



National Unit specification: general information

Unit title: Digital Photography: Basic File Optimisation

Unit code: FR2F 12

Superclass: CB

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Version: 02

Summary

The purpose of this Unit is to enable candidates to undertake basic management and optimisation of digital camera files using current software applications.

This is a mandatory Unit in the National Certificate in Photography at SCQF level 6 but can also be taken as a free-standing Unit. It provides suitable preparation for candidates wishing to undertake further study in photography.

Outcomes

- 1 Research file management software and basic image optimisation techniques.
- 2 Use appropriate software packages to carry out file management and basic image optimisation.
- 3 Evaluate file management techniques and software applications.

Recommended entry

Entry to this Unit is at the discretion of the centre. Candidates undertaking this Unit do not need any prior knowledge or experience of digital photography. However, good skills in *Information and Communication Technology (ICT)* and *Problem Solving* will be an advantage. This may be evidenced by attainment of the relevant Core Skills at SCQF level 4 or above.

Credit points and level

1 National Unit credit at SCQF level 6: (6 SCQF credit points at SCQF level 6).

**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*

General information (cont)

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SCQF credit points at an SCQF level. There are 12 SCQF levels, ranging from Access 1 to Doctorates.

Core Skills

Achievement of this Unit gives automatic certification of the following Core Skills component:

- ◆ Critical Thinking at SCQF level 6

There are also opportunities to develop aspects of Core Skills which are highlighted in the Support Notes of this Unit specification.

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 SQA.

Outcome 1

Research file management software and basic image optimisation techniques.

Performance Criteria

- (a) Investigate a range of hardware devices and workflow software solutions available to manage digital image files.
- (b) Identify key controls of a variety of software packages, which facilitate optimisation of digital image files.
- (c) Describe appropriate file storage and exportation functions of software applications.

Outcome 2

Use appropriate software packages to carry out file management and basic image optimisation.

Performance Criteria

- (a) Import digital image files using appropriate hardware and workflow software.
- (b) Select and apply a rating value to selected image files to a given brief.
- (c) Carry out basic image file optimisation to a given brief.
- (d) Save optimised images safely in an appropriate file format.

Outcome 3

Evaluate file management techniques and software applications.

Performance Criteria

- (a) Present images as a digital image file or hard copy.
- (b) Evaluate workflow methodology and final image optimization.

Evidence Requirements for this Unit

Evidence is required to demonstrate that candidates have achieved all Outcomes and Performance Criteria. This evidence will be produced under open-book conditions.

Outcome 1

Written and/or oral recorded evidence that demonstrates that the candidate can:

- ◆ Correctly describe a minimum of two methods for the efficient importation of multiple digital image files.

National Unit specification: statement of standards (cont)

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- ◆ Identify a minimum of four of the following key controls: camera file resolution, file compression, ISO and digital noise, file resizing and resolution, image sharpening techniques, sensor artefact removal/retouching, colour correction and tonal control techniques.
- ◆ Clearly outline the software applications and procedures available for the efficient naming and storing of image files using metadata.
- ◆ Describe a minimum of two software applications which will allow exportation of stored image files.

Outcome 2

Written and/or oral recorded evidence and product evidence that demonstrates that the candidate has imported, optimised and saved images is required. The candidate should work to a clear, given brief that provides details of the image file management and optimisation they are to undertake. These image file management and optimisation tasks will include the:

- ◆ Use of software to import, name and duplicate a batch of a minimum of ten original camera files.
- ◆ Use of software to rate image files.
- ◆ Use of software to enhance the visual impact of the original image using cropping tools, levels controls, colour correction, curves, healing brush where appropriate.
- ◆ Use of software to apply adequate sharpening to digital image files.
- ◆ Use of software to prepare both high and low resolution image file types correctly.
- ◆ Use of software to save image files in an appropriate format.

Outcome 3

Written and/or oral recorded evidence and product evidence that demonstrates the candidate can list and evaluate the processes undertaken in optimising image files in the context of the given brief is required.

This will include:

- ◆ A comparison of original camera files and resulting optimised images.
- ◆ Evaluation of the visual effect/impact achieved using image optimisation to include a minimum of four effects/impacts from: camera file resolution, file compression, ISO and digital noise, file resizing and resolution, image sharpening techniques, sensor artefact removal/retouching, colour correction and tonal control techniques.
- ◆ Identification of the workflow efficiencies achieved through the use of software packages.
- ◆ Evaluation of the effectiveness of digital devices and digital asset management.

Candidates can present images in an electronic format or using an online photo management and sharing web site or as hard print copy. Minimum size A5 or 5'x7'.

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

Many of the skills achieved in this Unit are transferable to other photography Units, especially those within the NC Photography framework. It should be considered as providing the foundation level of candidate's knowledge of digital image file management and optimisation.

It is recommended that the exercises presented to candidates should provide opportunities for investigation of a variety of image file management and optimisation hardware options and software applications available to allow them to maximise the visual quality of their digital images.

The candidates should use the information gathered through their investigations to underpin a range of basic image file management tasks and image enhancement techniques that are appropriate to this particular discipline.

This approach should provide ample opportunities for candidates to practice skills in *Problem Solving*, *Communication* and *Critical Thinking* as well as *Information and Communication Technology (ICT)* and vocational skills.

In Outcome 2 candidates should work to a clear, given brief that provides details of the image- management and optimisation they are to undertake.

