GQA LEVEL 3 NVQ DIPLOMA IN MACHINE PRINTING

Qualification Number
600/0607/9

Welsh Qualification Number
C00/1251/0

PERSONAL COMPETENCE SUMMARY

Name		Company/Centre	
Job Title		GQA Registration Number	

	UNITS OF COMPETENCE			ASSESSOR SIGNATURE Performance and knowledge assessment completed and supplemented with evidence overtime	DATE
Unit Number	**Mandatory Units**	**Level**	**Credit**		
L/601/9390 PR002	Promote and Maintain Health and Safety in a Print Related Working Environment	3	4		
D/601/9393 PR999	Contribute to Improving the Effectiveness of the Print Organisation	3	5		
L/601/9406 PR998	Understanding the Print Industry	3	4		
K/601/9395 PR004	Maintain Print Equipment in Working Order	3	6		
D/601/9426 PR267	Manage printing machines	3	8		
J/502/8501 PR120	Plan work to meet production requirements	3	4		
Optional Units (Optional - 6 Minimum Credits)					

RELIABLE EVIDENCE: The forms of evidence available include (mark as appropriate)

Observation in the workplace ☐   Assessment of knowledge ☐
Records of prior experience ☐   Witness statement(s) ☐
Testimonial(s) ☐   Photographic evidence ☐
Work records ☐   External testing ☐

Passport Style Candidate Photo (Mandatory)

COMPETENCE COMPLETION SIGNATURES
By signing here, the Candidate and Assessor confirm that evidence presented is authentic and that the assessments took place in accordance with the relevant assessment strategy. Details of the assessments and evidence must be recorded in the assessment decision record/summaries at the end of each unit.

	Name and Signature	Date
Candidate		
Lead Assessor		
IQA		
EQA		

Introduction to the Qualification

Who is this Qualification for?

This qualification is aimed at those who work as machine operatives (minders) on single and multi unit production printing presses, producing multi colour work. Assessment of the qualification can take place in a number of contexts including: Lithography (Sheet-fed) Printing, Lithography (Web-fed) Printing, Flexography Printing, Gravure Printing and Screen Printing and this will be reflected on the Qualification Certificate. The standards cover the most important aspects of the job. This qualification is at Level 3, and should be taken by those who have the responsibility for managing the machines, including monitoring and controlling the quality of output using a range of methods, and are responsible for ensuring the production records are completed in line with Company requirements. A further qualification for machine printing at Level 2 is also available.

In addition, there are qualifications available to cover Print Finishing and Pre-press. Candidates for this qualification will need to contribute to improving the efficiency in the completion of the Company objectives, promote the Company Health and Safety guidelines and policies and in addition candidates for this qualification will primarily be:

• Able to manage, monitor and control the production output producing multi colour work for print
• In control of the set up and running, maintenance and wash down of single and multi colour production machines

Candidates are likely to have jobs entitled:
• Machine minder
• No 1s/No 2s
• Machine operative

What is required from candidates?

GQA qualifications are made up of a number of units that have a credit value or credits. These credits must be achieved in the correct combination from mandatory and optional units: this qualification has 6 mandatory units and a group of optional units. Candidates should achieve all 6 mandatory units, plus a minimum of 6 credits from the group of optional units. This makes the minimum credit value of the qualification 37 credits. The group of optional units is intended to allow all those involved in Machine Printing to achieve the full qualification: when choosing from the optional units it is essential to ensure the units selected are appropriate and achievable within your job role.

Important consideration

For any machine minder to achieve the Machine Print Level 3 qualification they must have the skills knowledge and opportunity to demonstrate competence to the Assessor in the workplace. The units are made up of the things you need to know and the things you need to be able to do to carry out your job safely and correctly. These are called Learning Outcomes, and all must be met to achieve the unit. Qualifications are now required to indicate the total qualification time (TQT), this is to show the typical time it will take someone to attain the required skills and knowledge to meet the qualification criteria, this qualification has a TQT of 370 hours. Qualifications are also required to indicate the number of hours of teaching someone would normally need to receive in order to pass the qualification. These are referred to as Guided Learning Hours (GLH). The GLH for this qualification is 176.

Unit ref	Title	Level	Credit
Mandatory Units			
L/601/9390	Promote and Maintain Health and Safety in a Print Related Working Environment	3	4
PR002			
D/601/9393	Contribute to Improving the Effectiveness of the Print Organisation	3	5
PR999			
L/601/9406	Understanding the Print Industry	3	4
PR998			
K/601/9395	Maintain Print Equipment in Working Order	3	6
PR004			
D/601/9426	Manage printing machines	3	8
PR267			
J/502/8501	Plan work to meet production requirements	3	4
PR120			
Optional Units (Optional - Credits: 6 Minimum)			

A/601/9403	Set and Run ancillary printing machine equipment	2	5
PR254			
D/601/9412	Prepare and Maintain Image Carriers for Printing	2	4
PR257			
H/601/9413	Set and Run Die Stamping Printing Machinery	2	6
PR260			
J/601/9419	Set and Run in-line folding equipment	2	7
PR263			
F/601/9404	Set and Run over-printing machinery	2	7
PR255			
J/601/9405	Set and use ink drying equipment	2	3
PR256			
L/502/8502	Output Digital Image Carriers for Print	2	8
PR129			
A/601/9417	Set and Run Guillotines	2	5
PR357			
K/601/9400	Make lithographic printing plates	2	4
PR251			
M/601/9401	Prepare Inks and Coatings for Printing	2	4
PR252			
R/601/9410	Set and run slitting and re-reeling equipment adhesive label production	2	3
PR408			
F/502/8626	Set and run in line automated stitch and trim equipment for newspaper and periodical production	2	4
PR310			
T/601/9402	Set and Run numbering, bar-coding or inline data printing equipment	2	4
PR253			
F/601/9418	Set and run in-line converting or enhancing equipment	2	7
PR262			
M/502/8508	Prepare Stencils for Printing	2	4
PR219			
D/502/8505	Make photopolymer plates for flexographic printing	2	4
PR105			
T/502/8574	Manage Foil Blocking Machinery	3	5
PR650			

Achieving all of the mandatory units will mean the qualification has been completed and GQA will provide the Certificate with the qualification title. Where a candidate has completed additional credits the Certificate will list these as "additional credits", in cases where the candidate has not completed the full qualification and will not go on to do so, a Certificate of Unit credit can be issued for the units achieved.

Assessment guidance

Evidence should show that you can complete all of the learning outcomes for each unit being taken.

Types of evidence:

Evidence of performance and knowledge is required. Evidence of performance should be demonstrated by activities and outcomes, and should be generated in the workplace only, unless indicated under potential sources of evidence (see below). Evidence of knowledge can be demonstrated through performance or by responding to questions.

Quantity of evidence:

Evidence should show that you can meet the requirements of the units consistently over an appropriate period of time.

Potential sources of evidence:

The main source of evidence for each unit will be observation of the candidate's performance and knowledge demonstrated during the completion of the unit. This can be supplemented by the following types of physical or documentary evidence.

• Quality/production records
• Printed output (good and fault copies)
• Witness testimonies accident reporting systems
• Job bags/work instruction tickets/production records
• Examples of maintenance reports and/or records
• Examples of component replacement and/or records

• Use of equipment inc PPE
• Emergency procedures, risk assessments,
• Tutor and employer feedback/reviews
• Photographic evidence
• Professional discussion
• Responses to oral and written questions
• Written narrative

Please note that photocopied or downloaded documents such as manufacturers' or industry guidance, H&S policies, Risk Assessments etc, are not normally acceptable evidence for GQA qualifications unless accompanied by a record of a professional discussion or Assessor statement confirming candidate knowledge of the subject. If you are in any doubt about the validity of evidence, please contact your GQA EQA.

GQA Qualification Implementation Requirements covering Centre Approval, Candidate Assessment and ongoing Quality Assurance

This document indicates the requirements of Approved Centres delivering GQA qualifications and / or units of credit.

1. Equality of Opportunity

Equality of access to fair and valid assessment is necessary for all candidates undergoing assessment. This may mean making reasonable adjustments to normal assessment methods for candidates with particular or special assessment requirements. Candidates work patterns should not become a barrier to assessment, the organisation of which may have to be flexible. In the same way, reasonable adjustment arrangements may be necessary for candidates with a disability. For example, a candidate who is unable, through disability, to produce oral or written evidence, may be allowed to use the method they normally use as a substitute for the required form of communication. Reasonable adjustments need to be approved by GQA.

2. Recognised/Approved Assessment Centres

2.1 Individual centres must be approved by GQA to offer specific qualifications and / or units of credit. A centre may be a single organisation or a partnership of two or more organisations. It may operate at a single location or have satellites. For further details see the GQA booklet "Guide to Centre Approval". The Centre Approval process is carried out by a GQA approved EQA. Each Centre must maintain a centre file. It is important to be clear what the steps in the assessment process are:
• plan evidence collection and opportunities for assessment
• collect evidence
• judge evidence
• determine whether sufficient evidence has been presented
• make an assessment decision and give feedback to the candidate

NB Any deviation from the norm must be approved by a GQA EQA

2.2 Assessors and Verifiers

All Assessors of candidate performance must be competent, to make qualitative judgements, both in the skills they are assessing and in the assessment of candidates and hold the appropriate Assessor national award. Assessor occupational knowledge related to the qualifications being assessed is essential and must be illustrated to GQA prior to approval.

