Higher Level Qualifications Level 4 Higher Professional Diploma in Photo Imaging (4448)



Qualification handbook

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Accredited by QCA as a Level 4 qualification within the National Qualifications Framework

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Introduction

1 City & Guilds vocational schemes

- 1.1 City & Guilds provides vocational certification for occupational areas at eight levels within its Progressive Structure of Awards.
- 1.2 City & Guilds has developed this scheme with the support of the City & Guilds National Advisory Committee for Senior and Higher Level Awards and a subject specific Steering Group which includes representation from Higher Education and practitioners in the sector.
- 1.3 City & Guilds does not itself provide courses but has a 120 year history of developing qualifications and providing Quality Assurance and has had a Royal Charter for these activities since 1900.

Guide to levels and qualifications

8	Level 8 Fellowship (FCGI)
7	Level 7 S/NVQ 7, Master Professional Diploma, Membership (MCGI), ILM Executive Diploma in Management
6	Level 6 S/NVQ 6, Graduateship (GCGI)/Associateship (ACGI)*
5	Level 5 S/NVQ 5
4	Level 4 S/NVQ 4, Higher Professional Certificate/Diploma, Licentiateship (LCGI), ILM Diploma in Management
3	Level 3 S/NVQ 3, Advanced Professional Certificate, Advanced Vocational Certificate in Education, ILM Certificate in First Line Management, Pitman Qualifications – Advanced/Professional, Pitman Qualifications – Level 3
2	Level 2 S/NVQ 2, Intermediate GNVQ, ILM Certificate in Team Leading, Pitman Qualifications – Intermediate, Pitman Qualifications – Level 2
1	Level 1 S/NVQ 1, Foundation GNVQ, GCSE, Pitman Qualifications – Elementary/Essential, Pitman Qualifications – Level 1

^{*}Only graduates of the City and Guilds College, Imperial College of Science, Technology and Medicine are awarded the Associateship (ACGI)

2 City & Guilds Higher Level Qualifications

- 2.1 The City & Guilds Higher Level Qualifications have been developed in response to:
 - government initiatives to increase the numbers participating in higher level education and training and Lifelong learning
 - the emergence of QCA design principles for the submission of higher level vocational qualifications (excluding NVQs and degrees) into the National Qualifications Framework
 - a need from existing City & Guilds customers for higher level qualifications which offer a progression route from traditional level 3 and 4 qualifications
 - a City & Guilds initiative to offer its customers the full range of vocational qualifications from the basic to the highest levels.
- 2.2 These qualifications have been designed to:
 - combine the development of knowledge, understanding and skills in a variety of vocational areas
 - equip the individual with a flexible programme of study which will provide the relevant level of knowledge and skills that are needed in the world of work
 - meet the needs of industry and commerce and reflect the knowledge areas expressed in the relevant National Occupational Standards and/or professional standards.
- 2.3 The design of the Level 4 City & Guilds Higher Professional Diploma in Photo Imaging reflects an outcomes-based model that meets the requirements for Certificate Level (Level 1 HE) outcomes under the Framework for Higher Education Qualifications. This articulation facilitates the use of the HPD as the first year of a two year Foundation Degree. Please see the City & Guilds publication: Further Education and Higher Education Working together to deliver Foundation Degrees.
- 2.4 It is anticipated that potential candidates for these qualifications will currently be in work or have access to work placement but require a mechanism for the acquisition of relevant knowledge. In the first instance it is expected that many of these individuals will undertake the City & Guilds Higher Level Qualifications on a part-time basis, ie half day and evening, evenings only or as block release. However, there is also potential for these qualifications to be delivered as full-time programmes.
- 2.5 It is likely that these qualifications will be delivered in
 - colleges
 - training organisations
 - higher education institutions
 - armed forces

- 2.6 In the future, City & Guilds plans to develop with partners a range of mechanisms such as website material and open learning packages to promote flexible delivery to the individual where suitable materials do not already exist to support the Lifelong Learning agenda. In addition, reference should be made to the 'Guidance' sections within the units.
- 2.7 Some of the content covered in the units can contribute to the underpinning knowledge of S/NVQs. Effective delivery mechanisms could connect the delivery of units from both qualifications in a coherent, linked fashion for candidates.

3 The scheme

3.1 The Higher Professional Diploma in Photo Imaging

- has been approved by QCA as a Level 4 qualification within the National Qualifications Framework and as such meets the QCA Design Principles for Higher Level Vocational Qualifications. The QCA Qualification Accreditation Number is 100/5698/1.
- is designed to meet the needs of high achieving, work-based City & Guilds candidates and take account of the patterns of work in the photographic sector and related business practices
- comprises units which can be accredited separately to meet the needs of the individual
- provides the opportunity for skills/craft acquisition, supervision and underpinning knowledge
- reflects the knowledge areas expressed in Skillset's National Occupational Standards to ensure industry and OCA acceptability
- provides an understanding of the variety of roles and skills undertaken throughout the photographic industry, enabling the individual to select an individual pathway towards career progression
- includes a range of options to provide the opportunity for experimentation and research in order to evaluate and appreciate the diversity of expertise which exists within the industry
- provides skills and knowledge in present practices within the photographic industry while introducing innovation wherever possible
- is assessed by means of centre-devised assignments
- is externally moderated by City & Guilds.

3.2 **Aims**

The Higher Professional Diploma in Photo Imaging is designed to provide a higher level vocational pathway and to fill a gap in the current suite of City & Guilds photographic qualifications. It provides a progression route for Level 3 candidates wishing to acquire a range of high level photographic skills within a technical, creative or business context.

3.3 Broad objectives

The scheme is designed to enable candidates to:

- develop an understanding of the variety of roles and skills undertaken throughout the photographic industry and select an individual pathway towards career progression
- gain the opportunity for experimentation, innovation and research in order to evaluate and appreciate the diversity of expertise which exists within the industry

3.4 Progression opportunities

The qualification provides a progression route for candidates who have achieved either a Level 3 vocational award in the area of Photography, a Level 3 N/SVQ in Photography and Photographic Processing or who have a level of expertise commensurate with Level 3 in the National Qualifications Framework which has been acquired through work experience and can be demonstrated through the City & Guilds APL procedure.

It is anticipated that the qualification will provide opportunities for candidates wishing to work in the following areas of photography:

- Photography for Advertising
- Fashion photography
- Corporate photography
- Medical/scientific(including forensic/technical) photography
- Reportage
- Social and portraiture photography
- Specialist photography (eg aerial, underwater)
- Self-employed or management role in a photography business

The Higher Professional Diploma in Photo Imaging provides a strong basis for progression onto either a related foundation or honours degree programme. The qualification could form the first part (120 credits) so that candidates could fast-track to the second year of the related programme. The City & Guilds Level 7 Master Professional Diploma in Strategy and Development, in the context of Photo Imaging, offers an additional progression route.

4 General structure

4.1 In order to achieve the full Higher Professional Diploma in Photo Imaging, candidates have to successfully complete 12 units. It has been designed as a 480 guided learning hours programme deliverable most probably part-time, but possibly as a full-time programme. An example of mode of study could be 2 years part-time (6.5 hours/week). The recommended total notional hours for this award (including guided learning hours) is 1200 hours (120 credits).

The award has been designed to provide a set of units which will form the basis of a coherent and targeted course of study.

4.2.1 The table below shows the award structure in terms of mandatory and optional unit combinations.

Award structure

Block A Mandatory	Block B Optional	Block C Optional
12 units in total: (equivalent of) 6 mandatory units from Block A, 2 optional units from Block B and 4 optional units from Block C		
	Two of: Scientific and Photographic Technical Imaging Photographic Studio Imaging Photographic Location Imaging Photographic Aerial Imaging Underwater Photography Quality Management in Photographic Laboratories Interactive Media Design Production Moving Image Production (Video)	Four of: Photographic Fine Art Imaging Photography for Advertising Fashion Photography Editorial, Press and Public Relations Photography Portraiture and Social Photography Corporate (Industrial and Commercial) Photography Photographic Laboratory Management Specialist Darkroom Practices Contextual Studies in Photo Imaging Assessment and Training in Photography Businesses Specialist Photographic
		Applications for Scientific Research Personal and Professional Development

 $[\]textbf{*This equates to two units} \ (\textbf{please refer to paragraphs}\ 4.5\ \textbf{and}\ 4.8.2\ \textbf{for further information}).$

4.2.2The award has been designed to provide a choice of pathways to enable the individual to focus on particular specialisms. The award contains a selection of units which will form the basis of a coherent and targeted course of study. Whilst the award has been designed to provide centres with the flexibility to tailor the programme to the needs of their candidates, the following list shows which units from Block B and/or C may be relevant to occupations in the following fields:

Photography for Advertising – units: 8, 9, 15, 16

Fashion photography – units: 8, 9, 17, 23 Corporate photography – units: 8, 9, 20

Scientific and technical (including forensic/medical photography) – units: 7, 10, 14, 25

Reportage/photojournalism/PR photography – units: 9, 18, 19, 20, 23

Social and portraiture photography – units: 8, 9, 18, 19

Specialist photography (eg aerial, underwater) – units: 10, 11

Self-employed or management role in a photography business – units: 8, 12, 21, 24

- 4.3 Success in each unit within the qualification will be recognised by the issuing of a City & Guilds Certificate of Unit Credit. Achievement of (the equivalent of) all 12 units will result in a City & Guilds Higher Professional Diploma being issued.
- 4.4 As far as possible the units have been expressed in a standard format which fits with QCA Design Principles for Higher Level Vocational Qualifications. Each unit comprises:
 - Unit Title
 - Unit Summary
 - Aims
 - Outcomes statements of what the candidate is expected to achieve
 - Unit Content specifies all the learning the students need to apply and draw upon in order to be able to produce evidence indicated in the assessment section which addresses outcomes. In addition, it provides guidance to tutors in the design of their programmes and can be used as a diagnostic tool to identify areas of weakness when candidates have not been able to achieve outcomes.
 - Assessment specifies what candidates need to produce to show that they
 have met the outcomes. A form of evidence, eg a report, is indicated in this
 section, but different forms of evidence such as a case-study, presentation or
 a piece of practical work accompanied by appropriate research and
 information gathering activity are valid as long as they provide the
 opportunity for candidates to produce evidence of comparable quantity and
 quality and to meet the same outcomes.
 - Guidance on delivery, on assessment, links with other units/qualifications, resources. Guidance also on Key Skills signposting suggestions on where evidence could contribute to the Key Skills of Communication, Application of Number, Information Technology, Improving own Learning and Performance, Working with Others and Problem-Solving.

- 4.5 Each unit (including the double unit) should be allocated one grade: **Pass**, **Merit** or **Distinction**. In order for candidates to achieve a **Pass**, it is necessary for them to produce evidence which clearly shows that all the assessment requirements (and therefore all the outcomes) have been met. In addition, the overall quality of the work should be of a satisfactory and reliable standard.
- 4.6 To gain a **Merit** grade, candidates will, in addition to meeting the **Pass** requirements, need to produce work which meets all of the criteria detailed in the **Merit** column. To gain a **Distinction** grade, candidates will need to meet both the **Pass** and **Merit** requirements and produce a high standard of work as reflected in the **Distinction** column.
- 4.7 The criteria for **Merit** and **Distinction** focus on the quality of the work, and the way in which candidates have approached it. The criteria have been written to specify the requirements in terms of 'better' (not 'more') work.

4.8 The grading criteria

4.8.1 Unit grades

Each unit within the qualification should be graded on the following basis:

Pass: Candidates must meet the assessment requirements and outcomes in the unit specifications

Merit: Candidates must achieve a Pass and in addition achieve at least 14 marks from the Merit descriptors in the table below.	
Undertake research with minimum guidance from tutors/assessors (1) select and use a wide range of appropriate research sources (1), record and analyse data/information accurately (1) to draw valid conclusions (1)	4 marks
Present and analyse information and ideas accurately and clearly (2), using a well-structured format and appropriate technical language (2)	4 marks
Demonstrate effective and consistent application and development of work-related skills (2) knowledge and understanding (2)	4 marks
Demonstrate management of time, resources and learning (2) and an ability to analyse and reflect upon own ideas and actions (2)	4 marks

Distinction: Candidates must achieve a Merit and in addition at least marks from the Distinction descriptors in the table below	ast 16
Define the focus and scope of research (1), carry out research independently (1) evaluate the suitability of research sources and methods used (1), analyse and verify data/information (1) to develop an appropriate work strategy (1)	5 marks
Consolidate and present complex information and concepts fluently and persuasively (2) with evidence of an original and imaginative approach (2)	4 marks
Evaluate and synthesise relevant work-related skills, knowledge and understanding (2) and use these to justify conclusions and recommendations (2)	4 marks
Demonstrate consistently good management of time, resources and learning (2) and an ability to identify areas for development and improvement by critically reflecting upon own ideas and actions (2) employ appropriate methods to resolve unpredictable problems (1)	5 marks

4.8.2 Calculating an overall grade for the qualification

Each unit achieved by the candidate should firstly be converted into *points* as follows:

Pass = 1 **Merit** = 2 **Distinction** = 3

The unit grade allocated to the double unit should be converted into points and then doubled.

Then, the *points* should be aggregated and converted into an overall score and corresponding grade for the whole qualification as follows:

Pass = 12-17 **Merit** = 18-27 **Distinction** = 28-36

NB Achievement of **all** designated units is necessary for the full award. It is therefore necessary for candidates to achieve a minimum of 1 point for each of the single units and 2 points for the double unit.

5 Course planning and delivery

5.1 In terms of delivering Higher Level Qualifications, the emphasis is expected to be on the relationship between the content of the unit and the demands made on the individual by their existing or future job.

- 5.2 As long as the assessment requirements of units within the Higher Level Qualifications are met tutors/lecturers can design courses of study in any way which they feel will meet the needs of their candidates as individuals. There are opportunities for aspects of Key Skills: Communication Skills, Application of Number, Information Technology, Working with Others, Improving Own Learning and Problem Solving to be covered as appropriate throughout the teaching programme. Similarly, there are opportunities for candidates' work to link to relevant National Occupational Standards. Please see the Guidance section within each unit and Appendix B: Skillset's National Occupational Standards mapping overview.
- 5.3 It is essential that candidates and tutors/lecturers are aware of health and safety considerations at all times. The need to ensure that candidates preserve the health and safety of others as well as themselves should be emphasised.
- 5.4 Equal opportunities issues are relevant to all units of study and these aspects should be explicitly addressed in the delivery and assessment of the programme.
- 5.5 Candidates are likely to come from a variety of backgrounds, in that they will have had different education, training and work experiences and they will also have differing ambitions and opportunities. Tutors/lecturers may therefore find it helpful to
 - conduct an initial assessment of achievement for each candidate, so that prior learning and experience can be established and assessment strategies agreed
 - consider the best approaches to learning for each candidate.
- 5.6 Tutors/lecturers need to make these judgements by referring to the requirements of Higher Level Qualifications and establish what candidates already know and can do, to clarify where they need further preparation before assessment.
- 5.7 During this initial assessment tutors/lecturers are likely to consider what, if any
 - previous educational qualifications the candidates have, what training they
 have had and in particular what experience they have had in relevant
 vocational programmes and Key Skills
 - previous and current practical work experience the candidate has which is relevant to the aims of the scheme and from which relevant skills and knowledge may have been informally acquired.
- 5.8 When selecting appropriate approaches to learning and locations, tutors/lecturers are likely to consider the result of the initial assessment as well as the availability and suitability of open or distance learning materials and other resources, or co-operative working with other centres.

- 5.9 Effective communication between the tutor and candidate is a key component of successful delivery. It is important that candidates know for each assignment or activity, its purpose, the knowledge and skills required and the criteria for success. In addition, candidates should receive regular constructive feedback on their progress and achievement and also be provided with the opportunity to provide comments on their progress and course from their own personal perspective.
- 5.10 Some centres use a 'self-directed study' or 'negotiated approach' in terms of assignment design to enable candidates to tailor their response to a particular work opportunity or scenario. Tutors meet with candidates individually to discuss the learning outcomes of the unit and negotiate assignments which will allow the achievement of the criteria and relate to the candidate's work context or experience. Centres have the flexibility to work with candidates in terms of the context of the assignment or the presentation format of the assessment, as long as the specified requirements are met.
- 5.11 Consideration should be made regarding candidate access to certification for the Higher Level Qualification. In cases where the HLQ is the first part of a Foundation or (Honours) Degree, the candidate must be made aware of and **enabled to gain City & Guilds certification** for the HLQ part of the award.

6 Entry requirements

- 6.1 City & Guilds Higher Level Qualifications have been designed primarily for those in work, or with access to work experience as the specifications are vocationally relevant to the needs of the sector. In addition, given the high level of understanding and skills required of the qualification, it is likely that in order for prospective candidates to cope with the demands of the programme and achieve their full potential, they will have acquired one of the following:
 - City & Guilds Photography Part 3 (9231) or the City & Guilds Progression Award in Photography Level 3 (6924) or City & Guilds Vocational Photography Level 3 (7474)
 - an S/NVQ in Photography at Level 3, such as, City & Guilds Level 3 Photo Imaging and Photo Processing NVQ (7490)
 - A level of expertise commensurate with Level 3 in the National Qualifications Framework which has been acquired through work experience and can be demonstrated through an APL procedure.

7 Assessment

- 7.1 Assessment is by means of centre-devised assignments which should provide the opportunity for the assessment requirements of the unit to be achieved. Please refer to Appendix A for guidance on assignment design.
- 7.2 Each unit has its own assessment which must be rigorous and fit for the purpose for which it is designed. The purpose of the assessment is for candidates to demonstrate that they have fulfilled the outcomes of the unit and achieved the standard required of the award they seek.

- 7.3 Assessment must reflect the achievement of the candidate in fulfilling the assessment requirements, which are related to a consistent national standard. The assessment must therefore be carried out by competent and impartial assessors and by methods which enable them to assess a student fairly against the set requirements. This process will be monitored by the appointment to each centre of a City & Guilds External Moderator who will be responsible for upholding the subject standards to a national level.
- 7.4 Centres must design a selection of assignments **prior to the start of the course**, so that there is an opportunity to obtain some feedback on their suitability from the Higher Level Qualifications External Moderator.
- 7.5 Assignments should be designed to provide candidates with the opportunity to meet the unit outcomes and, where applicable, the grading criteria.
- 7.6 It is important for centres to use an integrated approach (ie content which effectively links across two or more units) in relation to at least one assignment. There are a number of units within the Higher Professional Diploma in Photo Imaging which have links and could potentially form the basis for the development of an integrated assignment. For example:

Unit 1: Photographic image creation *and* Unit 4: Visual studies and photographic techniques

Unit 5: Business planning for photo imaging *and* Unit 21: Photographic laboratory management

Unit 2: Image management – film recording and darkroom processes *and* Unit 8: Photographic studio imaging.

Where it is not possible or practical to cover all of the assessment requirements for each unit linked to the integrated assignment, it will be necessary for candidates to complete additional 'mini' assignments or 'top-up' activities to ensure that all the requirements have been met.

The approach to marking/assessing integrated assignments should enable an individual grade to be allocated to each unit covered, for the purposes of grading calculations, etc.

- 7.7 Assignment design should take account of opportunities for the **Merit** and **Distinction** criteria to be met for those candidates with the potential to achieve a higher grade. For instance, the grading descriptors (see pages 11 and 12) reflect the need for students to carry out research with increasing degrees of independence and also to take more responsibility for the learning process.
- 7.8 Centres must ensure that both the marking criteria and candidate guidance for assignments relate to the assessment requirements and outcomes identified in the unit. Assignments (including candidate guidance and internal marking criteria) together with candidate evidence must be available for checking by the Higher Level Qualifications External Moderator.

8 Approval of centres

8.1 Centre approval procedures

a The scheme is open to any organisation which has been approved by City & Guilds to conduct the Programme. Quality Assurance includes initial centre approval, scheme approval, the centre's own procedures for monitoring quality and City & Guilds on-going monitoring by an external moderator.

Details of City & Guilds criteria and procedures can be found in *Providing City & Guilds qualifications – A guide to centre and scheme approval* which may be obtained, together with supplementary HLQ information, from the Higher Level Qualifications Department at City & Guilds, 1 Giltspur Street, London EC1A 9DD.

Organisations that are not approved to offer City & Guilds qualifications will be required to apply for both initial centre approval (City & Guilds Form CAP, following the HLQ guidance) as well as scheme approval (City & Guilds Form SAP). These applications should be made simultaneously.

Centres that already have centre approval will need to obtain scheme approval for each City & Guilds qualification that they wish to offer, this includes the HLQs. In this case, only the Form SAP should be completed.

For new centres, there is a one-off centre approval fee which includes scheme approval for the first HLQ applied for by a centre. For existing centres, there is a scheme approval fee for each Higher Level Qualification applied for.

- b The centre must provide the following
 - i facilities adequate for the operational and administrative requirements of the scheme and a centre co-ordinator who will be the point of contact for City & Guilds
 - ii internal Quality Assurance Procedures
 - iii approved assessors to conduct the assessments
 - iv facilities to offer assessments in all the units of the qualification for which they are approved
 - v suitable and available industry links/work experience opportunities for candidates if they are not currently employed.
- c An approval visit will be arranged and an external moderator will check the centre has access to personnel, equipment, facilities and resources to provide proper assessments normally related to a practical workplace situation.
- d The centre must be able to provide secure arrangements for the storage of assessment material, ensuring that the course tutor, coordinator/internal moderator and external moderator all have access.
- e Scheme approval will be valid for up to 4 years from the approval date and City & Guilds reserves the right to withdraw approval from the centre if the circumstances should alter from those agreed in the original submission, or if there is a breakdown in the quality assurance system that jeopardises a candidate's successful completion of the qualification to the required standard.

8.2 Centre staff qualifications

It is important that centre staff involved in delivery or internal moderation have appropriate knowledge and skills to ensure effective delivery of Higher Level Qualifications. It is a requirement that centre staff have one or more of the following:

 a Foundation or Honours or Masters Degree/HNC or HND/HPD or MPD/NVQ at an equivalent level, in an appropriate subject with 3 years relevant sector experience

or

 Level 3 qualification in an appropriate subject with 5 years relevant sector experience at senior/managerial level

or

 7 years proven experience in the relevant sector at a managerial/senior level which could include recognised professional practice at a high level eg running a sector-related business or consultancy. (In certain circumstances this may be negotiable on discussion with the external moderator).

and

• A Cert Ed/equivalent teaching qualification and/or 2 years teaching/training/adult education experience

NB If additional experts (eg workplace practitioners) involved in the delivery of the programme do not have the necessary teaching qualifications or experience, it is necessary for any assessment they undertake to be second-marked by a qualified member of staff and form part of the internal moderation process.

9 The quality assurance system

9.1 It is important that centres have effective internal quality assurance to ensure optimum delivery and accurate assessment of the Higher Level Qualifications. It is expected that the centre will appoint a Scheme Co-ordinator/Internal Moderator who will ensure that assessment is subject to a suitable and agreed system of internal moderation. In addition, City & Guilds appoints a subject-specific External Moderator to monitor standards, provide advice and guidance, and confirm results. The following roles are key to successful implementation and assessment of these schemes.

9.2 The role of the Scheme Co-ordinator/Internal Moderator is to:

- liaise with City & Guilds (including completion of Form APU Approval Update – to notify City & Guilds of any change in details previously provided)
- ensure that all staff are appropriately qualified to deliver and assess the qualification (see 8.2)
- plan and manage the implementation of the qualification
- ensure there are adequate resources both staff and materials
- keep staff who are involved in the delivery of the qualification informed of any changes to the scheme documentation made by City & Guilds
- establish and monitor candidate support systems
- ensure all staff carrying out assessment are familiar with and understand the specifications and assessment requirements

- discuss and ensure the implementation of any action agreed with the external moderator as a result of the outcomes of the approval or any subsequent visits
- ensure that assignments and candidate evidence are available and clearly organised and accessible for the external moderator
- ensure that all City & Guilds documentation is completed when required
- manage the **internal moderation** process within the centre
- ensure that there is a consistent interpretation of the requirements in the delivery of the award through standardisation procedures and meetings
- ensure that policies for equal opportunities, complaints and appeals are effectively operated
- provide feedback or relevant documentation relating to standardisation procedures to the external moderator.
- 9.3 The **internal moderation** process should provide a sampled check of all aspects of the assessment process and should take account of:
 - All candidates for each student group
 - All tutors
 - All assignments
 - All forms of assessed work
 - All grades of performance.

In addition, confidence in the validity, reliability, sufficiency and authenticity of the centre's assessment practice must be established by these internal checks. Consequently, they must show that work assessed as satisfactory or better is:

- the candidate's own work
- sufficient and appropriate to meet the requirements of the specification
- at the correct level
- free from assessor bias

One of the strategies to be included in internal moderation is double marking of a representative sample of candidates for each assignment.

9.4 The role of the Tutor is to:

- ensure that each candidate is fully briefed on the characteristics of this qualification (eg approach to assignment delivery, grading)
- design assignments according to City & Guilds requirements which provide opportunities for the assessment requirements and, where applicable, the grading criteria to be met
- assess the extent to which the candidate's work contains evidence demonstrating that the assessment requirements have been met
- exercise judgement on claims for Accreditation of Prior Learning (APL), as appropriate
- provide each candidate with prompt, accurate and constructive feedback
- keep accurate and legible records
- assist in the centre's internal moderation by carrying out double marking, as required
- meet with the co-ordinator and other tutors to monitor, agree and maintain standards.

9.5 When carrying out monitoring visits and external moderation visits, the External Moderator will carry out checks to ensure the following:

- continued compliance with centre approval criteria
- effective scheme co-ordination
- effective internal quality assurance systems by sampling assessment activities, methods and records
- consistent interpretation of the specified standards
- appropriate and accurate grading of the completing candidates
- centre documentation meets the specified requirements
- effective appeals, complaints and equal opportunities provision.

9.6 The role of the External Moderator, in relation to assessment, is to ensure that:

- the assignments set by the centre are relevant, meet the specifications and are at the correct level
- centres interpret assessment standards fairly, consistently and accurately
- centres are following the assessment specifications published by City & Guilds
- centre documentation meets the requirements of City & Guilds
- judgements on APL are fair, consistent and appropriate
- centres carry out internal moderation of candidate work.

The External Moderator will:

- independently assess a piece of work from every candidate against the specifications and provide feedback
- sample and confirm grading decisions

and will require to see:

- a record of all units completed by candidates
- the assignments (including any candidate guidance and marking criteria) and internally assessed work by all candidates for whom the centre intends to seek certification
- a record of tutors showing their teaching/assessment responsibility for the units
- evidence of internal moderation and standardisation procedures.

10 Summary of registration and certification procedures

- 10.1 Procedures should be followed in accordance with the current City & Guilds *Directory of Vocational Awards*.
- 10.2 Candidates must register and claim certification through a City & Guilds approved centre. There is the option to register candidates either for the full Higher Professional Diploma or individual units within it. Procedures for registration and certification for all City & Guilds awards are detailed in the *Directory of Vocational Awards*.
- 10.3 The Directory includes examples of all the required forms and also the requirements for Electronic Data Transfer.

- 10.4 There are specific procedures in place for appeals against results which make clear the circumstances under which appeals may be made, the information required, and the procedures used to resolve them. Please refer to the *Directory of Vocational Awards* for further information.
- 10.5 City & Guilds fully supports the principles of equal opportunities, and the requirements as they affect centres and assessments are outlined in the *Directory of Vocational Awards*.
- 10.6 When candidates are first registered for a City & Guilds qualification they are issued with a unique, lifelong City & Guilds candidate enrolment (ENR) number.
- 10.7 On receipt of Form S (Registration), City & Guilds Entries and Results Processing Department will process and despatch details of registration, including the candidate enrolment (ENR) number, to the centre. The centre should ensure that the candidates are registered with City and Guilds **within 12 weeks** of enrolling at the centre. Please note that the external moderator will be unable to check any evidence from a candidate that has not been registered with City & Guilds for the qualification.
- 10.8 On receipt of Form S (Results) City & Guilds Entries and Results Processing Department will process and despatch details to centres. **Please note that final results should not be submitted until they have been agreed by the external moderator**.
- 10.9 Centres should note that, as certificates are prepared directly from these forms, it is essential that the **correct information** be supplied. Centres should always check carefully that the:
 - centre name and number have been accurately recorded
 - correct award number and award name are included
 - correct complex and component numbers have been used
 - candidate details have been accurately recorded.

If further guidance is required when completing forms, it is recommended that advice from City & Guilds Entries and Results Processing Department be sought.

- 10.10 The centre should retain a copy of completed forms until certificates are received.
- 10.11 Any queries regarding the issue of results must be conducted through the centre and made to City & Guilds, Entries and Result Processing Department.

11 Appeals

- 11.1 This section relates to appeals against results from assessment of evidence.
- 11.2 It is a condition of centre approval that all centres must ensure that there is an appeals procedure available to candidates. The appeals procedure documentation must be included in the documentation sent to City & Guilds in the scheme approval submission. If a candidate appeals against the result of the assessment, the course tutor and the programme director should try to resolve the problem in the first instance. If, however, the problem cannot be satisfactorily resolved, the external moderator should be approached to offer independent advice. All appeals must be clearly documented by the centre co-ordinator and made available to the external moderator and/or City & Guilds as appropriate.
- 11.3 City & Guilds will not enter into direct correspondence with the individual candidates concerning the results of their assessments unless they wish to formally appeal to City & Guilds regarding assessment decisions using the designated procedures.
- 11.4 All appeals must be made to City & Guilds Head of Quality Services. Applications should be made as soon as possible after the assessment concerned and, at the latest, within three months of the issue of results.

12 Equal opportunities

12.1 Access to these awards is open to all entrants, irrespective of gender, race, creed, age or special needs. The course tutor will ensure that no candidate is subject to unfair discrimination on any of these grounds in relation to access to assessment. City & Guilds will monitor the administration of these awards through external moderation to ensure that this policy is adhered to.

13 Further progression with City & Guilds and The Institute of Leadership & Management

Achieving a City & Guilds Higher Level Qualification provides the opportunity to also gain a Senior Award from City & Guilds and/or a grade of membership from the Institute of Leadership & Management.

Senior Awards are available at three levels and are offered under City & Guilds Royal Charter. They recognise a combination of academic achievement and vocational skills.

The **Institute of Leadership & Management (ILM)** is part of the City & Guilds Group. It is a professional body dedicated to raising leadership and management capability through qualifications, learning support, publishing and membership services across all sectors and at all levels.

Higher Level Qualification	Senior Award	ILM Membership grade
Master Professional Diploma + 10 yrs management experience	Membership (MCGI) in Management (Masters Degree level)	ILM Fellow (FInstLM)
Master Professional Diploma + 5 yrs management experience	Graduateship (GCGI) in Management (Honours Degree level)	ILM Fellow (FInstLM) or ILM Member (MInstLM)
Higher Professional Diploma + 5 yrs vocational experience	Licentiateship (LCGI) in Management (Foundation Degree level)	ILM Member (MInstLM)

In order to gain the relevant Senior Award you will need to submit a copy of your Higher Level Qualification certificate, full CV and an endorsement of your vocational experience from a senior manager. All Senior Award holders receive a diploma, post nominal letters, and the opportunity to attend the yearly graduation ceremony.

If you would like more details please contact Senior Awards on 0207 294 8220, email senior@cityandguilds.com, or write to us at City & Guilds, 1 Giltspur Street, London, EC1A 9DD.

For more information about gaining ILM membership or any other ILM services please contact the membership team on 01523 251346 or email membership@i-l-m.com

The units

The Higher Level Qualifications Department of City and Guilds has commissioned and developed this award, and **City & Guilds has copyright on the content of all the units within the qualification**. Consequently, none of this material can be used if not primarily as a City & Guilds Higher Level Qualification, and all candidates undertaking the units must therefore be registered with City & Guilds.

The following pages detail the unit specifications for this scheme.

Higher Level Qualifications Level 4 Higher Professional Diploma in Photo Imaging (4448)

The units

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Unit 1

Photographic image creation

Unit summary

This unit is to be used as a progression route to all other units, allowing the individual to revise or update visual and technical skills used for creating images, and to act as a transition into the higher level.

The work of a professional photographer can be diverse involving many peripheral skills together with well defined specific areas. Therefore, candidates will be encouraged to explore new technology throughout the whole programme, applying additional study time to new and less familiar areas, and as in the working environment special emphasis should be directed to good time management. For the purposes of this unit this will involve controlled, well managed study skills.

Successful achievement of this unit is dependent upon candidates meeting the assessment requirements and outcomes and producing work of a satisfactory and reliable standard.

Aims

The unit aims to enable the candidate to:

- refresh and update previously acquired skills and knowledge
- identify and pre-visualise image ideas in photographic communication
- use effective composition
- demonstrate a range of technical and visual skills
- create images using a range of techniques
- use organised research and good time management
- comply with current Health and Safety and risk assessment legislation.

Outcomes

On successful completion of the unit the candidate will be able to:

- 1 demonstrate a comprehensive approach to the choice of equipment and material and their operational skills
- 2 develop visual concepts within the photographic medium
- 3 research and generate image production profiles
- 4 record and produce final images demonstrating a high level of controlled technical and visual skills within realistic time constraints
- 5 analyse the final image production and the stylistic influences on the final image(s) together with the impact of these image(s) on modern society
- 6 demonstrate an understanding of Health and Safety regulations and risk assessment.

Unit content

Outcome 1

Demonstrate a comprehensive approach to the choice of equipment and materials and their operational skills

The candidate knows how to:

- use a range of camera, darkroom and ancillary equipment competently to produce final images
- use a range of materials to include traditional silver based materials and/or those used for computer manipulated images
- identify equipment types and their application and limitations in producing specific types of images
- identify materials and their uses, advantages and disadvantages
- list a range of materials, their qualities and suitability for specific image creation.

Outcome 2

Develop visual concepts within the photographic medium

The candidate knows how to:

- research and document a range of visual ideas to fulfil a visual brief
- organise, discuss and plan the methodology for image production
- use judgmental skills in order to implement final decision
- evaluate a range of approaches in exploring a visual concept
- identify sources of information and reference material
- identify correct procedure in copyright protection
- select correct procedures when undertaking the photographic assignment eg the protection of privacy, Model release, photography within royal parks, etc.

Outcome 3

Research and generate image production profiles

The candidate knows how to:

- research, evaluate and organise equipment
- research, organise and acquire material
- select and use suitable methods in order that images that are generated fulfil the final brief requirements
- evaluate the range of available equipment
- use judgement in final selection.

Outcome 4

Record and produce final images demonstrating a high level of controlled technical and visual skills within realistic time constraints

The candidate knows how to:

- record images achieving the final brief requirements
- use a range of other skills e.g Darkroom, Electronic manipulation
- use design application in final image presentation
- use presentation skills

Outcome 5

Analyse the final image production and the stylistic influences on the final image(s) together with the impact of these image(s) on modern society

The candidate knows how to:

- complete a report recording the research undertaken and information relating to the final image decision
- evaluate the function and analyse the effectiveness of the image(s) in terms of the social/cultural impact and the way the image may be used and document findings and opinions.

Outcome 6

Demonstrate an understanding of Health and Safety regulations and risk assessment

The candidate knows how to:

- identify potential Health and Safety hazards in the working environment
- identify and record a risk assessment during image production
- describe current Health and Safety regulations within the working situation
 - fire
 - electrical
 - air pollution
 - chemical

Assessment

Assessment of this unit will be based on a range of activities delivered by the production of assignment(s) designed to meet all the unit outcomes. The knowledge element will be demonstrated through evidence of the production of the images, plus the supporting documentation which is mandatory.

Specific key skills can be identified as an integral part of both image creation and the related research and final documentation. The unit will explore the candidates ability to use a range of equipment both for origination and for final production and in the creation of images demonstrate the use of the ability to see in a photograph context while examining and using design judiciously to achieve the planned effect.

Candidates will be expected to produce a folio of evidence to include the following:

- Evidence of research and planning based on a client brief
- Evidence of organisational skills
- A folio of photographs demonstrating high level camera skills and lighting techniques
- A range of other production skills which may include darkroom laboratory skills or image production and manipulation by using digital techniques
- Technical reports documenting production methods and possible stylistic influences
- A database or spreadsheet identifying the risk assessment during this type of image production and evidence of observing necessary health and safety and any other legal requirements
- A full analysis of the final images in terms of quality and their function in modern society, methods used in production, together with suitability for client purpose.

The above work should total approximately 2500 words.

Guidance

Key Skills signposting

As candidates are working towards the outcomes of this unit, there are opportunities for Key Skills development in the following Level 4 Key Skills units:

Communication

- C4.1 Develop a strategy for using communication skills over an extended period of time.
- C4.2 Monitor progress and adapt your strategy, as necessary, to achieve the quality of outcomes required in work involving at least one group discussion about a complex subject and one document of 1,000 words or more about a complex subject.
- C4.3 Evaluate your overall strategy and present the outcomes from your work, using at least one formal oral presentation. Include a variety of verbal, visual and other techniques to illustrate your points.

Information and communication technology

- ICT4.2 Monitor progress and adapt your strategy, as necessary, to achieve the quality of outcomes required in work involving the use of IT for two different complex purposes.
- ICT 4.3 Evaluate your overall strategy and present the outcomes from your work using at least one presentation, showing integration of text, images and numbers.

Links with other units/qualifications

The unit should be used as a foundation to all other units in the qualification. It will be expected that candidates will have already completed a Level 3 award and have a range of experience at this level.

