture and navigation of game mechanics
- self-management skills sufficient to:
  - meet deadlines
  - provide appropriate and timely documentation

Required knowledge

- industry knowledge, including:
  - roles and responsibilities of project team members, e.g. designers, content creators, information architects, programmers and coders
  - sound understanding of game theory, including traditional games
  - broad range of game genres and styles
  - technical parameters of various games platforms
  - issues and challenges that arise in designing games
- research methods for staying abreast of the latest changes and design enhancements
- requirements of game play design documents
- typical formats and techniques for documenting game designs
- intellectual property rights and copyright clearance procedures
- OHS standards as they relate to working for periods of time on computers

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Evidence of the following is essential: • development of original and innovative concepts for games • design of game play methods that are compelling for the user and technically feasible • production of clear and well-presented game design documentation • ability to work effectively as a member of a design team.
Context of and specific resources for assessment	Assessment must ensure: • practical demonstration of skills through the design of a variety of games for at least two platforms • access to game proposals or briefs on which designs can be based • access to a range of games for viewing • access to appropriate learning and assessment support when required • use of culturally appropriate processes and techniques appropriate to the language and literacy capacity of learners and the work being performed.
Method of assessment	A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit: • direct questioning combined with review of portfolios of evidence and third-party workplace reports of on-the-job performance • evaluation of game designs documented by the candidate and of their quality in terms of meeting creative briefs • written or oral questioning to test knowledge as listed in the required skills and knowledge section of this unit • case studies to assess ability to develop designs for different types of games.

EVIDENCE GUIDE	
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example: • CUFPPM404A Create storyboards • BSBCRT501A Originate and develop concepts.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
Relevant personnel may include:	• art director • client • designers • director • graphic artist • head of department • producer • programmer • publisher • script writer • software engineer • other technical and creative staff.

Factors may include:	• availability of personnel
	• availability of resources
	• available budget
	• complexity of proposed game
	• intellectual property
	• need to attract finance
	• production schedule
	• production values
	• technical parameters, including:
	  • technology constraints
	  • console
	  • platform
	  • bandwidth
	  • memory/RAM
	• timelines
	• user and audience.

Delivery platforms may include:	• CD/DVD • digital television set • games console • internet

RANGE STATEMENT	
	• mobile phone • personal digital assistant (PDA) • other wireless/mobile devices.
State of the art games may include:	• best selling games • games that show unique and innovative approaches.
Game literature may include:	• game design books • game post-mortems • magazine, newspaper and journal articles • previews and reviews • strategy guides • user manuals • walkthroughs • other online game resources.
Game genres may include:	• adventure • arcade • first person shooter • massively multiplayer online • mazes • platforms • puzzles • racing • rhythm • role playing • simulation • sport • strategy • third person shooter.
Design techniques may include:	• drawing • flow chart • scanning • storyboard • using image and background generating tools.

Game mechanics may include:	• environment and object interactions
	• environment dynamics
	• game objects
	• game play elements that may include:
	  • skill levels
	  • judgements

RANGE STATEMENT	
	• choices • decisions • codes • rules • levels of progression • goals • actions • events • levels of difficulty • scoring • calculation of scoring • user control • user interaction • options for single player or multiplayer • customisation • key systems • object actions • object to object interactions.
Criteria may include whether the prototype:	• can be demonstrated to a specialist target group • can be used for promotional purposes • can demonstrate the full potential of the game • can sell a concept to potential investors • is appropriate for the chosen genre and style.
Testing the effectiveness of the prototype may include:	• comparing game design with original objectives • group discussion techniques • identifying any logical inconsistencies in: • design • game timing • story-lines • measuring the levels of user satisfaction • paper and pencil techniques (dry running).
Game assets may include:	• animations • audio, including: • sound effects • dialogue • narration • music

RANGE STATEMENT	
	• cut scenes • titles • video sequences.
Game design document may include:	• agent architectures • artificial intelligence • asset register • background story • comprehensive designs for each mission and level • decision-making systems • game mechanics • game tools • graphics • inventories • overview • production specifications • scripts • spatial design • storyboard and flow chart • synopsis • title • user interface • walkthroughs.
Production specifications may include:	• budget • intellectual property • levels of staff expertise • production schedule • production values • size and composition of the development team • technology constraints • testing strategies • timelines.
Testing strategies may include:	• alpha • beta • completion • continuous • milestone • prototype • staged.

Unit Sector(s)

Unit sector	

Competency field

Competency field	Visual communication - digital content and imaging

Co-requisite units

Co-requisite units		