IQA's are responsible for the quality assurance of the assessment process within a centre. They should have a relevant occupational background, be competent in internal verification and hold the IQA national award. It is recommended that IQA work towards national recognition of assessor competence.

EQAs are responsible for ensuring accurate and consistent standards of assessment across centres, qualifications, units of credit and over time. They should have a relevant occupational background, be competent in external verification and hold the EQA national award
GQA will approve and licence all individuals involved in the assessment and verification of its approved qualifications and / or units of credit. Individuals who are working towards the Assessor or IQA national awards can only be provisionally licensed. The judgement of provisional licence holders will need to be agreed/authorised by a fully qualified and GQA licensed individual who cannot carry out a dual role in relation to a specific candidate.

All GQA Assessors and Verifiers must undertake a minimum of 2 significant CPD activities in both occupational areas and assessment and verification. Reflective CPD records must be maintained and made available to GQA EV's for review.

2.3 Centre Approval, Monitoring Reviews and Quality Assurance

The centre recognition/approval process is the start of a significant part of the awarding body's quality assurance system. The Approval process will begin with an EQA review of centre procedures to ascertain the potential centres ability to deliver GQA qualifications and / or units of credit. Centres will be expected to meet the relevant regulatory authority criteria for delivery of qualifications prior to initial approval; continued compliance with the criteria will be monitored through regular EQA visits. It is recommended that centre reviews are conducted at minimum every six months by a GQA EQA.

New or multi-site centres may be required to undertake quarterly or more frequent EV reviews to ensure that different locations can be seen to satisfy the national requirements.

GQA will ensure that unacceptable barriers relating to the assessment and internal verification of candidates in small companies do not deny recognition of competence to competent young workers. In such circumstances, GQA will demonstrate that its quality assurance procedures remain sufficient and rigorous to ensure that the competence outcomes have standing and credibility in the occupational area.

Enhanced quality procedures to ensure consistency of assessment and verification will be necessary and will include:
• a high level of sampling of assessment decisions N.B. In some instances the EQA may visit each assessment location and qualification / unit of credit candidate (e.g. single candidates dispersed throughout different small companies on government funded programmes)
• an in-depth scrutiny of assessment plans, materials and records
• specific centre guidance aimed at the successful implementation of qualifications and / or units of credit in SMEs via approved centre partnerships. This can include guidance on the quantity and quality of valid, authentic, and transferable evidence expected to be attributed to individual candidates
• ensuring centres are following the requirements prescribed in any appropriate assessment strategies and applicable codes of practice
• the identification and publication of good practice in centres

As part of the Quality Assurance process Proskills require an Enhanced External Verification process. This will be in the form of 1 significant underpinning knowledge question answered by the candidate for each unit of the qualification. The questions will be decided by GQA, and guideline answers must be submitted for approval and once approved kept in the Centre File to allow independent assessment

3. Qualification / Unit of Credit Candidates
All candidates must register with a GQA recognised/approved centre. The centre must maintain appropriate candidate personal details for external audit purposes etc.
The centre will provide candidates with advice and guidance on how to prepare for assessment and allocate an Assessor who will assess candidate ability to meet the requirements of the relevant qualifications / unit of credit. It is the candidate's responsibility to demonstrate competence and to do this they must:
• prove they can consistently meet all the qualification and / or unit of credit criteria
• provide evidence from work, that they can perform competently in all the contexts specified in the qualification / unit of credit requirements
• prove that they have the knowledge and understanding required to perform competently, even where they have not provided evidence from the workplace

It is therefore critical that quality evidence is provided in a format to allow the Assessor to make a decision and for the IQA to audit/verify his/her decision.

4. Evidence
A qualification and / or credit is awarded when a person has achieved the necessary outcomes of the qualification and / or unit of credit.
 The specific combination of units necessary to achieve a qualification is detailed in the qualification structure. Certificates of Unit Credit can be awarded when candidates achieve any one, or more, units from the qualification.
The evidence the candidate brings forward is primarily evidence of performance of what he/she can do, not just what he/she knows. The assessment criteria / qualification requirements are described within the qualification and / or unit of credit itself and can incorporate practical skills and knowledge.
The assessor's role is to judge each relevant item of evidence. Each must be judged against the qualification and / or unit of credit requirements. It is not sensible to collect evidence against individual criteria. Nor is it effective. If items of evidence were collected for each of the criteria, the candidate may have to produce many items of evidence, well above the number actually required. GQA recommend holistic assessment.

When judging each item of evidence, the assessor is deciding whether the evidence:
• is authentic – i.e. actually produced by the candidate
• meets the criteria
• relates as appropriate to a context defined within the qualification and / or unit of credit
• confirms that the candidate has the required underpinning knowledge

When the assessor makes a decision about the candidate's competence, he or she examines all the evidence available to determine:
• if the evidence, as a whole, covers all the evidence of achievement
• whether the evidence indicates consistency in competent performance
• whether there is enough evidence on which to base an inference of competence
The answer can only be:
• yes (the candidate is competent)
• no (the candidate is not yet competent)
• there is insufficient evidence to make a decision

Consistency means that the individual is likely to achieve the standard in their work role, in the different activities defined in the qualification and / or unit of credit over time and range of work. The assessor must judge how long a time period is enough to be confident that the candidate can perform reliably to the standard. Unsupported evidence i.e. based on a single assessment/visit will not normally prove consistency.

Performance evidence
Performance evidence can be what the individual actually produces, or the way the individual achieves the standard. One is called product evidence and the other process evidence.
Product evidence is tangible – you can look at it and feel it. Products can be inspected and the candidate can be asked questions about them.

In order to make a fair and objective assessment, the assessor must be able to answer the question: Is there sufficient evidence that the candidate can consistently meet the requirements of the qualification and / or unit of credit?
Process evidence describes the way the candidate has achieved an outcome – how they went about it. This may be, for example, the way the quality of products is checked or the way customer complaints are handled. This usually means observing the candidate in action.

Performance evidence may cover a number of outcomes. It makes sense to plan evidence collection so that what the candidate does, in the normal course of their job, can be related to different outcomes and units. The activities that clearly link to the qualification and / or unit of credit requirements are the things to concentrate on when planning evidence collection and assessment and when monitoring the candidate's progress. Look for opportunities in the candidate's job when evidence can be collected against a number of units at the same time.

Performance evidence can be:
• Naturally occurring – evidence produced in the normal course of work. Evidence of this sort is usually of high quality and reliable. It is also cost effective to collect naturally occurring evidence
• Taken from previous achievements – the candidate may be able to bring forward evidence from previous work experience to show that they are still competent to the standard.
• Evidence of prior achievement can be used when it can be shown to support a judgment that the candidate can still achieve the standard. So, the assessor must be satisfied that the evidence of prior achievement is sufficiently reliable to justify saying that the candidate is currently competent.
• Simulated – from circumstances specially designed to enable the candidate's performance to be assessed. Simulation is generally not acceptable. The exceptions to this are:

• Dealing with emergencies
• Dealing with accidents
• Certain pre-approved real time simulators
• Limited other procedures that cannot be practically performed in the workplace, and for which sufficient evidence can be collected through other means.

NB:It is not always possible or feasible to collect naturally occurring evidence. It is likely that some simulation may be needed, when it may take too long to wait for the evidence to arise e.g. it may be an aspect of performance which occurs infrequently. An example of this may be evidence of how to deal with emergencies i.e. it makes sense to look for evidence from sources other than naturally occurring ones, rather than for, say, waiting for the building to burn down. Centres must obtain GQA EQA approval prior to the use of simulation.

Knowledge evidence
Being able to achieve a standard requires the ability to put knowledge to work. The qualification and / or unit of credit indicates the knowledge each person should use if they are to perform competently.
It should not be necessary to test all of the candidate's knowledge separately; however, any exception to this would be detailed in the relevant Assessment Strategy. Performance evidence could show that the candidate knows what he or she is doing. When this is not the case, or if the assessor is not convinced from the performance evidence, it may be necessary to check the individual's knowledge separately.

Oral or written assessments must clearly provide a suitable means of checking the breadth and depth of an individual's knowledge. Assessors will need to judge the best mix of knowledge evidence according to individual circumstances. Knowledge evidence is useful when deciding the quality of performance evidence, but must not be used in isolation to judge competence or as an alternative to performance evidence. Care must be taken that candidate evidence is auditable and verifiable.

NB: These Qualification implementation guidelines are generic across the full range of GQA qualifications. Further guidance on acceptable evidence on each qualification will be found in the Introduction to the Qualification section of the candidate booklet

Collation of Evidence for Level 3 Qualifications

The definition of a Level 3 NVQ/SVQ is that competence in a broad range of varied work activities is performed in a wide variety of contexts, most of which are complex and non-routine. There is considerable responsibility and autonomy, and control or guidance of others is often required.

