Higher National Unit Specification

General information for centres

Unit title: Print Origination and Image Capture

Unit code: F0PG 35

Unit purpose: This Unit is designed to enable the candidate to evaluate the quality and suitability of photographic origination and digital files for reproduction. The Unit adopts a structured approach to the reproduction process from the classification, selection and cropping and scaling of originals to image capture by digital scanning and the editing of files to prepare them for output. It is primarily intended for candidates in printing, publishing, graphic design, and photography.

On completion of the Unit the candidate should be able to:

1   Classify photographic originals and evaluate their characteristics.
2   Scan photographic originals and capture files of specified type and quality.
3   Modify files captured via digital cameras to meet specific output requirements.

Credit points and level: 1 HN Credit at SCQF level 8: (8 SCQF credit points at SCQF level 8*)

*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.

Recommended prior knowledge and skills: Access to this Unit will be at the discretion of the Centre. Candidates should have good computer skills. This could be demonstrated by the achievement of an IT or desktop publishing unit at SCQF level 7, an equivalent qualification, or relevant work experience.

Core Skills: There are opportunities to develop the Core Skill of Information Technology at SCQF level 5 in this Unit, although there is no automatic certification of Core Skills or Core Skills components.

Context for delivery: If this Unit is delivered as part of a Group Award, it is recommended that it should be taught and assessed within the subject area of the Group Award to which it contributes.

Assessment: The focus of the Unit is on the production of a quality end product and the understanding of the processes leading to this. Assessment will therefore centre around production and evaluation of the product and on-going assessment of practical processes. This Unit should be assessed by means of a portfolio of evidence which includes: pro formas, record sheets, image files and digital proofs. Much of the evidence should arise naturally out of the task/s set for the candidate.

Higher National Unit specification: statement of standards

Unit title: Print Origination and Image Capture

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The sections of the Unit stating the Outcomes, knowledge and/or skills, and evidence requirements are mandatory.

Where evidence for Outcomes is assessed on a sample basis, the whole of the content listed in the knowledge and/or skills section must be taught and available for assessment. Candidates should not know in advance the items on which they will be assessed and different items should be sampled on each assessment occasion.

Outcome 1

Classify photographic originals and evaluate their characteristics

Knowledge and/or skills

- Classes of originals: Line Art, Greyscale and Colour
- Types of original within each class
- Characteristics of each class of originals
- Cropping and scaling of originals

Evidence Requirements

Candidates will need to provide evidence to demonstrate their knowledge and/or skills by showing that they can:

- correctly classify ten sample originals and/or images in presentation software
- use the method of proportional rectangles to accurately indicate the crop required and to use a calculator to determine the scale of reproduction for two cropping and scaling calculations
- complete three sections of characteristics, one for each class of original

Assessment should be open-book and carried out under controlled conditions.

Assessment guidelines

This Outcome may be assessed by means of a multipart pro forma and graphical work. The characteristics of originals may be related to scanner set up and/or image editing techniques where appropriate. Candidates may draw upon textbooks, handouts and electronic presentations to complete the assessment.

Outcome 2

Scan photographic originals and capture files of specified type and quality

Higher National Unit specification: statement of standards(cont)

Unit title: Print Origination and Image Capture

Knowledge and/or skills

♦   Principles of image capture by scanning
♦   Scanner set up
♦   Digital image processing software
♦   File formats
♦   Simple hardware or software problems

Evidence Requirements

Candidates will need to provide evidence to demonstrate their knowledge and skills by showing that they can:

♦   Capture, edit, hard/soft proof and record the data for a minimum of six scan files to meet a given specification. The files before and after processing should be retained for each image.

The candidate's submission should include:

♦   Evaluation of original characteristics
♦   Scan files as captured
♦   Files after editing in digital image processing software to meet the given specification
♦   Proofs of edited files
♦   Record of image capture and/or editing

This assessment work should be carried out under open-book conditions and under controlled conditions.