This unit also has links with the following National Occupational Standards/City & Guilds NVQ units in Photography and Photographic Processing:

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Unit 1	Contribute to effective performance at work L3
Unit 2	Establish and maintain positive working relations L3+L4
Unit 3	Contribute to the maintenance of health, safety and security at work L3
Unit 4	Establish and maintain a healthy, safe and secure workplace L4
Unit 6	Contribute to the development of the photo imaging brief L3
Unit 16	Store and retrieve photographic equipment and material L3+L4
Unit 17	Organise and carry out photographic assignments L3+L4
Unit 20	Take specified photographs L3
Unit 21	Conceive and take photographs L4
Unit 48	Process exposed films L3

- Unit 50 Print photographic images by hand L3
- Unit 54 Mount photographic images for exhibition and display L3

Delivery advice

This unit should involve approximately 100 hours of study – 40 of which should be through guided learning.

This unit is designed to enable progression so it is expected that centres will direct candidates by designing customised client briefs to meet the unit outcomes.

In addition, candidates should have access to a well-resourced learning centre/library with a stock of relevant materials for reference purposes. Access to a facility with IT provision needs to be available on a flexible basis to allow the candidate to produce the evidence required for assessment. Access to information within the candidate's support organisation is also necessary in order to draw upon both valuable and current evidence of activity relevant to the content of this unit.

Assessments should be practical and realistic and relate to current sector practice. If candidates are currently working in the sector, there will be opportunities for them to draw evidence from activities carried out in the workplace as agreed by their employer. Candidates should be encouraged to investigate and critically review current trends and innovative practice and use a range of resources to gather data. Valuable information can be obtained through visits to organisations and from presentations given by guest speakers.

Where appropriate, reference should be made to relevant legislation, British Standards and industry codes of practice. Similarly safe working methods and health and safety precautions should be applied, as necessary.

Appropriate centre staff should agree the title and outline of the report to be presented for assessment prior to commencement. Evidence presented should be the candidates' own work and candidates are expected to plan and carry out their assessments independently.

Suggested resources list

An extended range of textbooks and reference materials are available to candidates undertaking research studies in image creation, including the following:

Advanced Photography Michael Langford (Focal Press)
Manual of Photography Jacobson, Ray and Attridge (Focal Press)
Perception and Imaging Zakia (Focal Press)
Periodicals such as:
British Journal of Photography (BJP)

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Unit 2

Image management – film recording and darkroom processes

Unit summary

This unit is based on image recording and production, using a range of film types and formats for creating purposeful photographic images. This will allow the candidate the opportunity to demonstrate competent operation of a range of camera formats, lighting equipment and techniques, and darkroom and laboratory skills in order to complete the assignments.

In completing the unit the candidate will be expected to have produced a range of photographic work both in the studio and on location. This should include controlled studio photography using camera, lighting and darkroom skills. Design application, innovation and experimentation should be encouraged although the main thrust of the unit should be controlled technical photography with the inclusion of a range of other skills such as design and presentation.

Successful achievement of this unit is dependent upon candidates meeting the assessment requirements and outcomes and producing work of a satisfactory and reliable standard.

Aims

The unit aims to enable the candidate to:

- demonstrate an understanding of a range of camera formats
- use a range of lighting equipment and techniques
- explore the range and application of hand and machine processes
- use standard darkroom practices
- use innovation in darkroom/laboratory practices
- apply relevant Health and Safety and risk assessment and regulations

Outcomes

On successful completion of this unit the candidate will be able to:

- 1 research the requirements of photographic assignments/briefs and prepare effective design and production plans
- 2 select and use camera and lighting equipment, materials, properties, and models for photographic assignments
- 3 undertake, analyse and document photographic assignments based on a client brief
- 4 demonstrate effective application of photographic processes
- 5 use presentation skills as required by the client brief
- 6 correctly apply Health and Safety practices.

Unit 2 Image management – film recording and darkroom processes

Unit content

Outcome 1

Research the requirements of photographic assignments/briefs and prepare effective design and production plans

The candidate knows how to:

- investigate a range of source reference material using traditional paper based sources and web material
- negotiate and agree requirements with the client
- investigate and plan resources, time and costs
- investigate marketing considerations
- evaluate the range of materials against the client brief
- generate a range of ideas and evaluate their feasibility.

Outcome 2

Select and use camera and lighting equipment, materials, properties, and models, for photographic assignments

The candidate knows how to:

- select the most appropriate photographic equipment (ie camera, lighting, accessories)
- demonstrate through portfolio examples, the function and application of relevant equipment
- select and acquire photographic materials for a variety of situations
- identify film types, speed, contrast and their applications
- organise models, properties, and/or support personnel (such as stylists, caterers, set-builders, etc)
- obtain and use relevant documentation relating to legal and commercial factors, eg model release form

Outcome 3

Undertake, analyse and document photographic assignments based on a client brief

The candidate knows how to:

- undertake specific client brief(s)
- select and use camera equipment to produce optimum quality images
- select and use appropriate lighting equipment, eg hand flash, studio flash, tungsten
- record images in a range of situations and locations, eg controlled studio, uncontrolled location etc
- use appropriate techniques in image recording, ie use of filters, double exposure etc
- work effectively within the working space
- observe the law, public liability, privacy, when undertaking assignment
- monitor all the stages involved in planning and producing the final images
- evaluate and seek feedback on the final images in terms of how well they meet the requirements of the assignments/briefs

Unit 2 Image management – film recording and darkroom processes

Outcome 4

Demonstrate effective application of photographic processes

The candidate knows how to:

- select and prepare photographic chemistry
- use processing chemistry to produce optimum image quality, eg control contrast, speed and quality by time, temperature, agitation
- process by hand or machine a range of black and white and/or colour film formats
- organise colour negative materials for laboratory processing
- hand print monochrome and/or colour negatives
- identify types of processing systems
- identify processing faults
- apply innovative, non-standard processes.

Outcome 5

Use presentation skills as required by the client brief

The candidate knows how to:

- implement design considerations within the final presentation
- develop and use analytical and evaluation skills
- prepare and present finished materials.

Outcome 6

Correctly apply Health and Safety practices

The candidate knows how to:

- identify Health and Safety regulations within the studio, on location, and in the laboratory/darkroom situation
- carry out and document risk assessments
- recognise and use safely hazardous chemicals in the processing and printing of colour and black and white materials.

Assessment

The outcomes of this unit will be assessed on the production of TWO finished photographic assignments plus a word processed report of approximately 1500 words for each assignment. Each report should show evidence of source reference materials and the planned approach to the assignment outlining key decisions.

The TWO assignments should be based on outline client briefs which allow the candidate to make their own decisions on the approach in terms of technique and style of the final presentation.

The assignments should include a range of skills from origination to final presentation.

Unit 2 Image management – film recording and darkroom processes

Darkroom skills should encompass machine and/or hand processes and where film is laboratory processed the organisational skills must be used as an integrated part of the overall production. Where the design of the final presentation requires the use of derivative processes, such as *Cross Processing*, *Lith Printing*, *Split Grading Split Toning*, decisions regarding the most appropriate process should be made by the candidate – the effects of which can be analysed and evaluated in the final report.

The finished work should be presented in a form relating to the final destination of the image eg a music CD or a magazine cover, etc.

The range of the skills should demonstrate photography in two different forms, for example, studio still life, fashion or portraiture and location photography.

Candidates will be expected to produce the following:

- Documented evidence of research and planning
- Evidence of organisational skills
- Two folios of work covering the range
- Evidence of darkroom laboratory skills
- A database of risk, and evidence of complying with relevant health and safety and other legal requirements
- An analysis of the final images in terms of quality and suitability for the client purpose.

Guidance

Key Skills signposting

As candidates are working towards the outcomes of this unit, there are opportunities for Key Skills development in the following Level 4 Key Skills units:

Communication

C4.2 Monitor progress and adapt your strategy, as necessary, to achieve the quality of outcomes required in work involving at least one group discussion about a complex subject and one document of 1,000 words or more about a complex subject.

Information and communication technology

- ICT4.2 Monitor progress and adapt your strategy, as necessary, to achieve the quality of outcomes required in work involving the use of IT for different complex purposes.
- ICT4.3 Evaluate your overall strategy and present the outcomes from your work using at least one presentation, showing integration of text, images and numbers.

Unit 2 Image management – film recording and darkroom processes

Working with others

- WO4.1 Develop a strategy for working with others.
- WO4.2 Monitor progress and adapt your strategy to achieve the agreed objectives.
- WO4.3 Evaluate your strategy and present the outcomes from your work with others.

Improving own learning and performance

- LP4.1 Develop a strategy for improving your own learning and performance.
- LP4.2 Monitor progress and adapt your strategy to improve your performance.

Problem solving

- PS4.1 Develop a strategy for problem solving.
- PS4.2 Monitor progress and adapt your strategy for solving the problem.
- PS4.3 Evaluate your strategy and present the outcomes of your problem solving skills.

Links with other units/qualifications

The unit should be used to develop and expand skills and knowledge. It will be expected that candidates will have completed Unit 1: Photographic image creation and will have the experience to use design and other applications to problem solve and to innovate.

This unit also has links with the following National Occupational Standards/City & Guilds NVQ units in Photography and Photographic Processing:

- Unit 1 Contribute to effective performance at work L3
- Unit 2 Establish and maintain positive working relations L3+L4
- Unit 3 Contribute to the maintenance of health, safety and security at work L3
- Unit 4 Establish and maintain a healthy, safe and secure workplace L4
- Unit 6 Contribute to the development of the photo imaging brief L3
- Unit 7 Discuss, develop and agree the photo imaging brief L4
- Unit 16 Store and retrieve photographic equipment and material L3+L4
- Unit 17 Organise and carry out photographic assignments L3+L4
- Unit 20 Take specified photographs L3
- Unit 21 Conceive and take photographs L4
- Unit 48 Process exposed films L3
- Unit 50 Print photographic images by hand L3
- Unit 54 Mount photographic images for exhibition and display L3
- Unit 55 Make photographic copies L3

Unit 2 Image management – film recording and darkroom processes

Delivery advice

This unit should involve approximately 100 hours of study – 40 of which should be through guided learning.

The unit is designed to extend candidate skills and cognitive processes. It will be expected that centres direct candidates by designing customised client briefs to meet the unit outcomes.

The candidate should have access to a well-equipped darkroom area with processing and printing facilities and, if appropriate, to professional laboratory services. A range of film camera equipment should also be made available to the candidate.

In addition, candidates should have access to a well-resourced learning centre/library with a stock of relevant materials for reference purposes. Access to a facility with IT provision needs to be available on a flexible basis to allow the candidate to produce the evidence required for assessment. Access to information within the candidate's support organisation is also necessary in order to draw upon both valuable and current evidence of activity relevant to the content of this unit.

Assessments should be practical and realistic and relate to current sector practice. If candidates are currently working in the sector, there will be opportunities for them to draw evidence from activities carried out in the workplace as agreed by their employer. Candidates should be encouraged to investigate and critically review current trends and innovative practice and use a range of resources to gather data. Valuable information can be obtained through visits to organisations and from presentations given by guest speakers.

Where appropriate, reference should be made to relevant legislation, British Standards and industry codes of practice. Similarly safe working methods and health and safety precautions should be applied, as necessary.

Appropriate centre staff should agree the title and outline of the report to be presented for assessment prior to commencement. Evidence presented should be the candidates' own work and candidates are expected to plan and carry out their assessments independently.

Suggested resources list

An extended range of textbooks and reference materials are available to students undertaking research studies in film recording and darkroom processing, including the following:

Advanced Photography Michael Langford (Focal Press)

Manual of Photography Jacobson, Ray and Attridge (Focal Press)

Photographic Lighting Ralph Hattersley (Prentice Hall Inc Spectrum Books)

Ilford Monochrome Darkroom Practice Coote H J & Jack H (Focal Press)

The Darkroom Cookbook Stephen G Anchell (Focal Press)

Unit 3

Image management – digital recording and electronic manipulation

Unit summary

This unit offers the candidate the opportunity to demonstrate a high level of understanding of, and the application of, contemporary approaches and methods of image recording and production, using the features and benefits of film and/or digital capture, together with electronic manipulation, transfer and storage of images.

The candidate will be expected to produce a range of photographic work, either studio or location-based, employing a range of high level technical and visual skills. The application of design, innovation and experimentation should be encouraged, though it is essential that the work produced fulfils the brief or assignment objectives previously laid down and agreed.

Successful achievement of this unit is dependent upon candidates meeting the assessment requirements and outcomes, and producing work of a satisfactory and reliable standard.

Aims

The unit aims to enable candidates to:

- agree, research and complete assignments and/or client briefs
- develop their understanding of film and/or digital capture equipment, methods and techniques
- use a range of lighting equipment and techniques
- use appropriate methods of electronic image viewing, storage and transfer
- apply innovative image manipulation techniques
- comply with Health & Safety regulations

Outcomes

On successful completion of this unit the candidate will be able to:

- 1 research the requirements of photographic assignments/briefs and prepare effective design and production plans
- 2 select and use appropriate camera and lighting equipment, materials, properties and ancillary staff/associates
- 3 undertake, analyse and document photographic assignments based on a client brief
- 4 set up, use and monitor an effective digital/electronic workflow, taking into consideration the necessary colour and tonal management links between camera, monitor and output devices
- 5 plan, process and prepare digital files for print, manipulating images, as appropriate
- 6 use presentation skills as required for the client brief

Unit content

Outcome 1

Research the requirements of photographic assignments/briefs and prepare effective design and production plans

The candidate knows how to:

- research a range of source reference material using traditional paper-based sources and web material
- negotiate and agree requirements with the client
- identify the required input of other staff and/or specialists
- plan resources, time and costs
- investigate marketing considerations
- evaluate the range of available digital/electronic potential against the client brief
- generate a range of ideas and evaluate their feasibility
- prepare a risk assessment for undertaking the assignment/client brief and monitor procedures to ensure safe working practices.

Outcome 2

Select and use appropriate camera and lighting equipment, materials, properties and ancillary staff/associates

- select the most appropriate photographic equipment (ie camera, lighting, accessories) for the specific assignment/client brief
- demonstrate, through portfolio examples, the function and application of the relevant equipment
- when using film capture methods:
 - select and acquire suitable photographic materials for the variety of situations relevant to the assignments/clients briefs
- when using digital capture methods:
 - select and apply appropriate camera settings (eg ISO rating, white balance, file format & size, image resolution etc) relevant to the assignments/client briefs
- manage properties, models and/or staff (such as stylists, caterers, set-builders, etc)
- obtain and use relevant documentation relating to legal, ethical and commercial factors, eg model release form.

Outcome 3

Undertake, analyse and document photographic assignments based on a client brief

The candidate knows how to:

- undertake specific client briefs
- select the range of equipment needed to meet planned requirements
- select and use camera and/or scanning equipment to produce optimum quality images
- select and use appropriate lighting equipment
- record images in the range of situations and/or locations demanded by the assignments/clients briefs, which could be controlled or uncontrolled
- use appropriate techniques in image recording
- · work effectively within the working space
- observe legal and ethical factors when undertaking assignments/completing client briefs
- monitor all stages involved in planning and producing the final images
- evaluate the final images and seek feedback in terms of their effectiveness in meeting the requirements of the assignments/client briefs.

Outcome 4

Set up, use and monitor an effective digital/electronic workflow, taking into consideration the necessary colour and tonal management links between camera, monitor and output devices

- when using digital capture methods:
 - safely download images from the device (camera, digital back or scanner)
- when using film capture methods:
 - use appropriate film processing techniques, or professional laboratory processing services
 - effectively use a scanning device, to produce optimum quality images
- organise the initial safe storage of images within a receptor, eg computer hard drive, portable disc or drive, using the appropriate file format
- select, open and apply suitable computer software to manage and manipulate image files, demonstrating knowledge of image resolution, application of filters, and programme tools file conversion
- calibrate the system throughout, from capture device, via monitors to output devices (eg printers) so that the finished result shows predetermined colour and tonal qualities
- select and apply, where appropriate, printer settings, paper types and surfaces to achieve optimum results for the assignment/client brief
- select and apply devices, software and peripherals to store, transfer and/or transmit image files, according to the needs of the assignment/client brief
- monitor the settings within the workflow amending, as appropriate, according to differences in client preferences, applications or destinations.

Outcome 5

Plan, process and prepare digital files for print, manipulating images, as appropriate

The candidate knows how to:

- plan manipulation ideas to meet the requirements of the assignment/client brief in terms of physical size, resolution, colour and tonal qualities, etc
- select suitable software and manipulate images, as appropriate
- select and apply suitable output devices to save, print and/or transmit and/or store safely the manipulated files.

Outcome 6

Use presentation skills as required for the client brief

The candidate knows how to:

- implement design considerations within the final presentation
- · develop and use analytical and evaluation skills
- prepare and present finished work

Assessment

The outcomes of this unit will be assessed on the production of **two** finished photographic assignments plus a word-processed report of approximately 1500 words for each assignment. each report should show evidence of source reference materials and the planned approach to the assignment outlining key decisions.

The two assignments should be based on outline client briefs which allow the candidate to make their own decisions on the approach in terms of technique, style and final presentation.

The assignments should include a range of skills from origination to final presentation. Where the initial image capture is via film, if using laboratory processing, organisational skills in arranging this must be used as an integrated part of the overall production.

Where the assignment objectives or the requirements of the brief calls for innovative manipulation in the design of the final presentation, decisions regarding the most appropriate applications should be made by the candidate, the effects of which should be analysed and evaluated in the final report.

The finished work should be presented in a form relating to the final destination of the image.

The range of skills should demonstrate the candidate's ability in completing commissions in two different areas of visual communication, which could be controlled or uncontrolled.

Candidates will be expected to produce the following:

- documented evidence of research and planning
- evidence of organisational skills
- the results of two assignments or the responses to two client briefs
- evidence of good visual skills, showing the ability to predetermine the appearance of the final image
- evidence of a range of technical skills, to include image capture, manipulation, transfer and storage
- a database of risk and evidence of complying with relevant health and safety and other legal requirements
- an analysis of the final images in terms of quality, production methods used, and suitability for client purpose.

Guidance

Key skills signposting

As candidates are working towards the outcomes of this unit, there are opportunities for Key Skills development in the following Level 4 Key Skills units:

Information and communication technology

- ICT4.1 Develop a strategy for using ICT skills over an extended period of time.
- ICT4.2 Monitor progress and adapt your strategy, as necessary, to achieve the quality of outcomes required in work involving the use of ICT for two different complex purposes.
- ICT4.3 Evaluate your overall strategy and present the outcomes from your work using at least one presentation, showing integration of text, images and numbers.

Improving own learning and performance

- LP4.1 Develop a strategy for improving your own learning and performance.
- LP4.2 Monitor progress and adapt your strategy, as necessary, to achieve the quality of outcomes required in at least two different complex learning activities.
- LP4.3 Evaluate your overall strategy and present the outcomes from your work, including a synthesis of what you have learned from two different complex learning activities.

Problem solving

- PS4.1 Develop a strategy for using skills in problem solving over an extended period of time.
- PS4.2 Monitor progress and adapt your strategy, as necessary, to achieve the quality of outcomes required when tackling one complex problem with at least three options.
- PS4.3 Evaluate your overall strategy and present the outcomes from your work using a variety of methods.

Links with other units/qualifications

This unit should be used to develop and expand skills and knowledge. It will be expected that candidates will have completed Unit 1: Photographic image creation and will have the experience to use design and technology to problem solve and innovate.

This unit also has links with the following National Occupational Standards/City & Guilds NVQ units in Photography and Photographic Processing:

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Unit 1	Contribute to effective performance at work L3
Unit 2	Establish and maintain positive working relations L3+L4
Unit 3	Contribute to the maintenance of health, safety and security at work L3
Unit 4	Establish and maintain a healthy, safe and secure workplace L4
Unit 6	Contribute to the development of the photo imaging brief L3
Unit 7	Discuss, develop and agree the photo imaging brief L4
Unit 16	Store and retrieve photographic equipment and material L3+L4
Unit 17	Organise and carry out photographic assignments L3+L4
Unit 19	Take standardised still life photographs L2
Unit 20	Take specified photographs L3
Unit 21	Conceive and take photographs L4
Unit 35	Plan and produce scanned images L3
Unit 36	Carry out specified image editing L3
Unit 38	Prepare for and produce image output
Unit 42	Establish, maintain and use colour management procedures L4

Delivery advice

This unit should involve approximately 100 hours of study – 40 of which should be through guided learning.

The unit is designed to extend the candidates' skills and cognitive processes. It will be expected that centres direct candidates by designing customised client briefs to meet the unit outcomes.

The candidate should have access to industry-standard digital recording and/or traditional film capture and image manipulation equipment, including scanners, card readers, relevant current software and printers, as well as to suitable studio and/or location ancillary photographic equipment. The facility to download image files onto CD or DVD is also necessary.

In addition, candidates should have access to a well-resourced learning centre/library with a stock of relevant materials for reference purposes. Access to a facility with IT provision needs to be available on a flexible basis to allow the candidate to produce the evidence required for assessment. Access to information within the candidate's support organisation is also necessary in order to draw upon both valuable and current evidence of activity relevant to the content of this unit.

Assessments should be practical and realistic and relate to current sector practice. If candidates are currently working in the sector, there will be opportunities for them to draw evidence from activities carried out in the workplace as agreed by their employer. Candidates should be encouraged to investigate and critically review current trends and innovative practice and use a range of resources to gather data. Valuable information can be obtained through visits to organisations and from presentations given by guest speakers.

Where appropriate, reference should be made to relevant legislation, British Standards and industry codes of practice. Similarly safe working methods and health and safety precautions should be applied, as necessary.

Appropriate centre staff should agree the title and outline of the report to be presented for assessment prior to commencement. Evidence presented should be the candidates' own work and candidates are expected to plan and carry out their assessments independently.

Suggested resources list

An extended range of textbooks and reference materials are available to students undertaking research studies in digital recording and electronic manipulation, including the following:

Electronic Imaging for Photographers A Davies, P Fennessy (Focal Press)
Photoshop for Windows & Macintosh E. Weinmann, P Lourekas (Peachpit Press)
Digital Graphic Design Ken Pender
Adobe Photoshop 5.5 for Photographers Martin Evening (Focal Press) which includes

Periodicals such as: British Journal of Photography (BJP)

tutorial CD-Rom for PCs and Apple Macs

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Unit 4

Visual studies and photographic techniques

Unit summary

This unit will assist the development of the candidates' visual skills while enabling decision making with regard to the techniques that are available. For those candidates who start the study programme with the required level of skills and knowledge, this unit may be delivered alongside Unit 1 Photographic image creation.

The candidate will be expected to express knowledge and understanding of the principles of image making, and make critical evaluations on a range of topics, including concepts of photographic technology which have altered the image making process such as the zone system, and digital manipulation.

On completion of this unit it is expected that the cognitive processes involved with image making will have evolved into an innovative ability to transfer the creative thought process into a practical solution. Controlled experimentation should be encouraged throughout the unit. The candidate should use a range of image techniques such as the use of Photometric filters, Effects filter, Perspective distortion, Mixed lighting, Zone system, Toning/split grading, and demonstrate an in depth knowledge of the visual effects.

Successful achievement of this unit is dependent upon candidates meeting the assessment requirements and outcomes and producing work of a satisfactory and reliable standard.

Aims

The unit aims to enable the candidate to:

- develop a critical thought process in image analysis
- pre-visualise image ideas and develop production methodology
- demonstrate the integrative nature of learning activities
- select and control a range of photographic techniques in producing the desired effect.
- use critical analysis of photography in the role of visual communication
- use organised research, good time management and demonstrate applied study skills.

Outcomes

On successful completion of the unit the candidate will be able to:

- 1 evaluate photographic images and their visual impact and develop critical judgements of the value of the images, comparing these with other forms of visual communication
- 2 describe the process of critical image analysis and the factors that influence interpretation
- 3 demonstrate the ability to select appropriate production techniques
- 4 describe and demonstrate practically a range of image making techniques used for controlled image creation.

Unit content

Outcome 1

Evaluate photographic images and their visual impact and develop critical judgements of the value of the images, comparing these with other forms of visual communication

The candidate knows how to

- research and investigate a range of images and evaluate their purposes
- identify the range of photographic techniques used in a restricted selection of images
- identify the advantages and disadvantages in still photography compared to other media.

Outcome 2

Describe the process of critical image analysis and the factors that influence interpretation

The candidate knows how to:

- research and write a dissertation on image analysis
- organise, and plan the writing approach
- identify and select sources of reference material
- identify correct procedure in copyright protection.

Outcome 3

Demonstrate the ability to select appropriate production techniques

The candidate knows how to:

- research, evaluate and record production techniques, in order to demonstrate how these techniques can be used for controlled image creation
- integrate research findings within the final written dissertation material.

Outcome 4

Describe and demonstrate practically a range of image making techniques used for controlled image creation

- produce examples of specific techniques, and document the production methodology
- use photographic chemistry/ exposure techniques to control image quality
- assess the usefulness of these techniques in controlled creative image making
- use IT skills for final report presentation.

Assessment

The outcomes of this unit will be assessed on the production of a word-processed report of approximately 2500 words, which should be illustrated with practical examples produced by the candidate.

Where experimentation of specific techniques is undertaken, the dissertation may incorporate a technical report format. However, it must be emphasised that there must be evidence of the candidate's ability to use a critical thought process in image evaluation and the final dissertation must contain a predominance of this type of evidence.

Where the unit is delivered in conjunction with Unit 1 Photographic image creation, cross referencing between the units should be encouraged.

The dissertation must demonstrate planning and research, principles and concepts of the technology. There should be discussion and evaluation of a cross media approach, stills/film/video and the communication of ideas, photographic investigation, changes of use, photojournalism advertising, etc.

All practical examples should be presented within the document and must show clear critical evaluation of the techniques covered.

Candidates will be expected to produce the following:

- Evidence of research
- Substantiated opinions and judgement
- Technical report material supporting experimentation

Guidance

Key Skills signposting

As candidates are working towards the outcomes of this unit, there are opportunities for Key Skills development in the following Level 4 Key Skills units:

Communication

- C4.1 Develop a strategy for using communication skills over an extended period of time.
- C4.2 Monitor progress and adapt your strategy, as necessary, to achieve the quality of outcomes required in work involving one group discussion about a complex subject and one document of 1000 words or more about a complex subject.
- C4.3 Evaluate your overall strategy and present the outcomes from your work, using at least one formal oral presentation. Include a variety of verbal, visual and other techniques to illustrate your points.

Information and communication technology

- ICT4.2 Monitor progress and adapt your strategy, as necessary, to achieve the quality of outcomes required in work involving the use of IT for two different complex purposes.
- ICT4.3 Evaluate your overall strategy and present the outcomes from your work, using at least one presentation, showing integration of text, images and numbers.

Working with others

- WO4.1 Develop a strategy for working with others.
- WO4.2 Monitor progress and adapt your strategy to achieve the agreed objectives.
- WO4.3 Evaluate your overall strategy and present the outcomes from your work with others.

Links with other units/qualifications

This unit links closely with Unit 1: Photographic image creation within this qualification.

This unit also has links with the following National Occupational Standards/City & Guilds NVQ units in Photography and Photographic Processing:

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Unit 1	Contribute to effective performance at work L3	
Unit 3	Contribute to the maintenance of health, safety and security at work L3	
Unit 6	Contribute to the development of the photo imaging brief L3	
Unit 8	Manage photo imaging activities L3 + L4	
Unit 17	Organise and carry out photographic assignments L3 + L4	
Unit 21	Conceive and take photographs L4	
Unit 48	Process exposed films L3	
Unit 50	Process and print photographic images by hand L3	
Unit 55	Make photographic copies L3	

Delivery advice

This unit should involve approximately 100 hours of study -40 of which should be through guided learning.

The unit is designed to outline the application of visual skills supported by demonstration of the technical application. The study of a range of creative work is recommended in the delivery of the programme. The unit should also be used to develop the candidate's critical judgement and it will be expected that discussion and brainstorming will play a significant role in the delivery programme.

Candidates should have access to a well-resourced learning centre/library with a stock of relevant materials for reference purposes. Access to a facility with IT provision needs to be available on a flexible basis to allow the candidate to produce the evidence required for assessment. Access to information within the candidate's support organisation is also necessary in order to draw upon both valuable and current evidence of activity relevant to the content of this unit.

Assessments should be practical and realistic and relate to current sector practice. If candidates are currently working in the sector, there will be opportunities for them to draw evidence from activities carried out in the workplace as agreed by their employer. Candidates should be encouraged to investigate and critically review current trends and innovative practice and use a range of resources to gather data. Valuable information can be obtained through visits to organisations and from presentations given by guest speakers.

Where appropriate, reference should be made to relevant legislation, British Standards and industry codes of practice. Similarly safe working methods and health and safety precautions should be applied, as necessary.

Appropriate centre staff should agree the title and outline of the report to be presented for assessment prior to commencement. Evidence presented should be the candidates' own work and candidates are expected to plan and carry out their assessments independently.

Suggested resources list

An extended range of textbooks and reference materials are available to students undertaking research in visual studies and techniques including the following:

Advanced Photography Michael Langford (Focal Press)
Manual of Photography Jacobson Ray Attridge (Focal Press)
Advertising Photography Allyn Salomon (Amphoto)
Perception and Imaging Zakia R (Focal press)
The Complete Photographer Gus Wylie (Pyramid Books)

Other reference material:
The Image Bank catalogue of photography

Photographers' websites

Periodicals such as: British Journal of Photography (BJP) This page is intentionally blank

Unit 5

Business planning for photo imaging

Unit summary

This unit is about exploring a new business idea and the knowledge and skills that are needed to set up a business and write a business plan and set up a photography business. It provides the opportunity to carry out a detailed investigation into the proposed business idea in order to assess its viability and potential. The resulting business plan can be used to provide information once the business is up and running.

Business plans are working documents that can be used to obtain information once a business is up and running. There may be opportunities to assess candidates producing a business plan within Unit 19: Portraiture and social photography, Unit 21: Photographic laboratory management and Unit 24: Assessment and training in photography businesses.

Successful achievement of this unit is dependent upon candidates meeting the assessment requirements and outcomes and producing work of a satisfactory and reliable standard.

This unit is a double unit and therefore equates to two units.

Aims

The unit aims to enable the candidate to:

- examine a business idea, ensure there is a market for the idea, and check the feasibility of running the business
- consider the budget needed to start the business and keep it running, against available funding
- research how to sell and market the products and services
- develop a business plan based on the research
- staff and resource the business
- decide how best to ensure quality standards and produce a customer service policy

Outcomes

On successful completion of the unit the candidate will be able to:

- 1 produce a well-researched rationale for the proposed business and produce a suitable business plan
- 2 research the skills, job roles and training needs required for the business
- 3 identify and cost suitable premises, suppliers and equipment needed for the business
- 4 explain how legislation and regulations may affect the business and identify an appropriate trading status, explaining options considered
- 5 estimate a cash flow forecast, a profit and loss forecast, a sales forecast and a break even point, and identify potential financial sources
- 6 produce a marketing and sales plan, and set targets and criteria to measure success
- 7 determine the quality and customer service policies and procedures to be used for this business
- 8 draw up a detailed action plan of activities to be carried out before trading
- 9 produce a suitable business plan

Unit content

Outcome 1

Produce a well-researched rationale for the proposed business and produce a suitable business plan

The candidate knows how to:

- examine the business's unique selling point (USP) and why it is competitive
- evaluate the aims of the business and the factors which indicate that the business will be successful
- conduct or access market research to identify the intended market and customers
- carry out SWOT (strength, weakness, opportunity, threat) and PEST (political, economical, social, technology) analysis
- produce a personal survival budget, planned profits and explain the forecasts and accounts that will have to be produced
- write a business plan in a format suitable for the intended users: either external to attract funding/finance or internal to plan strategy

Outcome 2

Research the skills, job roles and training needs required for the business

The candidate knows how to:

- identify the management skills needed to run the business (these might include the skills necessary to manage money, plans, customers, products, quality and people)
- examine the skills required for the business, how to conduct skills audits, training needs analysis, recruit, train and reward staff (appraisal systems)
- write job and person specifications
- produce a personal development plan covering technical, operational and managerial skills
- conduct a functional analysis
- make an objective assessment as to whether the people involved can provide all the expertise required such as technical, financial, customer service, office and administrative support, marketing or business management expertise.
- meet law and regulatory requirements for employing different people such as fulltime, part-time, consultants etc

Outcome 3

Identify and cost suitable premises, suppliers and equipment needed for the business

- work out the full costs to the business of obtaining and running premises
- evaluate how obtaining premises will affect the fixed costs, cash flow and profitability of the business
- negotiate targets, obtain legal advice, keep records of discussions and what is agreed before signing any contracts
- work out what equipment, tools and materials are needed to start up and run the business

- match the needs for equipment, tools and materials to the business aims for products, market share, price, profitability, cash flow, turnover, capital and assets, and cost efficiency
- conduct a cost benefit analysis of different equipment, tools and materials and compare the results to the expected profit margins
- consider price, hidden costs, quality, reliability, minimum order quantities, delivery time and payment terms when choosing suppliers.

Outcome 4

Explain how legislation and regulations may affect the business and identify an appropriate trading status, explaining options considered

The candidate knows how to:

• identify what laws and regulations may affect the business, such as:

employment law
 planning permission
 equal opportunities policy
 consumer protection
 environmental laws
 contracts

 record keeping / accounts

minimum wage agreements
 Working Time Directive
 amount turnover before VAT
 power to inspect

- evaluate the best trading status (sole trader, partnership, Ltd Co, franchise, others) and explain the Companies act
- access business advice through business advisers and professionals
- · conduct risk analysis and plan for contingencies

Outcome 5

Estimate a cash flow forecast, a profit and loss forecast, a sales forecast and a break even point, and identify potential financial sources

- produce budgets for e.g. marketing
- maintain financial incomes and expenditure records ledgers, journals, invoices, receipts and understand the broad principles and procedure in accounting techniques
- keep accounts according to the law
- analyse the benefits and drawbacks of borrowing
- calculate what money is required to set-up, make a profit and return on capital
- use different accounting periods and financial years
- use computerised and manual systems
- produce and understand balance sheets
- produce forecasts:
 - cash flow forecast
 - profit and loss forecast
 - sales forecasts
 - break even point

Outcome 6

Produce a marketing and sales plan, and set targets and criteria to measure success

- analyse published information to find out about the market for the business and decide if any further information needs investigating, such as
 - pricing the product or service
 - what market trends could affect the business
 - what the customer needs are
- set targets for marketing, including
 - position in the market
 - sales and gross margins
 - products and/or services
 - competitor activity
 - fashion and customer trends
 - the image of the business
 - using resources
 - changes in technology
- produce a plan for effective marketing
 - what the market is
 - what customers need and want
 - business forecasts
 - type of marketing strategy
 - marketing costs
 - what the product(s)/service(s) are and what they cost
 - who will be involved in marketing
 - how the product/service will be supplied to customers
- produce a plan for effective sales covering
 - what the market is
 - what the customers need and want
 - sales targets and profit margins
 - sales personnel
 - forecasting sales by product/service and each sales person
 - how the product/service will be supplied to customers
 - sales costs
 - how sales will contribute to business success
- set realistic targets for sales, including
 - sales volume
 - profit margins
 - cash flow
 - providing customer service
 - getting repeat business
 - product and service quality
 - whether clients are credit worthy
- estimate marketing and sales performance in relation to sales and marketing targets

Outcome 7

Determine the quality and customer service policies and procedures to be used for the business

The candidate knows how to:

- find out about competitor activity in relation to quality and customer service
- examine different ways of bringing quality into a business, how they help business aims and targets, and how to decide which approach is best for the business.
- decide what systems and procedures need to be introduced and how quality checks will be carried out, how records are maintained.
- explain how complaints will be dealt with
- identify customer needs and develop a customer service policy
- implement and monitor the customer service plan, adapting as necessary.

Outcome 8

Draw up a detailed action plan of activities to be carried out before trading

- produce an action plan which should be implemented prior to trading, including:
 - market research
 - marketing
 - opening a bank account
 - sourcing any finance required
 - finding suppliers
 - buying any start-up stock
 - making any start-up stock
 - organising business stationery
 - insurance
 - buying equipment needed
 - personnel training
 - recruiting any staff
 - finding premises
 - refurbishing/fitting out premises if necessary
- set goals
- how to build in contingency plans, carry out risk assessment highlighting, for example, the importance of cash-flow, converting profits into cash, to ensure adequate working capital.

Outcome 9

Produce a suitable business plan

The candidate knows how to:

- identify the key components involved in putting together a business plan eg summary, strategic overview
- write a business plan in a suitable format for presentation
 - external to attract funding/finance
 - internal to plan strategy

Assessment

The outcomes of this unit will be assessed on the production of a business plan, of approximately 4000 words, which is in a suitable format for presentation to those being asked to provide financial, or other support, for the business. This should include:

- an analytical report on the aims of the business and how the need for the business was researched and established. It should include:
 - details on how the business may be affected by relevant legislation and regulations, the trading status selected, reasons for the choice, and how to ensure the business will trade legally
 - an explanation of the people who will be involved, their roles and responsibilities and a personal development plan for all those involved in the business, based on a checklist of the skills and abilities needed for the business, which takes into account relevant employment legislation
 - marketing and sales strategies
 - detailed information about the premises, operations, organisational structure and quality and customer service systems
 - details of financial considerations, including calculations and predictions relevant to the potential business performance
 - an action plan with targets and goals, which takes account of all the things which should be carried out before the start of trade.

