

Higher National Unit Specification

General information for centres

Unit title: Printing: Specialised Processes

Unit code: F0PV 34

Unit purpose: This Unit is designed to enable the candidate to evaluate specialised printing processes and produce work using a specialised printing process. It is intended for candidates who have limited or no knowledge of specialised printing processes.

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

- 1 Evaluate the applications for a range of specialised printing processes.
- 2 Produce prints using a specialised printing process.
- 3 Identify and describe on-press ancillary operations.

Credit points and level: 1 HN Credit at SCQF level 7: (8 SCQF credit points at SCQF level 7*)

**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 is at the discretion of the centre. Although not necessary, it would benefit candidates to have prior printing knowledge. This could be demonstrated by achievement of the following HN Units: *Printing Production Processes* and *Single Colour Litho Offset Printing* at SCQF level 7, equivalent qualifications or relevant work experience.

Core Skills: There are opportunities to develop the Core Skill of Working with Others 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: Outcome 1 will take the form of an evaluation of 10 different specialised printing processes.

Outcome 2 will take the form of producing 10 prints of a single job using a specialised printing process.

Outcome 3 will take the form of a description of 6 different on-press ancillary operations.

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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

Evaluate the applications for a range of specialised printing processes

Knowledge and/or skills

- ◆ Production techniques
- ◆ Skill level requirements
- ◆ Market niche of products
- ◆ Future development and viability of processes
- ◆ Capital cost of equipment

Evidence Requirements

Candidates will need to provide evidence to demonstrate their knowledge and/or skills by showing that they can evaluate the applications for 10 specialised printing processes.

Satisfactory evidence which covers all of the knowledge and skill areas for 10 specialised printing processes and which extends to a minimum of 1000 words should be submitted, together with a record of the assessment interview.

Each evaluation should contain information on the suitability of each specialised printing process in terms of:

- ◆ applications
- ◆ substrates
- ◆ inks
- ◆ special client requirements
- ◆ run length
- ◆ health and safety
- ◆ production worker skill requirements

This assessment will be conducted under open-book controlled conditions.

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Assessment guidelines

This could be assessed by candidates providing examples of 10 specialist printing processes and evaluating their suitability. The candidate evidence could be enhanced by visuals and samples. A pro forma could be provided by the centre for candidate completion.

Outcome 2

Produce prints using specialised printing processes

Knowledge and/or skills

- ◆ Make-ready procedures
- ◆ Print faults
- ◆ Maintenance of print quality during print run
- ◆ Quality criteria for prints

Evidence Requirements

Candidates will need to provide evidence to demonstrate their knowledge and skills by showing that they can produce 10 prints of a single job to match the quality of an agreed example.

An observation checklist should be used to record the candidate's performance.

Assessment guidelines

The practical work may be carried out on any suitable printing device and consist of the production of prints suitable for the process used.

Group working may be involved in some of the operations. If group work is involved, the candidate's contribution to group effectiveness, problem solving and competence in the operating of a printing device should be recorded in the observation schedule completed by the tutor.

This may be combined with Outcome 1 to form a portfolio of evidence, which covers all of the knowledge and/or skills for the entire Unit.

Outcome 3

Identify and describe on-press ancillary operations

Knowledge and/or skills

- ◆ On-press ancillary operations

Evidence Requirements

Candidates will need to provide evidence to demonstrate their knowledge and skills by showing that they can identify and describe six on-press ancillary operations.

Each description should include an accurate description of the:

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- ◆ Purpose and usage of operation
- ◆ Characteristics of the process
- ◆ Equipment and its operation
- ◆ Plate characteristics (if appropriate)

Each description should also be accompanied by samples.

The assessment will be carried out under closed book supervised conditions.

Assessment guidelines

The assessment may consist of short answer questions.

The candidate could be provided with a pro forma for completion and could be asked to provide a minimum of two samples of each process being assessed.

This may be combined with Outcome 1 and 2 to form a portfolio of evidence, which covers all of the knowledge and/or skills for the entire Unit.

Administrative Information

Unit code: F0PV 34
Unit title: Printing: Specialised Processes
Superclass category: KH
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Higher National Unit specification: support notes

Unit title: Printing: Specialised Processes

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 as part of the HNC/HND Printing and is an optional Unit within these awards. It is intended for those who are taking a qualification in printing at Higher National level or who have experience in printing or related fields and wish to further their knowledge and experience of specialised printing processes. It also provides an opportunity to extend their core skills of working with others.