Outcome 3 has been designed to encourage candidates to evaluate both the effectiveness of a variety of software packages in enhancing the visual impact of their images and in facilitation of efficient workflow solutions. This should allow them to make informed decisions about their future practice and selection of software packages for practical project working.

Knowledge and understanding developed in this Unit aligns to the National Occupational Standards for Photo Imaging (Skillset). In particular this Unit deals specifically with the knowledge and skills outlined in:

PI-16 Undertake technical adjustment of images

Guidance on learning and teaching approaches for this Unit

Outcome 1

(Suggested 20% of nominal delivery)

The candidate should be given the opportunity to investigate appropriate techniques and software packages independently; however it is strongly suggested that they should be directed to relevant websites and other resources such as online tutorials, textbooks and review articles. It is intended that these investigations should assist candidates in familiarisation with the hardware and software applications available for the management of

National Unit specification: support notes (cont)

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image files and the techniques involved in basic image optimisation.

The emphasis of this Outcome lies in investigation of the equipment and techniques required to manage a volume of digital files effectively. The file management aspects are intended to inform the foundation of a personal workflow methodology. The investigation of basic image optimisation by candidates should be considered as only underpinning the teaching and demonstration of appropriate techniques

It is further suggested that the integration of this Outcome with Outcome 2 would allow candidates the opportunity to investigate a range of techniques and software applications which could be implemented, along with those demonstrated by tutors, to facilitate considerable savings in time and workload when working effectively with image files.

It would be beneficial if ongoing tutor and peer feedback is provided on the material generated by candidates during their investigation of software packages and techniques. It is suggested that the scope of these enhancements is modest and within the scope of a range of freeware as well as professional imaging software packages.

Outcome 2

(Suggested 60% of nominal delivery)

This Outcome is largely practical with candidates expected to undertake a range of tutor-generated briefs. The briefs should provide an incremental challenge to candidates, ranging from simple import and file naming to image optimisation and retrieval tasks. It is advised that the value of candidate investigations be confirmed through a close integration of research and practical exercises, with initial tutor demonstration and teaching being underpinned by candidates' investigation of techniques and equipment.

It is strongly suggested that a formulaic approach to these activities is avoided, with candidates being encouraged to adopt an individual workflow solution to the management and optimisation of a volume of digital image files during the completion of these briefs.

A possible tool to support learning and teaching in this Outcome would be the generation of a log/record of practical steps taken by candidates and feedback on the techniques and equipment both investigated and used. This could be contained within a Unit workbook or within a separate document that could provide valuable material for the completion of Outcome 3 of this Unit.

Outcome 3

(Suggested 20% of nominal delivery)

It is advised that the learning and teaching approaches for this Outcome should involve close integration with Outcome 2. Candidate's evaluative statements should be generated on an ongoing basis during the delivery of Outcome 2 and the effectiveness of software applications and techniques be recorded in a log-book as reference material for the completion of this Outcome.

The opportunities for candidates to discuss and compare individual experience and approaches should be exploited as much as possible, especially within the context of tutor and peer feedback tutorials.

National Unit specification: support notes (cont)

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Integration

Delivery of this Unit should be facilitated as much as possible through the integration of all Outcomes. This should allow the investigations candidates carry out in Outcome 1 to both support and under-pin tutor demonstrations and teaching of techniques and softwares required for the practical elements required in Outcome 2.

The feedback and discussion of the success or ease of use of a variety of techniques and software applications in Outcome 2 should also, when integrated into Outcome 3, help prepare candidates in generating evaluative statements required as evidence of assessment in this Outcome.

Guidance on approaches to assessment for this Unit

Assessment of the Outcomes within this Unit should be viewed as holistically as possible with integration across all Outcomes allowing individual methods of assessment to be supported by work carried out in each.

It is recommended that the assessment of all Outcomes should make reference to well defined tutor generated briefs. The mode of assessment is left open for individual centres and tutors should decide the best way to assess and record candidate's knowledge and skill. It is however recommended that the recording of the steps taken in practical work and comparison of techniques used and control images could assist in assessment.

Written and/or oral recorded material could be generated via feedback tutorials:

- ◆ A workbook/report or presentation that contains accurate research information on the software packages and specific hardware available to candidates for the downloading, renaming, backing up and exporting digital images and clear description of the processes involved.
- ◆ A series of digital image files which exhibit basic optimisation techniques.
- ◆ An evaluation of the processes involved in file management and the visual impact of file optimisation.

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)*.

National Unit specification: support notes (cont)

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Opportunities for developing Core Skills

In this Unit candidates will develop skills in using equipment and techniques to effectively manage a volume of digital image files in order to facilitate savings in time and workload.

Candidates will:

- ◆ investigate image file management and optimisation hardware options
- ◆ describe functions of software applications
- ◆ apply information gathered to carry out a range of basic tasks
- ◆ apply image enhancement techniques
- ◆ import and optimise image files to meet the requirements of a client brief
- ◆ evaluate effectiveness of software packages
- ◆ make informed decisions about future practice.

This means that as candidates are doing this Unit they will be developing aspects of the Core Skills of *Communication*, *Problem Solving* and *Information and Communication Technology*.

In addition, candidates may develop aspects of the Core Skill of *Working with Others* through class discussion and peer review activities.

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	Core Skills Component Critical Thinking at SCQF level 6 embedded.	21/10/2011

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