Assessment guidelines

A pro forma record sheet may be used for each scan indicating original type and evaluation of original characteristics, scan set up, file data and image editing.

The candidate could demonstrate a breadth of knowledge by undertaking work involving a range of different kinds of origination including some having faults/problems provided by the tutor. The files produced may be for specified output requirements e.g. printed output or on-screen viewing only. These files may be available eg on a fileserver or CD ROM.

Outcome 3

Modify files captured via digital cameras to meet specific output requirements

Knowledge and/or skills

♦   File format
♦   File resolution
♦   Image scaling
♦   Image editing
♦   Mode requirements relative to end use

Higher National Unit specification: statement of standards(cont)

Unit title: Print Origination and Image Capture

Evidence Requirements

Candidates will need to provide evidence to demonstrate their knowledge and skills by showing that they can:

♦ Correctly process, edit, hard/soft proof and record the data for a minimum of four digital image files to meet a given specification. The files before and after processing should be retained for each image.

The candidate's submission should include:

♦ Digital camera files as captured.
♦ Files after editing in image processing software which match the given precification.
♦ Proofs of edited files to be used for printed output.
♦ Record of image capture and/or editing.

This assessment work should be carried out under open-book and controlled conditions.

Assessment guidelines

A completed pro forma record sheet may be used for each file indicating digital camera file data, file data after image editing and evaluation of file quality.

The candidate should demonstrate a breadth of knowledge by undertaking work involving files to be used for a range of different kinds of output including: Desktop publishing and printing, multimedia, presentation software and portable document format (PDF).

Administrative Information

Unit code: F0PG 35

Unit title: Print Origination and Image Capture

Superclass category: KH

Original date of publication: October 2006

Version: 01

History of Changes:

Version	Description of change	Date

Source: SQA

Additional copies of this Unit specification can be purchased from the Scottish Qualifications Authority. Please contact the Customer Contact Centre for further details, telephone 0845 279 1000.

Higher National Unit specification: support notes

Unit title: Print Origination and Image Capture

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 was developed for the HNC/HND Printing and is an optional Unit in the HND. It is primarily intended for those who are taking a printing qualification at Higher National level or who have experience in this or related fields and wish to further their knowledge and experience. It provides an opportunity to extend their skills in Information Technology. The Unit adopts a structured approach to the capture processing and output of digital images to ensure that the characteristics of the digital files match the output requirements. It prepares candidates for this role by providing them with the underpinning knowledge needed to carry out this type of task effectively. It is primarily intended for candidates in printing, publishing, graphic design, and photography. It would also be relevant to those with appropriate work experience such as the use of photography, desktop publishing or computer graphic packages. Candidates will be expected to exercise a degree of autonomy in carrying out the tasks required for the Unit. Most of the evidence will be generated and gathered as part of the practical work undertaken.

There are no prescriptive software and hardware facilities. However, tasks should replicate working practices for digital image capture and processing in terms of software and hardware used in the printing, graphic design, publishing, new media and photographic industries. The relevant facilities should be available to the candidate throughout the duration of the Unit.

It is acceptable for candidates to provide their own origination and digital camera files where this is possible (subject to lecturer approval).

Proof output should be produced by candidates. Colour files should be proofed in colour. Comment should be provided by candidates on their evaluation of the quality of their work relative to the origination or files. It is recommended that tutors should discuss with candidates the quality of their output and if required additional work should be undertaken and a new proof produced.

Guidance on the delivery and assessment of this Unit

The following notes give some additional information on each Outcome

Outcome 1: Origination — the categories and characteristics can be shown via samples of origination and/or using images via presentation software. This should be supplemented by notes.

Outcome 2: The range of originals scanned should include: Line art, Greyscale and Colour.

Ideally several different scanners should be used in order for candidates to gain experience of different scanner drivers. It is expected that the scanner driver should have been properly set up for each file. The file and proof quality will be determined by hardware/software issues and this should be taken into account when assessing.