Guidance

Key Skills signposting

As candidates are working towards the outcomes of this unit, there are opportunities for Key Skills development in the following Level 4 Key Skills units:

Problem solving

- PS4.1 Develop a strategy for problem solving
- PS4.2 Monitor progress and adapt your strategy, as necessary, for solving the problem
- PS4.3 Evaluate your strategy and present the outcomes of your problem solving skills.

Application of number

- N4.1 Develop a strategy for using application of number skills over an extended period of time
- N4.3 Evaluate your overall strategy and present the outcomes from your work, including use of charts, diagrams and graphs to illustrate complex data.

Information and communication technology

- ICT 4.1 Develop a strategy for using IT skills over an extended period of time
- ICT 4.2 Monitor progress and adapt your strategy, as necessary to achieve the quality of outcomes required in work involving the use of IT for two different, complex purposes
- ICT 4.3 Evaluate your overall strategy and present the outcomes from your work using at least one presentation, showing integration of text, images and number

Communication

- C4.2 Monitor progress and adapt your strategy as necessary, to achieve the quality of outcomes required in work involving at least:
 - **one** group discussion about a complex subject and;
 - one document of 1000 words or more about a complex subject

Links with other units/qualifications

Candidates undertaking this unit will also have opportunities to gather evidence via their portfolio of project work that could contribute towards accreditation of units of occupational standards at Level 4. The standards are divided into units, each reflecting a key area of business activity.

Materials generated from the Business Planning unit could in particular contribute and link with Business Start-Up units within the Small Firms Development Enterprise Initiative (SFEDI) standards. It directs the candidate to critically analyse their business idea and its implications before writing an outline business plan.

The unit integrates with:

- Unit 1 Check how successful your business idea will be
- Unit 2 Check your ability to run the business
- Unit 3 Check what law and other regulations will affect your business
- Unit 4 Work out what money you need to start the business and keep it running
- Unit 5 Decide how you will sell and market your products and services
- Unit 6 Decide how to use quality standards in your business
- Unit 7 Decide on your policy for looking after customers
- Unit 8 Get premises for your business
- Unit 9 Decide how you will get equipment, tools and materials
- Unit 10 Get the right staff for your business
- Unit 11 Develop the plan for your business

Delivery advice

This unit should involve approximately 200 hours of study – 80 of which should be through guided learning.

This unit of study should be supported by access to IT, learning and communication resources.

Candidates must prove that they have identified for whom the plan is intended and that they have written it in a format that will be acceptable to the intended reader/s. They should approach the intended reader before starting to write their Business plan to obtain any templates/formats the funding or other support agency requires. Completion of this unit does not guarantee the plan will be accepted by the intended reader/s.

Working towards this unit should enable candidates to conduct a critical appraisal of their business idea using as many sounding boards, both professional and personal, as possible. Candidates should be encouraged to attend networks such as Chamber of Commerce, Institute of Business Advisers branch meetings where valuable information can be picked up and the benefits of 'networking' introduced.

Where appropriate, reference should be made to relevant legislation, British Standards and industry codes of practice. Similarly, safe working methods and health and safety precautions should be applied, as necessary.

Suggested resources list

An extensive range of reading materials is available to support owners of pre-startup and start-up businesses, most being listed on COBRA CDRom in the Small Business Books Section, including:

West Alan – A Business Plan (Pitman)
Finch Brian – Business Plans (Kogan Page)
Blackwell Edward – How to prepare a Business Plan (Kogan Page)
Irwin David – Financial Control for non-financial Managers (International Thomson)
Make your Business grow (International Thomson)

In addition, a selection from the following is suggested to meet organisational and individual candidate needs:

Project Northeast Business Information fact sheets

Scitech Diol open learning materials www.scitechdiol.co.uk

Cobra Small Business Intelligence Service CDRom
0191 261 2853
ADVANCE Business Launch
01222 259000
Director's Printings

Director's Briefings

Croner Smaller Business Briefing

Business Links

ww.cronerconsulting.co.uk

SME start-up literature from banks

The enterprise zone www.enterprisezone.co.uk
Business Links www.businesslink.co.uk

Useful software packages include:

Business ArchitectThe Business Channel Ltd01784 483 779Penninsula Business PlanPenninsula01723 516978Plan IT Business PlanRoderick Manhatten Group020 8875 4444

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Unit 6

Photographic design and reproduction

Unit summary

This unit will encourage the candidate to originate and produce creative ideas which will fulfil photographic communication objectives using traditional and digital design practices. The candidate will explore the fundamental principles of structuring and presenting text material and imagery on paper, mark-making techniques, and relevant industry standard electronic imaging for reproduction.

This unit can be delivered alongside Unit 1 Photographic image creation, Unit 2 Image management – digital recording and electronic manipulation and/or Unit 14 Moving image production (Video).

Successful achievement of this unit is dependent upon candidates meeting the assessment requirements and outcomes and producing work of a satisfactory and reliable standard.

Aims

This unit aims to enable the candidate to:

- understand, research and interpret a brief in a photographic context
- develop and expand knowledge and understanding of using traditional skills to represent text material and imagery
- use a range of industry standard digital input and output devices
- prepare ideas which will interpret into the photographic medium and be presented to a professional standard

Outcomes

On successful completion of the unit the candidate will be able to:

- 1 analyse and critically evaluate the way in which his/her research and imagery fulfil the requirements of the brief
- 2 produce effective representations of illustrative, photographic, graphic and text material within page layout, liaising with design colleagues, as necessary
- 3 demonstrate expertise and proficiency in the use of features and options offered by industry standard digital input and output devices
- 4 select presentation formats appropriate to the photographic requirements in keeping with the aims and objectives of the client brief.

Unit content

Outcome 1

Analyse and critically evaluate the way in which his/her research and imagery fulfil the requirements of the brief

The candidate knows how to:

- interpret design briefs which have a photographic emphasis to define the purpose of the communication objectives
- identify and develop a range of research and retrieval methods
- originate and gather selective imagery as a source of information for the production of ideas
- evaluate ideas for their appropriateness in fulfilling communication objectives

Outcome 2

Produce effective representations of illustrative, photographic, graphic and text material within page layout, liaising with design colleagues, as necessary

The candidate knows how to:

- create ideas for design solutions exploring the relationship between text and imagery
- explore and create a range of page layouts and grids, using traditional skills and methods
- identify and select type forms for text and display which are appropriate for a particular design applications
- produce effective representations of illustrative, photographic and graphic imagery within page layouts using markers and similar 'rapid' tools and media

Outcome 3

Demonstrate an expertise and proficiency in the use of features and options offered by industry standard digital input and output devices

- translate an idea from its original conception, through initial paper based format, to on-screen design
- identify and use appropriate industry standard software packages which demonstrate the creative potential of working in the digital environment
- prepare digital layout, and use appropriate mode, resolution, compression and file format to access images from an identified range of sources
- use a range of appropriate digital effects, filters and techniques in the manipulation and creation of images

Outcome 4

Select presentation formats appropriate to the photographic requirements in keeping with the aims and objectives of the client brief

The candidate knows how to:

- produce a coherent presentation of conclusions drawn from research material in oral and visual form
- present ideas sheets, concept boards and final imagery in a clean and professional manner, liaising with design colleagues, as necessary
- select presentation formats which are appropriate to the ideas, aims, and objectives of the brief (eg., story board, web page, page layout, visual planning)

Assessment

The final presentation of ideas by the candidate can incorporate oral, portfolio, and video evidence, or a combination of any appropriate format relating to the above units.

All candidates will produce a word-processed report of 1500 words minimum. The report should outline research, planning and methodology, and provide clear evidence of a working knowledge of the digital software packages used.

The assignment should include a range of skills from origination to final presentation.

Candidates will be expected to produce the following:

- Documented evidence of research and planning showing original and sourced imagery
- Rough visual layouts using felt marker pens and pencils, which represent photographs, typography and grids
- Evidence of images produced and stored in appropriate digital format
- An analysis of the final imagery in terms of suitability, quality and methods used in the production of the client brief.

Guidance

Key Skills signposting

As candidates are working towards the outcomes of this unit, there are opportunities for Key Skills development in the following Level 4 Key Skills units:

Information and communication technology

ICT4.3 Evaluate your overall strategy and present the outcomes from your work using at least one presentation, showing integration of text, images and number

Improving own learning and performance

LP4.3 Evaluate your strategy and present the outcomes of your learning

Problem solving

PS4.1 Develop a strategy for problem solving

Communication

C4.3 Evaluate your overall strategy and present the outcomes from your work, using at least one formal oral presentation. Include a variety of verbal, visual and other techniques to illustrate your points.

Links with other units/qualifications

The unit also has links with the following National Occupational Standards/City & Guilds NVQ units in Photography and Photographic Processing:

Unit 1	Contribute to effective performance at work L3
Unit 2	Establish and maintain positive working relations L3 + L4
Unit 6	Contribute to the development of the photo imaging brief L3
Unit 7	Discuss, develop and agree the photo imaging brief L4
Unit 12	Present work to customers and potential customers L3 + L4

Delivery advice

This unit should involve approximately 100 hours of study – 40 of which should be through guided learning.

The candidate should have access to a range of conventional design hardware and manual design practice equipment, or to the digital equivalent.

In addition, candidates should have access to a well-resourced learning centre/library with a stock of relevant materials for reference purposes. Access to a facility with IT provision needs to be available on a flexible basis to allow the candidate to produce the evidence required for assessment. Access to information within the candidate's support organisation is also necessary in order to draw upon both valuable and current evidence of activity relevant to the content of this unit.

Assessments should be practical and realistic and relate to current sector practice. If candidates are currently working in the sector, there will be opportunities for them to draw evidence from activities carried out in the workplace as agreed by their employer. Candidates should be encouraged to investigate and critically review current trends and innovative practice and use a range of resources to gather data. Candidates should be, where appropriate, give theoretical input to supplement practical sessions, and demonstrations of the exciting possibilities and effects which can be produced using image manipulation in the digital environment. Valuable information can be obtained through visits to organisations and from presentations given by guest speakers.

Where appropriate, reference should be made to relevant legislation, British Standards and industry codes of practice. Similarly safe working methods and health and safety precautions should be applied, as necessary.

Appropriate centre staff should agree the title and outline of the report to be presented for assessment prior to commencement. Evidence presented should be the candidates' own work and candidates are expected to plan and carry out their assessments independently.

Suggested resources list

An extended range of textbooks and reference materials is available to candidates undertaking research studies in design and reproduction, including the following:

Electronic Culture; Technology and Visual Representation T Druckry. and A R Stone (Aperture, 1997)

Advanced Marker Techniques D Powell (London: Macdonald)

Lateral Thinking: Creative step-by-step E De Bono (Harper Collins: London, 1990)

Journals

Creative Review
Electronic Imaging
Campaign
Hot Ads
Aperture
Design Week

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Unit 7

Scientific and technical photographic imaging

Unit summary

This unit is an introduction to the skills and techniques used in the recording of scientific, medical and technical processes and procedures. As a scientific photographer, the candidate may be asked to record images to assist the analysis of these and to extract data to provide information about the subject rather than the process. To facilitate this, the candidate must be able to communicate with scientists and subject experts and understand their specialist vocabularies. They must also be able to design image recording situations to best advantage for subsequent data extraction and evaluation.

During the study of this unit, candidates will explore the limits of human perception and the recording role of photographic and digital systems. Candidates will apply scientific methods in the design of experiments and use spectral recording in the visible, infrared ultraviolet bands together with close-up photography and photomacrography. There will be an opportunity for candidates to demonstrate photography through the microscope and other scientific applications such as precision copying and lens testing procedures. Candidates will also explore optical systems for wide-angle, panoramic and telephoto recording and the methodology relating to motion and change using high speed photography, time lapse techniques and photogrammetry.

Successful achievement of this unit is dependent upon candidates meeting the assessment requirements and outcomes and producing work of a satisfactory and reliable standard.

Aims

The unit aims to enable the candidate to:

- acquire fundamental research, recording and analytical skills, to keep a satisfactory laboratory notebook and the ability to write and illustrate a report
- maintain an awareness of progress and developments in the scientific field
- comply with standards, procedures and protocols in investigative recording using images
- progress to more specialist applications
- apply for professional recognition of skills and membership of appropriate organisations
- contribute productively as a member of a research team

Unit 7 Scientific and technical photographic imaging

Outcomes

On successful completion of the unit the candidate will be able to:

- 1 use a range of specialist materials, equipment and techniques with an awareness of related health and safety considerations, while operating to a deadline
- 2 understand the simple mathematical basis of the properties of images and the extraction of numerical information
- 3 demonstrate practical skills in the design of experiments for photographic or digital recording of ephemeral events and unusual subjects as encountered in scientific research and the applications of imaging
- 4 collaborate and co-operate with other people in the processes of data acquisition, recording, analysis and presentation of results
- 5 understand and adapt new technology to enhance, simplify or extend techniques of scientific photography and imaging

Unit content

Outcome 1

Use a range of specialist materials, equipment and techniques with an awareness of related health and safety considerations, while operating to a deadline

The candidate knows how to:

- use a range of camera formats, general and special purposes materials
- use a range of lenses for general and scientific purposes
- use a range of light and radiation sources for ultraviolet, infrared and motion study work
- test equipment such as lenses to maintain performance
- work swiftly and safely

Outcome 2

Understand the simple mathematical basis of the properties of images and the extraction of numerical information

The candidate knows how to:

- use mathematical equations including those involving lens conjugates and image magnification, together with the equations of motion
- obtain image positional point data and use image parallax equations

Outcome 3

Demonstrate practical skills in the design of experiments for photographic or digital recording of ephemeral events and unusual subjects as encountered in scientific research and the applications of imaging

- use existing photographic and laboratory equipment, especially to improvise instrumentation for initial investigations
- calibrate and test photographic instrumentation
- check the accuracy of measurements
- predict the probable outcome of recording situations

Unit 7 Scientific and technical photographic imaging

Outcome 4

Collaborate and co-operate with other people in the processes of data acquisition, recording, analysis and presentation of results

The candidate knows how to:

- work as a productive member of a research team in science, medicine or commerce
- communicate using appropriate specialist terminology
- produce images to aid and illustrate reports from a collaborative team

Outcome 5

Understand and adapt new technology to enhance, simplify or extend techniques of scientific photography and imaging

The candidate knows how to:

- use study skills to keep a current awareness of progress in photography and imaging
- evaluate new equipment and processes for specific uses

Assessment

The outcomes of this unit will be assessed on the successful completion of the following:

- 1 A word-processed report on an aspect of scientific photography. It should be of approximately 2500 words and assessment will take into consideration:
 - a literature reference section in an approved format (eg Harvard)
 - an ordered presentation of the material
 - adherence to the subject and instructions
 - comprehension of the topic
 - the use of illustrative material from accredited sources
- 2 **Either:** a portfolio of practical work, which may be in the form of various types of medium, including prints, video and computer files, demonstrating a satisfactory level of skills in a minimum of three relevant topics

Or: a practical project on an agreed single topic following production of an agreed project plan, followed by submission of a detailed project report

NB The completion of a set of simple numerical problems based upon the basic equations of optics, image properties and motion, should support the candidate's work. Evidence of observing health and safety requirements should also be included.

Unit 7 Scientific and technical photographic imaging

Guidance

Key Skills signposting

As candidates are working towards the outcomes of this unit, there are opportunities for Key Skills development in the following Level 4 Key Skills units:

Problem solving

- PS4.1 Develop a strategy for problem solving.
- PS4.2 Monitor progress and adapt your strategy for solving the problem.
- PS4.3 Evaluate your overall strategy and present the outcomes of your problem solving skills.

Application of number

- N4.2 Monitor progress and adapt your strategy, as necessary, to achieve the quality of outcomes required in work involving deductive and inferential reasoning and algebraic modelling.
- N4.3 Evaluate your overall strategy and present the outcomes from your work, including the use of charts, diagrams and graphs to illustrate complex data.

Links with other units/qualifications

This unit is closely related to Unit 25 Specialist photographic applications for scientific research, within this qualification.

The unit also has links with the following National Occupational Standards/City & Guilds NVQ units in Photography and Photographic Processing:

Unit 1	Contribute to effective performance at work L3
Unit 2	Establish and maintain positive working relations L3 + L4
Unit 3	Contribute to the maintenance of health, safety and security at work L3
Unit 4	Establish and maintain a healthy, safe and secure workplace L4
Unit 6	Contribute to the development of the photo imaging brief L3
Unit 7	Discuss, develop and agree the photo imaging brief L4
Unit 8	Manage photo imaging activities L3 + L4
Unit 9	Establish and maintain the quality of workplace performance L3 + L4
Unit 12	Present work to customers and potential customers L3 + L4
Unit 16	Store and retrieve photographic equipment and material L3 + L4
Unit 20	Take specified photographs L3
Unit 22	Specify and obtain processed images L3 + L4

Unit 7 Scientific and technical photographic imaging

Delivery advice

This unit should involve approximately 100 hours of study – 40 of which should be through guided learning.

Apart from access to the normal range of photographic, digital and video equipment found in a centre for photographic studies, the following items are considered necessary for specialist nature of the practical work (with the necessary specialist technician support:

Set of photographic filters, including ultraviolet and infrared transmission tyres Macro lens, extension tubes and bellows

Range of specialist lenses, including zoom, long focus and extreme wide-angle types Stroboscopic flash source

Ultraviolet radiation sources

Camera command back for intervalometer work

Basic photomicroscope or microscope adapter

Travelling microscope or table microscope

Copying stand and lamps

Simple stereoscopic equipment

Time lapse video recorder

In addition, candidates should have access to a well-resourced learning centre/library with a stock of relevant materials for reference purposes. Access to a facility with IT provision needs to be available on a flexible basis to allow the candidate to produce the evidence required for assessment. Access to information within the candidate's support organisation is also necessary in order to draw upon both valuable and current evidence of activity relevant to the content of this unit.

Assessments should be practical and realistic and relate to current sector practice and standards of image capture, display and presentation. If candidates are currently working in the sector, there will be opportunities for them to draw evidence from activities carried out in the workplace as agreed by their employer. Candidates should be encouraged to investigate and critically review current trends and innovative practice and use a range of resources to assist the capture of images using film and/or digital methods. Valuable information can be obtained through visits to organisations and from presentations given by guest speakers.

Where appropriate, reference should be made to relevant legislation, British Standards and industry codes of practice. Similarly safe working methods and health and safety precautions should be applied, as necessary.

Appropriate centre staff should agree the title and outline of the report to be presented for assessment prior to commencement. Evidence presented should be the candidates' own work and candidates are expected to plan and carry out their assessments independently.

Unit 7 Scientific and technical photographic imaging

Suggested resources list

Key text books

An extended range of textbooks and reference materials are available to students undertaking research studies in scientific and technical imaging, including the following:

Digital Imaging for Photographers, 3rd edn A Davies and P Fennessy (Focal Press, Oxford 1998)

Manual of Photography, 9th ed R Jacobson, S Ray, G Attridge and N Axford (Focal Press, Oxford 2000)

Advanced Photography, 6th ed M Langford (Focal Press, Oxford 1998)

Basic Photography, 7th ed M Langford (Focal Press, Oxford 2000)

The Photographic Lens 2nd ed S Ray (Focal Press, Oxford 1992)

Applied Photographic Optics 2nd ed S Ray (Focal Press, Oxford 1994)

High Speed Photography and Photonics S Ray (ed.) (Focal Press, Oxford 1997)

Scientific Photography and Applied Imaging S Ray (Focal Press, Oxford 1999)

Biomedical Photography J Vetter (ed.) (Focal Press, 1992)

Further reading

Applied Photography C Arnold, P Rolls and J Stewart (Focal Press, London 1971) Handbook For Scientific Photography, 2nd edn A Blaker (Focal Press, Boston 1989) Beyond Vision J Darius (Oxford University Press, Oxford 1984)

Moments of Vision H Edgerton (MIT Press, Boston 1970)

Photography for the Scientist R Morton (ed.) (Academic Press, London 1984)

Data Presentation and Visual Literacy in Medicine and Science D Simmonds and L Reynolds (Butterworth-Heinemann, Oxford 1994)

The Focal Encyclopedia of Photography, 3rd edn L Strobel and R Zakia (Focal Press, Boston 1993)

Beauty of Another Order: Photography in Science A Thomas (ed.) (Yale University Press, Newhaven 1997)

Perception and Imaging R Zakia (Focal Press, Boston 1997)

Journals

British Journal of Photography
Image Technology
Journal of Audio Visual Media in Medicine
Journal of Biological Photography
New Scientist
Proceedings of the SPIE
Scientific American

Also make use of the M25 Access Scheme for access to libraries in the London region.

Unit 8

Photographic studio imaging

Unit summary

This unit is about developing skills and understanding of the techniques needed to work effectively in a controlled studio environment.

The candidate will be called upon to demonstrate skills in the studio to senior practitioner/manager level in order to raise the standards of studio work in the organisation in which they work. The candidates will work to the client brief and demonstrate interpersonal skills in dealing with clients and colleagues.

In this unit there is an opportunity to consider healthy and safe working practices, as well as how moral, ethical, social and environmental issues affect people working at senior/manager level in the photographic, imaging and related industries.

Successful achievement of this unit is dependent upon candidates meeting the assessment requirements and outcomes and producing work of a satisfactory and reliable standard.

Aims

This unit aims to enable the candidate to:

- develop high level practical skills
- investigate, demonstrate, and critically evaluate professional practices at senior practitioner/manager level
- develop their own creative and innovative ideas
- review the progress and direction of their study/work.

Outcomes

On successful completion of the unit the candidate will be able to:

- 1 research and plan the requirements of studio imaging at senior practitioner/management level
- 2 develop own creative and innovative ideas, skills and techniques
- 3 prepare accurate costing and time plans for a variety of commissions and assignments
- 4 demonstrate high level practical skills and abilities in the studio
- 5 critically review their own professional practices in studio imaging.

Unit content

Outcome 1

Research and plan the requirements of studio imaging at senior practitioner/management level

The candidate knows how to:

- interpret the client brief, including concepts in visual language
- identify the factors to be taken consideration when planning and producing photographs using silver-based and/or digital techniques in the studio, including:
 - choice of camera and lens type, and accessories
 - choice of image capture method
 - selection and control of lighting
 - positional and temporal choice
 - image processing method (film or digital)
 - range of studio subjects and properties
 - liaison with other personnel involved
 - health and safety and other legal requirements relevant to the shoot
- justify the choice of approach to be used
 - practical considerations: cost, equipment, material, staff capability, facilities
 - client needs
 - final image quality

Outcome 2

Develop own creative and innovative ideas, skills and techniques

- produce imaginative visual design solutions to a client brief, or illustrate concepts
- explore new techniques in visual language
- investigate suitable camera and lighting techniques to achieve specific visual effects
- research historical, contemporary and international images
- investigate the performance of film and print materials, camera techniques and print output to extend visual experience.

Outcome 3

Prepare accurate costing and time plans for a variety of commissions and assignments

The candidate knows how to:

- research and compare fee structures in the industry for a variety of studio work
- calculate time, resource requirement and costs for studio commissions
- produce written plans for:
 - small sets
 - large sets
 - models and properties hire
 - studio hire
 - staff time cost
 - profit margins
 - fees
 - bought-in services and outwork
 - equipment hire
 - specialist services
- identify sources of business information available
- research and record the information for completing business administration documentation.

Outcome 4

Demonstrate high level practical skills and abilities in the studio

- organise the studio environment for effective working, observing health and safety and other relevant legal requirements
- identify a range of conventional and digital camera types and formats for use in the studio, selecting as appropriate to the brief
- use a range of camera attachments and light reading accessories for photography in the studio
- demonstrate photography of a range of subjects in the studio
- demonstrate the application of specialist studio techniques
- show, in portfolio examples, the effect of the main forms of natural, tungsten and electronic flash lighting used in studio photography
- demonstrate the use of a range of lighting units and accessories available for studio work
- demonstrate the fundamental lighting techniques required for setting up a variety of arrangements for photography in the studio for children and adults, professional models, still life, small and larger sets
- demonstrate an understanding of specialised construction techniques of sets in the studio, eg for professional models, still life, glassware or silverware, etc
- assess the suitability of each light source for different tasks undertaken in the studio, such as natural, tungsten, electronic flash and HMI (Hydragyrum Medium arc-length Iodide) lighting

- demonstrate methods of evaluating optimum exposure for a variety of lighting situations using hand held and built in daylight and flash meters, reference guides and guide numbers
- identify the factors which to be considered when selecting equipment for a given task and output requirement, such as purpose and number of images and choice of format
- identify and provide the facilities required when photographing people in the studio including changing facilities, provision for children and chaperons, provision of refreshment for long or delayed shoots and first aid.

Outcome 5

Critically review their own professional practices in studio imaging

The candidate knows how to:

- evaluate their own practical work, considering
 - how effectively the work was managed, such as setting objectives, planning and managing time
 - ways of researching a wide variety of materials and techniques in studio imaging
 - how effectively the practical activities were undertaken
 - how well logistical and visual design problems in concepts or client briefs were anticipated and resolved
 - how successful the result was in illustrating the concept or meeting the client brief
 - how effectively and economically studio facilities and materials were used
 - to what extent these considerations contributed to the success of the brief/ assignment(s)
 - the differing working studio practices in advertising, scientific and forensic, fashion and portraiture and fine art/abstract imaging.

Assessment

Assessment of this unit will be based on a range of activities delivered through assignment(s) designed to meet all the unit outcomes. The knowledge element will be demonstrated through evidence of the production of the images, plus the supporting documentation which is mandatory.

Specific Key Skills can be identified as an integral part of both image creation and the related research and final documentation. The unit will explore the candidate's ability to use a range of equipment, both for origination and for final production and in the creation of images. Candidates should demonstrate the ability to 'see' in a photographic context, whilst examining and using design judiciously to achieve the planned effect.

Candidates will be expected to produce the following:

- evidence of research and planning based on the client briefs
- a portfolio of photographs demonstrating high level camera skills and lighting techniques
- a range of other production skills, which may include darkroom laboratory skills or image production and manipulation using digital techniques
- technical reports on production methods and possible stylistic influences
- a database or spreadsheet identifying the risk assessment involved during this
 type of image production and evidence of observing relevant health and safety,
 and any other legal requirements
- a full analysis of the final images in terms of quality, function and context in modern society, production methods, together with suitability for client purpose.

The above work should total 2500 words.

Guidance

Key Skills signposting

As candidates are working towards the outcomes of this unit, there are opportunities for Key Skills development in the following Level 4 Key Skills units:

Communication

- C4.1 Develop a strategy for using communication skills over an extended period of time.
- C4.3 Evaluate your overall strategy and present the outcomes from your work, using at least one formal oral presentation. Include a variety of verbal, visual and other techniques to illustrate your points.

Improving own learning and performance

- LP4.1 Develop a strategy for improving your own learning and performance.
- LP4.2 Monitor progress and adapt your strategy, to improve your performance.
- LP4.3 Evaluate your overall strategy and present the outcomes of your learning.

Problem solving

- PS4.1 Develop a strategy for problem solving.
- PS4.2 Monitor progress and adapt your strategy for solving the problem.

Working with others

- WO4.1 Develop a strategy for working with others.
- WO4.2 Monitor progress and adapt your strategy, as necessary, to achieve agreed objectives.

Links with other units/qualifications

This unit has links with the following units within this qualification: Unit 9 Photographic location imaging, Unit 16 Photography for advertising, Unit 17 Fashion photography, Unit 19 Portraiture and social photography, and Unit 20 Corporate (industrial and commercial) photography.

This unit also has links with the following National Occupational Standards/City & Guilds NVQ units in Photography and Photographic Processing:

Unit 3	Contribute to the maintenance of health, safety and security at work L3
Unit 4	Establish and maintain a healthy, safe and secure workplace L4
Unit 6	Contribute to the development of the photo imaging brief L3
Unit 7	Discuss, develop and agree the photo imaging brief L4
Unit 8	Manage photo imaging activities L3+L4
Unit 17	Organise and carry out photographic assignments L3+L4
Unit 20	Take specified photographs L3

Delivery advice

This unit should involve approximately 100 hours of study – 40 of which should be through guided learning.

The candidate should have access to a studio environment, where daylight can be restricted and excluded. Equipped with a selection of studio flash and/or tungsten lighting, background systems, set building tools and materials, reflectors and diffusers and support equipment.

A range of traditional (film) camera formats as well as digital capture equipment should be made available to the candidate to meet the requirements of the design problem assignments commonly found in studio imaging.

In addition, candidates should have access to a well-resourced learning centre/library with a stock of relevant materials for reference purposes. Access to a facility with IT provision needs to be available on a flexible basis to allow the candidate to produce the evidence required for assessment. Access to information within the candidate's support organisation is also necessary in order to draw upon both valuable and current evidence of activity relevant to the content of this unit.

This unit is designed to enable progression and it will be expected that centres direct candidates by designing customised client briefs to meet the unit outcomes.

Assessments should be practical and realistic and relate to current sector practice. If candidates are currently working in the sector, there will be opportunities for them to draw evidence from activities carried out in the workplace as agreed by their employer. Candidates should be encouraged to investigate and critically review current trends and innovative practice and use a range of resources to gather data. Valuable information can be obtained through visits to organisations and from presentations given by guest speakers.

Where appropriate, reference should be made to relevant legislation, British Standards and industry codes of practice. Similarly safe working methods and health and safety precautions should be applied, as necessary.

Appropriate centre staff should agree the title and outline of the report to be presented for assessment prior to commencement. Evidence presented should be the candidates' own work and candidates are expected to plan and carry out their assessments independently.

Suggested resources list

An extended range of textbooks and reference materials are available to students undertaking research studies in studio imaging, including the following:

Advanced Photography Michael Langford (Focal Press)
Professional Photography Michael Langford (Focal Press)
The Professional Photographer in Practice Robert Hymers (Focal Press)
Digital Photography Hambler/Green (Pira/BPIF Publishing)
Seeing the Light Rhonda Wilson (The Custard Factory)
Photographing Still Life Seth Joel (Amphoto)
How to Photograph People Bravement and Tarrant (Fountain Press)

Periodicals

British Journal of Photography (BJP) The Photographer Master Photographer Professional Photography Hot Shoe Campaign This page is intentionally blank

Unit 9

Photographic location imaging

Unit summary

This unit is about developing skills and understanding of the techniques of working in the location environment. The candidate will be called upon to demonstrate skills at senior practitioner/manager level in order to raise the standards of location work in the organisation in which they work. The candidates will work to the client brief and demonstrate interpersonal skills in dealing with clients and colleagues.

In this unit they will have the opportunity to consider healthy and safe working practices, as well as how moral, ethical, social and environmental issues affect people working at senior/manager level in the photographic and related industries.

Successful achievement of this unit is dependent upon candidates meeting the assessment requirements and outcomes and producing work of a satisfactory and reliable standard.

Aims

This unit aims to enable the candidate to:

- acquire high level practical skills
- investigate, demonstrate, and critically evaluate professional practices of location imaging at senior practitioner/manager level
- develop their own creative and innovative ideas
- review the progress and direction of their studies/work.

Outcomes

On successful completion of the unit the candidate will be able to:

- 1 research and plan the requirements of location Imaging at senior practitioner/management level
- 2 develop own creative and innovative ideas, skills and and techniques
- 3 prepare accurate costing and time plans for a variety of commissions and assignments
- 4 demonstrate high level practical skills and abilities in location imaging
- 5 critically review their own professional practices at in location imaging

Unit content

Outcome 1

Research and plan the requirements of location Imaging at senior practitioner/management level

The candidate knows how to:

- interpret the client brief, including concepts in visual language
- identify the factors to be taken consideration when planning and producing photographs using silver-based and/or digital techniques on location, including:
 - choice of camera and lens type, and accessories
 - choice of image capture method
 - selection and control of lighting
 - positional and temporal choice
 - weather conditions
 - image processing method (film or digital)
 - range of subjects and properties
 - liaison with other personnel involved
 - health and safety and other legal requirements relevant to the shoot
- justify the choice of approach to be used
 - practical considerations: cost, equipment, material, staff capability, facilities
 - client needs
 - final image quality

Outcome 2

Develop own creative and innovative ideas, skills and and techniques

- produce imaginative and original design solutions to a client brief, or to illustrate concepts
- explore new techniques in visual language
- investigate suitable camera and lighting techniques of location, subjects (or groups) with specific visual effects
- research historical, contemporary and international images
- investigate the performance of film and print materials, camera techniques and print output to extend visual experience

Outcome 3

Prepare accurate costing and time plans for a variety of commissions and assignments

- research and compare fee structures in the industry for location commissions
- calculate time, resource requirement and costs for location commissions
- produce written plans for:
 - interior locations
 - exterior locations
 - models and properties hire
 - working abroad
 - staff time cost
 - profit margins
 - fees
 - bought-in services and outwork
 - equipment hire
 - specialist services
- identify sources of business information
- research and record the information for completing business administration documentation.

Outcome 4

Demonstrate high level practical skills and abilities in location imaging

- select and use natural and supplementary lighting on the basis of colour, quality and suitability of purpose
- identify a range of camera types, formats and digital capture, selecting as appropriate to the brief
- select and demonstrate use of cameras, attachments, and light reading accessories, on location
- prepare and organise the location environment for safe and effective working
- demonstrate, through portfolio examples, the effect of the main forms of natural, tungsten and electronic flash lighting used in location photography
- record essential information on the subjects photographed, when and if required, for reference or legal purposes
- assess the suitability of each light source for different tasks undertaken on location, such as natural, prevailing light, tungsten and electronic flash
- demonstrate methods of evaluating optimum exposure for a variety of lighting situations using: hand held and built-in daylight and flash meters, reference guides and guide numbers
- assess factors to be considered when selecting equipment for a given task and print output requirement, such as purpose and number of images and choice of format, silver based or digital
- demonstrate techniques on location for architectural and industrial, interiors and exteriors and advertising and editorial subjects on location
- provide the facilities needed when photographing people on location, including changing facilities, provision for children and chaperons, refreshments for long shoots and first aid
- research the protocol and convention for carrying out location assignments in the UK, Europe, or throughout the world.

Outcome 5

Critically review their own professional practices in location imaging

The candidate knows how to:

- evaluate their own practical work, considering
 - how effectively the work was managed, such as setting objectives, planning and managing time
 - ways of researching a wide variety of materials and techniques in location imaging
 - how effectively the practical activities were undertaken
 - how well logistical and visual design problems in concepts or client briefs were anticipated and resolved
 - how successful the result was in illustrating the concept or meeting the client brief
 - how effectively and economically location facilities and materials were used
 - to what extent these considerations contributed to the success of the assignments(s)
 - the differing working location practices in advertising, scientific and forensic, fashion and portraiture and fine art/abstract imaging.

Assessment

Assessment of this unit will be based on a range of activities delivered by the production of assignment(s) designed to meet all the unit outcomes.

Specific Key Skills can be identified as an integral part of both image creation and the related research and final documentation. The unit will explore the candidate's ability to use a range of equipment, both for origination and for final production. In addition, candidates will need to demonstrate the ability to examine and use ideas, techniques and equipment to achieve the planned effect in the creation of images.

Candidates will be expected to produce the following:

- Evidence of research and planning based on the client briefs
- A portfolio of photographs demonstrating high level camera skills and lighting techniques
- A range of other production skills, which may include darkroom laboratory skills, or image production and manipulation using digital techniques
- Technical reports documenting production methods and possible stylistic influences
- A database or spreadsheet identifying the risk assessment involved during this
 type of image production, and evidence of observing relevant health and safety,
 and other legal, requirements
- A full analysis of the final images in terms of quality, function and context in modern society, methods used in production, and suitability for client purpose.

The above work should total 2500 words.

Guidance

Key Skills signposting

As candidates are working towards the outcomes of this unit, there are opportunities for Key Skills development in the following Level 4 Key Skills units:

Communication

- C4.1 Develop a strategy for using communication skills over an extended period of time
- C4.3 Evaluate your overall strategy and present the outcomes from your work, using at least one formal oral presentation. Include a variety of verbal, visual and other techniques to illustrate your points.

Improving own learning and performance

- LP4.1 Develop a strategy for improving your own learning and performance.
- LP4.2 Monitor progress and adapt your strategy, to improve your performance.

Problem solving

- PS4.1 Develop a strategy for problem solving.
- PS4.2 Monitor progress and adapt your strategy for solving the problem.

Working with others

- WO4.1 Develop a strategy for working with others.
- WO4.2 Monitor progress and adapt your strategy to achieve agreed objectives.

Links with other units/qualifications

This unit is closely related to the following units within this qualification: Unit 8 Photographic studio imaging, Unit 16 Photography for advertising, Unit 17 Fashion photography, Unit 19 Portraiture and social photography, and Unit 20 Corporate (industrial and commercial) photography.

The unit also has links with the following National Occupational Standards/City & Guilds NVQ units in Photography and Photographic Processing:

Unit 3	Contribute to the maintenance of health, safety and security at work L3
Unit 4	Establish and maintain a healthy, safe and secure workplace L4
Unit 6	Contribute to the development of the photo imaging brief L3
Unit 7	Discuss, develop and agree the photo imaging brief L4
Unit 8	Manage photo imaging activities L3 + L4
Unit 17	Organise and carry out photographic assignments L3 + L4

Unit 20 Take specified photographs L3

Delivery advice

This unit should involve approximately 100 hours of study – 40 of which should be through guided learning.

