

SQA Advanced Unit Specification

General information for centres

Unit title: Single Colour Offset Litho Printing

Unit code: HX2G 47

Unit purpose: This Unit is designed to enable the candidate to understand and carry out the make-ready procedures required and produce a single colour job printed on a lithographic press. It is intended for candidates who have limited or no knowledge of the lithographic printing process.

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

- 1 Set up a substrate transport system on a lithographic sheet fed press.
- 2 Evaluate the make-ready of a lithographic sheet fed press.
- 3 Produce single colour prints to match an agreed example.

Credit points and level: 1 SQA 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 National 1 to Doctorates.*

Recommended prior knowledge and skills: Access to this Unit is at the discretion of the centre. This is an introductory lithographic printing Unit and candidates do not require to have any prior printing knowledge.

Core Skills: There are opportunities to develop the Core Skill of Working with Others at SCQF level 6 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: This Unit can be assessed holistically with candidates being asked to make-ready and use a sheet fed press to produce a given item of print.

SQA Advanced Unit Specification

SQA Advanced 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

Set up a substrate transport system on a lithographic sheet fed press

Knowledge and/or skills

- ◆ Stream feeder characteristics
- ◆ Single sheet feeder characteristics
- ◆ Adjustment techniques to suit paper and card
- ◆ Registration systems
- ◆ Delivery system adjustments

Evidence Requirements

Candidates will need to provide evidence to demonstrate their knowledge and/or skills by showing that they can identify and set up substrate transport systems on a lithographic sheet fed press. This should include selecting correct air suckers to suit a given substrate, setting of air, blast and pile height to suit a given substrate, setting 2-sheet detector, feeding table grippers, side-lay, front-lays, swing-arm grippers, impression cylinder grippers, delivery grippers and identifying feeder type.

Candidate performance will be recorded in an observation schedule.

Assessment guidelines

The candidate could be asked to set up the substrate transport system for a sheet fed litho press for a given task such as an A4 pamphlet. This Outcome could be assessed holistically with Outcomes 2 and 3.

Outcome 2

Evaluate the make-ready of a lithographic sheet fed press

Knowledge and/or skills

- ◆ Inking system adjustment
- ◆ Damping system adjustment
- ◆ Printing pressure

SQA Advanced Unit Specification

Evidence Requirements

Candidates will need to provide evidence to demonstrate their knowledge and skills by showing that they can evaluate the correct method of setting an inking system, damping system and printing pressure on a lithographic sheet fed press. The candidate will be expected to set up a sheet fed press using the correct ink duct setting, ink/water balance and correct printing pressure settings to meet the requirements of the given task.

Candidate performance will be recorded on an observation schedule.

Assessment guidelines

The evidence for this Outcome may relate to the candidate's completion of a tutor specified task which takes place on a single colour litho offset press or a two-colour press using one printing Unit only. This Outcome could be assessed in conjunction with Outcomes 1 and 3.

Outcome 3

Produce single colour prints to match an agreed example

Knowledge and/or skills

- ◆ Ink/water balance
- ◆ Ink duct setting
- ◆ Print quality parameters

Evidence Requirements

Candidates will need to provide evidence to demonstrate their knowledge and skills by showing that they can successfully produce 50 copies of a single colour job. Each candidate must generate 50 printed sheets that match the agreed example. Each candidate must correctly complete a checklist detailing the stages of production. This will be completed in open-book supervised conditions.

Candidate performance should be recorded on an observational schedule.

Assessment guidelines

The assessment for this Outcome may be a combination of practical work and related reportage.

Candidates may work as a group when operating the press. In practical work the contribution to the group of the individual candidate must be clearly identified.

If the candidate generated checklist was produced prior to production the assessor could assess and write comments on the checklist as an observation schedule.

SQA Advanced Unit Specification

Administrative Information

Unit code:	HX2G 47
Unit title:	Single Colour Offset Litho Printing
Superclass category:	KH
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Version	Description of change	Date

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SQA acknowledges the valuable contribution that Scotland's colleges have made to the development of SQA Advanced Qualifications.