By the very nature of this, it is anticipated that Level 3 candidates will be able to provide evidence of their achievement drawn from successful work activities or projects, in other words, real examples of their work over time and range. All evidence should be dated, signed and authenticated/authorised by a recognised responsible person.

The following comments will help in the planning of evidence collection for Level 3 qualifications:

- Level 3 assessments are not normally carried out by the use of checklists
- Level 3 candidates are encouraged to provide evidence of their achievements drawn from their actual current work activities
- In many cases, evidence of achievement is not difficult to find
- Level 3 candidates should produce a CV that clearly indicates their relevant experience and achievement that contribute to the qualification
- A collation of evidence in the form of a Level 3 portfolio may be used to demonstrate competence against the standard
- The evidence must be cross referenced against the NVQ/SVQ standard (and where necessary justified)
- It may be appropriate for Level 3 candidates to undertake the related Level 2 qualification or some Level 2 units as a milestone/interim qualification
- Level 3 qualifications may include units of competence from Level 2 qualifications. If the candidate has already achieved any unit(s) and is regarded as currently competent then he/she will not be required to be reassessed on the same unit(s)
- Assessors will need to carry out performance and knowledge assessments for units/elements/pcs etc but the need for ongoing formal observations should not be as great if the candidate has produced a quality portfolio.

Some aspects of evidence may be subjected to independent assessment or enhanced external verification to satisfy the requirements of the standards setting body's assessment strategy

Candidate Declaration

Candidate Name...

Centre/Company Name..

Assessor(s) Name(s)..

I acknowledge receipt of this copy of GQA qualification booklet. The unit structure provides information on which units must be achieved to be awarded the qualification. The individual units detail in the necessary requirements etc that I must achieve.
I understand that I will have an important role in preparing for and planning assessments and with guidance from the Assessor I will Collect and record relevant evidence.

I have been informed of the appeals system, should I want to appeal against any part of the assessment process.

I understand the assessments will be carried out with regard to the company's/centre's Equal Opportunities Policy.

Candidate signature..

Date...

Production/Process Activity Guideline

To aid new or established workers, a centre may wish to describe a normal production/process activity relevant to the achievement of the national vocational qualification and identify which units/elements it will contribute to, e.g. the act of preparation for work, implementation and completion will contribute to a number of units of competence.

Production/Process Activity Relevant to the Achievement of this Qualification	Contributory to: Units/Elements

L/601/9390	Promote and Maintain Health and Safety in a Print Related Working Environment	Level 3	4 Credits
PR002			

The aim of this unit is to provide the learner with the knowledge and skills to work safely in the print related environment, to be able to carry out the correct actions should an accident or emergency occur and to promote and develop safe working practices. The learner will also need to know how to monitor the health and safety of others. Finally the learner is required to show awareness of associated problems that can occur and possible solutions.

Learning outcome. The learner will:	Assessment criteria. The learner can:	Evidence.ref.no		
1. Know which acts, regulations and guidelines apply to the print related working environment.	1.1 State which acts, regulations and guidelines apply to the print related working environment.			
	1.2 Explain how these acts, regulations and guidelines apply to the print related working environment.			
2. Know how to monitor and implement changes in health and safety acts, regulations and guidelines.	2.1 Explain how to monitor changes in health and safety acts, regulations and guidelines, to include: • Accessing HSE information • Receiving training updates			
	2.2 Explain how to introduce and implement changes.			
	2.3 Explain how to monitor the implementation of changes in health and safety to the working environment.			
3. Know how to carry out a formal assessment of hazards and risks in the print related working environment and the types of risk or hazards that exist.	3.1 Describe the steps in carrying out a formal risk assessment.			
	3.2 Explain how to record the findings and why recording is important.			
	3.3 Explain who should be made aware of the findings and how.			
	3.4 Explain why it is important to inform the relevant people of the findings.			
	3.5 Give 3 examples of risks or hazards that can occur in your working environment.			
4. Be able to identify hazards and assess risks in the print related working environment.	4.1 Carry out a risk assessment of the print related working environment.			
	4.2 Report the findings in accordance with Company procedures and legislation.			
5. Know how to promote safe working practices.	5.1 Give 3 examples of information that promote safe working practices related to the print related working environment.			
	5.2 Explain how each of the 3 examples given promote safe working practices.			
6. Be able to promote safe working practices.	6.1 Disseminate information on safe working practices.			
7. Be able to adopt a safe method of work.	7.1 Plan and organise a safe method of work.			
	7.2 Select and use personal protective equipment in accordance with Company guidelines and legislation.			
	7.3 Select and use print related materials in accordance with Company guidelines and legislation.			
8. Know how to ensure there is no unauthorised or unsafe access to the working areas.	8.1 Explain how to establish if a person is authorised to enter the work area.			
	8.2 Explain how to ensure that authorised people entering the work area are kept safe.			
9. Know how to monitor colleagues to ensure they comply with health and safety requirements.	9.1 Explain how to monitor colleagues to ensure they comply with health and safety requirements.			

L/601/9390	Promote and Maintain Health and Safety in a Print Related	Level 3	4 Credits
PR002	Working Environment (continued)		

10. Know what to do in the event of accidents or emergencies.	10.1 Describe the Company procedure to follow in the case of an accident.			
	10.2 Describe the Company procedure to follow in the case of an emergency.			
	10.3 Describe the procedure for evacuating workers and visitors.			
	10.4 Describe the procedure for reporting and recording accidents and emergencies.			
11. Understand the problems that can occur with promoting and maintaining health and safety within the print related working environment and the potential solutions.	11.1 Give 3 examples of problems that can arise when promoting health and safety, one each of the following: • Problem with communicating information to others • Problem with introducing changes • Problem with monitoring colleagues' compliance with health and safety requirements			
	11.2 Give an explanation of how to overcome each of the problems given in answer to 11.1.			

Assessor comments/feedback

D/601/9393 PR999	Contribute to Improving the Effectiveness of the Print Organisation	Level 3	5 Credits

The aim of this unit is to provide the learner with the knowledge and skills to be able to contribute to the improvement of the Organisation through the use of resources, communications and working relationships within the print working environment.

Learning outcome. The learner will:	Assessment criteria. The learner can:	Evidence.ref.no		
1. Know how to obtain and understand the work schedule.	1.1 Explain the Organisational procedure for obtaining the work schedule.			
	1.2 Explain what to do if the work schedule is: • Unclear • Not achievable			
2. Know how to ensure that the correct quantities of products and materials and human resources are used.	2.1 Explain how to ensure that the required quantities of products and materials and human resources are selected.			
3. Know how to minimise wastage of materials.	3.1 List three types of material that can potentially be wasted.			
	3.2 Describe what actions can be taken to minimise wastage of the materials listed.			
	3.3 Explain how surplus materials may be reused.			
4. Know why it is important to contribute to improving the effectiveness of the Organisation.	4.1 Explain 3 reasons for contributing to improving the effectiveness of the Organisation.			
5. Know what information to share with colleagues on your job role and why this is important.	5.1 Give 3 examples of information linked to your job role that needs to be shared with colleagues.			
	5.2 Explain why sharing information with colleagues is important.			
6. Be able to share information with colleagues.	6.1 Share information with colleagues using different methods, for example: • Face to face conversations • Company systems • Written notes • Drawings / sketches • Telephone (voice or text) • Email • Internet			
7. Know how to identify and pass on improvements to work activities.	7.1 Explain 2 ways to identify improvements that can be made in work activities.			
	7.2 Explain how to pass on suggestions for improvements identified in line with Organisational policies.			
	7.3 Explain who to make the suggestions to and why these people need to be made aware.			

Assessor comments/feedback

D/601/9393 PR999	Contribute to Improving the Effectiveness of the Print Organisation (continued)	Level 3	5 Credits

8. Know how and why to identify opportunities and needs for self development and how to manage this information.	8.1 Explain 2 ways that a need to update skills and/or knowledge of the print industry can be identified.			
	8.2 Give 2 examples of how to check opportunities for self development related to the print industry.			
	8.3 Explain the benefits of keeping skills and knowledge up to date, give 1 example each of how it benefits: • The individual • The organisation			
9. Know why it is important to have good relationships with customers.	9.1 Explain 3 benefits of having good relationships with customers.			

Assessor comments/feedback

L/601/9406	Understanding the Print Industry	Level 3	4 Credits
PR998			

The aim of this unit is to provide the learner with the knowledge and understanding of the print industry, the main processes, products and equipment and also understanding of the importance of confidentiality within the industry.

Learning outcome. The learner will:	Assessment criteria. The learner can:	Evidence.ref.no		
1. Know the printing processes used within the print industry.	1.1 Name 5 main print processes used within the print industry.			
	1.2 Explain the basic principles of each process.			
	1.3 Name one product that can be produced by each process.			
	1.4 Name 3 stages of production workflow in print.			
2. Understand the factors that influence the choice of printing process.	2.1 Explain the advantages of each process.			
	2.2 Explain the disadvantages of each process.			
3. Know the types of equipment used within the print industry	3.1 List 3 pieces of equipment/machinery used within the print production process.			
	3.2 Explain the purpose of each piece of equipment/machinery given in answer to 3.1.			
4. Recognise and understand the need for confidentiality within the print industry	4.1 List 2 types of information concerning a print job that may need to be kept confidential.			
	4.2 Explain the reasons the information should be kept confidential.			