For the location work, the candidate should have access to portable, hand and monoblock flash lighting equipment and tungsten lighting suitable for safe transport to locations away from the studio.

A range of traditional (film) camera formats as well as digital capture equipment should be made available to the candidate to meet the requirements of the outside and interior assignments commonly found when photographing on location.

In addition, candidates should have access to a well-resourced learning centre/library with a stock of relevant materials for reference purposes. Access to a facility with IT provision needs to be available on a flexible basis to allow the candidate to produce the evidence required for assessment. Access to information within the candidate's support organisation is also necessary in order to draw upon both valuable and current evidence of activity relevant to the content of this unit.

This unit is designed to enable progression and it will be expected that centres direct candidates by designing customised client briefs to meet the unit outcomes.

Assessments should be practical and realistic and relate to current sector practice. If candidates are currently working in the sector, there will be opportunities for them to draw evidence from activities carried out in the workplace as agreed by their employer. Candidates should be encouraged to investigate and critically review current trends and innovative practice and use a range of resources to gather data. Valuable information can be obtained through visits to organisations and from presentations given by guest speakers.

Where appropriate, reference should be made to relevant legislation, British Standards and industry codes of practice. Similarly safe working methods and health and safety precautions should be applied, as necessary.

Appropriate centre staff should agree the title and outline of the report to be presented for assessment prior to commencement. Evidence presented should be the candidates' own work and candidates are expected to plan and carry out their assessments independently.

Suggested resources list

An extended range of textbooks and reference materials are available to students undertaking research studies in location imaging, including the following:

Advanced Photography Michael Langford (Focal Press)
Professional Photography Michael Langford (Focal Press)
The Professional Photographer in Practice Robert Hymers (Focal Press)
Digital Photography Hambler/Green (Pira/BPIF Publishing)
Seeing the Light Rhonda Wilson (The Custard Factory)
Photographing Buildings inside and out Norman McGrath (Focal Press)
How to Photograph People Bravement and Tarrant (Fountain Press)

Periodicals

British Journal of Photography (BJP)
The Photographer
Master Photographer
Professional Photography
Hot Shoe
Campaign
Architectural Review

Unit 10

Photographic aerial imaging

Unit summary

This unit is about developing creative skills and knowledge of aerial imaging. As a senior member of staff, candidates are likely to be called upon to advise customers on the best solution to an aerial imaging problem and to deliver the solution to the highest possible quality. In the process, candidates will develop and implement innovative techniques designed to raise the overall standards of the business in which you work.

In this unit, candidates will have the opportunity to consider the importance of health and safety issues as they affect the use of aerial imaging platforms, as well as the impact of meteorological, pilot communication and planning on the success of aerial imaging projects.

Successful achievement of this unit is dependent upon candidates meeting the assessment requirements and outcomes and producing work of a satisfactory and reliable standard.

Aims

This unit aims to enable the candidate to:

- develop high level technical skills
- investigate, demonstrate, and critically evaluate professional practices at Senior Practitioner/Manager level
- develop own innovative ideas
- review the progress and direction of their studies/work.

Outcomes

On successful completion of the unit the candidate will be able to:

- 1 research and plan aerial imaging requirements at senior practioner/management level
- 2 prepare accurate costings and time plans for a variety of aerial images
- 3 demonstrate high level practical skills and abilities in aerial imaging and critically evaluate their own working practices
- 4 research and develop new techniques for producing aerial images with special emphasis on the role of digital imaging in this sector

Unit content

Outcome 1

Research and plan aerial imaging requirements at senior practitioner/management level

- identify the factors to be taken into consideration when planning and producing aerial images using both silver-based products and digital techniques and a variety of platforms:
 - light planes
 - helicopters
 - balloons
 - kites
 - model aeroplanes
 - equipment required
 - customer needs
 - pilot briefing
 - flying altitude
 - weather conditions
 - material choice
 - presentation techniques
- obtain and use reliable meteorological data while planning and implementing aerial imaging projects.
- justify the choice of approach to be used:
 - practical considerations: cost, equipment, material, staff capability, facilities
 - customer needs
 - final image quality
- describe the creative and innovative skills which could be used
- calculate the approximate scale using the dimensions of known objects in an aerial image
- ensure all legal requirements are met including flying height, privacy and copyright
- identify and apply safe working practices both on the ground and in the air, and state the consequences of failing to meet these safety standards.

Outcome 2

Prepare accurate costings and time plans for a variety of aerial images

The candidate knows how to:

- calculate costs for the production of both silver-based images and digital images taking account of:
 - purchase specifications
 - equipment costs
 - material costs
 - costs of hiring pilots and planes or other platforms
 - image processing costs
 - presentation costs
 - profit margins and selling prices, as applicable
- produce written time plans:
 - pre-production briefing
 - air time
 - de-briefing
 - imaging processing
 - presentation
- research and record the information for completing business administration documentation
- produce detailed invoices as applicable.

Outcome 3

Demonstrate high level practical skills and abilities in aerial imaging and critically evaluate their own working practices

- select appropriate methods for the production of high quality aerial images including the choice of equipment an materials
- adapt traditional imaging techniques to take account of current thinking and approaches including the ability to harness digital techniques to provide innovative answers to problems
- demonstrate effective working planning in relation to:
 - preparation
 - production
 - presentation
- demonstrate advanced skills and techniques in the production of images taking into account customer needs, media to be used, presentation and service
- demonstrate effective selling skills, as applicable
- implement health, safety and company procedures in order to ensure compliance with relevant laws and regulations
- co-operate productively with other people in the supply chain
- review their own working practices.

Outcome 4

Research and develop new techniques for producing aerial images with special emphasis on the role of digital imaging in this sector

The candidate knows how to:

- create and adapt techniques to take account of current attitudes and needs
- use digital imaging techniques both uniquely and as a hybrid solution to produce new and innovative approaches to the use and presentation of aerial images
- investigate the way aerial images are produced and used in the international market place
- use resources to research information on new aerial imaging techniques including
 - trade journals
 - CD and video
 - internet and web sites
 - books and picture libraries
 - experiment with different techniques such as false colour

Assessment

The outcomes of this unit will be assessed on the production of a word-processed report of approximately 2500 words to include the following.

- Records of the production of two silver-based images and two digital images These records must include:
 - the results of the planning for each image produced
 - evidence of originality
 - the time plans, costings (and selling prices, as applicable) for each image
 - a full description of each image including its conception and creation
 - the methods used to produce each image
 - details of how relevant health and safety, and other legal, requirements were met
 - an evaluation and critical analysis of each image
 - a high quality print, transparency or digital file of each image, minimum print size 20 x 25cm
- Records of investigative work that has been carried out
- Subjective and objective conclusions about the imaging methods investigated.

Guidance

Key Skills signposting

As candidates are working towards the outcomes of this unit, there are opportunities for Key Skills development in the following Level 4 Key Skills units:

Communication

- C4.1 Develop a strategy for using communication skills over an extended period of time
- C4.3 Evaluate your overall strategy and present the outcomes from your work, using at least one formal oral presentation. Include a variety of verbal, visual and other techniques to illustrate your points.

Improving own learning and performance

- LP4.1 Develop a strategy for improving your own learning and performance.
- LP4.2 Monitor progress and adapt your strategy, to improve your performance.

Problem solving

- PS4.1 Develop a strategy for using skills in problem solving.
- PS4.2 Monitor progress and adapt your strategy, for solving the problem.

Working with others

- WO4.1 Develop a strategy for working with others.
- WO4.2 Monitor progress and adapt your strategy, to achieve agreed objectives.

Links with other units/qualifications

In order to successfully complete this unit, the candidate is likely to have completed a level 3 qualification in photography or have extensive experience within this sector of the industry.

This unit has links with the following National Occupational Standards/City & Guilds NVQ units in Photography and Photographic Processing:

Unit 1	Contribute to effective performance at work L3
Unit 2	Establish and maintain positive working relations L3+L4
Unit 3	Contribute to the maintenance of health, safety and security at work L3
Unit 4	Establish and maintain a healthy, safe and secure workplace L4
Unit 6	Contribute to the development of the photo imaging brief L3
Unit 7	Discuss, develop and agree the photo imaging brief L4
Unit 9	Establish and maintain the quality of workplace performance L3+L4
Unit 16	Store and retrieve photographic equipment and material L3+L4
Unit 17	Organise and carry out photographic assignments L3+L4
Unit 20	Take specified photographs L3
Unit 21	Conceive and take photographs L4
Unit 22	Specify and obtain processed images L3+L4

Delivery advice

This unit should involve approximately 100 hours of study – 40 of which should be through guided learning.

There is a need for the candidates to have access to professional laboratory services including digital services and the use of light planes, helicopters or other imaging platforms from a suitably equipped airfield.

In addition, candidates should have access to a well-resourced learning centre/library with a stock of relevant materials for reference purposes. Access to a facility with IT provision needs to be available on a flexible basis to allow the candidate to produce the evidence required for assessment. Access to information within the candidate's support organisation is also necessary in order to draw upon both valuable and current evidence of activity relevant to the content of this unit.

Assessments should be practical and realistic and relate to current sector practice. If candidates are currently working in the sector, there will be opportunities for them to draw evidence from activities carried out in the workplace as agreed by their employer. Candidates should be encouraged to investigate and critically review current trends and innovative practice and use a range of resources to gather data. Valuable information can be obtained through visits to organisations and from presentations given by guest speakers.

Where appropriate, reference should be made to relevant legislation, British Standards and industry codes of practice. Similarly safe working methods and health and safety precautions should be applied, as necessary.

Appropriate centre staff should agree the title and outline of the report to be presented for assessment prior to commencement. Evidence presented should be the candidates' own work and candidates are expected to plan and carry out their assessments independently.

It is considered good practice for assessors to have had industry experience in the units to be assessed. In this unit this will allow the assessor to accompany the candidate on aerial imaging sorties so that they can see at first hand how the candidates cope with the pressures of each assignment.

Suggested resources list

This is a very specialist unit with relatively few textbooks and research material. However, the following include some useful information:

The uses of air photography J K S St Joseph, Photography from light planes and helicopters Eastman Kodak, Airborne camera: the world from the air and outer space Beaumont Newhall, Scientific photography and applied imaging Sidney F Ray,

Also try the following websites: www.bipp.com www.rps.org

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Unit 11

Underwater photography

Unit summary

This unit is about underwater photography. Photographers may be requested to take, or produce, photographs underwater, so it is useful to understand the technical problems associated with this specialised area of photography and the factors which affect the photographer operating in what is regarded as a hazardous environment.

Successful achievement of this unit is dependent upon candidates meeting the assessment requirements and outcomes and producing work of a satisfactory and reliable standard.

Aims

The unit aims to enable the candidate to:

- obtain details of the legal problems associated with operating in an underwater situation
- appreciate the physical problems encountered when operating underwater
- understand the technical difficulties faced by a photographer working underwater
- assess the appropriate equipment required for a specific photographic situation underwater

Outcomes

On successful completion of the unit the candidate will be able to:

- 1 explain the fundamental photographic problems faced by an underwater photographer and the basic techniques used to overcome these
- 2 analyse the main types of photographic equipment available for use underwater and describe the specific advantages and limitations for each
- 3 demonstrate a good knowledge of the physical impositions placed on a photographer working underwater
- 4 demonstrate an understanding of the legal and other parameters surrounding underwater photography in both the UK and abroad
- 5 determine the viability of undertaking an assignment in a hazardous environment
- 6 assess the viability of specialising in the field of underwater photography

Unit content

Outcome 1

Explain the fundamental photographic problems faced by an underwater photographer and the basic techniques used to overcome these

The candidate knows how to:

- identify basic photographic problems associated with underwater photography (minimise 'backscatter', low visibility)
- work with available light in low light and low contrast conditions
- use balancing flash and available light in low contrast situations
- deal with photographic problems (use of waterproof portable flash, use of macro and ultra wide-angle lenses, maximising image quality)
- identify the limitations the underwater environment places on photography in terms of optical considerations (especially the optics of flat and dome ports)
- maintain equipment.

Outcome 2

Analyse the main types of photographic equipment available for use underwater and describe the specific advantages and limitations for each

The candidate knows how to:

- identify optimum photographic systems available for underwater use, to include cameras or housings flash units, flash arms, ROVs.
- identify limitations and advantages of each type of system in terms of their versatility and viability for use under extreme conditions
- evaluate equipment in terms of image quality and appropriateness to a specific photographic requirement
- choose film and equipment for a specific purpose
- identify parameters which need to be taken into consideration when choosing appropriate equipment.

Outcome 3

Demonstrate a good knowledge of the physical impositions placed on a photographer working underwater

- assess physical constraints on those undertaking underwater work
- identify photographic constraints imposed by prevalent underwater conditions
- identify and assess physical factors determining working depth and duration
- assess constraints which limit the underwater photographer in both physical and photographic terms
- determine the viability of an assignment given constraints which are time limiting
- assess limitations on an underwater photographer working in specific types of location
- identify and evaluate sea and weather conditions
- organise specific training requirements for operating in differing conditions
- select minimum qualifications and preferred diving qualifications
- identify appropriate experience levels in underwater photography to be an effective team member.

Outcome 4

Demonstrate an understanding of the legal and other parameters surrounding underwater photography in both the UK and abroad

The candidate knows how to:

- obtain details of current legislation covering diving operations in both the UK and abroad
- provide a dive team able to operate under current legislation
- ensure that a risk assessment for a specific proposed dive is produced, and is able to provide the basic backbone of such an assessment
- ensure that only divers with appropriate qualifications may be used in dive teams
- ensure that safety is the most critical requirement of underwater operations
- identify potential hazards including those associated with above and below water
- comply with legislative, insurance and professional requirements imposed when operating within a hazardous environment
- apply cost compliance into an assignment
- determine what markets and/or requirements exist for underwater photography within the professional photographic field.

Outcome 5

Determine the viability of undertaking an assignment in a hazardous environment

The candidate knows how to:

- determine whether an assignment is technically possible
- assess the viability of undertaking an assignment which requires considerable adherence to legal, physical and commercial requirements above and beyond those required in most photographic situations
- prepare an estimate of the cost of undertaking a specific assignment.

Outcome 6

Assess the viability of specialising in the field of underwater photography

The candidate knows how to:

• examine this specific area of photography in terms of the technical, physical, legal and logistic considerations and their implifications on career choices.

Assessment

The outcomes of this unit will be assessed on the production of a report of approximately 2500 words and at least two photographs, which includes:

- explanations of the basic techniques used to overcome the problems specific to underwater photography
- details of the major types (in general terms) of underwater photographic equipment available and the advantages and disadvantages of each type
- the candidate's ideas on the role of underwater photography in a commercial environment, its viability and any alternatives
- an explanation of the relevant diving qualifications required by an underwater photographer operating within the UK and the bodies which certify divers
- details of the appropriate current UK legislation which covers diving operations and where such information is available
- a brief outline of the requirements to be taken into account by a professional underwater photographer when undertaking one of the following projects:
 - Photographing a small wreck (approx 30m long) in visibility which is not above
 10m, to determine its current state of disintegration.
 - Obtaining a photograph of a rare benthic species suitable for both pictorial and scientific purposes at a location over 10km offshore.
 - Producing photographs of a riverbed to show its physical characteristics at least two photographs taken using a camera and off-camera flash unit. This could be simulated using a simple subject placed in an aquarium tank filled with water. The water should have some ground up material added (leaves rubbed together or similar) to simulate 'murky' or low visibility conditions. One of the photographs must show bad 'backscatter', whilst the other show the 'backscatter' minimised by the use of an appropriate photographic technique.

Guidance

Key Skills signposting

As candidates are working towards the outcomes of this unit, there are opportunities for Key Skills development in the following Level 4 Key Skills units:

Improving own learning and performance

LP4.3 Evaluate your overall strategy and present the outcomes of yours.

Problem solving

PS4.1 Develop a strategy for using skills in problem solving.

Links with other units/qualifications

This unit has links with the following National Occupational Standards/City & Guilds NVQ units in Photography and Photographic Processing:

Unit 1 Contribute to effective performance at work L3

Unit 2 Establish and maintain positive working relations L3+L4

Unit 3 Contribute to the maintenance of health, safety and security at work L3

Unit 4 Establish and maintain a healthy, safe and secure workplace L4

Unit 7 Discuss, develop and agree the photo imaging brief L4

Unit 8 Manage photo imaging activities L3+L4

Unit 9 Establish and maintain the quality of workplace performance L3+L4

Unit 12 Present work to customers and potential customers L3+L4

Unit 17 Organise and carry out photographic assignments L3+L4

Unit 20 Take specified photographs L3

Unit 21 Conceive and take photographs L4

Delivery advice

This unit should involve approximately 100 hours of study – 40 of which should be through guided learning.

This unit is substantially theoretical. It covers the relatively limited array of underwater photographic problems and their solutions. It also shows candidates that there are many other factors to be taken into consideration which are essential for the successful outcome of a photographic shoot. Many are logistical. Some are of a legal nature, including health and safety requirements. Others (insurance etc) are also a mandatory part of this sector of photography.

As the underwater environment imposes severe limitations on the photographer, this unit also shows substantial research into the potential problems likely to be encountered is essential before actually undertaking work underwater. This requirement also applies to many other areas of photography.

In addition, candidates should have access to a well-resourced learning centre/library with a stock of relevant materials for reference purposes. Access to a facility with IT provision needs to be available on a flexible basis to allow the candidate to produce the evidence required for assessment. Access to information within the candidate's support organisation is also necessary in order to draw upon both valuable and current evidence of activity relevant to the content of this unit.

Candidates undertaking this unit will have opportunities to develop strategies which allow them to review their ability to undertake an assignment and the requirements of that assignments prior to actually carrying it out, or what the alternatives for production of similar images may be (if appropriate).

Assessments should be practical and realistic and relate to current sector practice. If candidates are currently working in the sector, there will be opportunities for them to draw evidence from activities carried out in the workplace as agreed by their employer. Candidates should be encouraged to investigate and critically review current trends and innovative practice and use a range of resources to gather data. Valuable information can be obtained through visits to organisations and from presentations given by guest speakers.

Where appropriate, reference should be made to relevant legislation, British Standards and industry codes of practice. Similarly safe working methods and health and safety precautions should be applied, as necessary.

Appropriate centre staff should agree the title and outline of the report to be presented for assessment prior to commencement. Evidence presented should be the candidates' own work and candidates are expected to plan and carry out their assessments independently.

Suggested resources list

This is a very specialised unit with relatively few textbooks and research material. However, the following include useful information:

Master Guide for Underwater Digital Photography, Jack Drafahl (Amherst Media, 2005)

The Essential Underwater Photography Manual: A Guide to Creative Techniques and Key Equipment, Larry and Denise Tackett (Rotovision, 2005)

Successful Underwater Photography, Brian Skerry & Howard Hall (Amphoto Books, 2002)

Unit 12

Quality management in photographic laboratories

Unit summary

This unit covers the quality control of photographic processing laboratories. As a senior member of staff, the candidate will be in charge of the input and output of the laboratory and will be called upon to advise staff and provide process control to ensure that all outgoing work meets the highest possible consistency and quality. In the process the candidate will develop and implement chemical and electronic control techniques designed to raise the overall standards of the business in which they work.

In this unit, the candidate will have the opportunity to consider the major importance of health and safety issues as they affect the use and disposal of chemicals, as well as the impact of chemical costs on the financial viability of the laboratory.

Successful achievement of this unit is dependent upon candidates meeting the assessment requirements and outcomes and producing work of a satisfactory and reliable standard.

Aims

This unit aims to enable the candidate to:

- acquire chemical and electronic process control skills at a high craft level
- understand and observe the legal and statutory requirements relevant to the operation of a processing laboratory
- evaluate, update and improve the control of processing laboratory operations
- analyse the financial viability of the operation and how it can be improved
- review the progress and direction of their studies.

Outcomes

On successful completion of the unit the candidate will be able to:

- 1 demonstrate and define the working practices required by personnel working at senior practitioner/manager level in laboratory process control including trouble shooting and problem solving
- 2 demonstrate a full understanding of the legal and statutory requirements which affect photographic processing laboratories
- 3 analyse the financial viability of processing laboratory operations
- 4 critically evaluate processing laboratory operations
- 5 update and implement improvements to processing laboratory operations including the impact that information technology can have on laboratory efficiencies.

Unit 12 Quality management in photographic laboratories

Unit content

Outcome 1

Demonstrate and define the working practices required by personnel working at senior practitioner/manager level in laboratory process control including trouble shooting and problem solving

The candidate knows how to:

- identify the main points in each process where quality can be compromised and introduce appropriate process control solutions to maintain quality including the use of chemical analysis
- implement, initiate and control good laboratory practices including the use of infra red cameras for darkroom areas and regular process control checks
- ensure that all statutory health and safety procedures are followed
 - Health and Safety at Work Act 1974
 - Fire Precautions Act 1971
 - Risk analysis (RIDDOR)
 - Supply and use of Personal Protective Equipment (PPE)
 - Accident and first aid requirements
- obtain and use sound process control data to provide advance warning of problems
- implement and analyse sound trouble shooting procedures and provide timely solutions to processing problems based on accurate process control data.

Outcome 2

Demonstrate a full understanding of the legal and statutory requirements which affect photographic processing laboratories

- implement, initiate and control the requirements of the relevant legislation applicable to photographic processing laboratories
- detail the chemical handling requirements for processing laboratory operations
 - COSHH (Control of Substances Hazardous to Health) regulations
 - MSDS (Material Safety Data Sheets) literature
 - first aid
 - eve bath stations
 - chemical reactions of contamination
 - Water Industries Act 1991
 - Environmental Protection Act 1990
 - Collection and Disposal of Waste Regulations 1988
 - Health and Safety at Work Act 1974
 - Control of Pollution Act 1974
 - Public Health Act 1961
- detail the other legal considerations relating to processing laboratory operations
 - contract law
 - sale of goods/trades descriptions
 - discrimination (equal opportunities)
 - customer property
 - customer debt right of lien

Unit 12 Quality management in photographic laboratories

- Fire Precautions Act 1971
- Occupiers Liability Act 1957
- regulations affecting fire extinguishers, fire and smoke alarms
- evacuation procedures
- risk assessment (RIDDOR)
- safe handling
- electrical safety

Outcome 3

Analyse the financial viability of processing laboratory operations

- analyse the financial viability of processing laboratory operations
 - budgets
 - targets
 - competitiveness
 - sales data
 - income
 - gross/net profits
 - profit and loss
 - balance sheets
- analyse the sales and marketing aspects of processing laboratory operations
 - merchandising
 - targeting
 - promotions
 - sales statistics
 - sales skills
 - sales training
- analyse human resources
 - workforce
 - staff/management ratios
 - job skills
 - work patterns
 - full time staff
 - part time staff
 - temporary staff
 - seasonal staff
 - training
 - discipline
 - grievance
 - redundancy/dismissal
- analyse the quality of processing laboratory operations
 - standards of service
 - staff accountability
 - customer service
 - environmental issues
 - product quality
 - customer loyalty
 - repeat business
 - value for money

Unit 12 Quality management in photographic laboratories

Outcome 4

Critically evaluate processing laboratory operations

The candidate knows how to:

- critically evaluate processing laboratory operations
 - customer feedback
 - efficiency
 - staff skills
 - equipment dependency
 - quality
 - performance
 - business activity
 - repeat business
 - supplier's dependability
- evaluate the financial aspects of processing laboratory operations
 - capital used
 - revenue
 - costs
 - yield management
 - gross/net profits
 - profit and loss
 - balance sheet
- critically evaluate own practical work considering the following:
 - the way objectives, planning and managing time were met
 - how well practical assessment activity was managed
 - how well problems and quality deficiencies were anticipated and resolved
 - how effectively the processing laboratory operations were organised and supervised
 - to what extent their work contributed to the overall success of the business
- give both subjective and objective conclusions about the activities of processing laboratories operations.

Outcome 5

Update and implement improvements to processing laboratory operations including the impact that information technology can have on laboratory efficiencies

- update and improve processing laboratory operations
 - analyse
 - implement change
 - gradual or radical change
 - innovative ideas
 - make decisions
 - manage change
 - short and long term planning
 - environmental issues

Unit 12 Quality management in photographic laboratories

- evaluate benefits
 - increased sales
 - improved service
 - increased profit
 - improved customer perception

Assessment

The outcome of this unit will be assessed on the production of a word-processed report of approximately 2500 words to include the following.

- Planning, implementation, analysis and evaluation of activities (practical or case studies) involving the effective management of processing laboratory operations. These records and results must show the candidate has:
 - implemented the processing laboratory services
 - monitored and analysed the process
 - dealt with any problems which occurred
 - evaluated the services
 - updated and implemented improvements to the laboratory operation
- Subjective and objective conclusions about the quality management methods investigated
- Demonstration of practice of process control and evaluation management.

Guidance

Key Skills signposting

As candidates are working towards the outcomes of this unit, there are opportunities for Key Skills development in the following Level 4 Key Skills units:

Communication

- C4.1 Develop a strategy for using communication skills over an extended period of time
- C4.3 Evaluate your strategy and present the outcomes from your work, using at least one formal oral presentation. Include a variety of verbal, visual and other techniques to illustrate your points.

Application of number

- N4.2 Monitor progress and adapt your strategy, as necessary, to achieve the quality of outcomes required in work involving deductive and inferential reasoning and algebraic manipulation.
- N4.3 Evaluate your overall strategy and present the outcomes from your work, including the use of charts, diagrams and graphs to illustrate complex data.

Information and communication technology

- ICT4.2 Monitor progress and adapt your strategy, as necessary, to achieve the quality of outcomes required in work involving the use of ICT for two different complex purposes.
- ICT4.3 Evaluate your overall strategy and present the outcomes from your work using at least one presentation, showing integration of text, images and numbers.

Unit 12 Quality management in photographic laboratories

Improving own learning and performance

- LP4.1 Develop a strategy for improving your own learning and performance.
- LP4.2 Monitor progress and adapt your strategy to improve your performance.

Problem solving

- PS4.1 Develop a strategy for problem solving.
- PS4.2 Monitor progress and adapt your strategy for solving the problem.

Links with other units/qualifications

In order to successfully complete this unit, the candidate is likely to have completed an N/SVQ level 3 in professional laboratory processing or have extensive experience within this sector of the industry.

This unit has links with the following National Occupational Standards/City & Guilds NVQ units in Photography and Photographic Processing:

- Unit 1 Contribute to effective performance at work L3
- Unit 2 Establish and maintain positive working relations L3+L4
- Unit 3 Contribute to the maintenance of health, safety and security at work L3
- Unit 45 Start up and shut down laboratory equipment L3
- Unit 46 Contribute to the effectiveness of laboratory activities L3
- Unit 48 Process exposed films L3
- Unit 49 Print photographic images by machine L3
- Unit 51 Process printed images by machine L3
- Unit 52 Maintain the quality of the photographic chemistry L3

Unit 12 Quality management in photographic laboratories

Delivery advice

This unit should involve approximately 100 hours of study – 40 of which should be through guided learning.

There is a need for the candidates to have access to professional laboratory services. They should also have access to and know how to use chemical analyses equipment to cheek for levels of bromine and sulphite. Such analytical equipment is available from specialist suppliers.

In addition, candidates should have access to a well-resourced learning centre/library with a stock of relevant materials for reference purposes. Access to a facility with IT provision needs to be available on a flexible basis to allow the candidate to produce the evidence required for assessment. Access to information within the candidate's support organisation is also necessary in order to draw upon both valuable and current evidence of activity relevant to the content of this unit.

Assessments should be practical and realistic and relate to current sector practice. If candidates are currently working in the sector, there will be opportunities for them to draw evidence from activities carried out in the workplace as agreed by their employer. Candidates should be encouraged to investigate and critically review current trends and innovative practice and use a range of resources to gather data. Valuable information can be obtained through visits to organisations and from presentations given by guest speakers.

Where appropriate, reference should be made to relevant legislation, British Standards and industry codes of practice. Similarly safe working methods and health and safety precautions should be applied, as necessary.

Appropriate centre staff should agree the title and outline of the report to be presented for assessment prior to commencement. Evidence presented should be the candidates' own work and candidates are expected to plan and carry out their assessments independently.

Suggested resources list

This is a very specialised unit with relatively few textbooks and research material. However, the following include some useful information:

Process control manuals for processes C6R, CN-16 and CP-21 (Fuji Photo Film) Process control manuals for processes E-6, C-41 and RA-4 (Eastman Kodak) Process control manuals for processes AP44, AP72 and AP94 (Agfa) Chemical analysis in photography G Russell This page is intentionally blank

Unit 13

Interactive media design production

Unit summary

This unit encompasses a wide range of primarily digital media production that can be used in the design of computer interactive media packages such as CD ROM Web Page design etc.

Image recording will usually be by video or sequential imagery on film and will include sound recording.

This unit will enable the candidate to understand and appreciate photographic image making within a time-based context.

Successful achievement of the unit is dependent upon candidates meeting the assessment requirements and outcomes and producing work of a satisfactory and reliable standard.

Aims

This unit aims to enable the candidate to:

- access a range of time-based digital media
- select from a range of interactive media outcomes consistent of target audience and brief
- select appropriate media to produce sequences either stills or video for the interactive media design
- plan, script and storyboard a short digital media sequence
- use camera techniques and lighting
- use sound recording and production
- use hardware and software applications to input source video, sound and photographic materials
- use hardware and software applications to edit, design and produce assigned output
- evaluate the aesthetic and communication qualities of finished output.

Outcomes

On successful completion of this unit the candidate will be able to:

- 1 discuss project needs and plan, organise and negotiate the production of still and moving image sequence capture required for the interactive media package
- 2 produce storyboard, shooting script, sound script and outline design
- 3 record digital image and video pieces required for final media output, saving and storing to achieve maximum quality
- 4 edit still images and video sequences, using a range of digital editing and image manipulation software, as appropriate
- 5 design and produce a short digital media product, effectively using input and output devices, to meet the requirements of the brief
- 6 evaluate the communication and aesthetic qualities of the design and output selection.

Unit content

Outcome 1

Discuss project needs and plan, organise and negotiate the production of still and moving image sequence capture required for the interactive media package

The candidate knows how to:

- evaluate and assess project needs with reference to aims of the project and target audience
- discuss and agree means of interactive media output of final production taking into consideration presentation hardware and software packages required
- negotiate and agree the production details eg timescale, methodology, costing
- make the most suitable selection of media to be used in final design/product
- identify and formulate production methodology

Outcome 2

Produce storyboard, shooting script, sound script and outline design

The candidate knows how to:

- assess the potential of a full range of photographic/video processes
- produce storyboard for short media pieces for either video or sequence stills recording
- produce shooting script with full consideration of final presentation format
- select range of equipment required
- plan audio input including sound effects, voice over, wild sound

Outcome 3

Record digital image and video pieces required for final media output, saving and storing to achieve maximum quality

- select and use video or still camera to record required imagery
- work to shooting script in an organised fashion and maintain continuity
- review imagery produced and implement necessary changes as required
- prepare video/photographic production for digital input to computer
- use computer peripherals to download video footage and/or photographic images and sound recordings
- select appropriate mechanism to digitally save and store video and photographic materials.

Outcome 4

Edit still image and video sequences, using a range of digital editing and image manipulation software, as appropriate

The candidate knows how to:

- select from and use a range of digital editing and manipulation software
- demonstrate a working knowledge of digital editing techniques
- apply pre-recorded sound to digital video and/or photographic sequences
- demonstrate and understanding of narrative, and sequential communication

Outcome 5

Design and produce a short digital media product, effectively using input and output devices, to meet the requirements of the brief

The candidate knows how to:

- input moving image or still photographic sequences produced into digital media package
- use image resolution appropriate to the final output
- ensure that the final works can be accessed and viewed by the client and are compatible with the clients software/hardware systems
- comply with relevant copyright legislation

Outcome 6

Evaluate the communication and aesthetic qualities of the design and output selection.

- review effectiveness of the communication of the design
- evaluate the material selections and aesthetic choices made in the design and production
- state alternative solutions

Assessment

The outcomes of this unit will be assessed on the production of one finished interactive media production as part of either a web site design, a CD ROM or a data projection show.

All preparation material demonstrating outcomes 1-6 should be included in a production file with a word processed report of 1500 words to include a full evaluation.

The finished production viewing conditions and equipment should be arranged by the candidate.

Candidates will be expected to produce the following:

- Documented evidence of research, planning and organisation.
- ONE finished master CD plus TWO copies
- Planning scripts
- Evidence of design ideas and decision making
- An analysis of the final images in terms of quality and methods used in production together with comments on suitability for the purpose.

Guidance

Key Skills signposting

As candidates are working towards the outcomes of this unit, there are opportunities for Key Skills development in the following Level 4 Key Skills units:

Information and communication technology

- ICT4.1 Develop a strategy for using ICT skills over an extended period of time
- ICT4.2 Monitor progress and adapt your strategy, as necessary, to achieve the quality of outcomes required in work involving the use of ICT for two different complex purposes.
- ICT4.3 Evaluate your overall strategy and present the outcomes from your work using at least one presentation, showing integration of text, images and numbers

Improving own learning and performance

- LP4.1 Develop a strategy for your own learning and performance.
- LP4.2 Monitor progress and adapt your strategy, to improve your performance.

Problem solving

- PS4.1 Develop a strategy for problem solving.
- PS4.2 Monitor progress and adapt your strategy for solving the problem.
- PS4.3 Evaluate your strategy and present the outcomes of your problem solving skills.

Links with other units/qualifications

The unit has links with the following units within this qualification:

Unit 3 Image management – digital recording and electronic manipulation

Unit 14 Moving image production (video)

This unit also has links with the following National Occupational Standards in Interactive Media:

- IM1 Work effectively in interactive media L3
- IM2 Obtain assets for use in interactive media products L3
- IM3 Prepare assets for use in interactive media products L3
- IM4 Prepare user interface assets for interactive media products L4
- IM5 Design user interfaces for interactive media products L5
- IM6 Use authoring tools to create interactive media products L4
- IM24 Create 2D animations for interactive media products L4
- IM27 Create sound effects for interactive media products L4
- IM28 Create music for interactive media products L4

Delivery advice

This unit should involve approximately 100 hours of study -40 of which should be through guided learning.

Candidates should have access to a well-resourced learning centre/library with a stock of relevant materials for reference purposes. Access to a facility with IT provision needs to be available on a flexible basis to allow the candidate to produce the evidence required for assessment. Access to information within the candidate's support organisation is also necessary in order to draw upon both valuable and current evidence of activity relevant to the content of this unit.

This unit is designed to extend the candidate's skills and cognitive processes and it will be expected that centres direct candidates by designing customised briefs to meet the unit outcomes.

Assessments should be practical and realistic and relate to current sector practice. If candidates are currently working in the sector, there will be opportunities for them to draw evidence from activities carried out in the workplace as agreed by their employer. Candidates should be encouraged to investigate and critically review current trends and innovative practice and use a range of resources to gather data. Valuable information can be obtained through visits to organisations and from presentations given by guest speakers.

Where appropriate, reference should be made to relevant legislation, British Standards and industry codes of practice. Similarly safe working methods and health and safety precautions should be applied, as necessary.

Appropriate centre staff should agree the title and outline of the report to be presented for assessment prior to commencement. Evidence presented should be the candidates' own work and candidates are expected to plan and carry out their assessments independently.

Suggested resources list

An extended range of textbooks and reference materials are available to students undertaking research studies in multimedia design production, including the following:

Electronic Imaging for Photographers, P. Fennessy (Focal Press)
Photoshop for Windows & Macintosh, E. Weinmann, P. Lourekas (Peachpit Press)
Digital Graphic Design, Ken Pender
Adobe Photoshop 5.5 for Photographers, Martin Evening (Focal Press) which
includes tutorial CD-Rom for PCs and Apple Macs
The Screen Education Reader: Cinema, Television, Culture, Buscombe & Collins
Basics of Video Production, Ly Ver, (Focal Press)
Digital non-linear editing, Ohanian, T. (Focal Press)
Designing Multimedia Web Sites, Gassaway, S. (Haydon Books)
Getting started in Multimedia Design, Olsen, G. (North Light Books)

Unit 14

Moving image production (video)

Unit summary

The unit will enable the candidate to explore the developments in moving image recording and production techniques, and to explore the potential of the medium and its inter-relationship with still image recording.

As with digital still-image making, the recorded images can be manipulated electronically through computer software, and in so doing produce sophisticated fully edited moving image programmes for a range of purposes.

The unit will call on a range of skills including programme planning, use of design for titles and graphics, as well as camera operating and editing via electronic and digital methods. The production of the finished tape programme should be all encompassing and include evidence of knowledge, advanced skills and techniques.

Successful achievement of this unit is dependent upon candidates meeting the assessment requirements and outcomes and producing work of a satisfactory and reliable standard.

Aims

The unit aims to enable the candidate to:

- plan script and storyboard a video programme
- · use camera techniques and lighting
- use sound recording and production
- raise awareness of the range and scope of the medium
- use hardware and software applications for making the programme
- use an innovative approach to image recording and final tape editing
- save, store and copy images
- manage the assignment in keeping with target audience and client brief
- evaluate the range of uses and their aesthetic qualities
- explore and evaluate the ethical, social and cultural implications, through the application of video programmes.

Outcomes

On successful completion of this unit the candidate will be able to:

- 1 discuss, negotiate and plan a video production with a client
- 2 produce storyboard, shooting script, sound script and editing script
- 3 organise and manage the video production to meet client needs and deadlines
- 4 demonstrate expertise in video camera production and team direction in recording scenes and undertaking the editing of moving image clips, titling, transitions and sound mixing specific to client requirements
- 5 save and store created productions for public viewing, and produce copies, maintaining optimum image quality
- 6 prepare a critical analysis and document against the brief requirements, to include image quality, techniques, the social implications of the production, the market context for which the production was planned to operate.

