Higher National Unit specification

General information for centres

Unit title: Design for Print: Automated Digital Workflows for Pre-Press

Unit code: F1V2 35

Unit purpose: This Unit will enable candidates to evaluate and design suitable automated digital workflows in a pre-press environment. The Unit adopts a structured approach to the process from the analysis of manual production workflows to the implementation of automated digital workflows. This Unit is primarily intended for candidates in printing, publishing, photography and graphic design.

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

1   Analyse and compare proprietary digital workflow solutions.
2   Analyse manual production workflows.
3   Design and implement automated digital workflows.

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. However, it is recommended that candidates should have some prior knowledge and skills in Computing and/or Information Technology. This may be evidenced by the possession of IT, Digital Imaging or Desktop Publishing Units at SCQF level 7, an equivalent qualification or work experience.

Core Skills: There are opportunities to develop the Core Skills of Information Technology at SCQF level 5 and Problem Solving 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: Outcomes 1 and 2 could be assessed by means of a report or the completion of pro formas. Outcome 3 could be assessed by means of a practical project. The evidence for Outcome 3 should include: unprocessed digital files, workflow files, post-processed files, hard copy proofs and pro formas. Outcome 2 and Outcome 3 could be integrated and assessed by means of a single project covering both Outcomes. Much of the evidence should arise naturally out of the task/s set for the candidate.

Higher National Unit specification: statement of standards

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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

Analyse and compare proprietary digital workflow solutions

Knowledge and/or Skills

♦ Terminology used in digital workflow solutions
♦ Proprietary digital workflow software
♦ Limitations inherent in digital workflow solutions
♦ Suitability of digital workflow solutions for specific tasks

Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can analyse and compare the sets of processes involved in proprietary digital workflow solutions.

Candidates should analyse and complete a minimum of two tutor-set exercises that will demonstrate an accurate and detailed comparison of the features and working methods of two samples of proprietary digital workflow software that will include:

♦ correct use of terminology
♦ the suitability of each particular solution in a specific situation
♦ one limitation of each particular solution in a specific situation

The assessment should be carried out under unsupervised, open-book conditions. Candidates may draw on experience, textbooks, presentations, personal notes and the internet.

Assessment Guidelines

The assessment for this Outcome may consist of a report of a minimum of 800 words, or the completion of a series of pro formas. If a report is used the submission may be in any form, with the prior approval of the tutor.

Higher National Unit specification: statement of standards (cont)

Unit title: Design for Print: Automated Digital Workflows for Pre-Press

Outcome 2

Analyse manual production workflows

Knowledge and/or Skills

- manual production workflows
- software requirements
- production processes
- process lists

Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can analyse manual production workflows, identify the process as either file processing, image processing, or layout processing, identify software suitable to perform the processes, and list at least three steps to manually perform the process in the chosen software.

Candidates should complete three tutor-set exercises that will demonstrate an accurate reduction of complex tasks to their component stages by:

- accurate analysis of the production workflow to determine the processes as either file processing, or image processing, or layout processing
- correct identification of software suitable to perform the processes
- description of at least three individual stages for each exercise in the form of a process list which details the correct sequence of functions required to perform the process

The assessment should be carried out under unsupervised, open-book conditions. Candidates may draw on experience, textbooks, presentations, personal notes and the internet.

Assessment Guidelines

The assessment for this Outcome may consist of a report of a minimum of 600 words, or the completion of a series of pro formas. If a report is used the submission may be in any form, with the prior approval of the tutor.

The assessment for this Outcome may be combined with Outcome 3. The three production process lists generated in Outcome 2 could be automated in software in Outcome 3.

Higher National Unit specification: statement of standards (cont)

Unit title: Design for Print: Automated Digital Workflows for Pre-Press

Outcome 3

Design and implement automated digital workflows

Knowledge and/or Skills

♦ Advanced functions of desktop publishing, digital imaging and pre-press software packages
♦ Individual steps in automated digital production workflows
♦ Hot folders and droplets
♦ Automated digital workflows

Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can analyse and identify at least three individual steps needed to create an automated digital production workflow, use software appropriate to the identified process to design and implement an automated digital workflow environment using hot folders and/or droplets, and process files and/or folder(s) of files to a given specification. The evidence should include: unprocessed digital files, workflow files, post-processed files, hard copy proofs and pro formas.

Candidates should analyse and complete three tutor-set exercises that will demonstrate the correct implementation of automated digital workflows by:

♦ accurate analysis of the production workflow to determine the processes as either file processing, or image processing, or layout processing
♦ correct identification of software suitable to perform the process for each exercise
♦ description of at least three individual stages for each exercise in the form of a process list which details the correct sequence of functions required to perform the process
♦ use of advanced functions of desktop publishing, digital imaging and pre-press software packages — batch processing, actions, droplets, hot folders
♦ creation and implementation of three automated digital workflows from three process lists

The assessment should be carried out under unsupervised, open-book conditions. Candidates may draw on experience, textbooks, presentations, personal notes and the internet.

Assessment Guidelines

The assessment for this Outcome may consist of completed pro formas, unprocessed digital files, workflow files, post-processed files and hard copy proofs.

The assessment for this Outcome may be combined with Outcome 2. Where this is not possible the outcome may be assessed in isolation.

The three production process lists generated in Outcome 2 could be automated in software in Outcome 3.