FURTHER INFORMATION: Call SQA's Customer Contact Centre on 44 (0) 141 500 5030 or 0345 279 1000. Alternatively, complete our [Centre Feedback Form](#).

SQA Advanced Unit Specification

SQA Advanced Unit specification: support notes

Unit title: Single Colour Offset Litho Printing

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 SQA Advanced Certificate/SQA Advanced Diploma in Printing and is a mandatory Unit in these awards. It is intended for those who are taking a printing qualification at SQA Advanced level or who have experience in printing or related fields and wish to further their knowledge and experience. It also provides an opportunity to extend their Core Skill of Working with Others.

Candidates should be given the opportunity to practice the following in Outcome 1:

- ◆ Selecting correct air suckers to suit a given substrate
- ◆ Setting of air, blast and pile height to suit a given substrate
- ◆ Setting 2-sheet detector
- ◆ Feed table grippers
- ◆ Side-lay
- ◆ Front-lays
- ◆ Swing-arm grippers
- ◆ Impression cylinders grippers
- ◆ Delivery grippers
- ◆ Identifying feeder type

The following areas will be covered in Outcome 2:

- ◆ Accurate fitting of printing plate to permit minimum adjustment on the press.
- ◆ Check cleanliness of inking and dampening rollers prior to running up ink and damp.
- ◆ Adjustment of ink duct setting to suit image requirement.
- ◆ Alteration of blanket to impression cylinder pressure depending on the thickness of substrate to be printed on.

In Outcome 3, which is essentially practical, candidates will be expected to:

- ◆ Set feeder and delivery system.
- ◆ Set side and front lays.
- ◆ Correct positioning of printed image.
- ◆ Set ink duct to suit plate image.
- ◆ Obtain correct ink/water balance.
- ◆ Obtain correct printing pressure.
- ◆ Obtain colour maintenance on the run.
- ◆ Control of register on the run.
- ◆ Ink and damping rollers wash-up procedures.

SQA Advanced Unit Specification

Guidance on the delivery and assessment of this Unit

The teaching and learning in this Unit will mainly focus on practical offset litho printing press make-ready procedures. This will be reinforced with theoretical notes and presentations. The experience gained by the candidate will be assessed by a practical task.

It is recommended that tutors should discuss with candidates the quality of the printed work. In the absence of a supplied example a pass sheet that has been approved by the class lecturer is also acceptable. A single or two-colour offset litho press should be used to produce a printed job (two-colour press can be used as single-colour).

Outcome 1

Candidates should be given several opportunities to practice correct paper settings of a transport system on a sheet fed litho press.

Outcome 2

The candidate will be expected to correctly carry out make-ready and detail the stages involved. Their practical work will be recorded by the assessor in an observation schedule.

Outcome 3

Candidates will be expected to produce 50 copies of a single colour job which matches an agreed example. Any corrective action to maintain print quality should be taken by candidates when necessary eg colour variation, loss of register. The printed job should be positioned on paper in the exact position as example.

Opportunities for developing Core Skills

As the Core Skill 'Working with Others' at SCQF Level 6 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 or work place learning providing that the candidate has access to a single colour sheet fed litho press with a trained assessor on site.

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

Equality and inclusion

This unit specification has been designed to ensure that there are no unnecessary barriers to learning or assessment. The individual needs of learners should be taken into account when planning learning experiences, selecting assessment methods or considering alternative evidence.

Further advice can be found on our website www.sqa.org.uk/assessmentarrangements.

SQA Advanced Unit Specification

General information for candidates

Unit title: Single Colour Offset Litho Printing

This Unit is designed to enable you to operate a single colour sheet fed litho press or two colour press (using one printing unit) to produce a single colour printed job to match an agreed example.

At the end of this Unit you should be able to:

- ◆ Evaluate and operate a single sheet feeder.
- ◆ Evaluate and operate a stream feeder.
- ◆ Be proficient in the correct use of printing press, to set-up feeder, delivery, side and front lays, ink duct and water/ink balance.
- ◆ Produce and evaluate print quality which will include visual comparison of print matches the exemplar.
- ◆ Participate fully as a member of an effective team.

You will produce and evaluate print output to match the requirement of an industry standard example.