Higher National Unit specification: support notes (cont)

Unit title: Print Origination and Image Capture

The editing of the files using digital image processing software should be limited to non-creative techniques for a single image, these could include: cropping, re-sampling and scaling, tone and colour editing, blemish retouching, noise reduction, sharpening and saving in required file format for output. Printed proofs should be produced for files intended for this purpose. Files for on-screen presentation only should not be printed but should be saved and retained as evidence.

The pro formas supplied should be candidate friendly and provide sections for all of the various types of information to be recorded.

Outcome 3: Digital camera files normally require editing depending on the output requirements and the quality of the original file. Either by demonstration or practice the candidates will learn about the following areas during the course of this Outcome: File requirements, format, cropping, scaling and sizing of images, mode requirements, and digital image processing techniques for single images which are to be edited for non-creative reproduction. Automated techniques for batch processing may be included. The digital files should be opened in digital image processing software, data and characteristics noted and saved under a new filename prior to image editing. The stages in image editing should be recorded on a pro forma. The same source file may be processed in more than one way so that one supplied file could be processed to produce two output files, one for printed output and a second file for on-screen display only. Printed proofs should be produced for files intended for this purpose. Files for on-screen presentation only should not be printed but should be saved and retained as evidence. Files for on-screen presentation may be incorporated into presentation format eg Powerpoint.

The pro formas supplied should be candidate friendly and provide sections for all of the various types of information to be recorded.

Opportunities for developing Core Skills

This Unit offers opportunities to further develop and extend the core skill, 'Using Information Technology' at SCQF Level 5. The Unit does not seek to embed the skill as a development of all elements is seen as a likely pre-requirement of the Unit. There are however indications given within the knowledge and skills statements of areas where core skill elements may be further reinforced:

♦   File types and image modes
♦   Software for image capture and digital image editing
♦   Use of network facilities

Open learning

This Unit is suitable for delivery by distance learning providing that the candidate has access to suitable computer hardware and software eg Adobe Photoshop and Microsoft PowerPoint; a scanner(s) capable of reflection and transmission scanning; suitable originals. The teaching notes and pro formas can be provided as PDF or word processed files, digital camera files can be provided in JPEG format.

If this Unit is delivered by open or distance learning methods, additional planning and resources may be required for candidate support, assessment and quality assurance. A combination of new and traditional authentication tools may have to be devised for assessment and reassessment purposes.

Higher National Unit specification: support notes (cont)

Unit title: Print Origination and Image Capture

For further information and advice, please see the SQA guide, *Assessment and Quality Assurance of Open and Distance Learning* (**www.sqa.org.uk**).

Candidates with disabilities and/or additional support needs

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments or considering alternative Outcomes for Units. For information on these, please refer to the SQA document *Guidance on Alternative Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs,* which is available on SQA's website: **www.sqa.org.uk**.

General information for candidates

Unit title: Print Origination and Image Capture

This Unit is designed to enable you to evaluate the suitability of originals and identify problems in order to take appropriate corrective measures in scanner driver set up and later in editing digital image processing software. The processing of image files captured via digital cameras is evaluated in order to optimise them for specific output requirements. Automated techniques for batch processing of files may also be included.

The extraction of data relevant to digital files both from the scanner driver and digital image processing software will be required. This will enable decision making so that suitable modifications can be made relevant to the output requirements.

You will be provided with a given specification for each original/file outlining the output requirements.

You will gain experience using commonly used non-creative techniques for digital image editing.

When evidence which was not produced under controlled conditions is submitted for assessment eg distance learning, it will be a requirement that the candidate sign a declaration that the assessment is his/her own work. Where this work is done at your place of employment, a supervisor's signature should be provided on the declaration as confirmation that the assessments were done by you and that the tasks were observed by the supervisor.