The processes and equipment may include:

- ◆ Pad printing, holography, lenticular printing, thermography, prismatic printing, screen process printing, foil blocking, specialised lithographic processes, flexography, gravure, digital printing, hybrid equipment.

The applications may include:

- ◆ Printing on unusual substrates: plastic, flexible and rigid, foil, textiles, garments, tiles and glass, scratch cards, three dimensional objects.
- ◆ Printing using unusual inks: thermographic inks, thermochromic inks, cion and reactive inks, photochromic and ultra violet luminescent inks, texture and variable shade inks, magnetic and conductive inks, acid resistant inks, infra red and ultra violet curing inks and varnish.
- ◆ Special requirements: durability, resistance to weathering and fading, security, forgery and tamper proofing, acid resists, continuous patterns for wallpaper and textiles, very short or very long run potential, variable data printing.

The coverage should also include the following factors:

- ◆ The cost of equipment, plates and materials
- ◆ Lead times
- ◆ Printing process suitability for a given market niche
- ◆ Skill requirements for production workers
- ◆ Health and safety issues
- ◆ Modern developments, innovation and trends

Identify on-press ancillary operations. The operations may include:

- ◆ Numbering, perforating, hole punching, slitting, scoring, creasing, embossing, varnishing, bronzing, folding, collating, gluing, imprinting, thermography, ink jet, in-line finishing.

Higher National Unit specification: support notes (cont)

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Guidance on the delivery and assessment of this Unit

The delivery of this Unit may be by a range of methods including: demonstrations, presentations, and discussion of sample work, industrial visits, research via the Internet and practical work.

Candidates will be supplied with a brief, which in general terms outlines the requirements for the practical work and assessment for Outcome 2. The processes, equipment and materials, which are available, will be discussed with the candidates and each candidate will agree with the tutor the work to be undertaken.

Candidates may be provided with film from which to make plates or with the plates depending on the process and the facilities available.

Make-ready and printing operations may involve teamwork and will be carried out under tutor supervision.

The prints produced will be evaluated relative to the criteria for quality and quality control procedures.

Tutors should discuss with candidates the quality of their printed work. In the absence of a supplied example, a sample that has been approved by the class lecturer is acceptable.

The candidate should maintain and submit a working logbook for their practical work.

The make-ready and operation of some equipment for specialised printing processes lends itself to team working. The possibilities vary dependant on the process involved.

Where possible the student should see samples of work and equipment.

Opportunities for developing Core Skills

As the Core Skill 'Working with Others' at SCQF Level 5 is signposted in this Unit, tutors should utilise the opportunities indicated to reinforce the importance to team working within the industry setting. Formative work on team building and group dynamics should where practical be undertaken alongside instruction on the basics of self appraisal and group negotiation. It is critical that the delivery and assessment process identifies the transferable nature of this skill to other vocational contexts.

Open learning

This Unit could be delivered by distance learning or work place learning providing that the candidate has access to a suitable printing device for a specialist process and computer hardware and software. The candidate attending college will have the advantage of involvement with demonstrations, the opportunity of group interaction and question and answer sessions.

If this Unit is delivered through open learning, arrangements will need to be made for assessments to be carried out and observed by a qualified assessor as this Unit is performance based.

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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: Printing: Specialised Processes

This Unit will be of value to you if you intend seeking a career in printing, printing management or print related industries.

You will be introduced to specialised printing processes, which meet the needs of niche markets. These processes provide printing and products, which cannot be produced by the offset litho process, which is used to provide the vast majority of printed work. These processes as well as having special characteristics, which make them especially suitable for their niche market, also have their own particular limitations, which limit their use to work for which they are particularly suited. These limitations include: eg cost, speed, plate production, and substrate and ink requirements.

You will have the opportunity to gain practical experience of specialised print production.

Ancillary operations which may be carried out during the printing process will be covered including: numbering, perforating, hole punching, slitting, scoring, creasing, embossing, varnishing, bronzing, folding, collating, gluing, imprinting, thermography, ink jet, in-line finishing.

Some aspects of this Unit will be suitable for working in groups. In practical elements you will be using printing equipment to produce a printed piece of work.

You should supplement teaching notes and lectures by your own notes, research and gathering of print samples.