Administrative Information

Unit code: F1V2 35

Unit title: Design for Print: Automated Digital Workflows
                                   for Pre-Press

Superclass category: KH

Original date of publication: August 2007

Version: 01

History of changes:

Version	Description of change	Date

Source: SQA

SQA acknowledges the valuable contribution that Scotland's colleges have made to the development of Higher National qualifications.

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: Design for Print: Automated Digital Workflows for Pre-Press

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 HND Digital Media Group Award and is an optional Unit. It is primarily intended for those who are taking or have taken a printing pre-press qualification at SCQF level 7 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 and Problem Solving. The Unit adopts a structured approach to the process of automated digital workflow design. It prepares candidates for this role by providing them with the underpinning knowledge needed to work effectively in an automated pre-press environment. It is intended for candidates in printing, publishing, photography and graphic design. It would also be relevant to those with appropriate work experience such as the use of desktop publishing, digital imaging 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 pre-press in terms of software and hardware used in the printing and publishing industries. The relevant facilities should be available to the candidate throughout the duration of the Unit.

Useful background information can be found in a variety of textbooks and software manuals which are widely available from Adobe, Quark, Peachpit Press etc. There may be helpful tutorials from the World Wide Web, eg adobe.com, quark.com, Lynda.com, etc. although these should be carefully worked through prior to recommending to candidates to ensure that vital stages have not been omitted.

It is recommended that candidates are encouraged to carry out their investigations for Outcome 1 into the identification and comparison of proprietary digital workflow solutions from the beginning of the Unit delivery, and be given sufficient time and be provided with adequate access to resources (eg manuals, internet, books, etc).

The tutor-set exercises could focus on three aspects of automation from the following:

♦ File processing (move, rename, delete, file format, archive)
♦ Image processing for production (scale, rotate, mode, profile, curves, levels, colour)
♦ Creative digital image processing (sky replacement, colour, watermark, frame)
♦ Layout processing (pre-flight, crop, printers marks, OCR, watermark, file format)

File processing could make use of software included in most modern Apple Macintosh computers such as Automator and Applescript. Software suitable for creating workflows for the image processing component could include Adobe Photoshop's Actions and Droplets. Layout processing software could include Adobe Acrobat's Batch facility.

Higher National Unit specification: support notes (cont)

Unit title: Design for Print: Automated Digital Workflows for Pre-Press

Guidance on the delivery and assessment of this Unit

Although candidates should become familiar with a range of software packages during the delivery of the Unit, emphasis should not be placed on software specific skills but rather on the specific analytical knowledge and skills required within the Unit. This will ensure that revisions of software do not impact on the underlying Knowledge and/or Skills acquired through the achievement of the Unit.

This Unit is primarily intended to be delivered with candidates utilising Apple Macintosh computers and the OS X system software, but can also be delivered with PCs running suitable system-level automation software.

The Unit is expressed in three separate Outcomes. Outcomes 2 and 3 may be assessed by a single assessment.

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 where the Core Skill elements may be further reinforced.

♦   Digital image processing software
♦   System level automation software
♦   Flightcheck software
♦   Use of network facilities

This Unit offers opportunities to further develop and extend the Core Skill, 'Problem Solving' 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 where the Core Skill elements may be further reinforced.

♦   Critical thinking
♦   Planning and organising

Open learning

This Unit is suitable for delivery and assessment via distance learning providing the candidate has access to suitable computer hardware and software. This would include Apple OS X 10.4 or later, internet access, Adobe Acrobat Professional, and a professional image processing package such as Adobe Photoshop. All teaching notes, presentations and assessment guidelines could be provided in PDF format and/or word files or Powerpoint.

Candidates could submit assessments via a VLE. The workflow files could be authenticated by means of screenshots showing the work in progress, these screenshots could be processed and sent in JPEG format. Hard copy proofs could be output by the centre on behalf of candidates.

Higher National Unit specification: support notes (cont)

Unit title: Design for Print: Automated Digital Workflows for Pre-Press

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.

For further information and advice please refer to the SQA document *Assessment and Quality Assurance for Open and Distance Learning* which is available on SQA's website **(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. Further advice can be found in the SQA document *Guidance on Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs* **(www.sqa.org.uk)**.

General information for candidates

Unit title: Design for Print: Automated Digital Workflows for Pre-Press

This Unit will enable you to analyse and design suitable automated digital workflows in a pre-press environment. You will analyse manual production workflows, reduce them to individual steps and implement them as automated digital workflows. It has three main areas, each of which is the subject of a separate outcome.

During the course of study for this Unit, you will progress by: studying proprietary digital workflow solutions and the terminology used, analysing and describing manual production workflows, followed by designing and implementing automated digital workflows.

In Outcome 1 you will carry out research and produce a report or complete pro formas describing the various processes and features of two proprietary automated workflow solutions, making reference to their suitability for a particular task and limitations inherent in the software. Using your research, you will produce an analysis of the suitability of the software for given tasks within a pre-press production environment.

In Outcome 2 you will analyse and describe three manual production workflows, reducing complex tasks to their component steps. You will then prepare a detailed process list describing at least three individual steps in the form of completed pro formas.

In Outcome 3 you will design and implement three automated digital workflows, using software suitable for the process, from three detailed process lists. You will use the advanced automation features of various pre-press applications to create automated workflows. You could also automate the process lists generated in Outcome 2.

In undertaking this Unit you will develop your Core Skills in Information Technology and Problem Solving. The Information Technology skills and the Problem Solving skills gained can be applied to many areas, not only automated digital workflow design.