



National Unit Specification: general information

UNIT Multimedia Computing: Introduction to Digital Photography
(SCQF level 5)

CODE D0F7 11

SUMMARY

Use a digital camera and related computer software within the context of multimedia computing.

OUTCOMES

- 1 Describe the principles of digital photographic image formation for multimedia computer applications.
- 2 Compose and store digital photograph images.
- 3 Enhance digital images using computer software.
- 4 Plan, produce and present a portfolio of digital photographic images to a given brief.
- 5 Comply with legislation and practice appropriate to digital photography.

RECOMMENDED ENTRY

No prior knowledge or skills are required for this Unit but basic computer skills may be seen as appropriate and may be evidenced by the candidate having successfully completed Units in computing.

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.*

Administrative Information

Superclass: CE

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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).

National Unit Specification: statement of standards

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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 digital photographic image formation for multimedia computer applications.

Performance Criteria

- a) The hardware requirements for digital photographic work on a microprocessor-based platform are correctly described.
- b) The software requirements for digital photographic work on a microprocessor-based platform are correctly described.
- c) Digital image file formats and the reason for compression are correctly described.
- d) Controls on a typical digital camera are correctly described.

Note on range for the Outcome

Hardware: camera; backing storage; interface.

Software: operating system; capture software; editing/enhancing software.

File formats: typical industry standards.

Controls: image quality; flash.

Evidence Requirements

Restricted response questions. The test will be a set of short answer questions requiring a combination of annotated sketches and written responses as appropriate to the question topic. The test must require a description of a minimum of four file formats, as specified in Performance Criteria (c).

OUTCOME 2

Compose and store digital photograph images.

Performance Criteria

- a) The physical attributes that tend towards the creation of pleasing images are correctly described.
- b) Images from a range of different photographic situations are correctly produced.
- c) Captured images are stored in a suitable file format for use in multimedia applications.

Note on range for the Outcome

Attributes: light; exposure; focusing; texture; colour and tone; balance; framing.

Situations: indoors (natural and artificial light); outdoors (various lighting conditions); casual composition; formal composition.

National Unit Specification: statement of standards (cont)

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Evidence Requirements

- a) Restricted short answer questions requiring a few lines describing the use of each of the attributes indicated respective to the Performance Criteria.
- b) The candidate must provide images taken from each of the situations.

Satisfactory achievement will be demonstrated by the candidate exposing the images and capturing them to backing storage in a suitable file format.

OUTCOME 3

Enhance digital images using computer software.

Performance Criteria

- a) The image attributes that can be enhanced in a typical digital camera/microprocessor system are correctly described.
- b) Previously captured images are enhanced appropriately.

Note on range for the Outcome

Image attributes: light; focusing; colour; tone; balance.

Evidence Requirements

- a) Written short answers to set questions on the range.
- b) Structured assignment based on previously captured images.

OUTCOME 4

Plan, produce and present a portfolio of digital photographic images to a given brief.

Performance Criteria

- a) The stages involved in planning effective image capture are correctly described for a given brief.
- b) An image shooting plan for a given brief is accurately produced.
- c) A portfolio of images for a given brief is correctly produced.
- d) A portfolio of images for a given brief is correctly presented.

Note on range for the Outcome

Stages: brief; design; location(s) survey; support production/procurement; shooting plan; editing.

Evidence Requirements

A formally presented project portfolio containing an introduction describing the stages, the shooting plan, exposed images (both hard copy and software versions) for a series of digital images.

National Unit Specification: statement of standards (cont)

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OUTCOME 5

Comply with legislation and practice appropriate to digital photography.

Performance Criteria

- a) Behaviour is consistently in a manner appropriate to the safety of self and others.
- b) Equipment is consistently used in a manner appropriate to safety of self and others.
- c) Copyright procedures are appropriately complied with.

Note on range for the Outcome

Legislation: health and safety; copyright.

Evidence Requirements

Observation checklists indicating consistency of performance throughout the Unit delivery.

National Unit Specification: support notes

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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 practices involved in digital photography for multimedia computing. The intention is to provide an opportunity for candidates to participate in this area of study at a reasonable level for a person with little or no experience of photography and to provide a foundation for further study at higher level. It is recommended that exercises undertaken in the study of this Unit give adequate opportunity for the candidate to explore the subject and to be creative.

The following information gives further clarification regarding the context in which Outcomes and Performance Criteria are to be achieved.

Outcome 1

A basic knowledge of the principles of digital imaging is envisaged for this Outcome rather than an in-depth study. The concept of backing storage space necessary for digital images should be stressed in connection with file size and portability.

Outcome 2

The candidate should be led through the attributes by investigation of real objects and their aesthetic effect. Practical exercises should be carefully thought out in order to give the candidate the opportunity to become involved with thoughts and feelings extending from the physical attributes. The review of work by peer group members in a constructive way should be encouraged as should the acceptance of criticism of his/her work by candidates. The emphasis in this Outcome should be on practical work.

Outcome 3

Once again the emphasis should be on practical experience with candidates gaining the maximum time available in actual work. Candidates should be allowed to experiment with images by 'bracketing' their image captures. Again, group criticism and support should be encouraged as a reinforcement tool.

Outcome 4

The brief given to the candidates should contain a description of the project to be undertaken together with any instructions necessary for successful completion. The project should be imaginative and allow for creative input from the candidate.

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Outcome 5

The subject matter in this Outcome should be emphasised throughout the study of the Unit with an attempt to ensure that both health and safety and copyright acknowledgement become a part of the candidate's behaviour and not merely an assessable part of the Unit.

The candidate should at all times comply with procedures and regulations designed for safety in the field and use safe working practices specified for equipment and work areas.

The candidate should be aware of, and comply with laws, agreements, understandings and good practice with regard to copyright, intellectual copyright and the acknowledgement of the contribution of others to his/her work.

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. This emphasis throughout the Unit should be on practical application, creativity and innovation.

Opportunities for Core Skill Development

Opportunities exist to develop Core Skills. Signposting is evident in the Unit.

GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT

The following are guidelines on the content of the assessment instruments:

Outcome 1

A sufficient number of restricted response questions should be set to cover the range. Typical industry standard formats could include: JPEG; GIF; TIFF; PSD; BMP; WMF.

Outcome 2

For the assessment of this Outcome, it is envisaged that two images from each situation would be reasonable.

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Outcome 3

For the assessment of this outcome, the candidate may use his/her own previously captured images or a set of images provided for the specific purposes.

Outcome 4

It is envisaged that a series of eight images would be appropriate for the brief.

Outcome 5

It is expected that compliance with legislation is integrated throughout the Unit.

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.