Assessor comments/feedback

K/601/9395	Maintain Print Equipment in Working Order	Level 3	6 Credits
PR004			

The aim of this unit is to provide the learner with the knowledge and skills to be able to maintain equipment in working order, and includes identifying and correcting faults within their area of responsibility.

Learning outcome. The learner will:	Assessment criteria. The learner can:	Evidence.ref.no		
1. Know how to maintain equipment in working order.	1.1 Describe the principal activities involved with machine cleaning, lubrication and maintenance in relation to the following: • Roles and responsibilities for cleaning, lubrication and maintenance • The choice and use of suitable cleaning agents and lubricants • The maintenance plans for equipment • When and how to start up and shut down equipment for maintenance and cleaning			
	1.2 Describe how the following could affect the maintenance of equipment: • Tools • Materials • Production requirement • Lack of skills or training • Sources of information			
	1.3 List consumables that are likely to require periodic replacement.			
	1.4 List parts that may be required at short notice.			
	1.5 Explain the Company policies and processes on the availability of parts and consumables.			
2. Be able to maintain equipment in working order.	2.1 Ensure that it is safe to start cleaning activities.			
	2.2 Obtain the required materials and equipment needed for cleaning.			
	2.3 Ensure that cleaning materials and equipment are used in ways which minimise waste and pollution.			
	2.4 Ensure that used cleaning agents and waste materials are disposed of in accordance with Company procedures.			
	2.5 Check that machines are safe to operate, free from waste and cleaning materials prior to start up.			
3. Know how to identify, correct and record machine faults.	3.1 Describe 3 faults that should be able to be corrected without summoning external assistance.			
	3.2 Explain how to obtain and analyse information about the machine faults to identify their likely cause.			
	3.3 Explain how to correct the faults identified including the tools, equipment and PPE required.			
	3.4 Explain the Company procedures on reporting faults which fall outside their area of responsibility/ capability and the importance of following procedures.			
	3.5 Explain how to assess the estimated time it will take to rectify faults and the Company procedures on informing the relevant people.			
	3.6 Explain how and why to record the details of machine faults and production down-time following Company procedures.			

K/601/9395	Maintain Print Equipment in Working Order (continued)	Level 3	6 Credits
PR004			

4. Be able to implement a programme of lubrication and maintenance.	4.1 Identify the lubrication points on the machine and the manufacturer's recommended types of lubricant and lubrication intervals.			
	4.2 Ensure that the maintenance plan is implemented and kept up to date.			
	4.3 Ensure that filters such as oil, air and water, are cleaned and/or replaced in line with needs or maintenance schedules.			
	4.4 Examine components for defects or excessive wear.			

Assessor comments/feedback

4. Be able to implement a programme of lubrication and maintenance.	4.1 Identify the lubrication points on the machine and the manufacturer's recommended types of lubricant and lubrication intervals.			

D/601/9426	Manage printing machines	Level 3	8 Credits
PR267			

The aim of this unit is to provide the learner with the knowledge and skills to be able to manage the operation and quality of output for printing machines such as sheet-fed multi-unit lithographic printing machines, wide-web printing machinery and narrow-web printing machinery. Candidates will need to be aware of the range of quality checks used in the Organisation, and also the recording of relevant information. Candidates must also demonstrate how to give instructions on processes to colleagues.

Learning outcome. The learner will:	Assessment criteria. The learner can:	Evidence.ref.no		
1. Be able to make-ready printing machines.	1.1 Obtain all the information required for the job.			
	1.2 Identify and obtain materials of the required type, quantity and quality to meet the job requirements, for example: • Substrates • Inks, toners and coatings			
	1.3 Identify any further production requirements.			
	1.4 Check that the machine and the work area are safe and ready for production.			
	1.5 Check output meets the Company's quality standard, making appropriate adjustments, if the standard is not met.			
	1.6 Obtain an approved sample of the product being produced.			
2. Be able to manage output and quality from print production machines.	2.1 Run and monitor production machines at the optimum speed, with minimum downtime and to the required quality standard.			
	2.2 Carry out checks in line with Company procedures that the output matches the job requirements.			
	2.3 Run the required number of good copies, keeping spoiled material to a minimum.			
	2.4 Follow the Company procedures for the removal of waste.			
	2.5 Record the production and quality assurance details following Company procedures.			
	2.6 Ensure the output is prepared for the next stage in the process, in accordance with Company procedures.			
3. Know how to manage printing machines.	3.1 Describe the principles of the process being managed.			
	3.2 Explain their responsibilities in regards of time and resources: • The different types of resource, including labour, materials, machinery • The relationship between resource usage and profitability • How to maximise productivity			
	3.3 Describe 3 problems that can occur when managing printing machines, their probable causes and possible solutions. Give one example each of a problem that could: • Affect the quality of the image • Reduce the rate of output • Affect health and safety			
	3.4 Explain how to identify maintenance schedules and needs and how to liaise with relevant colleagues to ensure output is maintained to the required standard and rate.			

D/601/9426 PR267	Manage printing machines (continued)	Level 3	8 Credits

	3.5 Explain how and when to make adjustments to the machine settings to achieve the required job specification and quality standards.			
	3.6 Identify 3 machine parts that may require replacing and explain the Company policy on the availability and replacement of these.			
	3.7 Explain the Company administrative procedures, for example: • Scheduling • Recording and reporting • Product labelling • Reporting faults and production downtime			
	3.8 Explain the methods available for giving clear instructions to colleagues regarding their responsibility in the operation of the print finishing machinery.			
	3.9 Explain the checks to make to ensure the instructions have been understood and followed.			
4. Know how to monitor the quality of output from print production machines.	4.1 Explain the Company procedures for monitoring the quality of output. To include: • Frequency • Type of checks • Viewing conditions • Quality control aids/devices • Acceptable tolerances/variation			
	4.2 Describe the purpose of achieving an approved copy			
	4.3 Identify the items on the product to be monitored during production output.			
	4.4 Describe the quality control aids located on the printed copy to aid in the monitoring of production.			
	4.5 Describe 3 methods used to monitor the standard of output achieved.			
	4.6 Explain why it is important to clearly identify both good and bad copy on completion of the run.			
	4.7 Describe the Company procedures for the removal of waste.			
	4.8 Understand the reason for maintaining performance records, for example: • Machine make-ready • Running speeds • Production time • Downtime in production			
5. Be able to monitor the quality of product throughout the Production process.	5.1 Operate the machine at the required production speeds maintaining quality of output.			
	5.2 Use recognised quality control methods to check output against the approved sample.			
	5.3 Produce the required number of good copies to meet customer/Company requirements.			

D/601/9426	Manage printing machines (continued)	Level 3	8 Credits
PR267			

	5.4 Identify the product which has met the approved standards.				
	5.5 Follow Company and legal procedures to identify and remove waste.				
	5.6 Follow Company procedures for completing production and quality assurance records.				

Assessor comments/feedback

J/502/8501 PR120	Plan work to meet production requirements	Level 3	4 Credits

The aim of this unit is to provide the learner with the knowledge and skills to be able to plan and set out the work required, the sequence of work and how to accurately determine the time needed to complete the workload.

Learning outcome. The learner will:	Assessment criteria. The learner can:	Evidence.ref.no		
1. Be able to interpret production requirements.	1.1 Obtain and check details of jobs to be output.			
	1.2 Identify the finished product required by the customer.			
	1.3 Identify what their department or area of work is required to produce.			
	1.4 Identify the order of tasks required to meet the output.			
2. Plan production tasks to meet customer requirements.	2.1 Confirm that the resources needed to complete the tasks are identified for example: • equipment • materials • labour.			
	2.2 Realistically estimate the time needed to complete each task.			
	2.3 Plan work to avoid unnecessary repetition and re-working.			
3. Know how to plan work to meet production requirements.	3.1 State the Company procedures for communicating with: • Colleagues • Customers			
	3.2 Describe the Company requirements for handling, security and storage of customer material: • Computer system security and virus protection • Print with time-sensitive or restricted release dates • High value products or print with a high risk of theft • Restriction to staffing access			
	3.3 Describe the workplace policy and practice in relation to the following: • Workplace standards and procedures • The range of work carried out in the workplace • The working practices existing in the workplace • The key job roles within the printing and graphic communications industry and their main purposes • Data protection and copyright			
	3.4 Describe the influencing factors when: • Selecting one process over another • The choice of processes for any particular product			
	3.5 Explain the responsibilities in regards of time and resources: • The different types of resource available, including labour, materials and machinery • The relationship between resource usage and profitability • How to maximise productivity • The relationship between productivity and competitiveness			
	3.6 Explain the administrative procedures, including: • Planning • Scheduling • Recording and reporting			

J/502/8501	Plan work to meet production requirements (continued)	Level 3	4 Credits
PR120			

	3.7 Explain the main features of quality assurance and quality control systems, including: • Techniques for controlling quality • Equipment for controlling quality in digital artwork, pre-press and printing areas • Light standards for viewing and assessing colour print			
	3.8 Explain the function of a proof in the printing process.			