Unit content

Outcome 1

Discuss, negotiate and plan a video production with a client

The candidate knows how to:

- evaluate and interpret the client needs in keeping with the purpose and target audience
- discuss and agree the requirements eg, purpose, timescale, production costs.
- identify and formulate production methodology

Outcome 2

Produce storyboard, shooting script, sound script and editing script

The candidate knows how to:

- produce a story board, to include pictorial representation of the scene
- plan audio cues, voice-overs, fades, SXF (sound effects) and full camera shooting instruction Long-shot, Med-shot, Close-up, camera angles (High, Low) and camera movement (panning) etc
- demonstrate a working knowledge of editing techniques, both sound and vision
- demonstrate a working knowledge of design implication within the overall production

Outcome 3

Organise and manage, the video production to meet client needs and deadlines

The candidate knows how to:

- use the shooting script and organise properties and other factors to maintain continuity
- plan and manage location videography and transportation of equipment
- review rough cut recorded images and plan and implement changes to requirements
- describe and select recording formats, outline function and application equipment types for capture, editing sound and vision.

Outcome 4

Demonstrate expertise in video camera production and team direction in recording scenes and undertaking the editing of moving image clips, titling, transitions and sound mixing specific to client requirements

- use a range of video cameras
- arrange and direct camera lighting
- direct production team
- list types of editing and equipment format
- use linear and/or non linear editing techniques
- use digital editing software
- use editing terminology eg, cut-aways, cut-ins insert, transitions
- demonstrate practical skills in sound recording/mixing /editing
- use time management effectively.

Outcome 5

Save and store created productions for public viewing, and produce copies, maintaining optimum image quality

The candidate knows how to:

- select and use copy equipment for optimum quality
- evaluate quality factors in final production
- identify the limitation of achievable image quality
- store safely free of magnetic field interference.

Outcome 6

Prepare a critical analysis of the final production and document against the brief requirements, to include image quality, techniques, the social implications of the production, in the market context for which the production was planned to operate

The candidate knows how to:

- compare and evaluate final image produced against the brief requirements
- list techniques employed and make a critical judgement about the resulting images
- outline the production techniques used eg, linear non linear editing text, commenting on final quality
- outline the social and ethical considerations of the final production
- demonstrate an awareness of Health and Safety and film crew responsibility to each other
- evaluate risk factors in the production process eg, director/performers/ presenters/film crew.

Assessment

The outcomes of this unit will be assessed on the production of ONE finished video tape or DVD plus TWO production copies.

Evidence of editing skills, linear and/or non-linear must be included.

Candidates should also produce a word processed report of 1500 words minimum. It should show evidence of source reference materials, the all pre-production planning and outlining key decisions, such as all scripting materials, costing, location planning, production team structure and responsibilities.

The **Video Production** should be based on client briefs allowing the candidate to discuss ideas in terms of style of the final presentation. It should show production continuity.

The evidence should include a range of skills from origination to final presentation and may be a combination of analogue and digital recording/editing.

Candidates will be expected to produce the following:

- Documented evidence of research and planning
- Evidence of organisational skills
- ONE finished master plus TWO production copies, tape or DVD
- Planning scripts
- Evidence of design application
- A database of risk
- An analysis of the final images in terms of quality and methods used in production together with comments on suitability for the client purpose.

Guidance

Key Skills signposting

As candidates are working towards the outcomes of this unit, there are opportunities for Key Skills development in the following Level 4 Key Skills units:

Communication

- C4.1 Develop a strategy for using communication skills over an extended period of time
- C4.3 Evaluate your overall strategy and present the outcomes from your work, using at least one formal oral presentation. Include a variety of verbal, visual and other techniques to illustrate your points.

Application of number

- N4.2 Monitor progress and adapt your strategy, as necessary, to achieve the quality of outcomes required in work involving deductive and inferential reasoning and algebraic modelling.
- N4.3 Evaluate your overall strategy and present the outcomes from your work, including the use of charts, diagrams and graphs to illustrate complex data.

Information and communication technology

- ICT4.2 Monitor progress and adapt your strategy, as necessary, to achieve the quality of outcomes required in work involving the use of ICT for two different complex purposes.
- ICT4.3 Evaluate your overall strategy and present the outcomes from your work using at least one presentation, showing integration of text, images and numbers.

Improving own learning and performance

- LP4.1 Develop a strategy for improving your own learning and performance.
- LP4.2 Monitor progress and adapt your strategy to improve your performance.

Problem solving

- PS4.1 Develop a strategy for problem solving.
- PS4.2 Monitor progress and adapt your strategy, for solving the problem.

Links with other units/qualifications

This unit should be used to expand the candidate's specialism using both traditional (film) and digital capture and editing. It will be expected that candidates will have the skills to facilitate achievement of other units in the qualification including Unit 1 Photographic image creation, Unit 2 Image management – Film recording and darkroom processes, Unit 3 Image management – digital recording and electronic manipulation and Unit 6 Photographic design and reproduction.

This unit also has links with the following National Occupational Standards/City & Guilds NVQ units in Photography and Photographic Processing:

- Unit 1 Contribute to effective performance at work L3
- Unit 2 Establish and maintain positive working relations L3+L4
- Unit 3 Contribute to the maintenance of health, safety and security at work L3
- Unit 4 Establish and maintain a healthy, safe and secure workplace L4
- Unit 6 Contribute to the development of the photo imaging brief L3
- Unit 7 Discuss, develop and agree the photo imaging brief L4
- Unit 8 Manage photo imaging activities L3+L4
- Unit 9 Establish and maintain the quality of workplace performance L3+L4
- Unit 16 Store and retrieve photographic equipment and material L3+L4
- Unit 17 Organise and carry out photographic assignments L3+L4

Delivery advice

This unit should involve approximately 100 hours of study – 40 of which should be through guided learning.

Candidates should have access to a well-resourced learning centre/library with a stock of relevant materials for reference purposes. Access to a facility with IT provision needs to be available on a flexible basis to allow the candidate to produce the evidence required for assessment. Access to information within the candidate's support organisation is also necessary in order to draw upon both valuable and current evidence of activity relevant to the content of this unit.

The unit is designed to extend candidate skills and cognitive processes and it will be expected that centres direct candidates by designing customised client briefs to meet the unit outcomes.

Assessments should be practical and realistic and relate to current sector practice. If candidates are currently working in the sector, there will be opportunities for them to draw evidence from activities carried out in the workplace as agreed by their employer. Candidates should be encouraged to investigate and critically review current trends and innovative practice and use a range of resources to gather data. Valuable information can be obtained through visits to organisations and from presentations given by guest speakers.

Where appropriate, reference should be made to relevant legislation, British Standards and industry codes of practice. Similarly safe working methods and health and safety precautions should be applied, as necessary.

Appropriate centre staff should agree the title and outline of the report to be presented for assessment prior to commencement. Evidence presented should be the candidates' own work and candidates are expected to plan and carry out their assessments independently.

Suggested resources list

Video Production Handbook Millerson (Focal Press)

Periodicals

Focus (Institute of Videography) Computer arts Video Camera Camcorder

Unit 15

Photographic fine art imaging

Unit summary

This unit provides the opportunity to use and develop skills for self-expression and personal statement through the production of photographic works by traditional and digital methods.

Candidates will be expected to undertake extensive research into the production of images using innovative techniques and visual experimentation.

Successful achievement of this unit is dependent upon candidates meeting the assessment requirements and outcomes and producing work of a satisfactory and reliable standard.

Aims

The unit aims to enable the candidate to:

- research and develop research methodology to underpin the creative process
- develop concepts that explore issues of self, society, environment and/or cultural issues
- investigate a range of creative approaches in the realisation of ideas and concepts
- produce a body of creative individual work and suitable presentation formats

Outcomes

On successful completion of the unit the candidate will be able to:

- 1 develop ideas and concepts that can be realised through image making, considering the relevance of contemporary and historical photographic image making and artistic practice
- 2 demonstrate the exploration of the potential of a range of materials, processes, tools and equipment
- 3 apply the principles of craftsmanship, adaptability and innovation to personal expression
- 4 present a body of personal work in a format that enhances and facilitates the realisation of original concept
- 5 evaluate the completed works in terms of innovation, creativity, meanings, communication and fitness for purpose

Unit content

Outcome 1

Develop ideas and concepts that can be realised through image making, considering the relevance of contemporary and historical photographic image making and artistic practice

The candidate knows how to:

- assess the impact of a range of artists and image makers on personal work and concept development
- incorporate research into the development of original concept
- reconcile and make use of a range of alternative ideas
- explore contemporary issues of identity, society and cultural communication
- use a variety of viewpoints when working towards a personal response
- use a flexible approach which responds to ongoing practice and methodologies.

Outcome 2

Demonstrate the exploration of the potential of a range of materials, processes, tools and equipment

The candidate knows how to:

- research and assess the potential of a full range of photographic processes, materials and equipment, both digital and traditional for the production of a body of personal work
- respond to the results produced, and incorporate those responses into the ongoing development of the work.

Outcome 3

Apply the principles of craftsmanship, adaptability and innovation to personal expression

- use effectively, a range of techniques, processes and skills to ensure that the work meets the necessary standards
- compare a variety of processes and materials and select the most appropriate for the work
- recognise and identify excellence in terms of skills and technique
- discuss project work and acquire feedback from associates and tutors in terms of qualities of ongoing practice and improvements to be incorporated.

Outcome 4

Present a body of personal work in a format that enhances and facilitates the realisation of original concept

The candidate knows how to:

- demonstrate and apply a range of theoretical and practical creative skills in the design and production of the presentation of final output
- combine visual and verbal communication processes to enhance the effective presentation of the personal work produced
- analyse how the various methods of presenting imagery can effect and alter meanings derived from the work.

Outcome 5

Evaluate the completed works in terms of innovation, creativity, meanings, communication and fitness for purpose

The candidate knows how to:

- identity and explain modifications during the production process
- evaluate the work from a well informed personal perspective that takes account of contemporary theories and practice
- analyse the effectiveness of the communication of the initial concept in the completed work

Assessment

The outcomes of this unit will be assessed through an exhibition/presentation of images produced through traditional and/or digital means. The concept development and the methodology of the work will be assessed through a 'visual diary' which should include references (artistic, photographic and cultural) both written and visual, and a fully documented creative process.

A presentation to the group of the work to include specific references and process will also form part of the assessment.

Guidance

Key Skills signposting

As candidates are working towards the outcomes of this unit, there are opportunities for Key Skills development in the following Level 4 Key Skills units:

Communication

C4.3 Evaluate your overall strategy and present the outcomes from your work, using at least one formal oral presentation. Include a variety of verbal, visual and other techniques to illustrate your points.

Improving own learning and performance

- LP4.1 Develop a strategy for improving your own learning and performance.
- LP4.2 Monitor progress and adapt your strategy to improve your performance.

Problem solving

PS4.2 Monitor progress and adapt your strategy for solving the problem.

Links with other units/qualifications

This unit has links with the following National Occupational Standards/City & Guilds NVQ units in Photography and Photographic Processing:

Unit 7 Discuss, develop and agree the photo imaging brief L4

Unit 8 Manage photo imaging activities L3+L4

Unit 9 Establish and maintain the quality of workplace performance L3+L4

Unit 47 Discuss and agree the supply of laboratory services L3

Delivery advice

This unit should involve approximately 100 hours of study – 40 of which should be through guided learning.

In the chosen context, the candidate should have access to:

- library and data for reference purposes
- professional expertise
- photographic image making equipment for technical development and exploration of ideas
- darkroom and processing facilities or the digital equivalent
- presentation facilities

Access to information within the candidate's support organisation is also necessary in order to draw upon both valuable and current evidence of activity relevant to the content of this unit.

Assessments should be practical and realistic and relate to current sector practice. If candidates are currently working in the sector, there will be opportunities for them to draw evidence from activities carried out in the workplace as agreed by their employer. Candidates should be encouraged to investigate and critically review current trends and innovative practice and use a range of resources to gather data. Visits to galleries and exhibitions should be encouraged.

Where appropriate, reference should be made to relevant legislation, British Standards and industry codes of practice. Similarly safe working methods and health and safety precautions should be applied, as necessary.

Appropriate centre staff should agree the title and outline of the report to be presented for assessment prior to commencement. Evidence presented should be the candidates' own work and candidates are expected to plan and carry out their assessments independently.

It should be noted, however, that the direction of the work may deviate from the initial concept and agreement, in response to ongoing feedback and progress. This should not affect the assessment provided the alterations are documented.

Candidates should review their work at all stages and respond to this review process and to feedback from tutors.

With work of this nature it is important that candidates do not judge their work in isolation but as part of an ongoing contemporary practice which has an international context.

Suggested resources list

Photography, A Critical Introduction Liz Wells (ed.) (Routledge)
The Photograph G Clarke (Oxford University Press)
Seeing The Light Rhondda Wilson (Nottingham University Press)

Monographs

For example: Cape Light Joel Meyerowitz (Museum of Fine Arts, Boston) Ray's a Laugh Richard Billingham (Richard Billingham) Zoo Britta Zaschinski (Phaidon) This page is intentionally blank

Unit 16

Photography for advertising

Unit summary

This unit is about developing skills and understanding of the techniques in photography for advertising.

The candidate will be called upon to demonstrate skills in the studio and on location to senior practitioner/manager level in order to raise the standards of photography for advertising in the organisation in which they work. The candidates will work to the client brief and demonstrate interpersonal skills in dealing with clients and colleagues in the world of advertising and publicity.

In this unit, candidates will have the opportunity to consider healthy and safe working practices, as well as how moral, ethical, social and environmental issues affect people working at senior/manager level in the photographic and related industries.

Successful achievement of this unit is dependent upon candidates meeting the assessment requirements and outcomes and producing work of a satisfactory and reliable standard.

Aims

This unit aims to enable the candidate to:

- research the structure of, the job roles in, and the methodology of the advertising industry
- develop high level practical skills
- investigate, demonstrate, and critically evaluate professional practices in advertising photography at senior practitioner/manager level
- develop their own creative and innovative ideas
- review the progress and direction of their study/work.

Outcomes

On successful completion of the unit the candidate will be able to:

- 1 describe the personnel involved, methods of working and the role of the advertising industry
- 2 demonstrate high level practical skills and abilities in advertising photography
- 3 develop own creative and innovative ideas, skills, and techniques
- 4 prepare accurate costing and time plans for a variety of commissions and assignments
- 5 critically review their own professional practices in advertising photography.

Unit content

Outcome '

Describe the personnel involved, methods of working and the role of the advertising industry

The candidate knows how to:

- define the roles of key personnel in the advertising industry, including agency staff, photographic team, design team and web publisher/print publisher
- research the processes of advertising, including marketing, campaigns, concepts, house styles and the understanding of moral and ethical implications
- identify and describe the output of advertising, including moving image, television and cinema, still image, newspapers, catalogues, brochures, leaflets, magazines, mail shots, new media, internet, intranet, world wide web, time phased moving image, interactive CD
- demonstrate the ability to evaluate the verbal and written instruction of a client brief in order to meet the client needs
- employ the correct imaging methodology to interpret client briefs
- use the design techniques practised in current and contemporary advertising
- demonstrate an understanding of the legislative restrictions and cultural issues that affect the photographer in advertising such as:
 - Advertising Standards Authority
 - Independent Television Commission
 - national government legislation
 - professional bodies and trade organisations
 - ethnic and cultural representation
 - image manipulation and control
 - contemporary attitudes and values in society.

Outcome 2

Demonstrate high level practical skills and abilities in advertising photography

- interpret the client brief or realise a concept in visual language
- organise the studio environment for effective working, observing relevant health and safety, and other legal requirements
- select and use a range of conventional and digital camera types and formats for use on advertising assignments in the studio or on location
- use a range of camera attachments and light reading accessories used in photography in the studio and on location
- demonstrate, through portfolio examples, the effect of the main forms of natural, tungsten and electronic flash lighting used in location and studio photography
- use a range of lighting units and accessories available for studio and location work

- demonstrate fundamental lighting techniques required for setting up a variety of arrangements for photography in the studio eg for professional models, still life, small and large sets
- demonstrate techniques on location eg for architectural and industrial, interiors and exteriors, advertising and editorial subjects
- demonstrate an understanding of specialised construction techniques in the studio eg for still life sets, portrait and full length sets for professional models, and silverware, glassware or self-illumination
- assess the suitability of each light source for different tasks undertaken in the studio or on location, such as natural, prevailing light, tungsten, electronic flash and HMI (Hydragyrum Medium arc-length lodide) lighting
- describe the principles and effects of various forms of lighting: direct, diffused, reflected and optically modified
- demonstrate methods of evaluating optimum exposure for a variety of lighting situations using: hand held and built-in daylight and flash meters, reference guides and guide numbers
- identify the factors which should be considered when selecting equipment for a given task and output requirement such as purpose and number of images and choice of format
- provide the facilities required when photographing people in the studio or on location including: changing facilities, provision for children and chaperons, refreshment for long or delayed shoots and first aid
- research and apply the protocol and convention for carrying out advertising photography commissions in the studio, the United Kingdom/Europe or throughout the world.

Outcome 3

Develop own creative and innovative ideas, skills, and techniques

- produce imaginative and original design solutions to a client brief, or to illustrate concepts
- explore new techniques in visual language
- demonstrate suitable camera and lighting techniques to achieve specific visual effects
- research historical, contemporary and international images
- investigate the performance of film and print materials, camera techniques and print output to extend visual experience

Outcome 4

Prepare accurate costing and time plans for a variety of commissions and assignments

The candidate knows how to:

- research and compare fee structures in the industry for a variety of advertising photography commissions
- calculate time, resource requirement and costs for advertising commissions
- produce written plans for:
 - small sets
 - large sets
 - models and properties hire
 - studio hire
 - staff time cost
 - profit margins
 - fees
 - bought-in services and outwork
 - equipment hire
 - specialist services
 - interior locations
 - exterior locations
 - working abroad
- identify sources of business information
- research and record the information for completing business administration documentation.

Outcome 5

Critically review their own professional practices in advertising photography

- · evaluate their own practical work, considering
 - how effectively the work was managed, such as setting objectives, planning and managing time
 - ways of researching using a wide variety of materials and techniques in advertising imaging
 - how practical activities were undertaken
 - how well logistical and visual design problems in concepts or client briefs were anticipated and resolved
 - how successful the result was in illustrating the concept or meeting the client brief
 - how effectively and economically location facilities and materials were
 - to what extent these considerations contributed to the success of the assignments(s)
 - the differing working location practices in advertising, scientific and forensic, fashion and portraiture and fine art/abstract imaging.

Assessment

Assessment of this unit will be based on a range of activities delivered by the production of assignment(s) designed to meet all the unit outcomes. The knowledge element will be demonstrated through evidence of the production of the images, plus the supporting documentation which is mandatory.

Candidates will be expected to produce the following:

- Evidence of research, planning and interpretation of the client brief(s)
- A portfolio of photographs for use in advertising which demonstrate
 - the application of suitable and high level camera skills and lighting techniques
 - creative and artistic ideas, talents and techniques
- Full documentary evidence of:
 - how costs, time, resources were planned and monitored
 - how the client brief was organised and managed
 - production methods used
 - details of how health and safety, and other legal requirements were met
 - stylistic influences
 - legislative restrictions and cultural issues relevant to the brief
- An analysis of how the final images meet the client brief and an evaluation of their own professional practice.

Guidance

Key Skills signposting

As candidates are working towards the outcomes of this unit, there are opportunities for Key Skills development in the following Level 4 Key Skills units:

Communication

- C4.1 Develop a strategy for using communication skills over an extended period of time
- C4.3 Evaluate your overall strategy and present the outcomes from your work, using at least one formal oral presentation. Include a variety of verbal, visual and other techniques to illustrate your points.

Improving own learning and performance

- LP4.1 Develop a strategy for improving your own learning and performance.
- LP4.2 Monitor progress and adapt your strategy of to improve your performance.

Problem solving

- PS4.1 Develop a strategy for problem solving.
- PS4.2 Monitor progress and adapt your strategy, for solving the problem.

Working with others

WO4.1 Develop a strategy for working with others.

WO4.2 Monitor progress and adapt your strategy, to achieve agreed objectives.

Links with other units/qualifications

This unit is closely related to the following units within this qualification: Unit 8 Photographic studio imaging, Unit 9 Photographic location imaging, Unit 17 Fashion photography, Unit 19 Portraiture and social photography, and Unit 20 Corporate (industrial and commercial) photography.

The unit also has links with the following National Occupational Standards/City & Guilds NVQ units in Photography and Photographic Processing:

Unit 3 Contribute to the maintenance of health, safety and security at work L3

Unit 4 Establish and maintain a healthy, safe and secure workplace L4

Unit 6 Contribute to the development of the photo imaging brief L3

Unit 7 Discuss, develop and agree the photo imaging brief L4

Unit 9 Establish and maintain the quality of workplace performance L3+L4

Unit 17 Organise and carry out photographic assignments L3+L4

Unit 20 Take specified photographs L3

Delivery advice

This unit should involve approximately 100 hours of study – 40 of which should be through guided learning.

The candidate should have access to a studio environment, where daylight can be excluded. It should be equipped with a selection of studio flash and/or tungsten lighting, background systems, set building tools and materials, reflectors and diffusers.

For the location work, the candidate should have access to portable, hand and monoblock flash lighting equipment and tungsten lighting suitable for safe transport to locations away from the studio.

A range of traditional (film) camera formats as well as digital capture equipment should be made available to the candidate to meet the requirements of the client-led, studio and location assignments commonly found in Photography for Advertising.

In addition, candidates should have access to a well-resourced learning centre/library with a stock of relevant materials for reference purposes. Access to a facility with IT provision needs to be available on a flexible basis to allow the candidate to produce the evidence required for assessment. Access to information within the candidate's support organisation is also necessary in order to draw upon both valuable and current evidence of activity relevant to the content of this unit.

The unit is designed to enable progression. It will be expected that centres direct candidates by designing customised client briefs to meet the unit outcomes.

Assessments should be practical and realistic and relate to current sector practice. If candidates are currently working in the sector, there will be opportunities for them to draw evidence from activities carried out in the workplace as agreed by their employer. Candidates should be encouraged to investigate and critically review current trends and innovative practice and use a range of resources to gather data. Valuable information can be obtained through visits to organisations and from presentations given by guest speakers.

Where appropriate, reference should be made to relevant legislation, British Standards and industry codes of practice. Similarly safe working methods and health and safety precautions should be applied, as necessary.

Appropriate centre staff should agree the title and outline of the report to be presented for assessment prior to commencement. Evidence presented should be the candidates' own work and candidates are expected to plan and carry out their assessments independently.

Suggested resources list

An extended range of textbooks and reference materials are available to students undertaking research studies in advertising photography, including the following:

Advertising Sandra Bunting (Hodder and Stoughton)
Advanced Photography Michael Langford (Focal Press)
Professional Photography Michael Langford (Focal Press)
The Professional Photographer in Practice Robert Hymers (Focal Press)
Digital Photography Hambler/Green (Pira/BPIF Publishing)
Seeing the Light Rhonda Wilson (The Custard Factory)
Photographing Buildings inside and out Norman McGrath (Focal Press)
Photographing Still Life Seth Joel (Amphoto)
How to Photograph People Bravement and Tarrant (Fountain Press)

Periodicals

British Journal of Photography The Photographer Master Photographer Professional Photography Hot Shoe Campaign Architectural Review This page is intentionally blank

Unit 17

Fashion photography

Unit summary

This unit is about developing the creative skills and knowledge of fashion photography. As a senior member of staff, candidates are likely to be called upon to advise customers on the most visually-effective solution to a fashion photography project and to deliver the solution to the highest possible quality. In the process, candidates will develop and implement innovative techniques designed to raise the overall standards of the business in which they work.

In this unit, candidates will have the opportunity to consider the importance of health and safety issues in relation to the comfort and security of models of all ages, together with the impact of location choice, weather conditions and planning on the success of fashion photography projects.

Successful achievement of this unit is dependent upon candidates meeting the assessment requirements and outcomes and producing work of a satisfactory and reliable standard.

Aims

This unit aims to enable the candidate to:

- acquire high level practical skills
- investigate, demonstrate, and critically evaluate professional practices in fashion photography at the senior practitioner/manager level
- develop their own creative and innovative ideas
- review the progress and direction of their studies/work.

Outcomes

On successful completion of the unit the candidate will be able to:

- 1 research and plan the requirements of fashion photography at Senior Practitioner/management level
- 2 prepare accurate costings and time plans for a variety of fashion images produced for sale to clients
- 3 demonstrate high level of practical skills and abilities in fashion photography and critically evaluate own working practices
- 4 research and develop new techniques for producing fashion images with special emphasis on the role of digital imaging in this sector

Unit content

Research and plan the requirements of fashion photography at senior practitioner/management level

The candidate knows how to:

- identify the factors to be taken into consideration when planning and producing high quality fashion photographs using both silver-based products and digital techniques in both studio settings and outdoor locations, including
 - model selection
 - make up and styling eg choice and control of fashion accessories
 - selection and control of studio lighting
 - choice and control of outdoor settings
 - equipment required
 - customer needs
 - briefing of support personnel, such as make up artists and stylists
 - weather conditions
 - material choice
 - presentation techniques
- obtain and use sound weather data while planning and implementing outdoor fashion photography shots
- justify the choice of approach to be used
 - practical considerations: cost, equipment, material, staff capability, facilities
 - customer needs
 - final image quality
- describe the creative and innovative skills and techniques which could be used
- ensure all relevant legal requirements are met including those that apply to children
- identify safe and unsafe practices and the consequences of failing to meet safety standards.

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Outcome 2

Prepare accurate costings and time plans for a variety of fashion images produced for sale to clients

The candidate knows how to:

- calculate costs for the production of both silver-based images and digital images taking account of
 - purchase specifications
 - equipment costs
 - material costs
 - costs of hiring suitable locations, make up artists, stylists and support staff
 - image processing costs
 - presentation costs
 - profit margins
 - selling prices
- produce written time plans
 - pre-production briefing
 - studio or location timings
 - de-briefing
 - imaging processing
 - presentation
- produce detailed invoices.

Outcome 3

Demonstrate high level of practical skills and abilities in fashion photography and critically evaluate own working practices

- select appropriate methods for the production of high class fashion images including the choice of equipment and materials
- adapt traditional imaging techniques to take account of contemporary thinking and approaches including the ability to harness digital techniques to produce innovative solutions
- demonstrate effective work planning in relation to:
 - preparation
 - production
 - presentation
- demonstrate advanced skills and techniques in the production of images taking into account customer needs, media to be used, presentation and service
- demonstrate effective selling skills
- implement health, safety and company procedures in order to ensure compliance with relevant laws and regulations
- co-operate productively with other people in the supply chain
- review their own working practices.

Outcome 4

Research and develop new techniques for producing fashion images with special emphasis on the role of digital imaging in this sector

The candidate knows how to:

- create and adapt techniques to take account of current attitudes and needs
- use digital imaging techniques both uniquely and as a hybrid solution to produce new and innovative approaches to the use and presentation of fashion images
- investigate how fashion images are produced and used in the international market place
- identify the contribution that well known fashion photographers have made to the advancement of modern fashion photography
- use resources to research information on new and innovative imaging techniques including
 - trade journals
 - CD and video
 - internet and web sites
 - books and picture libraries
 - experiment with different techniques such as false colour and high contrast.

Assessment

The outcomes of this unit will be assessed on the production of a word-processed report of approximately 2500 words to include the following.

- Records of the production images from both silver-based and digital sources. Material from which the selection is made should be included.
- These records must include:
 - the results of the planning for each image produced
 - evidence of originality
 - the time plans, costings and selling prices
 - a full description of each image including its conception and creation
 - the methods used to produce each image
 - evidence of observing relevant health and safety, and other legal requirements
 - an evaluation and critical analysis of each image
 - a high quality print, transparency or digital file of each image, minimum print size 20 x 25cm.
- Records of investigative work that has been carried out.
- Subjective and objective conclusions about the imaging methods investigated.

Guidance

In order to successfully complete this unit, the candidate is likely to have completed a level 3 in photographic portraiture or have extensive experience within this sector of the industry.

Key Skills signposting

As candidates are working towards the outcomes of this unit, there are opportunities for Key Skills development in the following Level 4 Key Skills units:

Communication

- C4.1 Develop a strategy for using communication skills over an extended period of time
- C4.3 Evaluate your overall strategy and present the outcomes from your work, using at least one formal oral presentation. Include a variety of verbal, visual and other techniques to illustrate your points.

Application of number

- N4.1 Develop a strategy for using application of number skills over an extended period of time.
- N4.2 Monitor progress and adapt your strategy, as necessary, to achieve the quality of outcomes required in work involving deductive and inferential reasoning and algebraic manipulation.
- N4.3 Evaluate your overall strategy and present the outcomes from your work, including the use of charts, diagrams and graphs to illustrate complex data.

Improving own learning and performance

- LP4.1 Develop a strategy for improving your own learning and performance.
- LP4.2 Monitor progress and adapt your strategy to improve your performance.

Problem solving

- PS4.1 Develop a strategy for problem solving.
- PS4.2 Monitor progress and adapt your strategy for solving the problem.

Working with others

- WO4.1 Develop a strategy for working with others.
- WO4.2 Monitor progress and adapt your strategy to achieve agreed objectives.

Links with other units/qualifications

This unit is closely related to the following units within this qualification: Unit 8 Photographic studio imaging, Unit 9 Photographic location imaging, Unit 16 Photography for advertising, Unit 19 Portraiture and social photography and Unit 20 Corporate (industrial and commercial) photography.

The unit also has links with the following National Occupational Standards/City & Guilds NVQ units in Photography and Photographic Processing:

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Unit 2	Establish and maintain positive working relations L3+L4
Unit 4	Establish and maintain a healthy, safe and secure workplace L4
Unit 6	Contribute to the development of the photo imaging brief L3
Unit 7	Discuss, develop and agree the photo imaging brief L4
Unit 8	Manage photo imaging activities L3+L4
Unit 9	Establish and maintain the quality of workplace performance L3+L4
Unit 12	Present work to customers and potential customers L3+L4
Unit 17	Organise and carry out photographic assignments L3+L4
Unit 20	Take specified photographs L3
Unit 21	Conceive and take photographs L4
Unit 47	Discuss and agree the supply of laboratory services L3

Delivery advice

This unit should involve approximately 100 hours of study – 40 of which should be through guided learning.

There is a need for candidates to have access to professional laboratory services including digital services and the use of an extensive range of lighting, backgrounds and studio locations.

In addition, candidates should have access to a well-resourced learning centre/library with a stock of relevant materials for reference purposes. Access to a facility with IT provision needs to be available on a flexible basis to allow the candidate to produce the evidence required for assessment. Access to information within the candidate's support organisation is also necessary in order to draw upon both valuable and current evidence of activity relevant to the content of this unit.

Assessments should be practical and realistic and relate to current sector practice. If candidates are currently working in the sector, there will be opportunities for them to draw evidence from activities carried out in the workplace as agreed by their employer. Candidates should be encouraged to investigate and critically review current trends and innovative practice and use a range of resources to gather data. Valuable information can be obtained through visits to organisations and from presentations given by guest speakers.

Where appropriate, reference should be made to relevant legislation, British Standards and industry codes of practice. Similarly safe working methods and health and safety precautions should be applied, as necessary.

Unit 17 Fashion photography

Appropriate centre staff should agree the title and outline of the report to be presented for assessment prior to commencement. Evidence presented should be the candidates' own work and candidates are expected to plan and carry out their assessments independently.

It is considered good practice for assessors to have had industry experience in the units to be assessed. In this unit this will allow the assessor to accompany the candidate on location work so that they can see at first hand how the candidates cope with the pressures of each assignment.

Suggested resources list

This is a very specialised unit with relatively few textbooks and research material. However, the following include some useful information:

Digital photography handbook Tim Daly (Focal Press)

Pro lighting – fashion shots Alex Larg and Jane Wood (Focal Press)

Concept to print Stu Williamson

The following websites may also be useful: www.bipp.com
www.rps.org
www.aophoto.co.uk

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Unit 18

Editorial, press and public relations photography

Unit summary

This unit is about developing the creative skills and knowledge of editorial, PR or press photography. As a senior member of staff, the candidate is likely to be called upon to manage a wide variety of editorial, PR or press photographic assignments and to deliver them to the highest possible quality. In the process the candidate will develop and implement innovative approaches designed to raise the overall standards of the business in which they work.

In this unit, the candidate will have the opportunity to consider the importance of health and safety issues in different locations, legislation affecting the photography of minors, the need for accurate information about people photographed for subsequent caption writing, as well as the impact of location, weather conditions and planning on the success of editorial, PR or press photography projects. There is also opportunity to consider how ethical, social and moral issues affect working practices of editorial, PR or press photography.

Successful achievement of this unit is dependent upon candidates meeting the assessment requirements and outcomes and producing work of a satisfactory and reliable standard.

Aims

This unit aims to enable the candidate to:

- acquire high level practical skills
- investigate, demonstrate, and critically evaluate professional practices at senior practitioner/manager level
- develop their own creative and innovative talents
- review the progress and direction of their studies/work

Outcomes

On successful completion of the unit the candidate will be able to:

- 1 research and plan the requirements of editorial, PR or press photography at senior practitioner/management level
- 2 prepare accurate costings and time plans for a variety of editorial, PR or press images produced for sale to newspapers and magazines
- 3 demonstrate high level practical skills and abilities in editorial, PR or press photography, and critically evaluate own working practices
- 4 research and develop new techniques for producing editorial, PR or press images with particular emphasis on the growing role of digital imaging in this sector

Unit content

Outcome '

Research and plan the requirements of editorial, PR or press photography at senior practitioner/management level

The candidate knows how to:

- identify the factors to be taken into consideration when planning and producing high quality editorial, PR and press photographs, using both silver-based products and digital techniques in a range of locations
 - choice of camera and lens type, and accessories
 - choice of image capture method
 - selection and control of lighting
 - positional and temporal choice
 - locations image processing method (film or digital)
 - image destination
 - liaising with police, security or support personnel involved
 - ethical and legal factors relevant to the shoot
- identify the quality points of photographic and digital images and how lighting conditions, camera and lens choice and approach can affect the final result
- research and identify photo opportunities at locations, such as, sports events, conferences and demonstrations, as applicable
- research the use of suitable captions for photographs, as applicable
- justify the choice of approach to be used
 - practical considerations: cost, equipment, material, staff capability, facilities
 - media needs
 - final image quality
- apply innovative visual and technical ideas, skills, and techniques while retaining the integrity of the subject

Outcome 2

Prepare accurate costings and time plans for a variety of editorial, PR or press images produced for sale to newspapers and magazines

- calculate costs for the production of both silver-based images and digital images taking account of:
 - fees (day/hour/job rates)
 - agreed expenses
 - overheads
 - margins
- produce written time plans for each assignment/brief
 - planning and pre-production meetings
 - executing plans
 - contingency planning
 - image processing, manipulating and presentation
- produce detailed invoices

Outcome 3

Demonstrate high level practical skills and abilities in editorial, PR or press photography, and critically evaluate own working practices

The candidate knows how to:

- select appropriate methods for the production of high quality editorial, PR, or press images including the choice of equipment and materials
- adapt traditional imaging techniques to take account of contemporary thinking and approaches including the ability to harness digital techniques
- demonstrate effective work planning in relation to:
 - preparation
 - production
 - presentation
- demonstrate advanced skills and techniques in the production of images taking into account customer needs, media to be used, presentation and service
- demonstrate effective selling skills
- implement health, safety and other company procedures in order to ensure compliance with the various laws and regulations
- co-operate productively with other people in the supply chain
- review their own working practices.

Outcome 4

Research and develop new techniques for producing editorial, PR or press images with particular emphasis on the growing role of digital imaging in this sector

- create and adapt techniques to take account of current attitudes and needs
- use digital imaging techniques both uniquely and as a hybrid solution to produce new and innovative approaches to the use and presentation of PR and press images while still preserving the truthfulness of the images and the integrity of the subject
- investigate the way editorial, PR or press images are produced and used in the international market place
- identify the contribution that well known PR and press photographers have made to the advancement of modern fashion photography
- use resources to research information on new and innovative imaging techniques including
 - trade journals
 - CD and video
 - internet and web sites
 - books and picture libraries
 - experiment with different imaging techniques particularly those produced by computer software such as Quark Xpress and Photoshop.

Assessment

The outcomes of this unit will be assessed on the production of a word-processed report of approximately 2500 words to include the following:

- Records of the production image from both silver-based and digital sources. Material from which the selection is made should be included.
- These records must include:
 - the results of the planning for each image produced
 - evidence of originality
 - the time plans, costings and selling prices for each image
 - a full description of each image including its conception and creation
 - the methods used to produce each image
 - evidence of observing relevant ethical and legal requirements
 - an evaluation and critical analysis of each image
 - a high quality print, transparency, or digital file of each image, minimum print size 20 x 25cm
- Records of investigative work that has been carried out
- Subjective and objective conclusions about the imaging methods investigated.

Guidance

In order to successfully complete this unit, the candidate is likely to have completed a N/SVQ Level 3 in Photography and Photographic Processing or have extensive experience within this sector of the industry.

