



National Unit Specification: general information

UNIT Introduction to Computer Animation (SCQF level 5)

CODE D6RC 11

SUMMARY

Using computer software to produce on-screen graphical animation.

OUTCOMES

- 1 Describe the principles of computer animation.
- 2 Produce simple two-dimensional animations using appropriate software.
- 3 Produce simple three-dimensional animations using appropriate software.

RECOMMENDED ENTRY

There are no formal entry requirements for this Unit although some experience of using computers is recommended.

CREDIT VALUE

1 credit at SCQF level 5 (6 SCQF credit points at SCQF level 5*).

**SCQF credit points are used to allocate credit to qualifications in the Scottish Credit and Qualifications Framework (SCQF). Each qualification in the Framework is allocated a number of SCQF credit points at an SCQF level. There are 12 SCQF levels, ranging from Access 1 to Doctorates.*

CORE SKILLS

Information on the automatic certification of any Core Skills in this Unit is published in Automatic Certification of Core Skills in National Qualifications (SQA, 1999).

Administrative Information

Superclass: CB

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National Unit Specification: statement of standards

UNIT Introduction to Computer Animation (SCQF level 5)

Acceptable performance in this Unit will be the satisfactory achievement of the standards set out in this part of the Unit specification. All sections of the statement of standards are mandatory and cannot be altered without reference to the Scottish Qualifications Authority.

OUTCOME 1

Describe the principles of computer animation.

Performance Criteria

- a) The hardware requirements for computer animation work on a microprocessor-based platform are correctly described.
- b) The software requirements for computer animation work on a microprocessor-based platform are correctly described.
- c) Producing the illusion of movement from still images is described.
- d) Animation file formats are correctly described.

Note on range for the Outcome

Hardware: typical multimedia hardware (emphasis on storage and graphics card).

Software: Operation system; drivers; application software.

File formats: a minimum of three industry standard file formats.

OUTCOME 2

Produce simple two-dimensional animations using appropriate software.

Performance Criteria

- a) The variables involved in two-dimensional animation are outlined.
- b) A set of animations is generated to suit given briefs.

Note on range for the Outcome

Variables: X axis; Y axis; speed; additive; subtractive; replacement.

OUTCOME 3

Produce simple three-dimensional animations using appropriate software.

Performance Criteria

- a) The variables involved in three-dimensional animation are outlined.
- b) A set of animations is generated to suit given briefs.

Note on range for the Outcome

Variables: X axis; Y axis; apparent Z axis; size; speed; additive; subtractive; replacement.

National Unit Specification: statement of standards (cont)

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EVIDENCE REQUIREMENTS FOR THIS UNIT

Outcome 1

A set of four short answer questions requiring a combination of annotated sketches and written responses as appropriate to the question topic. Where hardware and software items or file formats are being discussed the candidate should give a description of the purpose of each within computer animation rather than a simple list.

Outcome 2

Documentation for three animations, which meet given briefs, should include the original brief, an annotated graphical description of the proposed solution to the brief, and either hardcopy or software evidence of successful completion.

Outcome 3

Documentation for three animations, which meet given briefs, should include the original brief, an annotated graphical description of the proposed solution to the brief, and either hardcopy or software evidence of successful completion.

National Unit Specification: support notes

UNIT Introduction to Computer Animation (SCQF level 5)

This part of the Unit Specification is offered as guidance. The support notes are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 40 hours.

GUIDANCE ON THE CONTENT AND CONTEXT FOR THIS UNIT

This Unit is designed to introduce the candidate to the theory and practice of computer animation. The intention is to provide an opportunity for candidates to undertake a realistic simulation of a possible real-life task and to provide a foundation for further study at higher level. It is recommended that the project brief is designed to allow the candidate an adequate opportunity to be creative. It may be best to deliver Outcome 1 in tandem with Outcomes 2 and 3, to help candidates develop a better understanding of the theory. The following information gives further clarification regarding the context in which Outcomes and Performance Criteria are to be achieved.

Outcome 1

An introduction to the specific hardware, software and fundamental animation techniques required for creating 2D and 3D animation is envisaged for this Outcome. Hardware could discuss the reasons why higher specification computers are required than for general purpose IT applications. Peripherals such as image capture devices and graphics tablets could also be mentioned. Software would look at current animation applications i.e. Adobe Flash CC, 3D Studio Max and the Operating Systems required to run these.

Creating the illusion of movement would explore frame rates and fps (frames per second). It may be useful to demonstrate the result of changing fps in an animation application and techniques such as frame by frame animation, motion and shape tweening. Methods for creating the still images could include scanned sketches and computer generated drawings.

File formats would be common formats current at the time of delivery. At the time of writing .swf, .mov and .exe are some examples. It may be useful to explain the difference between the editable and published formats e.g .fla and .swf.

Outcomes 2 and 3

The candidate should be led through demonstrations covering the range of the Outcomes. It is recommended that industry standard software is used. Simple animations are encouraged, to help candidates grasp concepts as opposed to more complex animations. There should also be scope for candidates to extend their skills beyond this.

More time may be required to work with the 3D animation software.

GUIDANCE ON LEARNING AND TEACHING APPROACHES FOR THIS UNIT

Teaching and learning should be a combination of tutor-centred investigation and candidate-centred learning. Candidates should be encouraged to take a positive attitude towards the quality of their own work throughout this Unit. The emphasis throughout the Unit should be on practical application, creativity and innovation.

National Unit Specification: support notes

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OPPORTUNITIES FOR CORE SKILL DEVELOPMENT

Opportunities exist to develop Core Skills.

National Unit Specification: support notes (cont)

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GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT

The requirements for assessment of the Unit are adequately described in the learning outcome statements.

Opportunities for the use of e-assessment

E-assessment may be appropriate for some assessments in this Unit. By e-assessment we mean assessment which is supported by Information and Communication Technology (ICT), such as e-testing or the use of e-portfolios or e-checklists. Centres which wish to use e-assessment must ensure that the national standard is applied to all candidate evidence and that conditions of assessment as specified in the Evidence Requirements are met, regardless of the mode of gathering evidence. Further advice is available in *SQA Guidelines on Online Assessment for Further Education (AA1641, March 2003)*, *SQA Guidelines on e-assessment for Schools (BD2625, June 2005)*.

DISABLED CANDIDATES AND/OR THOSE WITH ADDITIONAL SUPPORT NEEDS

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering whether any reasonable adjustments may be required. Further advice can be found on our website www.sqa.org.uk/assessmentarrangements.

History of changes to Unit

Version	Description of change	Date
02	Amendment to Content and Context section of support notes.	23/07/2014