Assessor comments/feedback

A/601/9403	Set and Run ancillary printing machine equipment	Level 2	5 Credits
PR254			

The aim of this unit is to provide the learner with the knowledge and skills to prepare and monitor the performance of printing machine equipment. Ancillary printing machine equipment is any piece of equipment which is associated with (and usually connected to) a printing machine but does not form part of the main printing machine itself.

Learning outcome. The learner will:	Assessment criteria. The learner can:	Evidence.ref.no		
1. Be able to set ancillary printing machine equipment for use.	1.1 Obtain and check the job specification.			
	1.2 Identify and obtain the materials required to meet the job specification.			
	1.3 Ensure the working environment is safe for production.			
	1.4 Set the ancillary equipment to meet the job specification.			
2. Be able to operate the ancillary equipment.	2.1 Operate the machinery at the required production speed, and in accordance with Company guidelines.			
	2.2 Keep up the supply of materials throughout the run.			
	2.3 Monitor the output to ensure the job specification and Company quality standards are met.			
3. Know how to set and run ancillary printing machine equipment.	3.1 Explain how to start up and shut down the machinery for: • Normal operation • Emergency situations			
	3.2 Explain 3 things to check to ensure effective operation of the machinery.			
	3.3 Explain where to obtain information on the setting and operation of machinery.			
	3.4 Describe 3 situations that can be overcome by adjustments, how to make adjustments to the settings to meet the job specifications and how to ensure the machine is safe for use after adjustments have been made.			
	3.5 Describe 2 problems that can occur when operating machinery that may not be resolved by adjustment and the Company procedure for dealing with them.			

Assessor comments/feedback

D/601/9412	Prepare and Maintain Image Carriers for Printing	Level 2	4 Credits
PR257			

The aim of this unit is to provide the learner with the knowledge and skills to be able to prepare and maintain image carriers and related consumables (such as blocks, pads, plates, or engraved cylinders).

Learning outcome. The learner will:	Assessment criteria. The learner can:	Evidence.ref.no		
1. Be able to prepare image carriers for printing.	1.1 Identify and select the required image carrier(s) and any associated materials to meet the job specification.			
	1.2 Prepare the image carrier for use by fitting into/onto any externally-prepared carrier devices in accordance with Company guidelines.			
	1.3 Ensure the image carrier is located and fitted in accordance with Company guidelines prior to production.			
2. Know how to store image carriers.	2.1 Explain how and when to clean and protect an image carrier.			
	2.2 Explain how to report any image carrier wear or damage in line with Company procedures.			
	2.3 Explain the Company procedure for labelling and storing image carriers.			
3. Know how to prepare and maintain image carriers for printing.	3.1 Describe the operation of image carrier mounting equipment.			
	3.2 Describe the difference between direct and indirect image transfer, giving an example of each.			
	3.3 Give two examples of faults that can occur with image carriers, what causes them and how to correct them.			
	3.4 Describe the Company's quality control checks on image carriers.			
	3.5 Describe the Company's procedure for reporting faults.			
	3.6 Explain the types of image carriers used in the Company.			

Assessor comments/feedback

H/601/9413 PR260	Set and Run Die Stamping Printing Machinery	Level 2	6 Credits

The aim of this unit is to provide the learner with the knowledge and skills to be able to undertake all the steps required to make a die stamping machine ready for production, to run the machine to produce commercially acceptable work, and to assist in identifying and correcting faults with the equipment.

Learning outcome. The learner will:	Assessment criteria. The learner can:	Evidence.ref.no		
1. Be able to prepare die stamping machinery for production.	1.1 Obtain and check the job specification.			
	1.2 Set the paper transport to run, so that: • The job stock is fed and forwarded without misses or doubles • The transport operates safely at the required running speed • Sheets are delivered squarely and form an even pile • Production times can be met			
	1.3 Fit and position the die so that: • The die is secured • The die is square			
	1.4 Set the pressure to ensure the product will meet job specification.			
	1.5 Ensure the output meets the job specifications and Company quality standard prior to full production.			
2. Be able to run die stamping machine.	2.1 Run the die stamping machine at the required speed.			
	2.2 Follow the Company procedures for the removal of waste.			
	2.3 Stack work in accordance with Company guidelines.			
3. Know how to set and operate die stamping printing machinery.	3.1 Explain how to start up and shut down die stamping print machinery in: • Normal operations • Emergency situations			
	3.2 Explain the information required to set the machinery to run effectively and where to obtain it.			
	3.3 Explain how to obtain and confirm authorisation to run the job and why this is important.			
	3.4 Explain how to identify faults which: • Affect the quality of the image • Produce a shortfall in output			
	3.5 Describe 3 situations that can be overcome by adjustments, how to make adjustments to the settings to meet the job specifications and how to ensure the machine is safe for use after adjustments have been made.			
	3.6 Describe 2 problems that can occur when operating machinery that may not be resolved by adjustment and the Company procedure for dealing with them.			

Assessor comments/feedback

J/601/9419	Set and Run in-line folding equipment	Level 2	7 Credits
PR263			

The aim of this unit is to provide the learner with the knowledge and skills to be able to set in-line folding equipment on a printing machine. It also requires knowledge of adjustments and problem solving.

Learning outcome. The learner will:	Assessment criteria. The learner can:	Evidence.ref.no		
1. Be able to set and operate in-line folding equipment.	1.1 Obtain all necessary details for the job.			
	1.2 Ensure the working environment is safe for production.			
	1.3 Set the folding equipment, ensuring that any register requirements are met.			
	1.4 Set up any gluing, stitching, sheeting or rotary cutting equipment required to produce the product to specification.			
	1.5 Ensure the output meets the job specifications and Company quality standard prior to full production.			
	1.6 Check output meets the Company's quality standard			
2. Know how to set and operate in-line folding equipment.	2.1 Explain how to start up and shut down the equipment in: • Normal operation • Emergency situation			
	2.2 Explain what information is required to set up and run the job and where to obtain it.			
	2.3 Explain how to identify the cause of problems which: • Would reduce the rate of output • Cause damage or distortion to the end product • Affect the efficient operation of equipment			
	2.4 Describe 3 situations that can be overcome by adjustments, how to make adjustments to the settings to meet the job specifications and how to ensure the machine is safe for use after adjustments have been made.			
	2.5 Describe 2 problems that can occur when operating machinery that may not be resolved by adjustment and the Company procedure for dealing with them.			

Assessor comments/feedback

F/601/9404	Set and Run over-printing machinery	Level 2	7 Credits
PR255			

The aim of this unit is to provide the learner with the knowledge and skills to be able to set up and operate printing machinery designed to print onto a pre-made product. It also includes problem solving.

Learning outcome. The learner will:	Assessment criteria. The learner can:	Evidence.ref.no		
1. Be able to set up a preprinting machine for production.	1.1 Obtain and check the job specification.			
	1.2 Identify and obtain the materials required for the job.			
	1.3 Ensure the working environment is safe for production.			
	1.4 Set the inserting equipment to meet the job specification.			
	1.5 Ensure the output meets the job specifications and Company quality standard prior to full production			
2. Be able to run over-printing machinery effectively.	2.1 Run the print machinery at the optimum speed.			
	2.2 Keep up the supply of materials and consumables throughout the run.			
	2.3 Check the quality standard and job specifications are met.			
	2.4 Record production and quality assurance details in line with Company requirements.			
	2.5 Follow the Company procedure for the removal of waste.			
3. Know how to set and operate over-printing machinery.	3.1 Explain how to obtain details of the work required.			
	3.2 Explain how to start up and shut down over-printing machinery in: • Normal operation • Emergency situation			
	3.3 Explain the Company procedure for obtaining authorisation to begin production and why this is important.			
	3.4 Explain the identification and assessment of printing options, including the stages in the printing process from pre-press to printed product.			
	3.5 Describe the operation of over-printing machinery.			
	3.6 Explain the principles of the over-printing process that is used.			
	3.7 Explain how to identify faults which: • Affect the quality of the image • Produce a shortfall in output • Create risks to health and safety			

Assessor comments/feedback

J/601/9405	Set and use ink drying equipment	Level 2	3 Credits
PR256			

The aim of this unit is to provide the learner with the knowledge and skills to be able to use ink drying or ink curing equipment associated with printing machinery. Common ink drying/curing equipment includes: Ultra Violet (UV), Infra Red (IR) and hot air.

Learning outcome. The learner will:	Assessment criteria. The learner can:	Evidence.ref.no		
1. Be able to set up ink drying equipment.	1.1 Check that the drying equipment is safe and ready for production.			
	1.2 Ensure the drying equipment is set to operate at the temperature or intensity required.			
2. Be able to maintain the quality of output from ink drying equipment.	2.1 Monitor that the output meets the required quality in accordance with job specification, for example: • Ink setting and hardening rates meet production requirements • The correct temperature is maintained throughout the run • The quality of the image is maintained during drying activities			
	2.2 Stack work in accordance with Company guidelines.			
3. Know how to use ink drying equipment.	3.1 Explain how to obtain the information required to operate the ink drying equipment effectively.			
	3.2 Describe how to start up and stop ink drying equipment for: • Normal use • Emergency situation			
	3.3 Explain the Company procedure for the safe removal of waste from ink drying equipment.			
	3.4 Describe 3 faults which can occur when operating ink drying equipment, what causes them and how to correct them.			
	3.5 Explain why it is important to check that there is no build up of material or combustible matter in or around the dryer.			
	3.6 Explain where and how to obtain the maintenance plan and operating procedures for the ink drying equipment.			
	3.7 Describe the Company's procedure for reporting faults.			