Key Skills signposting

As candidates are working towards the outcomes of this unit, there are opportunities for Key Skills development in the following Level 4 Key Skills units:

Communication

- C4.1 Develop a strategy for using communication skills over an extended period of time.
- C4.3 Evaluate your overall strategy and present the outcomes from your work, using at least one formal oral presentation. Include a variety of verbal, visual and other techniques to illustrate your points.

Application of number

- N4.1 Develop a strategy for using application of number skills over an extended period of time.
- N4.2 Monitor progress and adapt your strategy, as necessary, to achieve the quality of outcomes required in work involving deductive and inferential reasoning and algebraic manipulation.
- N4.3 Evaluate your overall strategy and present the outcomes from your work, including the use of charts, diagrams and graphs to illustrate complex data.

Improving own learning and performance

- LP4.1 Develop a strategy for improving your own learning and performance.
- LP4.2 Monitor progress and adapt your strategy to improve your performance.

Problem solving

- PS4.1 Develop a strategy for problem solving.
- PS4.2 Monitor progress and adapt your strategy for solving the problem.

Working with others

- WO4.1 Develop a strategy for working with others.
- WO4.2 Monitor progress and adapt your strategy to achieve agreed objectives.

Links with other units/qualifications

This unit also has links with the following National Occupational Standards/City & Guilds NVQ units in Photography and Photographic Processing:

- Unit 4 Establish and maintain a healthy, safe and secure workplace L4
- Unit 8 Manage photo imaging activities L3+L4
- Unit 9 Establish and maintain the quality of workplace performance L3+L4
- Unit 12 Present work to customers and potential customers L3+L4
- Unit 17 Organise and carry out photographic assignments L3+L4
- Unit 20 Take specified photographs L3
- Unit 47 Discuss and agree the supply of laboratory services L3

Delivery advice

This unit should involve approximately 100 hours of study – 40 of which should be through guided learning.

The candidate should have access to a range of traditional (film) camera formats and/or digital capture equipment, as well as ancillary equipment, such as, exposure meters, camera supports and portable lighting. In the case of digital capture methods, the candidate would benefit from access to a laptop computer with appropriate card-readers and relevant software to enable the swift transfer of images to any recipients.

In addition, candidates should have access to a well-resourced learning centre/library with a stock of relevant materials for reference purposes. Access to a facility with IT provision needs to be available on a flexible basis to allow the candidate to produce the evidence required for assessment. Access to information within the candidate's support organisation is also necessary in order to draw upon both valuable and current evidence of activity relevant to the content of this unit.

Assessments should be practical and realistic and relate to current sector practice. If candidates are currently working in the sector, there will be opportunities for them to draw evidence from activities carried out in the workplace as agreed by their employer. Candidates should be encouraged to investigate and critically review current trends and innovative practice and use a range of resources to gather data. Valuable information can be obtained through visits to organisations and from presentations given by guest speakers.

Where appropriate, reference should be made to relevant legislation, British Standards and industry codes of practice. Similarly safe working methods and health and safety precautions should be applied, as necessary.

Appropriate centre staff should agree the title and outline of the report to be presented for assessment prior to commencement. Evidence presented should be the candidates' own work and candidates are expected to plan and carry out their assessments independently.

It is considered good practice for assessors to have had industry experience in the units to be assessed. In this unit, this will allow the assessor to accompany the candidate on location work so that they can see at first hand how the candidates cope with the pressures of each assignment.

Suggested resources list

This is a very specialised unit with relatively few textbooks and research material. However, the following include some useful information:

Digital photography handbook Tim Daly Photojournalism principles and practices Clifton Edom Techniques of photojournalism Richard Logan Photojournalism Arthur Rothstein Pictures on a page Harold Evans

The following websites may also be useful: www.bipp.com
www.rps.org
www.aophoto.co.uk

Unit 19

Portraiture and social photography

Unit summary

This unit will build on candidates' personal development within this specialist field of photographic practice.

The candidate will be expected to demonstrate a high level of professional photographic practice skills and make specific judgmental decisions in a range of circumstances, both business promotion, management and operational skills.

On completion of the unit, it is expected that the candidate will have gained experience in a broad range of skills and will be able to apply such skills supported by the underpinning knowledge required for successful management of the social photography business.

Successful achievement of this unit is dependent upon candidates meeting the assessment requirements and outcomes and producing work of a satisfactory and reliable standard.

Aims

The unit aims to enable the candidate to:

- investigate and demonstrate a range of photographic skills relating to high quality portrait and social photography
- use critical analytical skills in self-development
- use organised research to explore the commercial applications of the business of social photography
- select and apply specific skills related to business development and demonstrate the ability to develop a working business plan
- evaluate specific business related practices, such as, employment law, COSHH (Control Of Substances Hazardous to Health) and business risk assessment

Outcomes

On successful completion of the unit the candidate will be able to:

- 1 research and plan the requirements of portraiture and social photography at senior practitioner/management level
- 2 develop own creative and innovative styles over a range of interior and exterior locations using different methods, including digital techniques
- 3 demonstrate the ability to seek out and create profitable markets for high quality portrait and social photography
- 4 prepare accurate costings and time management plans for individual assignments and demonstrate how this information is incorporated with a strategic approach to overall business development
- 5 demonstrate high level practical skills and abilities in portraiture and social photography

Outcome 1

Research and plan the requirements of portraiture and social photography at senior practitioner/management level

The candidate knows how to:

- interpret the client brief, including concepts in visual language
- identify the factors to be taken consideration when planning and producing photographs using both silver-based and digital techniques for interior and exterior locations, including:
 - choice of camera and lens type, and accessories
 - choice of image capture method
 - selection and control of lighting
 - positional and temporal choice
 - image processing method (film or digital)
 - range of subjects and properties
 - liaison with other personnel involved
 - health and safety and other legal requirements relevant to the shoot
- justify the choice of approach to be used
 - practical considerations: cost, equipment, material, staff capability, facilities
 - client needs
 - final image quality

Outcome 2

Develop own creative and innovative styles over a range of interior and exterior locations using different methods, including digital techniques

- investigate the trends in portrait and social photography imaging both in the UK and international market place
- identify the contributions made by leading portrait and social photographers to the current market
- constructively analyse and appraise images, both their own and those produced by others
- use and adapt a wide variety of techniques to create distinctive photographs with a distinctive style
- use digital techniques to alter and enhance
- use resources to research information on new and innovative imaging techniques including:
 - trade journals
 - Internet and websites
 - CD and video
 - books and picture libraries
- experiment with different techniques.

Outcome 3

Demonstrate the ability to seek out and create profitable markets for high quality portrait and social photography

The candidate knows how to:

- prepare a marketing plan
 - obtain relevant statistical information and demographics
 - monitor and record customer profiles
- apply the marketing plan
- evaluate and employ promotion and advertising media best suited to the marketing plan

Outcome 4

Prepare accurate costings and time management plans for individual assignments and demonstrate how this information is incorporated with a strategic approach to overall business development

- calculate costs for the production of both silver based and digital images taking account of:
 - equipment costs
 - material costs
 - image processing costs
 - presentation costs
 - profit margins
 - selling prices
- produce written time plans:
 - creating business leads
 - converting to bookings
 - pre-shoot client meetings
 - studio and location timings
 - image processing
 - prepare finished product
 - selling the product
 - incorporate costings and time management plans and marketing into a working business plan

Outcome 5

Demonstrate high level practical skills and abilities in portraiture and social photography

The candidate knows how to:

- select and apply appropriate methods for the production of high quality portrait and social photography images including the choice of equipment and materials
- implement health and safety procedures and other organisational policies to comply with necessary legal requirements
- demonstrate effective work planning in relation to:
 - preparation
 - production
 - presentation
- liaise effectively with other agencies, personnel, and support staff
- critically review their own working practices

Assessment

The outcomes of this unit will be assessed on the production of three assignments, to include a word-processed report of approximately 1000 words for each assignment.

- One assignment should be a wedding, and the other, a portrait sitting in the home. The report on these assignments should include:
 - obtaining a brief from the client
 - outline of steps taken to ensure client expectations are fulfilled
 - critique/evaluation of images presented to client
 - description of sales process and different options available to the client
 - portfolio of images as presented to client
- The third assignment is to outline a portrait promotion and show evidence of source reference materials and a planned approach to the assignment outlining key decisions.

The assignments should demonstrate a range of skills including effective planning, organising, marketing, costing, and photographic and digital techniques. Documented evidence should include:

- planning and records (including evidence of observing relevant legal and statutory requirements)
- a range of products as presented to the customer
- at least one digitally manipulated image.

Guidance

In order to successfully complete this unit, the candidate is likely to have completed a Level 3 in Photographic Portraiture, as included in the City & Guilds Level 3 Progression Award in Photography or have extensive experience within this sector of the industry.

Key Skills signposting

As candidates are working towards the outcomes of this unit, there are opportunities for Key Skills development in the following Level 4 Key Skills units:

Communication

- C4.1 Develop a strategy for using communication skills over an extended period of time.
- C4.2 Monitor progress and adapt your strategy, as necessary, to achieve the quality of outcomes required in work involving at least one group discussion about a complex subject and one document of 1000 words or more about a complex subject.
- C4.3 Evaluate your overall strategy and present the outcomes from your work, using at least one formal oral presentation. Include a variety or verbal, visual and other techniques to illustrate your points.

Application of number

- N4.1 Develop a strategy for using application of number skills over an extended period of time.
- N4.2 Monitor progress and adapt your strategy, as necessary, to achieve the quality of outcomes required in work involving deductive and inferential reasoning and algebraic modelling.
- N4.3 Evaluate your overall strategy and present the outcomes from your work, including the use of charts, diagrams and graphs to illustrate complex data.

Improving own learning and performance

- LP4.1 Develop a strategy for improving your own learning and performance.
- LP4.2 Monitor progress and adapt your strategy to improve your performance.
- LP4.3 Evaluate your strategy and present the outcomes of your learning.

Problem solving

- PS4.1 Develop a strategy for problem solving.
- PS4.2 Monitor progress and adapt your strategy for solving the problem.
- PS4.3 Evaluate your strategy and present the outcomes of your problem solving skills.

Links with other units/qualifications

This unit is closely related to the following units within this qualification: Unit 8 Photographic studio imaging, Unit 9 Photographic location imaging, Unit 16 Photography for advertising, Unit 17 Fashion photography, and Unit 20 Corporate (industrial and commercial) photography.

This unit also has links with the following National Occupational Standards/City & Guilds NVQ units in Photography and Photographic Processing:

- Unit 1 Contribute to effective performance at work L3
- Unit 2 Establish and maintain positive working relations L3+L4
- Unit 3 Contribute to the maintenance of health, safety and security at work L3
- Unit 4 Establish and maintain a healthy, safe and secure workplace L4
- Unit 7 Discuss, develop and agree the photo imaging brief L4
- Unit 9 Establish and maintain the quality of workplace performance L3+L4
- Unit 12 Present work to customers and potential customers L3+L4
- Unit 16 Store and retrieve photographic equipment and material L3+L4
- Unit 17 Organise and carry out photographic assignments L3+L4
- Unit 20 Take specified photographs L3
- Unit 21 Conceive and take photographs L4
- Unit 22 Specify and obtain processed images L3+L4
- Unit 47 Discuss and agree the supply of laboratory services L3Unit PR3

Delivery advice

This unit should involve approximately 100 hours of study – 40 of which should be through guided learning.

Candidates should have full access to a studio with an extensive range of lighting and backgrounds. They should also have access to professional colour laboratory and digital services, the internet and a facility with IT provision. It is imperative that the candidate is supported by a commercial organisation in the social photographic field to draw upon current evidence and relevant activity. In addition, candidates should have access to a well-resourced learning centre/library with a stock of relevant materials for reference purposes.

Assessments should be practical and realistic and relate to current sector practice. If candidates are currently working in the sector, there will be opportunities for them to draw evidence from activities carried out in the workplace as agreed by their employer. Candidates should be encouraged to investigate and critically review current trends and innovative practice and use a range of resources to gather data. Valuable information can be obtained through visits to organisations and from presentations given by guest speakers.

Where appropriate, reference should be made to relevant legislation, British Standards and industry codes of practice. Similarly safe working methods and health and safety precautions should be applied, as necessary.

Appropriate centre staff should agree the title and outline of the report to be presented for assessment prior to commencement. Evidence presented should be the candidates' own work and candidates are expected to plan and carry out their assessments independently.

Suggested resources list

An extended range of textbooks and reference materials are available to students undertaking research studies in portraiture and social photography, including the following:

Shooting for Gold Charles Green
Saleable Portraits Michael Frost & Ron Stillwell
The Business of Wedding Photography Ann Monteith
Location Portraiture William Macintosh
The Business of Portrait Photography Tom MacDonald

Websites

www.bipp.com www.mpauk.com This page is intentionally blank

Unit 20

Corporate (industrial and commercial) photography

Unit summary

This unit is about developing skills and understanding of the techniques of working in the corporate (industrial and commercial) environment, both in the studio and on location.

The candidate will work to the client brief, and demonstrate interpersonal skills in dealing with clients and colleagues, as well as high level practical skills and abilities in corporate (industrial and commercial) photography.

The term 'corporate photography', as used within the photo imaging sector, incorporates both industrial and commercial photography. References to 'corporate photography' throughout this unit should, therefore, be interpreted in this way.

In this unit, there is the opportunity to consider healthy and safe working practices, as well as how moral, ethical, social and environmental issues affect people working at senior practitioner/manager level in the photographic and related industries.

Successful achievement of this unit is dependent upon candidates meeting the assessment requirements and outcomes and producing work of a satisfactory and reliable standard.

Aims

The unit aims to enable the candidate to:

- acquire high level practical skills
- investigate, demonstrate, and critically evaluate professional practices of corporate photography at senior practitioner/manager level
- develop their own creative and innovative ideas
- review the progress and direction of their studies/work.

Outcomes

On successful completion of the unit the candidate will be able to:

- 1 research and plan the requirements of corporate photography at senior practitioner/management level
- 2 develop own creative ideas, skills and techniques
- 3 employ effective business practices and prepare accurate costing and time plans, for a variety of commissions and location assignments
- 4 demonstrate high level practical skills and abilities in corporate photography
- 5 critically review their own professional practices in corporate photography

Unit content

Outcome 1

Research and plan the requirements of corporate photography at senior practitioner/management level

The candidate knows how to:

- interpret the client brief, including concepts in visual language
- identify the factors to be taken consideration when planning and producing photographs using both silver-based and digital techniques for interior and exterior locations, including:
 - choice of camera and lens type, and accessories
 - choice of image capture method
 - selection and control of lighting
 - positional and temporal choice
 - image processing method (film or digital)
 - range of subjects and properties
 - liaison with other personnel involved
 - health and safety and other legal and ethical considerations relevant to the shoot
- · justify the choice of approach to be used
 - practical considerations: cost, equipment, material, staff capability, facilities
 - client needs
 - final image quality

Outcome 2

Develop own creative ideas, skills and techniques

The candidate knows how to:

- research and investigate historical and contemporary images, applying the results to enhance their own work
- produce imaginative visual design solutions to a client brief, or illustrate a concept
- explore new techniques in visual language
- investigate the performance and manipulation of film or digital capture techniques and equipment, and print output to extend visual vocabulary
- demonstrate suitable camera and lighting techniques for corporate photography to achieve specific visual appearances

Outcome 3

Employ effective business practices and prepare accurate costing and time plans, for a variety of commissions and location assignments

- identify sources of business information available
- research and record the necessary information for completing business administration documentation
- calculate time, resource requirement, and cost for corporate photography
- select and apply suitable marketing methods and techniques, targeting the relevant sector of industry and commerce

- effectively liaise and negotiate with clients and potential clients in order to secure and maintain business
- produce written plans for
 - fees
 - staff time costs
 - profit margins
 - bought-in services and outwork
 - working abroad
 - equipment hire
 - specialist services

Outcome 4

Demonstrate high level practical skills and abilities in corporate photography

- carry out risk assessments and apply appropriate health and safety practices
- select a range of conventional and digital camera types and formats:
 - types (single lens reflex, twin lens reflex, direct vision, digital backs)
 - small, medium and large fonts
- demonstrate the use of a range of accessories used in corporate photography and state their function
 - supplementary lenses, bellows and extension rings
 - interchangeable lenses (standard, wide angle, long focus, variable focus, and macro)
 - filters for colour, tone, correction, conversion, and contrast
 - exposure meters, camera supports, cable releases, lens hoods, filter holders and matt boxes
- show the effect of the main forms of available lighting used in corporate photography
 - daylight-direct, diffused and reflected
 - artificial-tungsten and electronic flash
 - specialist effect lighting
- demonstrate the use of lighting equipment available for use in uncontrolled location surroundings
 - portable electronic hand flash, attachments and accessories
 - available light, fluorescent, theatre lights, office and factory lighting
- demonstrate the features and quality of lighting found in a range of supplementary and available light sources
 - direction, intensity and evenness
 - colour composition, colour temperature and contrast
 - duration
- demonstrate the ability to record information of the subjects photographed
 - time
 - date
 - place
 - nature of the subject, and the context of the image
 - named persons involved
 - prevailing conditions

- state and describe in general terms the merits and limitations of each light source for different tasks, the advantages and disadvantages of
 - natural prevailing light
 - tungsten and halogen
 - hand electronic flash
 - mixed lighting sources
- describe the principles and effects of various forms of lighting
 - direct
 - diffused
 - reflected
- describe methods of calculating optimum exposure for a variety of lighting situations using
 - hand held meters
 - built in and integrated meters
 - flash and combination meters
 - reference guides
 - standard/predictable lighting conditions
- describe the fundamental lighting conditions for a variety of available light situations in photography
- state the factors which determine the use of available lighting and selection of camera equipment for the location job in hand
 - subject size and type
 - location and logistics
- state the factors which should be considered when selecting equipment for a given task and output requirement
 - purpose of the images
 - number of images required
 - knowledge of the format or medium required.
- researches protocol for contemporary examples of professional photography of uncontrolled events
 - weddings
 - sports and pastimes
 - theatre and concerts
 - people at large
 - meetings, demonstrations, civil disturbances and conflict
 - animals, birds and fish
 - news features, royal visits and state occasions
- describe techniques on location for
 - architectural interiors and exteriors
 - industrial interiors and exteriors
 - advertising and editorial subjects

Outcome 5

Critically review their own professional practices in corporate photography

The candidate knows how to:

- evaluate their own practical work considering;
 - how effectively the work was managed, such as setting objectives, planning and managing time
 - ways of researching a wide variety of materials and techniques in corporate photography
 - how effectively the practical activities were undertaken
 - how well logistical and visual design problems in concepts or client briefs were anticipated and resolved
 - how successful the result was in illustrating the concept or meeting the client brief
 - how effectively and economically location facilities and materials were used
 - to what extent these considerations contributed to the success of the assignment(s)
 - the differing working location practices in advertising, scientific and forensic, fashion and portraiture and fine art/abstract imaging

Assessment

Assessment of this unit will be based on a range of activities delivered by the production of assignment(s) designed to meet all the unit outcomes.

The knowledge element will be demonstrated through evidence of the production of the images, plus the supporting documentation which is mandatory.

The assessment will explore the candidate's ability to use a range of equipment, both for origination, and for final production, and in the creation of images demonstrate the use of the ability to 'see' in a photographic context, whilst examining and using design judiciously to achieve the planned effect.

Candidates will be expected to produce the following:

- evidence of research and planning based on the client briefs, including time and costing plans
- a portfolio of photographs demonstrating high level camera skills and lighting techniques
- a range of other production skills, which may include darkroom laboratory skills or image production and manipulation by using digital techniques
- technical reports documenting production methods and possible stylistic influences
- a database or spreadsheet identifying the risk assessment involved during this type of image production, together with evidence of observing relevant health and safety, and any other legal requirements
- a critical analysis of the final images in terms of quality, function and context in modern society, production methods, and suitability for client purpose.

The above work should total approximately 2500 words.

Guidance

In order to successfully complete this unit, the candidate is likely to have completed a Level 3 qualification in photography or have extensive experience within this sector of the industry.

Key Skills signposting

As candidates are working towards the outcomes of this unit, there are opportunities for Key Skills development in the following Level 4 Key Skills units:

Communication

- C4.1 Develop a strategy for using communication skills over an extended period of time
- C4.3 Evaluate your overall strategy and present the outcomes from your work, using at least one formal oral presentation. Include a variety of verbal, visual and other techniques to illustrate your points.

Improving own learning and performance

- LP4.1 Develop a strategy for improving your own learning and performance.
- LP4.2 Monitor progress and adapt your strategy to improve your performance

Problem solving

- PS4.1 Develop a strategy for problem solving.
- PS4.2 Monitor progress and adapt your strategy for solving the problem.

Working with others

- WO4.1 Develop a strategy for working with others.
- WO4.2 Monitor progress and adapt your strategy to achieve agreed objectives.

Links with other units/qualifications

This unit has links with the following units within this qualification: Unit 8 Photographic studio imaging, Unit 9 Photographic location imaging, Unit 16 Photography for advertising, Unit 17 Fashion photography and Unit 19 Portraiture and social photography

This unit also has links with the following National Occupational Standards/City & Guilds NVQ units in Photography and Photographic Processing:

Unit 3 Contribute to the maintenance of health, safety and security at work L3

Unit 4 Establish and maintain a healthy, safe and secure workplace L4

Unit 9 Establish and maintain the quality of workplace performance L3+L4

Unit 12 Present work to customers and potential customers L3+L4 $\,$

Unit 16 Store and retrieve photographic equipment and material L3+L4

Unit 17 Organise and carry out photographic assignments L3+L4

Unit 20 Take specified photographs L3

Delivery advice

This unit should involve approximately 100 hours of study – 40 of which should be through guided learning.

The candidate should have access to a studio environment (where daylight can be excluded) which should include a selection of studio flash and/or tungsten lighting, background systems, set building, tools and materials, reflectors and diffusers.

For location work, the candidate should have access to portable hand and monoblock flash lighting equipment, tungsten lighting, suitable for safe transport to locations away from the studio.

A range of traditional (film) camera formats as well as digital capture equipment should be made available to the candidate, to meet the requirements of the client led, studio and location assignments commonly found in corporate photography.

In addition, the candidates should have access to a well resourced learning centre or library with a stock of relevant material for reference purposes. Access to the Internet and a facility with IT provision needs to be available on a flexible basis to allow the candidates to produce the evidence required for assessment. Access to information within the candidates support organisations is also necessary in order to draw upon both valuable and current evidence of activity, relevant to the content of this unit.

In addition, candidates should have access to a well-resourced learning centre/library with a stock of relevant materials for reference purposes. Access to a facility with IT provision needs to be available on a flexible basis to allow the candidate to produce the evidence required for assessment. Access to information within the candidate's support organisation is also necessary in order to draw upon both valuable and current evidence of activity relevant to the content of this unit.

The unit is designed to enable progression and it will be expected that centres direct candidates by designing customised client briefs to meet the unit outcomes.

Assessments should be practical and realistic and relate to current sector practice. If candidates are currently working in the sector, there will be opportunities for them to draw evidence from activities carried out in the workplace as agreed by their employer. Candidates should be encouraged to investigate and critically review current trends and innovative practice and use a range of resources to gather data. Valuable information can be obtained through visits to organisations and from presentations given by guest speakers.

Where appropriate, reference should be made to relevant legislation, British Standards and industry codes of practice. Similarly safe working methods and health and safety precautions should be applied, as necessary.

Appropriate centre staff should agree the title and outline of the report to be presented for assessment prior to commencement. Evidence presented should be the candidates' own work and candidates are expected to plan and carry out their assessments independently.

Suggested resources list

An extended range of textbooks and reference materials are available to students undertaking research studies in corporate photography, including the following:

Advanced Photography Michael Langford (Focal Press)
Professional Photography Michael Langford (Focal Press)
The Professional Photographer in Practice Robert Hymers (Focal Press)
Digital Photography Hambler/Green (Pira/BPIF Publishing)
Seeing the Light Rhonda Wilson (The Custard Factory)
Photographing Buildings Inside and Out Norman McGrath (Focal Press)
Photographing Still Life Seth Joel (Amphoto)
How to Photograph People Braveman and Tarrant (Fountain Press)

Periodicals

The Business section of the broadsheet newspapers
British Journal of Photography
The Photographer
Master Photographer
Professional Photography
Hot Shoe
Architectural Review

Unit 21

Photographic laboratory management

Unit summary

This unit is about the business skills of laboratory management and the requirement for continuous improvement and safety within your organisation and industry. As a senior member of staff, candidates will have the responsibility for quality standards and health and safety. Candidates may be asked to contribute to the development and implementation of quality systems that are either self assessed or meet national and international standards. It is possible that candidates will be asked to contribute to the auditing and compliance of the quality systems and take appropriate action designed to continuously improve the quality of products, services and processes to meet customer expectations and needs.

In this unit, candidates will have the opportunity to investigate and implement continuous improvement and Health and Safety issues, as well as how moral, ethical, social and environmental issues (such as energy conservation, waste and recycling) affect the business stakeholders.

This unit can be delivered alongside Unit 5 Business planning for photo imaging.

Successful achievement of this unit is dependent upon candidates meeting the assessment requirements and outcomes and producing work of a satisfactory and reliable standard.

Aims

This unit aims to enable the candidate to:

- investigate theories, concepts and models for continuous improvement
- develop skills in accessing, interpreting and validating information on the outcome of quality management approaches
- apply techniques for monitoring customer satisfaction, in order to identify the need for improvement
- draw conclusions on the importance continuous improvement to the effectiveness of an organisation and its role and responsibilities in relation to this
- investigate approaches to the involvement of people in continuous improvement processes
- investigate the management of health and safety within the photographic industry
- fully understand the legal and statutory requirements relevant to health and safety in the photographic industry
- monitor, evaluate, update and improve health and safety processes and procedures.

Outcomes

On successful completion of the unit the candidate will be able to:

- 1 demonstrate an understanding of the manager's responsibilities to continuous improvement and for health and safety
- 2 demonstrate a full understanding of continuous improvement techniques, quality standards and the legal and statutory requirements of health and safety
- 3 plan, implement and manage the training and development of staff
- 4 plan, implement, manage and control continuous improvement and health and safety practices and procedures
- 5 update and implement improvements to quality systems and health and safety practices and procedures
- 6 plan for the auditing of quality and health and safety systems and take appropriate action.

Unit content

Outcome 1

Demonstrate an understanding of the manager's responsibilities to continuous improvement and for health and safety

- demonstrate appropriate management skills
- act as a role model
- explain the principal legal requirements affecting service and the quality of products and services
- implement and maintain quality systems
- identify approaches which can assist in maintaining services when systems go wrong
- make recommendations for improvements in the service provision through improvements being made in work areas and service systems
- demonstrate a responsible attitude for all aspects of health and safety
- develop health and safety policies and strategies
- ensure the safe storage, distribution, handling and use of all items
- maintain accurate records
- identify lapses in health and safety practices and procedures
- implement changes for health and safety practices and procedures in order to maintain the highest standards
- detail approaches which can contribute to the development and maintenance of positive working relationships
- deal with staff discipline.

Outcome 2

Demonstrate a full understanding of continuous improvement techniques, quality standards and the legal and statutory requirements of health and safety

The candidate knows how to:

- critically evaluate the nature and purpose of quality concepts, standards, systems and programmes
- demonstrate a full understanding of and interpret the legal and statutory requirements for
 - management of health and safety
 - fire precautions
 - Control of Substances Hazardous to Health (COSHH)
 - Personal Protective Equipment (PPE)
 - first aid
 - manual handling
 - display screen equipment
 - working time
- plan, implement, manage and control procedures to ensure compliance with legal and statutory requirements
- plan, implement, manage and control changes to procedures in order to comply with changes in legal requirements
- explain the consequences and risks of non-compliance with legal requirements
- ensure the safety of staff, customers and visitors
- seek legal advice concerning the legal and statutory requirements and maintain and up-to-date knowledge of legal issues
- describe the corporate and individual responsibilities
- notify the appropriate authorities of health and safety and personal illness issues when necessary.

Outcome 3

Plan, implement and manage the training and development of staff

- identify appropriate staff and own training needs
- · cost, plan and organise the training and development of staff
- train new and existing staff
- · out-source training as required
 - training organisations
 - local authorities
 - colleges
- evaluate training
- test for competency
- review the training and development procedures
- identify appropriate levels of quality and health and safety training
- · describe the benefits associated with well trained staff
- set an example for other staff.

Outcome 4

Plan, implement, manage and control continuous improvement and health and safety practices and procedures

The candidate knows how to:

- suggest ways in which an organisation can identify and select strategies which are consistent with the organisation's vision of quality
- identify and describe potential inconsistencies in the aims and commitments of management, suppliers and customers and propose options for resolving them
- evaluate alternative strategies for implementing quality policies and identify their advantages, disadvantages and resource implications
- describe how customer needs can be turned into deliverable products and services, design systems that control the delivery of products and services, which are consistent with quality strategies and policies
- make recommendations on improvements to quality policies and the way they are implemented
- plan, implement, manage and control health and safety risk assessment policies and procedures
- plan, implement, manage and control fire safety policies and procedures
- monitor fire safety precautions
- ensure company procedures are implemented
- explain the importance of monitoring procedures
- plan, implement, manage and control the monitoring procedures
- plan, monitor, manage and control chemical and paper storage
- describe the requirements of COSHH
- · describe the need for PPE
- plan, monitor, manage and control the use of PPE
- plan, monitor, manage and control the disposal of waste chemicals
- explain the need for internal and external inspection

Outcome 5

Update and implement improvements to quality systems and health and safety practices and procedures

- determine the scope and objectives of a system to monitor and evaluate organisational performance
- identify appropriate performance measures and assessment tools and techniques
- detail the resource implications for effective systems
- assess the outcomes of continuous monitoring and evaluations for their implications for an organisation
- identify trends and developments in the quality of products, services and processes
- monitor and improve health and safety practices and procedures
 - analysis
 - improving inspection reports
 - decision making
 - improving service

- implement change
- managing change
- environmental issues
- short/long term planning
- social, moral and ethical issues
- innovative ideas
- gradual/radical change
- improving customer perception

Outcome 6

Plan for the auditing of quality and health and safety systems and take appropriate action

- describe the scope and objectives of a system to monitor and evaluate organisational performance
- identify processes in the organisation where non-compliance is most likely
- identify the relative risks to the organisation of non-compliance with quality and health and safety systems in each of the organisation's processes
- detail how a programme of audits should comply with the organisation's quality and health and safety policies and procedures and be sufficiently detailed to reveal any discrepancies
- identify the key requirements to ensure that audits are conducted in a way which enhances the confidence and commitment of quality and health and safety of auditees
- complete and maintain records of the audits in accordance with agreed procedures
- describe the process for following up on corrective action and reporting on persistent problems
- determine appropriate recommendations for improvements to processes.

Assessment

The outcomes of this unit will be assessed on the production of a word-processed report of approximately 2500 words to include the following:

- Planning, implementation, analysis and evaluation of activities carried out when researching continuous improvement and health and safety in Photography.
- These records and results must show the candidate has:
 - examined continuous improvement and reviewed continuous improvement processes within their own organisation
 - investigated current trends and innovation
 - reached subjective and objective conclusions about continuous improvement within the photographic industry
 - analysed and reviewed health and safety practices and procedures within their own organisation
 - reached subjective and objective conclusions about health and safety within the photographic industry
 - made appropriate recommendations for their own organisation on the basis of their investigations.

Guidance

Key Skills signposting

As candidates are working towards the outcomes of this unit, there are opportunities for Key Skills development in the following Level 4 Key Skills units:

Communication

- C4.1 Develop a strategy for using communication skills over an extended period of time.
- C4.2 Monitor progress and adapt your strategy, as necessary, to achieve the quality of outcomes required in work involving at least one group discussion about a complex subject and one document of 1000 words or more about a complex subject
- C4.3 Evaluate your overall strategy and present the outcomes from your work, using at least one formal oral presentation. Include a variety of verbal, visual and other techniques to illustrate your points.

Application of number

N4.3 Evaluate your overall strategy and present the outcomes from your work including use of at least one presentation, showing integration of text, images and numbers. Charts, graphs and diagrams to illustrate complex dates.

Information and communication technology

- ICT4.1 Develop a strategy for using ICT skills over an extended period of time
- ICT4.2 Monitor progress and adapt your strategy, as necessary, to achieve the quality of outcomes required in work involving the use of ICT for different complex purposes.
- ICT4.3 Evaluate your overall strategy and present the outcomes from your work using at least one presentation, showing integration of text, images and numbers.

Improving own learning and performance

- LP4.1 Develop a strategy for improving your own learning and performance.
- LP4.2 Monitor progress and adapt your strategy to improve your importance.

Working with others

- WO4.1 Develop a strategy for working with others.
- WO4.2 Monitor progress and adapt your strategy to achieve agreed objectives
- WO4.3 Evaluate your strategy and present the outcomes from your work with others.

Links with other units/qualifications

This unit has links with the following National Occupational Standards/City & Guilds NVQ units in Photography and Photographic Processing:

- Unit 2 Establish and maintain positive working relations L3+L4
- Unit 4 Establish and maintain a healthy, safe and secure workplace L4
- Unit 17 Organise and carry out photographic assignments L3+L4
- Unit 20 Take specified photographs L3
- Unit 21 Conceive and take photographs L4
- Unit 46 Contribute to the effectiveness of laboratory activities L3
- Unit 52 Maintain the quality of the photographic chemistry L3

Delivery advice

This unit should involve approximately 100 hours of study -40 of which should be through guided learning.

Candidates should have access to a well-resourced learning centre/library with a stock of relevant materials for reference purposes. Access to a facility with IT provision needs to be available on a flexible basis to allow the candidate to produce the evidence required for assessment. Access to information within the candidate's support organisation is also necessary in order to draw upon both valuable and current evidence of activity relevant to the content of this unit.

Assessments should be practical and realistic and relate to current sector practice. If candidates are currently working in the sector, there will be opportunities for them to draw evidence from activities carried out in the workplace as agreed by their employer. Candidates should be encouraged to investigate and critically review current trends and innovative practice and use a range of resources to gather data. Valuable information can be obtained through visits to organisations and from presentations given by guest speakers.

Where appropriate, reference should be made to relevant legislation, British Standards and industry codes of practice. Similarly safe working methods and health and safety precautions should be applied, as necessary.

Appropriate centre staff should agree the title and outline of the report to be presented for assessment prior to commencement. Evidence presented should be the candidates' own work and candidates are expected to plan and carry out their assessments independently.

Suggested resources list

An extensive range of text books and reference materials are available to candidates undertaking research studies into continuous improvement and health and safety management including:

Managing Quality B Dale (Blackwell)

Self-Assessment 1998 Guidelines for Companies Brussels EFQM (European Foundation for Quality Management)

Total Quality Management J S Oakland (Butterworth Heinemann)

Health and Safety Law: What You Should Know Health and Safety Executive 1999

The Handbook of Health and Safety Practice J Shanks (Financial Times)

Unit 22

Specialist darkroom practices

Unit summary

This unit is about developing and practising creative skills and knowledge in a specialist darkroom. As a senior member of staff, the candidate is likely to be called upon to advise customers on the best darkroom practice to use and to deliver the solution to the highest possible quality. In the process, the candidate will develop and implement innovative techniques designed to raise the overall standards and scope of the business.

In this unit, the candidate will have the opportunity to consider the importance of health and safety issues as it affects darkroom practices, as well as the benefit of good communication and planning on the success of darkroom projects.

Successful achievement of this unit is dependent upon candidates meeting the assessment requirements and outcomes and producing work of a satisfactory and reliable standard.

Aims

This unit aims to enable the candidate to:

- develop high level craft skills
- investigate, demonstrate, and critically evaluate professional practices at senior practitioner/manager level
- develop their own creative and innovative talents
- review the progress and direction of their studies/work.

Outcomes

On successful completion of the unit the candidate will be able to:

- 1 research and plan specialist darkroom practices at senior practitioner/management level, using own innovative ideas and skills
- 2 prepare accurate costings and time plans for a variety of darkroom images produced for sale to clients
- 3 demonstrate high level practical skills and abilities in specialist darkroom practices
- 4 research and develop new techniques for producing darkroom images

Unit 22 Specialist darkroom practices

Unit content

Outcome 1

Research and plan specialist darkroom practices at senior practitioner/management level, using own innovative ideas and skills

- identify the factors to be taken into consideration when planning and producing darkroom images using silver-based products and chemical processing techniques
 - conventional papers
 - hand-made papers
 - unconventional substrates: cloth, glass, wood, film
 - use of high contrast materials for special effects
 - combination printing techniques
 - proprietary chemical solutions
 - dyes
 - equipment required
 - customer needs
 - exploring non-proprietary solutions
 - effect of solution concentration
 - effect of temperature variations
 - effect of pH variations
- use reliable analytical techniques while planning and implementing darkroom images.
- justify the choice of approach to be used
 - practical considerations: cost, equipment, material, staff capability, facilities
 - customer needs
 - final image quality
- describe the creative and innovative skills to be used
- create, adapt and evaluate new solutions in a methodical way.
- ensure all legal requirements are met including those involving patentable processes and copyright
- identify safe and unsafe practices and the consequences of failing to meet these safe standards

Unit 22 Specialist darkroom practices

Outcome 2

Prepare accurate costings and time plans for a variety of darkroom images produced for sale to clients

The candidate knows how to:

- calculate costs for the production of a range of silver-based images taking account of
 - purchase specifications
 - equipment costs
 - material costs
 - chemical costs
 - image processing costs
 - presentation costs
 - profit margins and selling prices
- produce written time plans
 - pre-production briefing
 - analytical time
 - imaging processing
 - presentation
- produce detailed invoices, as applicable
- research and record information for completing business and administration documentation

Outcome 3

Demonstrate high level practical skills and abilities in specialist darkroom practices

- select appropriate methods for the production of high quality darkroom images including the choice of equipment and materials
- adapt traditional and innovative imaging techniques to take account of current thinking and approaches including the ability to harness unconventional techniques to produce innovative solutions
- demonstrate effective work planning in relation to:
 - preparation
 - production
 - presentation
- demonstrate advanced skills and techniques in the production of images taking into account customer needs, media and chemicals to be used and presentation
- handle and combine images from different sources to produce effective composites
- demonstrate effective selling skills, as applicable
- implement health, safety and company procedures in order to ensure compliance with relevant laws and regulations
- co-operate productively with other people in the supply chain
- critically review their own working practices.

