



Unit Title: Computer Games Development

OCR unit number: 5
 Level: 3
 Credit value: 10
 Guided learning hours: 71
 Unit reference number: F/601/3165

Candidates undertaking this unit must complete real work activities in a work environment. Simulation is only allowed in exceptional circumstances (please refer to the centre handbook for further details).

Unit purpose and aim

This unit provides detailed coverage of computer games architecture and components and also the computer games industry. It also involves the evaluation, specification and implementation of computer games.

Learning Outcomes	Assessment Criteria	Knowledge, understanding and skills
<p>The Learner will:</p> <p>1 Understand computer game architecture and components</p>	<p>The Learner can:</p> <p>1.1 Describe the hardware and software components of a video game system</p>	<p>Candidates must have an understanding of:</p> <ul style="list-style-type: none"> • the hardware, display devices, any storage media and interface devices • the capabilities of the devices • the different platforms that could be used for games
<p>2 Understand the computer games industry</p>	<p>2.1 Describe the stages of evolution of computer game industry</p> <p>2.2 Describe the roles and activities required to develop modern computer games</p> <p>2.3 Explain computer game development processes and terminology</p> <p>2.4 Explain computer game programming methods and techniques</p>	<p>Candidates must have an understanding of:</p> <ul style="list-style-type: none"> • how to summarise the stages of evolution of computer game industry: <ul style="list-style-type: none"> - pre-production - pitch - game design - prototype - production - programming - testing - completion - maintenance • how to summarise the roles and activities required to develop computer games <ul style="list-style-type: none"> - producer

Learning Outcomes	Assessment Criteria	Knowledge, understanding and skills
		<ul style="list-style-type: none"> - designers - artists - programmers - level designers - sound engineers - testers • computer game development processes and terminology <ul style="list-style-type: none"> - pre-production - pitch - game design - prototype - production - programming - testing - completion - maintenance • computer games programming methods and techniques <ul style="list-style-type: none"> - top down design - modularisation - structure diagrams - data dictionary - system requirements
<p>3 Be able to evaluate existing computer games</p>	<p>3.1 Produce a structured evaluation of an existing computer game</p>	<p>Candidates must have an understanding of:</p> <ul style="list-style-type: none"> • how to evaluate an existing computer game with regards to: <ul style="list-style-type: none"> - features good and bad including: <ul style="list-style-type: none"> - game objectives - game structure - genre - narrative structure - any characters - visual style - any sounds - scoring system - legal and ethical issues to include: <ul style="list-style-type: none"> - age restrictions - appropriateness of content - copyright - PEGI

Learning Outcomes	Assessment Criteria	Knowledge, understanding and skills
4 Develop a computer game specification	4.1 Produce a pre-production proposal document for a computer game project 4.2 Identify the components required to develop a computer game 4.3 Produce an implementation plan for a computer game development	Candidates must have an understanding of how to: <ul style="list-style-type: none"> • document their ideas based on the requirements of the project • identify the activities to be carried out including: <ul style="list-style-type: none"> - proposed timescales - deadlines - assets to be sourced - equipment to be used • review the plan against the project requirements making changes as required
5 Implement elements of a computer game	5.1 Design components of a computer game 5.2 Develop components of a computer game 5.3 Test components of a computer game	Candidates must have an understanding of: <ul style="list-style-type: none"> • how to create the design using a recognised format to meet the needs of the project for example: <ul style="list-style-type: none"> - detailed storyboard - flow chart • how to create a prototype of the game • how to create and use a test plan to test the functionality of the game.

Assessment

Candidates undertaking this unit must complete real work activities in order to produce evidence to demonstrate they are occupationally competent. Real work is where the candidate is engaged in activities that contribute to the aims of the organisation by whom they are employed, for example in paid employment or working in a voluntary capacity.

Simulation is only allowed for aspects of units when a candidate is required to complete a work activity that does not occur on a regular basis and therefore opportunities to complete a particular work activity do not easily arise. When simulation is used, assessors must be confident that the simulation replicates the workplace to such an extent that candidates will be able to fully transfer their occupational competence to the workplace and real situations.

Internal quality assurance personnel must agree the use of simulated activities before they take place and must sample all evidence produced through simulated activities.

It is the assessor's role to satisfy themselves that evidence is available for all performance, knowledge and evidence requirements before they can decide that a candidate has finished a unit. Where performance and knowledge requirements allow evidence to be generated by other methods, for example by questioning the candidate, assessors must be satisfied that the candidate will be competent under these conditions or in these types of situations in the workplace in the future. Evidence of questions must include a written account of the question and the candidate's response. Observations and/or witness testimonies must be detailed and put the evidence into context ie the purpose of the work etc.

All of the assessment criteria in the unit must be achieved and clearly evidenced in the submitted work, which is externally assessed by OCR.

Evidence for the knowledge must be explicitly presented and not implied through other forms of evidence.

Evidence requirements

All aspects of the assessment criteria must be covered and evidence must be available that shows where and how the assessment criteria have been achieved.

Assessment Criterion 1

Candidates must:

- describe the hardware and software components for a video games system and their uses.

Evidence should be in the form of a detailed report.

Assessment Criterion 2

For computer game development, candidates must summarise:

- the stages of evolution
- the roles and activities

Candidates must describe:

- the development processes and terminology used
- the programming methods and techniques used

Evidence should be in the form of a detailed report.

Assessment Criterion 3

Candidates must provide evidence of a structured evaluation of an existing computer game.

Evidence should be in the form of a detailed report supported by annotated screenshots where appropriate.

Assessment Criterion 4

For a given specification, candidates must provide evidence of:

- a pre-production proposal
- the components required to develop the game
- an implementation plan
- review of plan

Evidence should be in the form of a detailed report supported by:

- proposed plan
- implementation plan

Evidence of revision of plan

Assessment Criterion 5

Based on the given specification, candidates must provide evidence of:

- creating their design in a recognised format
- creating a prototype of a component of the game
- creating and using a test plan to test the game.

Evidence should be in the form of a detailed report.

Candidates are encouraged to choose activities which will allow them to cover all or a majority of the criteria at one time. It is not necessary to use different activities for each element of the criterion.

Guidance on assessment and evidence requirements

Evidence can reflect how the candidate carried out the process or it can be the product of a candidate's work or a product relating to the candidate's competence.

For example: The process that the candidate carries out could be recorded in a detailed personal statement or witness testimony. It is the assessor's responsibility to make sure that the evidence a candidate submits for assessment meets the requirements of the unit.

Questioning the candidate is normally an ongoing part of the assessment process, and is necessary to:

- test a candidate's knowledge of facts and procedures
- check if a candidate understands principles and theories *and*
- collect information on the type and purpose of the processes a candidate has gone through.
- Candidate responses must be recorded

It is difficult to give a detailed answer to how much evidence is required as it depends on the type of evidence collected and the judgement of assessors. The main principles, however, are as follows: for a candidate to be judged competent in a unit, the evidence presented must satisfy:

- all the items listed, in the section 'Learning Outcomes'
- all the areas in the section 'Assessment Criteria'

The quality and breadth of evidence provided should determine whether an assessor is confident that a candidate is competent or not. Assessors must be convinced that candidates working on their own can work independently to the required standard.

Additional information

For further information regarding administration for this qualification, please refer to the OCR document '*Admin Guide: Vocational Qualifications*' (A850) on the OCR website www.ocr.org.uk .