Assessor comments/feedback

L/502/8502 PR129	Output Digital Image Carriers for Print	Level 2	8 Credits

The aim of this unit is to provide the learner with the knowledge and skills to produce image carriers for printing, utilising digital system technology, e.g. Computer to Plate, (flexo, gravure, litho) Film output technology.

Learning outcome. The learner will:	Assessment criteria. The learner can:	Evidence.ref.no		
1. Be able to impose images electronically.	1.1 Obtain all the details needed for the job			
	1.2 Select an appropriate imposition scheme by taking into account, for example: • The quantity required • The working size of the job • Paper size • Printing machine sizes and the number available • The type of printing machine to be used • Colour fall (where appropriate) • The method of finishing			
	1.3 Retrieve or create an imposition template that meets the requirements of the imposition scheme.			
	1.4 Identify and correct data, system and software problems which will affect the production of impositions.			
2. Be able to prepare images for processing.	2.1 Check that the job files are compatible with the imaging software to be used.			
	2.2 Set the required output parameters to meet the job specification, taking into account, for example: • Resolution • Screen ruling and dot type • Screen angle • Orientation • Position on the image carrier • Register or other marks • Right/wrong reading • Emulsion up/down • Separations settings			
	2.3 Make sure the required image carrier is loaded into the output device.			
	2.4 Check that the output device is calibrated and prepared for operation.			
3. Be able to produce and process image carrier.	3.1 Send the data to output device.			
	3.2 After imaging, process the image carrier as required.			
	3.3 Check that output meets the job requirements for quality and specification.			
	3.4 Store finished output in line with Company guidelines.			
	3.5 Keep records for quality assurance and administrative purposes as required by the Company.			
	3.6 Archive digital files in accordance with Company procedures.			
4. Know how to produce computer-generated image carriers.	4.1 Explain what information is required to start the work.			
	4.2 Describe 3 factors to consider when selecting an appropriate imposition scheme.			
	4.3 Describe three problems that can occur during the process of producing computer generated image carriers and suggest possible solutions.			
	4.4 Explain the Company procedures for reporting faults and delays to production.			

L/502/8502	Output Digital Image Carriers for Print (continued)	Level 2	8 Credits
PR129			

	4.5 Describe the operation of equipment for the following: • The set-up of digital equipment and software • The operation of digital imaging equipment and software.			
	4.6 State the characteristics of sensitive material in printing.			
	4.7 Explain how to deal with the digital files in relation to the following: • File conversion techniques • File compression and decompression systems • File management			

Assessor comments/feedback

A/601/9417	Set and Run Guillotines	Level 2	5 Credits
PR357			

The aim of this unit is to provide the learner with the knowledge and skills to be able to set and run guillotines, including knowledge of faults and problems that can occur with guillotines.

Learning outcome. The learner will:	Assessment criteria. The learner can:	Evidence.ref.no		
1. Be able to set/programme and run guillotines.	1.1 Obtain all details of work required.			
	1.2 Identify and obtain the materials needed to meet the job specification.			
	1.3 Check that the guillotine and work area is safe and ready for production.			
	1.4 Follow manufacturer's instruction to start up the guillotine.			
	1.5 Set up the guillotine taking into consideration: • The use of an existing programme or the need to create a programmed cutting sequence • The required cut size(s) is (are) produced with minimum handling • Setting the back fence manually for each cut • Production time			
	1.6 Run the guillotine, making sure that, for example: • Cuts are clean, square and accurately positioned • Clamp pressure does not cause marking or set-off			
	1.7 Monitor the output to ensure the job specification and Company quality standards are met.			
	1.8 Record production information in accordance with Company requirements.			
	1.9 Follow the Company procedures for the removal of waste.			
2. Know how to run guillotines.	2.1 Explain the information required to carry out the work and where to obtain it.			
	2.2 Describe the principles of guillotining.			
	2.3 Explain the risks associated with operating a guillotine, and how to avoid them.			
	2.4 Explain how to start up and stop the guillotine in: • Normal operation • Emergency situations			
	2.5 Explain the Company's method for stacking of finished work from the machine.			

Assessor comments/feedback

A/601/9417	Set and Run Guillotines (continued)	Level 2	5 Credits
PR357			

3. Be able to monitor quality of guillotine cutting.	3.1 Check that the Company's quality standards are being met.			
	3.2 Record the quality assurance details following Company procedures.			
4. Know how to monitor quality of guillotine cutting.	4.1 Describe the Company's quality standards for guillotine work.			
	4.2 Describe 3 faults with a product that can occur in guillotine work, how to identify them, and how to rectify them.			
	4.3 Explain how to check that the machine is safe to operate, once quality defects have been corrected.			
	4.4 Explain the Company procedure for recording and reporting problems or faults.			

Assessor comments/feedback

| K/601/9400 | Make lithographic printing plates | Level 2 | 4 Credits |
| PR251 | | | |

The aim of this unit is to provide the learner with the knowledge and skills to be able to make lithographic printing plates and store them for reuse.

Learning outcome. The learner will:	Assessment criteria. The learner can:	Evidence.ref.no		
1. Be able to produce lithographic printing plates.	1.1 Identify the required plate material for plate making.			
	1.2 Identify the required files and materials for exposing the plate to meet the job specification.			
	1.3 Check that the imaging/exposure and any online processing equipment is ready for operation.			
	1.4 Load the plate into the imaging/exposure equipment in accordance with manufacturer's instructions.			
	1.5 Begin the imaging/exposure of the plate in accordance with Company guidelines.			
	1.6 On completion of imaging/exposure, develop the plate to meet the job specification.			
	1.7 Check the plate for correct exposure, completeness of the image and free from physical damage or blemishes.			
2. Know how to maintain lithographic printing plates.	2.1 Explain how and when to clean and protect plates for re-use.			
	2.2 Explain the conditions and procedure for storage of plates.			
3. Know how to produce lithographic printing plates.	3.1 Explain the types of lithographic printing plates and their uses.			
	3.2 Explain the process of producing a lithographic printing plate			
	3.3 Explain 3 checks to make before beginning the production process.			
	3.4 Describe three common faults in plate making and plate processing, their causes and how to correct them.			
	3.5 Explain how and why, to report a fault that is not able to be corrected either due to lack of knowledge or lack of authority.			

Assessor comments/feedback

M/601/9401	Prepare Inks and Coatings for Printing	Level 2	4 Credits
PR252			

The aim of this unit is to provide the learner with the knowledge and skills to be able to prepare printing inks and coatings for printing, either to achieve a specified colour or to alter the characteristics of the inks or coatings to suit the process conditions or substrate being printed.

Learning outcome. The learner will:	Assessment criteria. The learner can:	Evidence.ref.no		
1. Be able to mix and match ink to meet the product specification.	1.1 Identify the mix and the inks required from the job instructions.			
	1.2 Obtain the required quantity and types of inks to make up the batch to meet the job specification.			
	1.3 Use Company procedures for estimating and measuring the quantities required to produce the required mix in the required batch size(s).			
	1.4 Produce the mix, following Company procedures.			
	1.5 Match a sample against the specification, using approved test methods.			
	1.6 Record product details in line with Company requirements.			
2. Know how to adjust viscosity and tack to suit materials or print conditions.	2.1 Explain the adjustments that can be made to viscosity or tack.			
	2.2 List suitable medium with which to adjust the viscosity and take.			
	2.3 Explain how to identify the required viscosity or tack has been achieved.			
3. Be able to store inks and coatings in accordance with Company procedures.	3.1 Store inks and coatings in containers and conditions in accordance with Company guidelines.			
	3.2 Ensure containers are marked in accordance with Company procedures.			
	3.3 Record the stock control details required by the Company.			

Assessor comments/feedback

R/601/9410 PR408	Set and run slitting and re-reeling equipment adhesive label production	Level 2	3 Credits

The aim of this unit is to provide the learner with the knowledge and skills to be able to set up and run slitting and re-reeling equipment. There is also the need to have knowledge of adjustments and problem solving when operating this type of equipment.

Learning outcome. The learner will:	Assessment criteria. The learner can:	Evidence.ref.no		
1. Be able to set slitting and re-reeling equipment.	1.1 Obtain and check the job specification.			
	1.2 Identify and obtain the materials required for the job.			
	1.3 Ensure the working environment is safe for production.			
	1.4 Set up the slitting and re-reeling equipment, so that, for example: • Slitting is clean without any burrs • Waste is removed from final reels • Reels are produced of the required length, meterage, quantity • Reels are square to the core • Production times can be met			
	1.5 Ensure the output meets the job specifications and Company quality standard prior to full production.			
2. Be able to run slitting and re-reeling equipment.	2.1 Operate the machinery at the required production speed and in accordance with Company guidelines.			
	2.2 Keep up the supply of materials throughout the run.			
	2.3 Monitor the output to ensure the job specification and Company quality standards are met.			
	2.4 Record production information in accordance with Company requirements.			
	2.5 Follow the Company procedures for the removal of waste.			
	2.6 Stack or pack finished work in accordance with Company approved methods.			