Unit 22 Specialist darkroom practices

Outcome 4

Research and develop new techniques for producing darkroom images

The candidate knows how to:

- create and adapt techniques to take account of current attitudes and needs
- use chemical processing techniques to produce new and innovative approaches to the use and presentation of darkroom images
- use combination printing, using both normal contrast and high contrast materials
- investigate the way darkroom images are produced and used in the international market place
- use resources to research information on new darkroom imaging techniques including
 - trade journals
 - CD and video
 - internet and web sites
 - books and picture libraries
 - experiment with different techniques such as multiple toning

Assessment

The outcomes of this unit will be assessed on the production of a word-processed report of approximately 2500 words to include the following:

• Production of derived images by both chemical processing and optical composite means.

These records must include:

- the results of the planning for each image produced
- evidence of originality
- the time plans, costings and, as applicable, selling prices, for each image
- a full description of each image including its conception and creation
- the methods used to produce each image
- details of how relevant health and safety, and other legal, requirements were met
- an evaluation and critical analysis of each image
- a high quality print or transparency of each image, minimum print size 20 x 25cm
- Records of investigative work that has been carried out
- Subjective and objective conclusions about the imaging methods investigated

Unit 22 Specialist darkroom practices

Guidance

In order to successfully complete this unit, the candidate is likely to have completed a N/SVQ Level 3 in pro lab processing or have extensive darkroom experience.

Key Skills signposting

As candidates are working towards the outcomes of this unit, there are opportunities for Key Skills development in the following Level 4 Key Skills units:

Communication

- C4.1 Develop a strategy for using communication skills over an extended period of time
- C4.3 Evaluate your strategy and present the outcomes from your work, using at least one formal oral presentation. Include a variety of verbal, visual and other techniques to illustrate your points.

Application of number

- N4.1 Develop a strategy for using application of number skills over an extended period of time.
- N4.2 Monitor progress and adapt your strategy, as necessary, to achieve the quality of outcomes required in work involving deductive and inferential reasoning and algebraic modelling.
- N4.3 Evaluate your overall strategy and present the outcomes from your work including use of charts, graphs and diagrams to illustrate complex data.

Improving own learning and performance

- LP4.1 Develop a strategy for improving your own learning and performance.
- LP4.2 Monitor progress and adapt your strategy to improve your performance.

Problem solving

- PS4.1 Develop a strategy for problem solving.
- PS4.2 Monitor progress and adapt your strategy for solving the problem.

Links with other units/qualifications

This unit links closely with Unit 2: Image management-film recording and darkroom processes, within this qualification.

This unit also has links with the following National Occupational Standards/City & Guilds NVQ units in Photography and Photographic Processing:

- Unit 1 Contribute to effective performance at work L3
- Unit 3 Contribute to the maintenance of health, safety and security at work L3
- Unit 45 Start up and shut down laboratory equipment L3
- Unit 46 Contribute to the effectiveness of laboratory activities L3
- Unit 52 Maintain the quality of the photographic chemistry L3
- Unit 54 Mount photographic images for exhibition and display L3

Unit 22 Specialist darkroom practices

Delivery advice

This unit should involve approximately 100 hours of study – 40 of which should be through guided learning.

There is a need for the candidates to have access to professional laboratory services including analytical services and the use of a range of materials and chemicals. In addition, the candidates should have access to a well resourced learning centre or library with a stock of relevant materials for reference purposes. Access to the internet and a facility with IT provision needs to be available on a flexible basis to allow the candidates to produce the evidence required for assessment. Access to information within the candidate's support organisations is also necessary in order to draw upon both valuable and current evidence of activity relevant to the content of this unit.

In addition, candidates should have access to a well-resourced learning centre/library with a stock of relevant materials for reference purposes. Access to a facility with IT provision needs to be available on a flexible basis to allow the candidate to produce the evidence required for assessment. Access to information within the candidate's support organisation is also necessary in order to draw upon both valuable and current evidence of activity relevant to the content of this unit.

Assessments should be practical and realistic and relate to current sector practice. If candidates are currently working in the sector, there will be opportunities for them to draw evidence from activities carried out in the workplace as agreed by their employer. Candidates should be encouraged to investigate and critically review current trends and innovative practice and use a range of resources to gather data. Valuable information can be obtained through visits to organisations and from presentations given by guest speakers.

Where appropriate, reference should be made to relevant legislation, British Standards and industry codes of practice. Similarly safe working methods and health and safety precautions should be applied, as necessary.

Appropriate centre staff should agree the title and outline of the report to be presented for assessment prior to commencement. Evidence presented should be the candidates' own work and candidates are expected to plan and carry out their assessments independently.

Unit 22 Specialist darkroom practices

Suggested resources list

This is a very specialised unit with relatively few textbooks and research material. However, the following include some useful information:

Black and white darkroom techniques Eastman Kodak Creative darkroom techniques Eastman Kodak Ilford monochrome darkroom practice Jack Coote Workbook of darkroom techniques John Hedgecoe Platinum and palladium printing Louis Nadeau

Websites

www.bipp.com www.rps.org This page is intentionally blank

Unit 23

Contextual studies in photo imaging

Unit summary

This unit enables candidates to examine in depth the history of photographic research, invention and application in the context of a history of social change. The study can be seen as a marketing tool enabling the candidate to identify potential routes of visual innovation within his/her selected application.

Successful achievement of this unit is dependent upon candidates meeting the assessment requirements and outcomes and producing work of a satisfactory and reliable standard.

Aims

The unit aims to enable the candidate to

- investigate in-depth past and present professional practice in his/her own selected application
- identify and contextualise his/her visual strength within his/her selected area of professional practice
- draw conclusions on the future progress and direction of that application in view of current and possible technological and social change
- acquire basic research and presentation skills and the capacity to write and report
- research and develop a range of visual ideas and practice which extends and develops former knowledge.

Outcomes

On successful completion of the unit the candidate will be able to

- 1 investigate the link between the history of social change and the evolution of photographic invention and application
- 2 describe an application of photography/imaging in the context of its historical development and current trends
- 3 demonstrate an in-depth critical understanding of photographic practice in terms of artistic, cultural, and visual appreciation and individual style
- 4 use primary and secondary investigative research methods and sources
- 5 co-operate productively with other people in the process of identifying, collecting and selecting visual, written and verbal information in regard to a chosen application and method of production.

Unit content

Outcome 1

Investigate the link between the history of social change and the evolution of photographic invention and application

The candidate knows how to:

- describe how social change has impacted on developments in photography
- compare the photographic materials, processes and resources used within historical and contemporary contexts.

Outcome 2

Describe an application of photography/imaging in the context of its historical development and current trends

The candidate knows how to:

- understand and describe applications of photography/imaging in communications, social history, art, science, industry, research and medicine
- critically analyse a photographic assignment in terms of the current and future development of its application/genre
- describe the key technological influences on the application.

Outcome 3

Demonstrate an in-depth critical understanding of photographic practice in terms of artistic, cultural and visual appreciation and individual style

The candidate knows how to:

- recognise the effect of individual style on photographic practice and appreciation
- use knowledge of historical developments to support judgement
- develop a range of visual ideas that recognise the potential of future developments in photographic practice.

Outcome 4

Demonstrate an understanding of primary and secondary investigative research methods and sources

- use IT to access basic/primary sources of information and collate with secondary research material and to produce reports/dissertations
- use IT to produce and confirm assignment specifications and terms
- collate and evaluate material collected from visits to visual agencies, learned societies and presentations by photographic/imaging organisations.

Outcome 5

Co-operate productively with other people in the process of identifying, collecting and selecting visual, written and verbal information in regard to a chosen application and method of production

The candidate knows how to:

- understand and be able to negotiate with a wide variety of commissioning agents of photographic images and applications
- accurately identify and prioritise key requirements, recognising areas of possible conflict
- access information on the wide range of health and safety issues that need to be addressed at all times.

Assessment

The outcomes of the unit will be assessed on the production of a word-processed dissertation/report on the historical and contemporary development of a photographic medium, application or invention of approximately 2500 words in length.

All candidates must demonstrate an ability to research their chosen subject in some depth, and it is expected that the dissertation/report will be an organised, articulate analysis of the topic demonstrating individual perception and speculation. It must also clearly demonstrate achievement of the outcomes in the unit.

The dissertation/report must comply with generally accepted presentation requirements (ie, typescript, A4, appropriate illustration and supplementary material, full and appropriate illustration and supplementary material, full and appropriate bibliographic notation including also full web site addresses).

Guidance

Key Skills signposting

As candidates are working towards the outcomes of this unit, there are opportunities for Key Skills development in the following Level 4 Key Skills units:

Communication

- C4.1 Develop a strategy for using communication skills over an extended period of time.
- C4.2 Monitor progress and adapt your strategy, as necessary, to achieve the quality of outcomes required in work involving at least one group discussion about a complex subject and one document of 1000 words or more about a complex subject.
- C4.3 Evaluate your overall strategy and present the outcomes from your work, using at least one formal oral presentation. Include a variety of verbal, visual and other techniques to illustrate your points.

Problem solving

- PS4.1 Develop a strategy for problem solving.
- PS4.2 Monitor progress and adapt your strategy for solving the problem.

Improving own learning and performance

- LP4.1 Develop a strategy for improving your own learning and performance.
- LP4.2 Monitor progress and adapt your strategy to improve your performance.

Working with others

- WO4.1 Develop a strategy for working with others.
- WO4.2 Monitor progress and adapt your strategy to achieve agreed objective.
- WO4.3 Evaluate your strategy and present the outcomes from your work with others

Information and communication technology

- ICT4.1 Develop a strategy for using ICT skills over an extended period of time.
- ICT4.2 Monitor progress and adapt your strategy, as necessary, to achieve the quality of outcomes required in work involving the use of ICT for two different complex purposes.
- ICT4.3 Evaluate your overall strategy and present the outcomes from your work using at least one presentation, showing integration of text, images and numbers.

Links with other units/qualifications

This unit also has links with the following National Occupational Standards/City & Guilds NVQ units in Photography and Photographic Processing:

Unit 1	Contribute to effective performance at work L3
Unit 2	Establish and maintain positive working relations L3+L4
Unit 4	Establish and maintain a healthy, safe and secure workplace L4
Unit 7	Discuss, develop and agree the photo imaging brief L4
Unit 9	Establish and maintain the quality of workplace performance L3+L4
Unit 12	Present work to customers and potential customers L3+L4

Unit 17 Organise and carry out photographic assignments L3+L4
 Unit 20 Take specified photographs L3
 Unit 21 Conceive and take photographs L4

Delivery advice

This unit should involve 100 hours of study – 40 of which should be through guided learning.

There is a need for the candidates to have access to a well-resourced learning centre and library with a stock of key texts/books, as listed below. A facility with IT provision must be available on a flexible basis to allow the candidate to produce the evidence required for assessment.

Candidates should investigate and critically review current trends and innovative practice and use a wide range of resources to gather data. They should be assisted in this where possible, especially with regard to visits to photographic galleries and exhibitions, national collections of photography and the visual arts. Attendance at trade shows and events organised by the photographic professional organisations (BIPP etc) and learned societies such as the RPS and RSA should be encouraged.

Where appropriate, reference should be made to relevant legislation, British Standards and industry codes of practice. Similarly, safe working methods and safety precautions should be followed at every stage of the activity and health and safety considerations should be integrated into the unit wherever possible.

Appropriate centre staff should agree the title and outline of the report/dissertation to be presented for assessment prior to commencing work on the unit. Evidence presented should be the candidates' own work and candidates are expected to plan and carry out their assessments independently.

Suggested resources list

The following list of publications will be of value to candidates undertaking research into contextual studies. Candidates should acknowledge all sources of information in all written presentations. Books marked with an asterisk are seen as essential provision within the learning centre library. Other books, including those out of print should be available through the public library system, learned society libraries (RPS, RSA, V&A, Birmingham Reference Library "Stone" Collection, the Museum of Film and Photography in Bradford and the British Library).

- *A New History of Photography edited by Michel Frizot (Konemann, 1998 ISBN-3-8290-1328-0)
- *The Photograph Graham Clarke (Oxford University Press, 1997 Oxford History of Art series ISBN-0-19-284200-5)
- *The History of Photography from 1839 to the Present Beaumont Newhall (Secker and Warburg London, 1982 ISBN-0-4363-0508-9)
- *Photography from 1839 to Today (Taschen, 1999 ISBN-3-8228-7973-0)
- *A History of Photography, Social and Cultural Perspectives edited by Jean-Claude Lemagny & Andre Rouille (Cambridge University Press, 1987 ISBN-0-521-34407)

*Story of Photography Michael Langford (2nd Edition, Focal Press Ltd, 1999 ISBN-0-2405-1483-1)

*Art and Photography Aaron Scharf (Allen Lane Penguin Press, 1969 SBN-7139-0052-0)

*Talking Photography: Catalogue of the audio and visual collections at the British Library National Sound Archive (available for loan) edited by Val Williams, Rob Perks and Martin Barnes (ISBN-0-7123-4608-2)

*Beyond the Lens Guide to Rights, Ethics and Business Practice in Professional Photography (Association of Photographers, 81 Leonard Street, London EC2A 4QS)

*Photo UK: A source book for anyone working in Photography (Dewi Lewis ISBN-1-899235-75-2)

*Susan Sontag on Photography (Penguin Books, 1979)

*Ways of Seeing John Berger (Penguin Books, 1979)

*Coming to Light: Birmingham's Photographic Collections by Peter James (Birmingham Libraries, Museums and Art Gallery, 1989 ISBN-0-7093-0228-2)

*Advanced Photography Michael Langford (6th Edition, Focal Press, 1989 ISBN-0-2405-1486-6)

British Photography in the 19th Century: The Fine Art Tradition Mike Weaver (Cambridge University Press, 1989 ISBN-0-521-34119-1)

Beyond Monochrome Tony Worobiec and Ray Spence (printing including working details of historical processes) (Fountain Press, 1999 ISBN-0-86343-31-38)

Dialogue with Photography Paul Hill and Thomas Cooper (Dewi Lewis ISBN-1-899235-61-2)

Stieglitz on Photography: Selected Essays and Notes (Aperture, 1999 ISBN-0-89381-804-6)

Aperture Masters of Photography Series (Aperture, 1999 ISBN-0-89381-751-1 to ISBN-0-8931-836-4). 18 Historical Masters of Photography from Eugene Atget to Eikoh Hosoe

The Artist as Photographer Marina Vaizey (Sidgwick & Jackson London ISBN-0-283-98739-1)

Our Forbidden Land Fay Godwin (Jonathan Cape, 1990 ISBN-0-224-02751-4)

Unit 24

Assessment and training in photography businesses

Unit summary

This unit will serve as an awareness raiser to the practice and procedures of modern business, by encouraging the candidate to research and adopt systems outside the photographic industry.

The requirements for successful unit completion will include a demonstration and appreciation of the normal requirements of Business planning, Employment Law (contracts and job descriptions), interview, staff selection, staff training, assessing skills and e-commerce.

The unit should direct the candidate towards research and the evaluation of acquired information, in order to make policy decisions to achieve business success and general projected aims.

Training and assessment should be a major feature in the unit and should demonstrate the practical ability of the candidate to interview and, by initial assessment methods, select staff. In addition, candidates should carry out training in specific skills and finally make an objective assessment of the trainee, giving feedback on the trainees' success.

Successful achievement of this unit is dependent upon candidates meeting the assessment requirements and outcomes and producing work of a satisfactory and reliable standard.

Aims

The unit aims are to enable the candidate to:

- develop their understanding of a range of business practices
- research and apply skills related to staff selection training and on going appraisal
- · understand and advise on business start up procedures
- practise effective training and standard assessing techniques.

Outcomes

On successful completion of this unit the candidate will be able to:

- 1 demonstrate an understanding of the factors which can affect the selection and training of staff
- 2 select candidates, undertake interviews and make a selection of staff for a specific appointment
- 3 provide learning opportunities for new and existing staff and undertake training sessions
- 4 assess trainees in skills and knowledge
- 5 organise generic staff training events

Unit content

Outcome 1

Demonstrate an understanding of the factors which can affect the selection and training of staff

The candidate knows how to:

- describe the main types of management structure
- identify the key elements of employment law and equal opportunities policies
- recognise the importance of the business plan and financial issues on decisions about recruitment and training
- ensure the accuracy and suitability of job specifications/descriptions, recruitment advertisements, application forms and contracts.

Outcome 2

Select candidates, undertake interviews and make a selection of staff for a specific appointment

The candidate knows how to:

- organise advertising, produce job specifications, and qualification profiles
- evaluate staff applications against job specifications
- organise interviews:
 - plan and prepare interview questions
 - plan interview procedure and content
- conduct interviews
- use communication techniques effectively (question/answer, reports, letters, email)
- select candidates for the specific appointment
- prepare written feedback for unsuccessful candidates.

Outcome 3

Provide learning opportunities for new and existing staff and undertake training sessions

- · organise and deliver a staff induction programme
- use research vehicles to obtain information on training needs
- identify current industrial practice and new technology related to the staff and their duties
- identify specific staff training requirements
- write a training plan
- plan a training session
- deliver a group training session
- coach on a one to one basis
- use efficient training methods
- use a range of visual aids
- evaluate own training performance.

Outcome 4

Assess trainees in skills and knowledge

The candidate knows how to:

- design assessment procedures
- undertake assessment of skills and underpinning knowledge
- prepare written and oral questions and marking criteria
- design and produce recording and tracking documentation
- monitor achievement rates in conjunction with equal opportunities policy
- give candidate feedback
- assess the effectiveness of the training programme.

Outcome 5

Organise generic staff training events

The candidate knows how to:

- plan the training agenda
- organise the training meeting (delivery, content, specialist speakers)
- act as chairperson
- summarise content and discussion points.

Assessment

- The outcomes of this unit will be assessed on the production of a 1500 word casestudy report which shows evidence of the candidate's knowledge of how the following factors relate to staff recruitment and training in photography businesses:
 - Company structure
 - Job descriptions
 - Contracts
 - Employment Law
 - Financial planning
 - Equal opportunities policies.
- A full description of the staff selection process in a photography business
- Records, supplemented by witness evidence, which demonstrate that the candidate has carried out an assessment of trainees and organised training events, to meet the needs of a photography business.

Guidance

Key Skills signposting

As candidates are working towards the outcomes of this unit, there are opportunities for Key Skills development in the following Level 4 Key Skills units:

Communication

- C4.1 Develop a strategy for using communication skills over an extended period of time.
- C4.2 Monitor progress and adapt your strategy, as necessary, to achieve the quality of outcomes required in work involving at least one group discussion about a complex subject and one document of at least 1000 words or more about a complex subject.
- C4.3 Evaluate your overall strategy and present the outcomes from your work, using at least one formal oral presentation. Include a variety of verbal, visual and other techniques to illustrate your points.

Application of number

- N4.1 Develop a strategy for using application of number skills over an extended period of time.
- N4.2 Monitor progress and adapt your strategy, as necessary, to achieve the quality of outcomes required in work involving deductive and inferential reasoning and algebraic modelling.
- N4.3 Evaluate your overall strategy and present the outcomes from your work including use of charts, graphs, and diagrams to illustrate complex data.

Information and communication technology

- ICT 4.1 Develop a strategy for using ICT skills over an extended period of time
- ICT4.2 Monitor progress and adapt your strategy, as necessary, to achieve the quality of outcomes required in work involving the use of ICT for two different complex purposes.
- ICT4.3 Evaluate your overall strategy and present the outcomes from your work using at least one presentation, showing integration of text, images and numbers

Problem solving

- PS4.1 Develop a strategy for problem solving.
- PS4.2 Monitor progress and adapt your strategy for solving the problem.
- PS4.3 Evaluate your strategy and present the outcomes of your problem solving skills.

Improving own learning and performance

- LP4.1 Develop a strategy for improving your own learning and performance.
- LP4.2 Monitor progress and adapt your strategy to improve your performance.

Working with others

- WO4.1 Develop a strategy for working with others.
- WO4.2 Monitor progress and adapt your strategy to achieve the agreed objectives.
- WO4.3 Evaluate your strategy and present the outcomes from your work with others.

Links with other units/qualifications

The unit has links with the following units within 7318 Learning and Development award (previously 7281 Training and Development):

- Unit 16 Monitor and review progress with learners L16 (previously D11)
- Unit 25 Assess candidates using a range of methods A1 (previously D32 & D33)
- Unit 26 Assess candidates' performance through observation A2 (previously D32 & D33)
- Unit 27 Conduct internal quality assurance of the assessment process V1 (previously D34)

Delivery advice

This unit should involve approximately 100 hours of study – 40 of which should be through guided learning.

Assessments should be practical and realistic and relate to current financial and retail practices. Where candidates are currently working in the sector, there will be opportunities for them to draw evidence from activities carried out in the workplace as agreed by their employer. Candidates should be encouraged to investigate and critically review current trends and innovative practice and use a range of resources to gather data.

Candidates should be encouraged to use Information Communication Technology (ICT) resources for activities involving research, investigation, processing and presentation of financial information. In assessment output candidates must demonstrate appropriate and effective use of ICT resources.

Where appropriate, reference should be made to relevant legislation, British Standards and industry codes of practice. Similarly, safe working methods and health and safety precautions should be applied, as necessary.

Suggested resources list

An extended range of textbooks and reference materials are available to students undertaking research studies in Recruitment and Staff Development, including the following:

Peter Chandler – An A-Z of Employment Law: A Complete Reference Source for Managers (Kogan Page 2000)

David Walker – Selection Interviewing (Self-development for Success) (Amacum 1999) Paul Iles – Managing staff selection and assessment (Managing Work and Organisations) (OU Press 1998)

Douglas McGregor – The Human Side of Enterprise (McGraw Hill Education 1995)

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Unit 25

Specialist photographic applications for scientific research

Unit summary

This unit is concerned with the development of the skills required by the photographer working in a scientific research environment as senior members of staff. Candidates will be expected to advise on photographic imaging techniques supporting the research of specialist recording or visualisation. Throughout this unit, the term photography will be taken to include silver-based and digital imaging.

On completion of this unit, candidates will have gained experience in a broad range of specialist scientific applications, together with an appreciation of the administrative and analytical skills required at this level.

Successful achievement of this unit is dependent upon candidates meeting the assessment requirements and outcomes and producing work of a satisfactory and reliable standard.

Aims

This unit aims to enable the candidate to:

- acquire high level craft skills in a range of specialist scientific photography techniques
- investigate the theoretical basis of a range of scientific applications of photography
- devise practical methods of applying specialist techniques to meet local requirements
- monitor the photographic and technical press for relevant advances and developments
- investigate and critically evaluate professional practices at the senior practitioner/manager level
- co-operate productively with non-photographic colleagues in the research environment
- develop proficiency in the production of technical appraisals and laboratory reports.

Outcomes

On successful completion of this unit, the candidate will be able to:

- 1 demonstrate senior practitioner/manager practical skills and abilities in a wide range of scientific imaging
- 2 prepare accurate costing and time plans for a variety of studio-based and laboratory-based research assignments
- 3 demonstrate an ability to discuss and advise on the imaging requirements of research colleagues, operating effectively and safely in the research environment, and produce high quality reports
- 4 devise and develop experimental imaging set-ups for a range of research situations
- 5 critically review their own professional practices at senior practitioner/ manager level

Outcome 1

Demonstrate senior practitioner/manager practical skills and abilities in a wide range of scientific imaging

The candidate knows how to:

- select appropriate equipment and materials for the recording or visualisation of research subject matter, in the studio or in a laboratory environment, using
 - invisible radiation (infrared, direct ultraviolet, indirect ultraviolet)
 - monophotogrammetry of two dimensional subject matter
 - sensitometry (process control, testing of sensitive materials)
 - macrophotography up to 20x camera image magnification (reflected light, transmitted light -bright field, dark field)
 - photomicrography up to 200x camera image magnification (bright field, dark field)
 - visualisation of movement (high speed still photography using high effective shutter speeds and using strobe light sources), time lapse imaging
 - photoelastic stress recording of birefringent models under strain

[Note: techniques of standardisation, use of control images or scale references are essential requirements for many specialist scientific applications.]

Outcome 2

Prepare accurate costing and time plans for a variety of studio-based and laboratory-based research assignments

The candidate knows how to:

- calculate time and resource costs for both silver-based and digital images
- produce written plans of costing for
 - staff time, including pre and post production
 - equipment hire
 - bought-in services
 - materials costs

Outcome 3

Demonstrate an ability to discuss and advise on the imaging requirements of research colleagues, operate effectively and safely in the research environment, and produce high quality reports

- identify and describe the imaging potential of a range of research situations
- advise on developments in the field of scientific imaging
- ensure that health and safety procedures are observed.

Outcome 4

Devise and develop experimental imaging set-ups for a range of research situations

The candidate knows how to:

- apply expert knowledge to the analysis of research imaging proposals
- devise, design and progress experimental imaging apparatus to meet research requirements
- record imaging procedures and produce high quality reports.

Outcome 5

Critically review their own professional practices at senior practitioner/ manager level

Candidates know how to:

- evaluate their own performance, considering
 - how effectively the work was managed, such as setting objectives, planning and managing time
 - ways of researching a wide variety of materials and techniques in specialist scientific imaging
 - effective liaison with colleagues within the practical research environment
 - how effectively logistical and operational problems in research imaging were anticipated and resolved
 - how successful the finished image product was in illustrating the research phenomenon.

Assessment

Assessment of this unit will be based on a range of assignments designed to meet all the unit outcomes and candidates must be conversant with all of the unit content. The candidate must provide evidence of subject knowledge by producing finished presentations for FOUR assignments based on the major topic areas of Outcome 1. The choice of silver-based or digital technology must be appropriate to the subject matter, and the final presentation should be based on paper print images. Commercial processing of colour is acceptable. However, it is expected that black and white materials will be processed and printed by the candidate.

The assessable work for each of the chosen topic areas will comprise of

- the final presented images for each research topic
- evidence of research including original material such as tests and other support material
- a full technical report with records of procedures, planning and health and safety issues for each assignment. The report should be prepared using a word processor, and should include explanatory diagrams and be presented in a bound form
- a comprehensive analysis of the final images in terms of image quality, production methods, and a successful demonstration of the research phenomenon.

The above pieces of work should total approximately 1500 words.

Guidance

It is expected that candidates will have completed a Level 3 award and have a range of experience at this level. It will be an advantage to have completed 9231 Photography Part 3, 6924 Progression Award in Photography Level 3 or 7474 Vocational Photography.

Key Skills signposting

As candidates work towards the outcomes of this unit, there are opportunities for Key Skills development in the following Level 4 Key Skills units:

Application of number

- N4.1 Develop a strategy for using application of number skills over an extended period of time.
- N4.2 Monitor progress and adapt your strategy, as necessary, to achieve the quality of outcomes required in work involving deductive and inferential reasoning and algebraic modelling.
- N4.3 Evaluate your overall strategy and present the outcomes from your work, including the use of charts, diagrams and graphs to illustrate complex data.

Communication

- C4.1 Develop a strategy for using communication skills over an extended period of time.
- C4.2 Monitor progress and adapt your strategy, as necessary, to achieve the quality of outcomes required in work involving one group discussion about a complex subject and one document of 1000 words or more about a complex subject.

Working with others

- WO4.1 Develop a strategy for working with others.
- WO4.2 Monitor progress and adapt your strategy to achieve agreed objectives.

Improving own learning and performance

- LP4.1 Develop a strategy for improving your own learning and performance.
- LP4.2 Monitor progress and adapt your strategy to improve your performance.
- LP4.3 Evaluate your strategy and present the outcomes of your learning.

Problem solving

- PS4.1 Develop a strategy for problem solving.
- PS4.2 Monitor progress and adapt your strategy for solving the problem.
- PS4.3 Evaluate your strategy and present the outcomes of your problem solving skills.

Links with other units/qualifications

This unit is closely related to Unit 7 Scientific and technical photographic imaging, within this qualification.

This unit also has links with the following National Occupational Standards/City & Guilds NVQ units in Photography and Photographic Processing:

Unit 1	Contribute to effective performance at work L3
Unit 2	Establish and maintain positive working relations L3+L4
Unit 3	Contribute to the maintenance of health, safety and security at work L3
Unit 4	Establish and maintain a healthy, safe and secure workplace L4
Unit 6	Contribute to the development of the photo imaging brief L3
Unit 16	Store and retrieve photographic equipment and material L3+L4
Unit 17	Organise and carry out photographic assignments L3+L4
Unit 20	Take specified photographs L3
Unit 21	Conceive and take photographs L4
Unit 48	Process exposed films L3
Unit 50	Process and print photographic images by hand L3
Unit 54	Mount photographic images for exhibition and display L3

Delivery advice

This unit should involve approximately 100 hours of study -40 of which should be through guided learning.

Candidates should have access to an environment where a range of scientific imaging is a significant research tool.

In addition, candidates should have access to a well-resourced learning centre/library with a stock of relevant materials for reference purposes. Access to a facility with IT provision needs to be available on a flexible basis to allow the candidate to produce the evidence required for assessment. Access to information within the candidate's support organisation is also necessary in order to draw upon both valuable and current evidence of activity relevant to the content of this unit.

Assessments should be practical and realistic and relate to current sector practice. If candidates are currently working in the sector, there will be opportunities for them to draw evidence from activities carried out in the workplace as agreed by their employer. Candidates should be encouraged to investigate and critically review current trends and innovative practice and use a range of resources to gather data. Valuable information can be obtained through visits to organisations and from presentations given by guest speakers.

Where appropriate, reference should be made to relevant legislation, British Standards and industry codes of practice. Similarly safe working methods and health and safety precautions should be applied, as necessary.

Appropriate centre staff should agree the title and outline of the report to be presented for assessment prior to commencement. Evidence presented should be the candidates' own work and candidates are expected to plan and carry out their assessments independently.

Suggested resources list

Scientific Photography and Applied Imaging, S. Ray (Focal Press, Oxford 1999)

Applied Photography, C. Arnold, P. Rolls and J. Stewart (Focal Press, London 1971)

Advanced Photography, M. Langford (Focal Press, Oxford 1998)

Focal Encyclopaedia of Photography, L. Strobel and R. Zakia (Focal Press, Boston 1993)

There are many data sheets and publications from manufacturers, which are essential reading for specialist scientific imaging.

Journals also provide an opportunity to learn of current research and techniques, for example:

Proceedings of the SPIE

Journal of Audio visual Media in Medicine Scientific American Journal of Biological Photography

Unit 26

Personal and professional development

Unit summary

This unit is about the knowledge and skills needed to plan, monitor and manage a personal learning and development programme which will enable individuals to accept responsibility for their own career development, make and take opportunities for themselves whilst, at the same time, looking beyond the immediate needs of the organisation.

Successful achievement of this unit is dependent upon candidates meeting the assessment requirements and outcomes and producing work of a satisfactory and reliable standard.

Aims

This unit aims to enable the candidate to:

- seek information on ways to achieve what they want to do and identify factors that may affect their plans
- use this information to agree targets with others
- prioritise action and manage their time effectively to complete tasks
- seek and use feedback and support from others to monitor progress.

Outcomes

On successful completion of this unit the candidate will be able to:

- 1 review their learning, capabilities and work performance, identifying strengths, weaknesses and areas for improvement
- 2 devise a strategy and schedule to manage their personal development and achieve goals
- 3 investigate various learning strategies and how the learning experience can be optimised and managed
- 4 monitor and review their progress with support from others
- 5 critically reflect on the degree of personal development achieved and implications for further personal and professional progression.

Unit content

Outcome 1

Review their learning, capabilities and work performance, identifying strengths, weaknesses and areas for improvement

- undertake a self-audit to record experiences to date, identifying knowledge and skills acquired through previous experience and present job role
- review, with help from others, the experience of learning and identify personal strengths and weaknesses
- outline own aspirations using appropriate sources of advice and information
- explain the importance of self development
- describe what personal effectiveness is.
- describe how lifestyle and health impact on personal effectiveness
 - diet
 - exercise
 - rest
 - recreation
 - stress
- identify behaviours associated with personal effectiveness
 - assertiveness
 - stamina
 - commitment
 - drive
 - energy
 - motivation
- explain the importance of personal presentation
- describe the important personal skills
 - entrepreneurial
 - innovation
 - communication
 - counselling
 - presentation skills
 - decision making
 - problem solving
 - time management
 - controlling stress
 - self evaluation
 - analysis techniques
- describe the importance of developing effective professional relationships
 - colleagues
 - superiors
 - team members
- describe effective social skills
 - conventions of business relationships
 - greetings
 - punctuality.

Outcome 2

Devise a strategy and schedule to manage their personal development and achieve goals

The candidate knows how to:

- identify practical targets, including relevant qualifications and/or units of awards, which lead to career and personal development
- establish a timetable to achieve targets
- identify factors that might affect their plans eg financial, stress implications, available opportunities, motivation, possible implications for changes in lifestyle
- investigate details of the identified units and/or qualifications, using advice from others to identify gaps in their existing knowledge and skills that are needed
- identify the appropriate resources which may enable them to obtain the identified units and/or qualification eg formal/informal training, the time available, personal circumstances.

Outcome 3

Investigate various learning strategies and how the learning experience can be optimised and managed

The candidate knows how to:

- explain how people learn and how learning capacity can be optimised
- describe the various learning styles and their relative strengths and weaknesses
- identify their own preferences with regard to learning
- describe how study skills increase learning effectiveness
 - speed reading
 - reading
 - report writing
 - note taking
 - research methods
- describe the self evaluation skills
- evaluate learning resources.

Outcome 4

Monitor and review their progress with support from others

- prioritise actions for achieving targets
- devise a method of tracking personal progress by use of a diary, the collection of evidence or an alternative agreed logging method
- monitor own performance and review progress towards achieving objectives with an appropriate person paying particular attention to
 - method of study
 - ability to meet deadlines
- monitor the development of learning methods

- make use of available means of support, such as:
 - self-directed learning using written or IT-based material
 - teaching or training sessions
 - tutorials
 - activity-based learning
- make revisions to plans to take account of any changes in personal circumstances
- adapt methods of learning as necessary.

Outcome 5

Critically reflect on the degree of personal development achieved and implications for further personal and professional progression

- reflect on progress made, taking into account the contribution made to personal development by negotiating and collaborating with others, the methods by which strengths were maximised and weaknesses were overcome, the changes in working methods developed, and the effect on personal lifestyle, motivation and confidence
- seek information from others
 - tutors
 - colleagues
 - supervisors
 - managers
 - careers advisors
 - mentors
- establish evidence of own achievements
 - examples of work
 - witness statements
 - records
 - reports
 - certificates
 - awards
- assess the extent to which targets have been met
- present own views, take advice from others and agree possible action for future progression
- produce a structured report using a form and style to suit purpose and audience
- describe the career planning cycle
 - goal
 - action
 - review
 - goal
- draw up a career action plan
- set development goals
- plan for a change in direction
 - specialising
 - diversifying
 - acquiring
 - marketing new skills

- maximise development opportunities
- plan and implement Continuous Professional Development (CPD)
- develop a professional portfolio of achievement.

Assessment

The outcomes of this unit will be assessed on the production of a word-processed report of approximately 2,500 words which will include:

- a personal development strategy which incorporates a self-audit of experience and knowledge and skills acquired to date and identifies aspirations, needs and targets
- an assessment of various learning strategies available and suggestions as to how the candidate's learning experience might be optimised
- records which demonstrate that the candidate has:
 - actively undertaken personal development
 - monitored and analysed personal development
 - dealt with any problems which occurred
- an evaluative report which reflects on progress made in terms of personal and professional development, the extent to which targets have been met including any changes in expectations and the implications of the experience for further personal and professional development.

Guidance

Key Skills signposting

As candidates are working towards the outcomes of this unit, there are opportunities for Key Skills development in the following Level 4 Key Skills units:

Communication

- C4.1 Develop a strategy for using communication skills over an extended period of time
- C4.2 Monitor progress and adapt your strategy, as necessary, to achieve the quality of outcomes required in work involving at least one group discussion about a complex subject and one document of 1,000 words or more about a complex subject.

Application of number

N4.1 Develop a strategy for using application of number skills over an extended period of time.

Improving own Learning and Performance

- LP4.1 Develop a strategy for improving your own learning and performance.
- LP4.2 Monitor progress and adapt your strategy to improve your performance.
- LP4.3 Evaluate your strategy and present the outcomes of your learning.

Links with other units/qualifications

The content of this unit has links with all other units within this qualification.

Delivery advice

This unit should involve approximately 100 hours of study – 40 of which should be through guided learning. There is a need for the candidate to have access to a resourced learning centre/library with a stock of relevant materials for reference purposes. A facility with IT provision needs to be available on a flexible basis to allow the candidate to produce the evidence required for assessment.