Assessor comments/feedback

R/601/9410 PR408	Set and run slitting and re-reeling equipment adhesive label production (continued)	Level 2	3 Credits

3. Know how to set and run slitting and re-reeling equipment in adhesive label production.	3.1 Explain how to start up and shut down the machinery for • Normal operation • Emergency situations			
	3.2 Explain 3 things to check to ensure effective operation of the machinery.			
	3.3 Explain where to obtain information on the setting and operation of machinery.			
	3.4 Explain the Company procedure for obtaining authorisation to begin production and why it is important to follow the procedure.			
	3.5 Explain when and how to monitor the quality of the output, give 3 examples of things to monitor.			
	3.6 Explain the Company procedure for the disposal of 2 types of waste.			
	3.7 Define the possible causes of faults which can result in, for example: • Reels of the wrong length • Reels out of square to the core • Inaccurate slitting			

Assessor comments/feedback

F/502/8626 PR310	Set and run in line automated stitch and trim equipment for newspaper and periodical production	Level 2	4 Credits

The aim of this unit is to provide the learner with the knowledge and skills to be able to set and run in-line stitching-trimming machinery for Newspaper and Periodicals production. They will be expected to control the equipment whilst running production jobs to produce commercially acceptable work, and to understand how to identify and correct faults with the equipment.

Learning outcome. The learner will:	Assessment criteria. The learner can:	Evidence.ref.no		
1. Be able to set stitchingtrimming machinery.	1.1 Obtain and check the job specification.			
	1.2 Ensure the required type, quantity and quality of materials are available and loaded to meet the job specification.			
	1.3 Ensure the working environment is safe for production.			
	1.4 Set up the line so that the output meets the job specification, to include: • Positioning and condition of stitch			
	1.5 Ensure the output meets the job specifications and Company quality standard prior to full production.			
2. Be able to run stitchingtrimming machinery.	2.1 Run stitching-trimming machinery at the required speed and in accordance with Company guidelines.			
	2.2 Keep up the supply of materials throughout the run.			
	2.3 Monitor the output to ensure the job specification and Company quality standards are met.			
	2.4 Record production information in accordance with Company requirements.			
	2.5 Follow the Company procedures for the removal of waste.			
	2.6 Ensure the production is forwarded to the next stage in the production process.			

Assessor comments/feedback

F/502/8626 PR310	Set and run in line automated stitch and trim equipment for newspaper and periodical production (continued)	Level 2	4 Credits

3. Know how to set and run stitching-trimming machines.	3.1 Explain how to start up and shut down the machinery for: • Normal operation • Emergency situations			
	3.2 Explain 3 things to check to ensure effective operation of the machinery.			
	3.3 Explain where to obtain information on the setting and operation of machinery.			
	3.4 Explain the Company procedure for obtaining authorisation to begin production and why it is important to follow the procedure.			
	3.5 Explain when and how to monitor the quality of the output, give 3 examples of things to monitor.			
	3.6 Explain the Company procedure for the disposal of 2 types of waste.			
	3.7 Define the possible causes of faults which can result in, for example: • Stitch legs of unequal length • Stitch leg not closed • Stitch missing			
	3.8 Describe 2 situations that can be overcome by adjustments, how to make adjustments to the settings to meet the job specifications and how to ensure the machine is safe for use after adjustments have been made.			
	3.9 Describe 2 problems that can occur when operating machinery that may not be resolved by adjustment and the Company procedure for dealing with them.			

Assessor comments/feedback

T/601/9402 PR253	Set and Run numbering, bar-coding or inline data printing equipment	Level 2	4 Credits

The aim of this unit is to provide the learner with the knowledge and skills to be able to set and monitor numbering, bar-coding or inline data printing equipment. The numbering equipment may be conventional numbering 'clocks' or 'blocks' or ink-jet, thermal or laser technology.

Learning outcome. The learner will:	Assessment criteria. The learner can:	Evidence.ref.no		
1. Be able to set up numbering, bar-coding or non-impact printing equipment.	1.1 Obtain and check the job specification.			
	1.2 Determine the sequence, orientation and position of the number or data on the sheet.			
	1.3 For multiple sequential numbering, calculate the starting number for each number position.			
	1.4 Set the numbering device or print head to produce a clean image without causing physical damage to the substrate to the print.			
	1.5 Check that any sequential number will operate and count in the right direction.			
	1.6 Check that any batch coding data is set-up accurately and any barcode images can be read by a barcode scanning device.			
	1.7 Ensure the working environment is safe for production.			
	1.8 Ensure the output meets the job specifications and Company quality standard prior to full production.			
2. Be able to operate and monitor the quality of numbering, bar-coding or none-impact printing during production.	2.1 Monitor that any numbering or variable data is maintained in sequence.			
	2.2 Check that the numbering, bar-coding or other data can be read, e.g. by using a 'read' device such as a barcode scanner.			
	2.3 Run the printing machinery at the optimum speed.			
	2.4 Keep up the supply of materials and consumables throughout the run.			
	2.5 Check that quality standards and job specifications are met.			

Assessor comments/feedback

T/601/9402	Set and Run numbering, bar-coding or inline data printing equipment (continued)	Level 2	4 Credits
PR253			

3. Know how to set and monitor numbering, bar-coding or inline date printing equipment.	3.1 Explain how to start up and shut down the machinery for • Normal operation • Emergency situations			
	3.2 Explain the type of information required to ensure the equipment can be set correctly and where and when to obtain it.			
	3.3 Describe the identification and assessment of printing options and the stages in the printing process from prepress to printed product.			
	3.4 Describe the operation of equipment for the following: • The operation of numbering, bar-coding or non-impact inline printing equipment • The principles of barcode construction, including the use of 'check' digits			
	3.5 Explain the principles of impact and none-impact numbering and inline data printing.			
	3.6 Describe three problems that can occur during the set up or operation processes and possible solutions.			

Assessor comments/feedback

F/601/9418 PR262	Set and run in-line converting or enhancing equipment	Level 2	7 Credits

The aim of this unit is to provide the learner with the knowledge and skills to be able to set and run in-line converting and/or enhancing equipment on a printing machine. In-line converting or enhancing equipment is equipment which is used to apply a coating or other image-enhancing material to the substrate or any form of finishing or converting technique which is run in-line immediately before or after the printing units. It includes techniques such as cutting and creasing, rotary die-cutting, laminating, embossing, foiling and coating.

Learning outcome. The learner will:	Assessment criteria. The learner can:	Evidence.ref.no		
1. Be able to set in-line converting or enhancing equipment.	1.1 Obtain and check the job specification.			
	1.2 Identify and obtain the materials required for the job.			
	1.3 Set the in-line converting equipment to meet the job specification taking into consideration, for example: • The size, type and caliper of the substrate • Grain direction • Press running speed • That dies, formes, cylinders, blankets, etc are mounted onto or into the unit to allow effective production • Any enhancing materials (e.g. foils, coatings, laminates) • Controlled removal of waste • Production times			
	1.4 Ensure the output meets the job specifications and Company quality standard prior to full production.			
2. Be able to run in-line converting or enhancing equipment.	2.1 Operate the machinery at the required production speed and in accordance with Company guidelines.			
	2.2 Keep up the supply of materials throughout the run.			
	2.3 Monitor the output to ensure the job specification and Company quality standards are met.			
	2.4 Record production information in accordance with Company requirements.			
	2.5 Follow the Company procedures for the removal of waste.			
	2.6 Stack or pack finished work in accordance with Company approved method.			

Assessor comments/feedback

F/601/9418 PR262	Set and run in-line converting or enhancing equipment (continued)	Level 2	7 Credits

3. Know how to set and run inline converting or enhancing equipment.	3.1 Explain how to start up and shut down the machinery for: • Normal operations • Emergency situations			
	3.2 Explain 3 things to check to ensure effective operation of the machinery.			
	3.3 Explain where to obtain information on the setting and operation of machinery.			
	3.4 Explain the Company procedure for obtaining authorisation to begin production and why it is important to follow the procedure.			
	3.5 Explain when and how to monitor the quality of the output, give 3 examples of things to monitor.			
	3.6 Explain the Company procedure for the disposal of 2 types of waste.			
	3.7 Explain the types of faults that can affect the quality of output, and their possible causes. Give 2 examples.			
	3.8 Describe 3 situations that can be overcome by adjustments, how to make adjustments to the settings to meet the job specifications and how to ensure the machine is safe for use after adjustments have been made.			
	3.9 Describe 2 problems that can occur when operating machinery that may not be resolved by adjustment and the Company procedure for dealing with them.			

Assessor comments/feedback

M/502/8508	Prepare Stencils for Printing	Level 2	4 Credits
PR219			

The aim of this unit is to provide the learner with the knowledge and skills to be able to identify mesh and frame size, including preparing the mesh and checking the tension. Also the learner will be required to prepare the mesh material, apply and dry stencil material, position the photo-positive; also exposing, developing and drying the stencil.