Assessments should be practical and realistic and relate to current sector practice. If candidates are currently working in the sector, there will be opportunities for them to draw evidence from activities carried out in the workplace as agreed by their employer. Candidates should be encouraged to investigate and critically review current trends and innovative practice and use a range of resources to gather data.

Valuable information can be obtained through visits to organisations and from presentations given by guest speakers.

Where appropriate, reference should be made to relevant legislation, British Standards and industrial codes of practices. Similarly safe working methods and health and safety precautions should be applied, as necessary.

Suggested resources list

An extended range of textbooks and materials are available to candidates undertaking research studies in self development and personal skills and include:

Mike Pedler A Manager's Guide to Self-Development (McGraw Hill, 2001)

Fiona Elsa Dent *The Self-Managed Development Pocketbook* (Management Pocketbooks, 1999)

Phil Murray, Kevin Ash Bites on Personal Development: Fresh Thoughts with a Sharp Twist of Reality (Perfect Words and Music: 1996)

David Megginson, Vivian Whitaker *Cultivating Self-Development* (CIPD: 1996)

Appendix A

Guidance on delivery requirements

Guidance on delivery requirements

1 Staff profile criteria

	Essential	Desirable
Professional qualification in the discipline	3	
An award from BIPP or MPA		3
Trade experience		3
A City & Guilds Senior Award		3
TDLB awards		3
3 years teaching experience of photography at an appropriate level	3	
Specialist knowledge of unit content to be delivered	3	

2 General equipment requirements

Each unit will require a slightly different range of equipment. The following should be regarded as minimum requirements to offer the Higher Professional Diploma in Photo Imaging.

i Camera equipment:

Medium and/or large format where required by the unit should be available at a minimum ratio of FIVE students to ONE camera type. In addition to this, the centre should have a range of camera accessories to support the equipment and at least one change of focal length lens for each outfit. Exposure meters should be included.

ii Darkroom equipment:

Enlargers

Small, medium and large format enlargers where required by the unit should be available at a minimum ration of THREE students to ONE.

iii Processing equipment:

The following list may vary depending on unit selection:

Small tanks, deep tanks, processing dishes, drum processor, plus other accessories such as thermometers, measuring dishes etc.

3 Specialist equipment requirements

Moderators assigned to centres offering the Higher Professional Diploma in Photo Imaging are subject experts who are able to provide guidance and advice about the equipment which will be needed to offer the units selected. However, the following is an indication of some of the equipment which is likely to be needed to offer the more specialised units:

Scientific/medical/technical photography: optical microscopes, fibre-optic lighting systems, hand and studio flash

Image Management – appropriate digital recording equipment including stills and moving images, back-up software for editing and image manipulation

Laboratory Management – specialised laboratory processing equipment to include a densitometer, a roller transport colour print processor

Underwater photography – tanks which can be used for simulated photographic assignments

Aerial photography – this will usually be undertaken by specialist centres involved with flying. Additional specialist lenses for aerial photography will be required.

4 Photographic lighting

The space required for studio work is an important factor and it would be expected that a dedicated studio would be available.

Equipment to include:

Studio flash, a range of tungsten lighting to include: spot and flood lights plus other accessories, such as snoots, barn doors, soft boxes, plus backdrops

5 Digital

Hardware/software appropriate to the units.

Appendix B

Guidance on assignment design

1 Designing assignments

- 1.1 The purpose of an assignment is to provide candidates with the opportunity to produce work which demonstrates that they have gained the knowledge and skills detailed in the learning outcomes. Assignments may focus on either a single unit or more than one unit where there are common themes across some of the units.
- 1.2 It is important for centres to use an integrated approach (ie content which effectively links across two or more units) in relation to at least one assignment. There are a number of units within the Higher Professional Diploma in Photo Imaging which have links and could potentially form the basis for the development of an integrated assignment. Examples are:
 - Unit 1: Photographic image creation *and* Unit 4: Visual studies and photographic techniques
 - Unit 5: Business planning for photo Imaging *and* Unit 21: Photographic laboratory management
 - Unit 2: Image management film recording and darkroom processes *and* Unit 8: Photographic studio imaging.
- 1.3 Regardless of whether the assignment is based on an individual unit or an integrated selection of units, complete familiarity with the specification requirements will allow both tutors and candidates to identify relevant opportunities, content, and topics which can facilitate the development of work-related and challenging assignments. Specifically, the assessment and guidance section of the specifications should be used to generate ideas about possible approaches to assignment design.
- 1.4 In some units the assessment section is quite detailed and provides a strong basis for an assignment. In these cases, the main focus is likely to be on providing further background or a scenario to place the assignment into a meaningful context with a clear vocationally-related purpose. In addition, it is probable that centres will wish to present the assignment in a user-friendly manner for candidates, eg addressing the candidate in the second person, using a different font-size. Other units in the specifications have a less detailed assessment section which provides more scope for centres and candidates to tailor assignments to their specific work roles and experience, bearing in mind the need for the unit outcomes to be met. Although a particular form of assessment may be identified in the assessment section of the unit eg a report, it is possible to select an alternative approach such as a casestudy or presentation, as long as candidates produce evidence of comparable quantity and quality and meet the same outcomes.
- 1.5 To aid manageability and clarity, the assignment may be broken down into activities or tasks which relate to each other so that the overall assignment is coherent. In addition, assignments should be vocationally-relevant, realistic and motivating. It is important that each assignment brief provides the following information:
- the purpose of the brief or rationale for the assignment
- intended context
- knowledge and skills to be demonstrated
- the criteria for success

- 1.6 Assignment design should take account of those candidates who have the potential to achieve a higher grade to meet the Merit and Distinction criteria. For instance, the grading descriptors reflect the need for candidates to carry out research with increasing degrees of independence, apply work-related skills, knowledge and understanding effectively, and analyse and reflect on ideas and actions. There should therefore be opportunities for candidates to respond to their assignments in this way.
- 1.7 Assignments can be completed in any order; however, centres will be expected to sequence assignments logically according to the requirements of the candidates, the course, and resources within the centre.

2 Opportunities for repeating assignments

2.1 At this level candidates should be encouraged to take a proactive role in their own self assessment and be encouraged to match their work to the unit requirements. This should be supplemented with tutor feedback on performance. As part of this process, if candidates have not been successful in the assignment, there should be discussion and illustration of why they were not successful. If a candidate is then able to attempt the assignment again and meet the criteria independently, a pass can be achieved.

3 Safe working

3.1 The importance of safe working practices must always be stressed. Candidates have responsibilities for the safety of others as well as themselves. A candidate cannot be allowed to continue working on an assignment if they have contravened health and safety requirements. To complete the unit, the candidate will be allowed to recommence on a different occasion and tutors will closely monitor the achievement of the safety aspects.

4 Permission & confidentiality

4.1 Candidates may need to maintain confidentiality in the use of business data by 'anonymizing' sensitive information.

5 Marking and grading of assignments

- 5.1 To confirm that an outcome is achieved, it is useful to identify the key points or key assignment indicators which one would expect to see in a candidate's response. Reference should be made to the unit content of each outcome as well as the requirements of the brief/task to select the key points.
- 5.2 The content of the assignments and feedback to candidates should take into consideration the importance of
 - a formative approach
 - candidates being encouraged to reflect on building their achievements throughout the provision of the qualification, rather than only on the final outcome
 - indicating clearly and supportively to candidates on a regular basis any gaps there might be in the sufficiency and level of achieving the outcomes.

- 5.3 In order for candidates to achieve a Pass, it is necessary for them to complete all parts of the assignment and produce evidence which clearly shows that the outcomes have been met. The overall quality of the work must be of a satisfactory and reliable standard.
- 5.4 The assignments should be graded: Pass, Merit or Distinction. Candidates who show greater degrees of autonomy in the ways in which they carry out research, approach and evaluate their work, or demonstrate originality and imagination will gain higher grades than those who work completely from tutor prepared material. Please refer to the general Guidance section, paragraph 4.10 'The grading criteria' for full grading descriptors.

6 Internal and external moderation of assignments

6.1 Please refer to the general Guidance section, paragraph 9 'The quality assurance system' for information on how assignments are moderated.

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Appendix C

Skillset's National Occupational Standards mapping overview

This table indicates links between the units within the City & Guilds Higher Professional Diploma in Photo Imaging and Skillset's National Occupational Standards/NVQ units in Photography and Photographic Processing (Levels 3 and 4)

City & Guilds Higher Professional Diploma in Photo Imaging – Units	NOS/NVQ units in Photography and Photographic Processing		
Unit 1: Photographic image creation	NOS unit	City & C	Guilds NVQ unit
	Unit C1	Unit 1	Contribute to effective performance at work L3
	Unit C2	Unit 2	Establish and maintain positive working relations L3+L4
	Unit C3	Unit 3	Contribute to the maintenance of health, safety and security at work L3
	Unit C4	Unit 4	Establish and maintain a healthy, safe and secure workplace L4
	Unit C6	Unit 6	Contribute to the development of the photo imaging brief L3
	Unit P1	Unit 16	Store and retrieve photographic equipment and material L3+L4
	Unit P2	Unit 17	Organise and carry out photographic assignments L3+L4
	Unit P5	Unit 20	Take specified photographs L3
	Unit P6	Unit 21	Conceive and take photographs L4
	Unit PR4	Unit 48	Process exposed films L3
	Unit PR6	Unit 50	Print photographic images by hand L3
	Unit PR10	Unit 54	Mount photographic images for exhibition and display L3
Unit 2: Image management – NOS un		City & C	Guilds NVQ unit
film recording and darkroom processes	Unit C1	Unit 1	Contribute to effective performance at work L3
,	Unit C2	Unit 2	Establish and maintain positive working relations L3+L4
	Unit C3	Unit 3	Contribute to the maintenance of health, safety and security at work L3
	Unit C4	Unit 4	Establish and maintain a healthy, safe and secure workplace L4
	Unit C6	Unit 6	Contribute to the development of the photo imaging brief L3
	Unit C7	Unit 7	Discuss, develop and agree the photo imaging brief L4
	Unit P1	Unit 16	Store and retrieve photographic equipment and material L3+L4

City & Guilds Higher Professional Diploma in Photo Imaging – Units	NOS/NVQ units in Photography and Photographic Processing		
	Unit P2	Unit 17	Organise and carry out photographic assignments L3+L4
	Unit P5	Unit 20	Take specified photographs L3
	Unit P6	Unit 21	Conceive and take photographs L4
	Unit PR4	Unit 48	Process exposed films L3
	Unit PR6	Unit 50	Print photographic images by hand L3
	Unit PR10	Unit 54	Mount photographic images for exhibition and display L3
	Unit PR11	Unit 55	Make photographic copies L3
Unit 3: Image management –			ilds NVQ unit
digital recording and electronic manipulation	Unit C1	Unit 1	Contribute to effective performance at work L3
	Unit C2	Unit 2	Establish and maintain positive working relations L3+L4
	Unit C3	Unit 3	Contribute to the maintenance of health, safety and security at work L3
	Unit C4	Unit 4	Establish and maintain a healthy, safe and secure workplace L4
	Unit C6	Unit 6	Contribute to the development of the photo imaging brief L3
	Unit C7	Unit 7	Discuss, develop and agree the photo imaging brief L4
	Unit P1	Unit 16	Store and retrieve photographic equipment and material L3+L4
	Unit P2	Unit 17	Organise and carry out photographic assignments L3+L4
	Unit P4	Unit 19	Take standardised still life photographs L2
	Unit P5	Unit 20	Take specified photographs L3
	Unit P6	Unit 21	Conceive and take photographs L4
	Unit D3	Unit 35	Plan and produce scanned images L3
	Unit D4	Unit 36	Carry out specified image editing L3
	Unit D6		Prepare for and produce image output
	Unit D10	Unit 42	Establish, maintain and use colour management procedures L4
Unit 4: Visual studies and	NOS unit City & Guilds NVQ unit		
photographic techniques	Unit C1	Unit 1	Contribute to effective performance at
photographic teeningues	OTHE CT	Offici	work L3
	Unit C3	Unit 3	Contribute to the maintenance of health, safety and security at work L3
	Unit C6	Unit 6	Contribute to the development of the photo imaging brief L3
	Unit C8 Unit P2	Unit 8 Unit 17	Manage photo imaging activities L3+L4 Organise and carry out photographic assignments L3+L4

City & Guilds Higher Professional Diploma in Photo Imaging – Units	NOS/NVQ units in Photography and Photographic Processing				
	Unit P6 Unit PR4 Unit PR6	Unit 21 Unit 48 Unit 50	Conceive and take photographs L4 Process exposed films L3 Process and print photographic images		
	Unit PR11	Unit 55	by hand L3 Make photographic copies L3		
Unit 6: Photographic design	NOS unit	City & C	& Guilds NVQ unit		
and reproduction	Unit C1	Unit 1	Contribute to effective performance at work L3		
	Unit C2	Unit 2	Establish and maintain positive working relations L3+L4		
	Unit C6	Unit 6	Contribute to the development of the photo imaging brief L3		
	Unit C7	Unit 7	Discuss, develop and agree the photo imaging brief L4		
	Unit C12	Unit 12	Present work to customers and potential customers L3+L4		
Unit 7: Scientific and technical	NOS unit	City & Guilds NVQ unit			
photographic imaging	Unit C1	Unit 1	Contribute to effective performance at work L3		
	Unit C2	Unit 2	Establish and maintain positive working relations L3+L4		
	Unit C3	Unit 3	Contribute to the maintenance of health, safety and security at work L3		
	Unit C4	Unit 4	Establish and maintain a healthy, safe and secure workplace L4		
	Unit C6	Unit 6	Contribute to the development of the photo imaging brief L3		
	Unit C7	Unit 7	Discuss, develop and agree the photo imaging brief L4		
	Unit C8	Unit 8	Manage photo imaging activities L3+L4		
	Unit C9	Unit 9	Establish and maintain the quality of workplace performance L3+L4		
	Unit C12	Unit 12	Present work to customers and potential customers L3+L4		
	Unit P1	Unit 16	Store and retrieve photographic equipment and material L3+L4		
	Unit P5	Unit 20	Take specified photographs L3		
	Unit P7	Unit 22	Specify and obtain processed images L3+L4		

City & Guilds Higher Professional Diploma in Photo Imaging – Units	NOS/NVQ Photograp		Photography and essing	
Unit 8: Photographic studio imaging	NOS unit	City & Guilds NVQ unit		
	Unit C3	Unit 3	Contribute to the maintenance of	
			health, safety and security at work L3	
	Unit C4	Unit 4	Establish and maintain a healthy, safe	
			and secure workplace L4	
	Unit C6	Unit 6	Contribute to the development of the photo imaging brief L3	
	Unit C7	Unit 7	Discuss, develop and agree the photo	
			imaging brief L4	
	Unit C8	Unit 8	Manage photo imaging activities L3+L4	
	Unit P2	Unit 17	Organise and carry out photographic	
			assignments L3+L4	
	Unit P5	Unit 20	Take specified photographs L3	
Unit 9: Photographic location imaging	NOS unit	City & G	Guilds NVQ unit	
	Unit C3	Unit 3	Contribute to the maintenance of	
			health, safety and security at work L3	
	Unit C4	Unit 4	Establish and maintain a healthy, safe	
			and secure workplace L4	
	Unit C6	Unit 6	Contribute to the development of the	
			photo imaging brief L3	
	Unit C7	Unit 7	Discuss, develop and agree the photo imaging brief L4	
	Unit C8	Unit 8	Manage photo imaging activities L3+L4	
	Unit P2	Unit 17	Organise and carry out photographic	
			assignments L3+L4	
	Unit P5	Unit 20	Take specified photographs L3	
Unit 10: Photographic aerial imaging	NOS unit	City & Guilds NVQ unit		
	Unit C1	Unit 1	Contribute to effective performance at work L3	
	Unit C2	Unit 2	Establish and maintain positive working relations L3+L4	
	Unit C3	Unit 3	Contribute to the maintenance of	
	Unit C4	Unit 4	health, safety and security at work L3 Establish and maintain a healthy, safe and secure workplace L4	
	Unit C6	Unit 6	Contribute to the development of the photo imaging brief L3	
	Unit C7	Unit 7	Discuss, develop and agree the photo imaging brief L4	
	Unit C9	Unit 9	Establish and maintain the quality of workplace performance L3+L4	
	Unit P1	Unit 16	Store and retrieve photographic equipment and material L3+L4	

City & Guilds Higher Professional Diploma in Photo Imaging – Units	NOS/NVQ units in Photography and Photographic Processing			
	Unit P2	Unit 17	Organise and carry out photographic assignments L3+L4	
	Unit P5	Unit 20	Take specified photographs L3	
	Unit P6	Unit 21	Conceive and take photographs L4	
	Unit P7	Unit 22	Specify and obtain processed images L3+L4	
Unit 11: Underwater photography	NOS unit	City & C	Guilds NVQ unit	
	Unit C1	Unit 1	Contribute to effective performance at work L3	
	Unit C2	Unit 2	Establish and maintain positive working relations L3+L4	
	Unit C3	Unit 3	Contribute to the maintenance of health, safety and security at work L3	
	Unit C4	Unit 4	Establish and maintain a healthy, safe and secure workplace L4	
	Unit C7	Unit 7	Discuss, develop and agree the photo imaging brief L4	
	Unit C8	Unit 8	Manage photo imaging activities L3+L4	
	Unit C9	Unit 9	Establish and maintain the quality of workplace performance L3+L4	
	Unit C12	Unit 12	Present work to customers and potential customers L3+L4	
	Unit P2	Unit 17	Organise and carry out photographic assignments L3+L4	
	Unit P5	Unit 20	Take specified photographs L3	
	Unit P6	Unit 21	Conceive and take photographs L4	
Unit 12: Quality management	NOS unit	City & C	Guilds NVQ unit	
in photographic laboratories	Unit C1	Unit 1	Contribute to effective performance at work L3	
	Unit C2	Unit 2	Establish and maintain positive working relations L3+L4	
	Unit C3	Unit 3	Contribute to the maintenance of health, safety and security at work L3	
	Unit PR1	Unit 45	Start up and shut down laboratory equipment L3	
	Unit PR2	Unit 46	Contribute to the effectiveness of laboratory activities L3	
	Unit PR4	Unit 48	Process exposed films L3	
	Unit PR5	Unit 49	Print photographic images by machine L3	
	Unit PR7	Unit 51	Process printed images by machine L3	
	Unit PR8	Unit 52	Maintain the quality of the photographic chemistry L3	

City & Guilds Higher Professional Diploma in Photo Imaging – Units

NOS units in Interactive Media

Diploma in Photo Imaging – Units NOS units in Ir			n Interactive Media		
Unit 13: Interactive media design	NOS unit	NOS unit			
production	IM1	Work ef	fectively in interactive media L3		
F	IM2		assets for use in interactive media		
		product			
	IM3		e assets for use in interactive media		
		product			
	IM4		e user interface assets for interactive		
			products L4		
	IM5		user interfaces for interactive media		
			products L5		
	IM6	•	horing tools to create interactive media		
		product	•		
	IM24	Create 2	2D animations for interactive media		
		product	ts L4		
	IM27	Create	sound effects for interactive media		
		product	ts L4		
	IM28	Create r	music for interactive media products L4		
Unit 14: Moving image	NOS/NVQ	IVQ units in Photography and			
production (video)	Photogra	phic Proc	cessing		
	NOS unit	City & 0	Guilds NVQ unit		
	Unit C1	Unit 1	Contribute to effective performance at		
			work L3		
	Unit C2	Unit 2	Establish and maintain positive working		
			relations L3+L4		
	Unit C3	Unit 3	Contribute to the maintenance of		
			health, safety and security at work L3		
	Unit C4	Unit 4	Establish and maintain a healthy, safe		
			and secure workplace L4		
	Unit C6	Unit 6	Contribute to the development of the		
			photo imaging brief L3		
	Unit C7	Unit 7	Discuss, develop and agree the photo		
			imaging brief L4		
	Unit C8	Unit 8	Manage photo imaging activities L3+L4		
	Unit C9	Unit 9	Establish and maintain the quality of		
			workplace performance L3+L4		
	Unit P1	Unit 16	Store and retrieve photographic		
			equipment and material L3+L4		
	Unit P2	Unit 17	Organise and carry out photographic		
			assignments L3+L4		
	Unit P5	Unit 20	Take specified photographs L3		
	Unit P6	Unit 21	Conceive and take photographs L4		

City & Guilds Higher Professional Diploma in Photo Imaging – Units	NOS/NVQ units in Photography and Photographic Processing			
Unit 15: Photographic fine art imaging	NOS unit Unit C7	City & C Unit 7	Guilds NVQ unit Discuss, develop and agree the photo imaging brief L4	
	Unit C8 Unit C9	Unit 8 Unit 9	Manage photo imaging activities L3+L4 Establish and maintain the quality of workplace performance L3+L4	
	Unit PR3	Unit 47	Discuss and agree the supply of laboratory services L3	
Unit 16: Advertising for	NOS unit	City & Guilds NVQ unit		
photography	Unit C3	Unit 3	Contribute to the maintenance of health, safety and security at work L3	
	Unit C4	Unit 4	Establish and maintain a healthy, safe and secure workplace L4	
	Unit C6	Unit 6	Contribute to the development of the photo imaging brief L3	
	Unit C7	Unit 7	Discuss, develop and agree the photo imaging brief L4	
	Unit C9	Unit 9	Establish and maintain the quality of workplace performance L3+L4	
	Unit P2	Unit 17	Organise and carry out photographic assignments L3+L4	
	Unit P5	Unit 20	Take specified photographs L3	
Unit 17: Fashion photography	NOS unit	City & Guilds NVQ unit		
1 017	Unit C2	Unit 2	Establish and maintain positive working relations L3+L4	
	Unit C4	Unit 4	Establish and maintain a healthy, safe and secure workplace L4	
	Unit C6	Unit 6	Contribute to the development of the photo imaging brief L3	
	Unit C7	Unit 7	Discuss, develop and agree the photo imaging brief L4	
	Unit C8	Unit 8	Manage photo imaging activities L3+L4	
	Unit C9	Unit 9	Establish and maintain the quality of workplace performance L3+L4	
	Unit C12	Unit 12	Present work to customers and potential customers L3+L4	
	Unit P2	Unit 17	Organise and carry out photographic assignments L3+L4	
	Unit P5	Unit 20	Take specified photographs L3	
	Unit P6	Unit 21	Conceive and take photographs L4	
	Unit PR3	Unit 47	Discuss and agree the supply of laboratory services L3	

City & Guilds Higher Professional Diploma in Photo Imaging – Units	NOS/NVQ units in Photography and Photographic Processing			
Unit 18: Editorial, press, and	NOS unit	City & Guilds NVQ unit		
public relations photography	Unit C4	Unit 4	Establish and maintain a healthy, safe and secure workplace L4	
	Unit C8	Unit 8	Manage photo imaging activities L3+L4	
	Unit C9	Unit 9	Establish and maintain the quality of workplace performance L3+L4	
	Unit C12	Unit 12	Present work to customers and potential customers L3+L4	
	Unit P2	Unit 17	Organise and carry out photographic assignments L3+L4	
	Unit P5	Unit 20	Take specified photographs L3	
	Unit PR3	Unit 47	Discuss and agree the supply of laboratory services L3	
Unit 19: Portraiture and social	NOS unit	City & C	Guilds NVQ unit	
photography	Unit C1	Unit 1	Contribute to effective performance at	
,			work L3	
	Unit C2	Unit 2	Establish and maintain positive working	
			relations L3+L4	
	Unit C3	Unit 3	Contribute to the maintenance of	
	Unit C4	Unit 4	health, safety and security at work L3 Establish and maintain a healthy, safe	
	Offit C4	OIIIL4	and secure workplace L4	
	Unit C7	Unit 7	Discuss, develop and agree the photo	
	0007		imaging brief L4	
	Unit C9	Unit 9	Establish and maintain the quality of	
			workplace performance L3+L4	
	Unit C12	Unit 12	Present work to customers and potential customers L3+L4	
	Unit P1	Unit 16	Store and retrieve photographic	
			equipment and material L3+L4	
	Unit P2	Unit 17	Organise and carry out photographic	
			assignments L3+L4	
	Unit P5	Unit 20	Take specified photographs L3	
	Unit P6	Unit 21	Conceive and take photographs L4	
	Unit P7	Unit 22	Specify and obtain processed images L3+L4	
	Unit PR3	Unit 47	Discuss and agree the supply of laboratory services L3Unit PR3	

City & Guilds Higher Professional Diploma in Photo Imaging – Units	NOS/NVQ units in Photography and Photographic Processing			
Unit 20: Corporate (industrial and	NOS unit	City & Guilds NVQ unit		
commercial) photography	Unit C3	Unit 3	Contribute to the maintenance of	
., ,			health, safety and security at work L3	
	Unit C4	Unit 4	Establish and maintain a healthy, safe	
			and secure workplace L4	
	Unit C9	Unit 9	Establish and maintain the quality of	
			workplace performance L3+L4	
	Unit C12	Unit 12	Present work to customers and potential	
	Linit D1	Lloit 17	customers L3+L4	
	Unit P1	Unit 16	Store and retrieve photographic equipment and material L3+L4	
	Unit P2	Unit 17	Organise and carry out photographic	
	OTHET Z	Offic 17	assignments L3+L4	
	Unit P5	Unit 20	Take specified photographs L3	
Unit 21: Photographic laboratory	NOS unit	City & G	Guilds NVQ unit	
management	Unit C2	Unit 2	Establish and maintain positive working	
Ü			relations L3+L4	
	Unit C4	Unit 4	Establish and maintain a healthy, safe	
			and secure workplace L4	
	Unit P2	Unit 17	Organise and carry out photographic	
			assignments L3+L4	
	Unit P5	Unit 20	Take specified photographs L3	
	Unit P6	Unit 21	Conceive and take photographs L4 Contribute to the effectiveness of	
	Unit PR2	Unit 46	laboratory activities L3	
	Unit PR8	Unit 52	Maintain the quality of the photographic	
	OTHET NO	0111032	chemistry L3	
Unit 22: Specialist darkroom practices	NOS unit	City & G	Guilds NVQ unit	
	Unit C1	Unit 1	Contribute to effective performance at	
			work L3	
	Unit C3	Unit 3	Contribute to the maintenance of	
			health, safety and security at work L3	
	Unit PR1	Unit 45	Start up and shut down laboratory	
			equipment L3	
	Unit PR2	Unit 46	Contribute to the effectiveness of	
	Unit PR8	Lipit FO	laboratory activities L3	
	UIIILPKÖ	Unit 52	Maintain the quality of the photographic chemistry L3	
	Unit PR10	Unit 54	Mount photographic images for	
	Silici IVIO	OTHE OT	exhibition and display L3	
			1 / -	

City & Guilds Higher Professional Diploma in Photo Imaging – Units	NOS/NVQ units in Photography and Photographic Processing			
Unit 23: Contextual studies in	NOS unit	City & Guilds NVQ unit		
photo imaging	Unit C1	Unit 1	Contribute to effective performance at work L3	
	Unit C2	Unit 2	Establish and maintain positive working relations L3+L4	
	Unit C4	Unit 4	Establish and maintain a healthy, safe and secure workplace L4	
	Unit C7	Unit 7	Discuss, develop and agree the photo imaging brief L4	
	Unit C9	Unit 9	Establish and maintain the quality of workplace performance L3+L4	
	Unit C12	Unit 12	Present work to customers and potential customers L3+L4	
	Unit P2	Unit 17	Organise and carry out photographic assignments L3+L4	
	Unit P5	Unit 20	Take specified photographs L3	
	Unit P6	Unit 21	Conceive and take photographs L4	
Unit 25: Specialist photographic	NOS unit	City & Guilds NVQ unit		
applications for scientific research	Unit C1	Unit 1	Contribute to effective performance at work L3	
	Unit C2	Unit 2	Establish and maintain positive working relations L3+L4	
	Unit C3	Unit 3	Contribute to the maintenance of health, safety and security at work L3	
	Unit C4	Unit 4	Establish and maintain a healthy, safe and secure workplace L4	
	Unit C6	Unit 6	Contribute to the development of the photo imaging brief L3	
	Unit P1	Unit 16	Store and retrieve photographic equipment and material L3+L4	
	Unit P2	Unit 17	Organise and carry out photographic assignments L3+L4	
	Unit P5	Unit 20	Take specified photographs L3	
	Unit P6	Unit 21	Conceive and take photographs L4	
	Unit PR4	Unit 48	Process exposed films L3	
	Unit PR6	Unit 50	Process and print photographic images by hand L3	
	Unit PR10	Unit 54	Mount photographic images for exhibition and display L3	

Appendix D

Summary of scope of units

Unit 1 Photographic image creation

This unit focuses on:

- consolidating and extending the visual and technical skills used to create photographic images
- the development of visual concepts within the photographic medium
- the investigation of stylistic influences on images and their impact on modern society
- · health and safety and risk assessment

Unit 2 Image management – film recording and darkroom processes

This unit focuses on:

- image recording and production, using a range of film types and formats for creating photographic images
- competent operation of small, medium and large format camera
- related lighting equipment and techniques
- darkroom skills (to include machine and hand processes) and laboratory skills
- health and safety considerations

Unit 3 Image management – digital recording and electronic manipulation

The unit focuses on:

- the skills needed to access electronic image making technology
- the potential of a range of image-making applications including image recording either by film or CCDs and manipulated electronically by computer software
- the production of a folio of images which should be all encompassing and include evidence of knowledge, advanced skills and techniques

Unit 4 Visual studies and photographic techniques

The unit focuses on:

- the development of visual skills, critical image analysis and the principles of image making
- concepts of photographic technology which have altered the image making process such as the zone system, and digital manipulation
- use of a range of image techniques such as the use of photometric filters, effects filter, perspective distortion, mixed lighting, zone system, toning / split grading

Unit 5 Business planning for photo imaging

The unit focuses on:

- the exploration of a business idea
- the knowledge and skills that are needed to set up and start a business
- the production of a business plan for an idea or a new product/service.
- detailed investigation of the proposed business idea in order to assess its viability and potential.

Unit 6 Photographic design and reproduction

The unit focuses on:

- the production of creative photographic ideas which use traditional and digital design practices
- the structuring and presentation of text material and imagery on paper, using mark-making techniques, before using relevant industry standard electronic imaging for reproduction
- the development of expertise in features offered by industry standard digital input & output devices

Unit 7 Scientific and technical photographic imaging

The unit focuses on:

- the skills and techniques used in the recording of scientific, medical and technical processes and procedures
- the ability to communicate effectively with scientists
- the design of image recording situations to maximise data extraction and evaluation
- the use of special materials and equipment, using mathematical formulas as necessary

Unit 8 Photographic studio imaging

The unit focuses on:

- the development of skills and understanding of the techniques for working in a studio environment
- working to a client brief and planning and costing commissions
- using suitable camera and lighting techniques for studio work

Unit 9 Photographic location imaging

This unit focuses on:

- the development of skills and understanding of the equipment and techniques for working on location
- working to a client brief and planning and costing commissions
- developing and evaluating professional practice in relation to location imaging

Unit 10 Photographic aerial imaging

This unit focuses on:

- the development of creative skills and knowledge of aerial imaging
- the skills needed to advise customers on the best solution to an aerial imaging problem and the delivery of solutions to the highest possible quality
- the implementation of innovative techniques designed to raise the overall standards of the photography business
- the importance of health and safety issues as they affect the use of aerial imaging platforms, as well as the impact of meteorological, pilot communication and planning on the success of aerial imaging projects

Unit 11 Underwater photography

This unit focuses on:

- the advantages and limitations of photographic equipment and techniques used for underwater photography
- exploration of photographic problems faced by the underwater photographer
- legal and health and safety considerations in relation to underwater photography

Unit 12 Quality management in photographic laboratories

This unit focuses on:

- the quality, legal and statutory control of photographic processing laboratories
- the implementation and evaluation of chemical and electronic control techniques designed to raise the overall standards of the business

Unit 13 Interactive media design production

This unit focuses on:

- the exploration and use of digital media used in the design of computer multimedia packages
- the evaluation of the communication and aesthetic qualities of a multimedia production

Unit 14 Moving image production (video)

The unit focuses on:

- the development of moving image recording and production techniques
- the potential of the medium and its inter-relationship with still image recording
- the planning, scripting and production of a storyboard for a video programme
- programme planning, use of design, for titles and graphics as well as camera operating and editing via electronic and digital methods
- the skills needed in camera production, team direction and editing

Unit 15 Photographic fine art imaging

The unit focuses on:

- the development of self-expression and personal statement
- the production of photographic works by traditional and digital methods
- the relevance of a range of artists and image makers to personal work and concept development
- the development of ideas and concepts that can be realised through image making
- the exploration of the potential of a range of materials, processes, tools and equipment
- the principles of craftsmanship, adaptability and innovation to personal expression through image making

Unit 16 Photography for advertising

The unit focuses on:

- the working methods of key personnel in the advertising industry
- the production of imaginative and original design solutions to concepts
- the planning and costing of commissions and assignments
- legislative restrictions and cultural issues which affect the photographer in advertising

Unit 17 Fashion photography

The unit focuses on:

- the ability to provide eye-catching solutions to a fashion photography project
- health and safety issues in relation to comfort and security of models, location etc
- researching new techniques for the production of fashion images to include the role of digital imaging

Unit 18 Editorial, press and public relations photography

This unit focuses on:

- the management and delivery of a wide variety of creative PR and press photographic assignments
- researching new techniques for the production of PR and Press images
- health and safety issues, legislation and accuracy of information
- planning and costing of PR and Press images produced for sale to newspapers and magazines

Unit 19 Portraiture and social photography

This unit focuses on:

- the demonstration of a range of photographic skills in relation to portrait and social photography using both silver-based products and digital techniques in both interior and exterior locations
- seeking and creating profitable markets for high quality portrait and social photography
- working effectively with clients to meet their requirements and expectations
- taking a strategic approach to business development

Unit 20 Corporate (Industrial and Commercial) photography

This unit focuses on:

- the development of ideas and techniques for working in a corporate (industrial and commercial) environment both in the studio and on location
- the working practices required by personnel working in corporate (industrial and commercial) photography
- the planning and costing of commissions and location assignments

Unit 21 Photographic laboratory management

This unit focuses on:

- the development of business skills in laboratory management
- quality standards and continuous improvement in laboratory management
- the management of health and safety and legal and statutory requirements
- training and development of staff

Unit 22 Specialist darkroom practices

This unit focuses on:

- the implementation of best darkroom practice
- the reasoned use of different photographic materials and chemicals
- plans and costings for darkroom images produced for sale to clients
- health and safety requirements
- the investigation of new techniques

Unit 23 Contextual studies in photo imaging

This unit focuses on:

- the investigation into the link between the history of social change and photographic invention and application
- the development of critical understanding of chosen styles and photographic practice
- identification of potential routes of visual innovation for chosen application
- the use of effective research skills

Unit 24 Assessment and training in photography businesses

This unit focuses on:

- raising awareness of a range of business and employment practices
- recruiting and selecting staff
- staff development, training and appraisal

Unit 25 Specialist photographic applications for scientific research

This unit focuses on:

- selecting and using equipment and materials for the recording or visualisation of research subject matter
- planning and costing studio and laboratory-based research assignments
- developing experimental imaging set-ups for a range of research situations

Unit 26 Personal and professional development

This unit focuses on:

- planning, managing and reviewing a personal and professional development programme
- identifying strengths, weaknesses and areas for improvement in personal learning and performance, and developing strategies for optimising the achievement of goals
- critically reflecting on progress, including feedback from others, and drawing conclusions for future learning and development needs.

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Appendix EQCA accreditation numbers

Qualification title	QCA Qualification accreditation number	
City & Guilds Level 4 Higher Professional		
Diploma in Photo Imaging	100/5698/1	

City and Guilds unit	QCA Unit accreditation number
Unit 1 Photographic image creation	F/103/4630
Unit 2 Image management – film recording and darkroom processes	J/103/4631
Unit 3 Image management – digital recording and electronic manipulation	L/103/4632
Unit 4 Visual studies and photographic techniques	R/103/4633
Unit 5 Business planning for photo imaging	Y/103/4634
Unit 6 Photographic design and reproduction	D/103/4635
Unit 7 Scientific and technical photographic imaging	H/103/4636
Unit 8 Photographic studio imaging	K/103/4637
Unit 9 Photographic location imaging	M/103/4638
Unit 10 Photographic aerial imaging	T/103/4639
Unit 11 Underwater photography	K/103/4640
Unit 12 Quality management in photographic laboratories	M/103/4641
Unit 13 Interactive media design production	T/103/4642
Unit 14 Moving image production (video)	A/103/4643
Unit 15 Photographic fine art imaging	F/103/4644
Unit 16 Photography for advertising	R/103/4647
Unit 17 Fashion photography	J/103/4645
Unit 18 Editorial, press and public relations photography	L/103/4646
Unit 19 Portraiture and social photography	Y/103/4648
Unit 20 Corporate (Industrial and commercial) photography	D/103/4649
Unit 21 Photographic laboratory management	R/103/4650
Unit 22 Specialist darkroom practices	Y/103/4651
Unit 23 Contextual studies in photo imaging	D/103/4652
Unit 24 Assessment and training in photography businesses	H/103/4653
Unit 25 Specialist photographic applications for scientific research	K/103/4654
Unit 26 Personal and professional development	M/101/6978

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