Learning outcome. The learner will:	Assessment criteria. The learner can:	Evidence.ref.no		
1. Be able to prepare the mesh.	1.1 Obtain and check the job specification.			
	1.2 Identify and select the mesh type and frame size.			
	1.3 Check the tension of the mesh.			
	1.4 Check the condition of new and used mesh is suitable for use.			
	1.5 Prepare the mesh so that it will accept the stencil.			
2. Know how to prepare the mesh.	2.1 Explain how to identify the image size.			
	2.2 Explain how to identify the machine to be used.			
	2.3 Explain how to select the frame.			
	2.4 Explain how to identify the required mesh material.			
	2.5 Describe why it is important that reclaimed mesh is free from stains and ghost images and how to confirm this.			
	2.6 Describe how to treat mesh material.			
	2.7 Explain how to check that stencil residue has been completely removed from reclaimed screens.			
	2.8 Describe the health and safety requirements when using chemicals and what personal protective equipment to use.			
	2.9 Describe the Company procedure for reporting unsuitable frames and meshes.			
3. Be able to prepare stencils for production.	3.1 Obtain and check the job specification.			
	3.2 Obtain the photo-positive and check that it is fit for use.			
	3.3 Apply the stencil material to the screen and dry it in accordance with manufacturer's and Company guidelines.			
	3.4 Position the photo-positive accurately on the screen.			
	3.5 Confirm that the exposure is correct to suit the stencil system.			
	3.6 Develop the stencil ensuring the water temperature and pressure are set in accordance with manufacturer's and Company guidelines.			
	3.7 Dry stencils checking that drying is even over the entire surface.			
	3.8 Check the stencils are free from fault.			
4. Know how to prepare stencils.	4.1 Describe the methods to use in the production of the different types of stencils.			
	4.2 Explain how to choose the type of stencil to use.			
	4.3 Give reasons for choosing a particular stencil type.			
	4.4 Describe the materials available for the production of stencils.			
	4.5 Explain what safe light conditions are used in stencil processing.			
	4.6 Explain why it is important to position the photopositive accurately and how to machine affects positioning.			

M/502/8508	Prepare Stencils for Printing (continued)	Level 2	4 Credits
PR219			

	4.7 Describe how to achieve the optimum exposure.			
	4.8 Describe the effects of under and over exposure.			
	4.9 Explain how the condition of the stencil affects the printed image.			
	4.10 Describe two common faults associated with preparing the stencils for print.			

Assessor comments/feedback

D/502/8505 PR105	Make photopolymer plates for flexographic printing	Level 2	4 Credits

The aim of this unit is to provide the learner with the knowledge and skills to be able to carry out the production and output of photopolymer plates for flexographic printing. It includes identifying the work to be done, exposing plates, processing plates, checking the quality of output.

Learning outcome. The learner will:	Assessment criteria. The learner can:	Evidence.ref.no		
1. Be able to prepare photopolymer plates for print.	1.1 Obtain and check the job specification.			
	1.2 Ensure the required type, quantity and quality of materials are available.			
	1.3 Check that: • Negatives match with artwork • Elements match imposition • Non-image density matches the manufacturer's recommendations and their company's quality standard			
	1.4 Prepare the exposure unit in accordance with job requirements.			
	1.5 Handle and load plate material in accordance with Company procedures.			
	1.6 Position plate material so that all image elements fall accurately on the finished plate.			
	1.7 Select exposure values which produce the require plate characteristics after processing.			
	1.8 Expose the assembly in accordance with job requirements.			
	1.9 Pass the plate for processing.			
2. Be able to process photopolymer plates.	2.1 Load the processor according to specified instructions, handling materials in accordance with Company Health and Safety guidelines.			
	2.2 Set and operate processor in accordance with job requirements and safe operating procedures.			
	2.3 Trim the finished plate to the required size.			
	2.4 Check that the finished plate meets the Company's standard for: • Thickness • Relief height • Spots and blemishes			
	2.5 Keep waste to a minimum and dispose of it in accordance with Company procedures.			
	2.6 Report when the plate is ready for production.			
3. Know how to make photopolymer plates for flexographic printing.	3.1 Describe what details are needed to produce the job.			
	3.2 Describe the quality standards relating to plate production.			
	3.3 Explain the key parts of a negative film which should be checked prior to output.			
	3.4 Describe the risks which arise when handling plates and materials and operate exposure units and how to avoid them.			
	3.5 Explain the plate making methods and the function of the equipment in use in the Company.			
	3.6 Identify the suitable safe lighting conditions to be used during production.			

D/502/8505	Make photopolymer plates for flexographic printing (continued)	Level 2	4 Credits
PR105			

	3.7 Describe the make ready procedures for the plate making equipment in use.			
	3.8 State the Company's waste disposal procedures.			
	3.9 State the Company procedures for reporting machine faults and breakdowns.			
	3.10 Give two examples of faults that can occur, what causes them and how to correct them.			
	3.11 Describe how to recognise when to correct faults themselves and when to ask for help.			

Assessor comments/feedback

T/502/8574	Manage Foil Blocking Machinery	Level 3	5 Credits
PR650			

The aim of this unit is to provide the learner with the knowledge and skills to be able to manage foil blocking machinery. They will be expected to control the equipment whilst running production jobs and know how to instruct others and monitor the quality of output.

Learning outcome. The learner will:	Assessment criteria. The learner can:	Evidence.ref.no		
1. Be able to make-ready foil blocking machinery.	1.1 Obtain and check the job specification.			
	1.2 Identify and obtain the materials required for the job.			
	1.3 Ensure the working environment is safe for production.			
	1.4 Set up foil blocking machinery so that: • The temperature is correct for the material to be blocked • Material to be blocked is fed squarely, coming to the register against stops • The foil is fed evenly, to give minimum gap between impressions • Images are clean, sharp and have overall solid colour density • Images are accurately positioned on the material • Subsequent colours are in register and fit with other colours • Production times can be met			
	1.5 Ensure the output meets the job specifications and Company quality standard prior to full production.			
	1.6 Obtain an approved sample of the product being produced.			
2. Be able to manage output and quality from foil blocking machinery.	2.1 Run and monitor production machines at the optimum speed, with minimum downtime and to the required quality standard.			
	2.2 Carry out checks in line with Company procedures that the output matches the job requirements.			
	2.3 Run the required number of good copies, keeping spoiled material to a minimum.			
	2.4 Follow the Company procedures for the removal of waste.			
	2.5 Record the production and quality assurance details following Company procedures.			
	2.6 Ensure the output is prepared for the next stage in the process, in accordance with Company procedures.			
3. Know how to manage foil blocking machinery.	3.1 Describe the principles of the process being managed.			
	3.2 Explain the responsibilities in regards of time and resources: • The different types of resource, including labour, materials, machinery • The relationship between resource usage and profitability • How to maximise productivity			
	3.3 Describe 3 problems that can occur when managing production machines, their probable causes and possible solutions. Give one example each of a problem that could: • Affect the quality of the image • Reduce the rate of output • Affect health and safety			

	3.4 Explain how to identify maintenance schedules and needs and how to liaise with relevant colleagues to ensure output is maintained to the required standard and rate.			
	3.5 Explain how and when to make adjustments to the machine settings to achieve the required job specification and quality standards.			
	3.6 Identify 3 machine parts that may require replacing and explain the Company policy on the availability and replacement of these.			
	3.7 Explain the Company administrative procedures, for example: • Scheduling • Recording and reporting • Product labelling • Reporting faults and production downtime			
	3.8 Explain the methods available for giving clear instructions to colleagues regarding their responsibility in the operation of the print finishing machinery.			
	3.9 Explain the checks to make to ensure the instructions have been understood and followed.			
4. Know how to monitor the quality of output from foil blocking machinery.	4.1 Explain the Company procedures for monitoring the quality of output. To include: • Frequency • Type of checks • Viewing conditions • Quality control aids/devices • Acceptable tolerances/variation			
	4.2 Describe the purpose of achieving an approved copy.			
	4.3 Identify the items on the product to be monitored during production output.			
	4.4 Describe the quality control aids located on the printed copy to aid in the monitoring of production.			
	4.5 Describe 3 methods used to monitor the standard of output achieved.			
	4.6 Explain why it is important to clearly identify both good and bad copy on completion of the run.			
	4.7 Describe the Company procedures for the removal of waste.			
	4.8 Explain the reason for maintaining performance records, for example: • Machine make-ready • Running speeds • Production time • Downtime in production			

Assessor comments/feedback

T/502/8574 PR650	Manage Foil Blocking Machinery (continued)	Level 3	5 Credits

5. Be able to monitor the quality of printed product from foil blocking machinery.	5.1 Operate the machine at the required production speeds maintaining quality of output.			
	5.2 Use recognised quality control methods to check output against the approved sample.			
	5.3 Produce the required number of good copies to meet customer/Company requirements.			
	5.4 Identify the product which has met the approved standards.			
	5.5 Follow Company and legal procedures to identify and remove waste.			
	5.6 Follow Company procedures for completing production and quality assurance records.			

Assessor comments/feedback

Notes

Notes