Unit 33: Lens-based Image Making

Unit code: J/502/4979

QCF Level 3: BTEC National

Credit value: 10

Guided learning hours: 60

● Aim and purpose

This unit introduces learners to skills in and knowledge of a variety of lens-based technologies and processes for image making. Learners will explore the potential of this area in response to given themes or briefs.

● Unit introduction

There is a broad range of techniques that tutors and learners can within this discipline. Film-based or digital technologies can be used along with the investigation and use of processes like photograms, control of cameras, composition, editing and darkroom techniques.

When meeting the requirements of design briefs it is essential to develop skills in a broad range of areas. Learners need to be taught how to experiment with a variety of media in order to develop the creative and technical skills needed for the art and design industry. Although this unit is primarily concerned with developing proficiency in lens-based image making, the overall aim is to incorporate these skills within the chosen art and design discipline and apply them in order to communicate visually.

Learners will need to understand how to analyse a given theme or brief to plan and produce the most effective outcomes. This will involve using visual sources to develop creative ideas and will need to take into account appropriate and available technologies and equipment in order to build on technical skills. Learners must be made aware of the health and safety issues that apply to this area of study and explore them in sufficient detail to limit risk. Tutors will demonstrate safe working practices for equipment and processes.

Through this unit learners will develop an understanding of how to respond to a given theme or brief that incorporates lens-based image making and how to develop appropriate ideas and final solutions, using relevant technologies and techniques to produce outcomes.

● Learning outcomes

On completion of this unit a learner should:

1   Know about lens-based image making

2   Be able to develop ideas using lens-based technologies

3   Be able to produce final outcomes for a set brief

4   Be able to review own lens-based outcomes.

Unit content

1 Know about lens-based image making

Lens-based image making: film-based eg still photography, 35 mm camera, large format, point and shoot, lenses; digital eg DSLR, compact, mobile phone cameras; lenses eg telephoto, wide angle, zoom, enlarger, characteristics (speed, depth of field, resolving power, bokeh)

Work of others: primary eg galleries, exhibitions, guest speakers; secondary eg internet, books, magazines, design examples

Applications: eg web, animations, magazines, illustrations, TV, advertising, packaging, scientific

2 Be able to develop ideas using lens-based technologies

Traditional technologies: eg camera controls and operation; portraits, landscapes, still life and studio work; film speeds, exposure, depth of field, shutter speed; darkroom techniques, film processing, printing

Digital technologies: eg camera controls and operation; portraits, landscapes, still life, studio work; exposure, depth of field, shutter speed; editing and manipulation, use of relevant software and hardware

Lens-based: eg lens selection, focal length, aperture, depth of field, lens speed, focal plane shutter, apo-chromatic, camera format

3 Be able to produce final outcomes for a set briefs

Produce: consider visual language and formal elements eg composition, line, shape, contrast, colour, perspective; use lens-based technologies eg cameras, accessories, equipment, lenses, tripods, lighting

Final outcomes: eg portraits, landscapes, magazine spreads, packaging, advertising, abstract pieces, collage, animation

Set briefs: eg specific messages, clarity of message, functional, figurative, illustrations, charts, diagrams, non-specific messages, underlying meaning, double meanings, intention, idea, target group, audience

4 Be able to review own lens-based outcomes

Review: outcomes against brief eg analysis work, technical language, techniques, aesthetic qualities, fitness for purpose, constraints, opportunities; record eg annotation, presentation

Assessment and grading criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria for a pass grade describe the level of achievement required to pass this unit.

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P1 identify lens-based image making [SM, RL, IE, TW, EP]	**M1** describe lens-based image making	**D1** use examples of lens-based image making to inform ideas
P2 develop ideas using lens-based technologies [RL, IE, CT, TW, EP]	**M2** purposefully produce individual ideas against a given theme of brief	**D2** produce original ideas and effective final outcomes against a brief, with innovative use of lens-based technologies and techniques
P3 produce and present final outcomes for a set brief [CT, SM, IE]	**M3** produce and present considered final outcomes for a set brief, with coherent use of lens-based technologies and techniques	**D3** evaluate own lens-based outcomes.
P4 use lens-based technologies and techniques within own work [IE, CT, SM]	**M4** justify own lens-based outcomes.	
P5 review own lens-based outcomes. [CT, SM, RL, EP]		

PLTS: This summary references where applicable, in the square brackets, the elements of the personal, learning and thinking skills applicable in the pass criteria. It identifies opportunities for learners to demonstrate effective application of the referenced elements of the skills.

Key	IE – independent enquirers	RL – reflective learners	SM – self-managers
	CT – creative thinkers	TW – team workers	EP – effective participators

Essential guidance for tutors

Delivery

Successful delivery of this unit should give learners opportunities to investigate a variety of lens-based technologies and enable them to put these technologies into the context of a given theme or assignment brief. Learners should be given a variety of specific tasks so that they can familiarise themselves with lens-based technologies, whether traditional and/or digital.

Learners will become acquainted with the processes associated with lens-based technologies. The use of demonstrations and discussion is suggested to contextualise learner ideas within the given theme or assignment brief. Learners will need to be familiar with relevant terminology used in this area of art and design and should be guided through the design and production process from idea generation, using thumbnails and roughs along with lens-based experimentation, to possible production issues and evaluating their own final designs.

Most of the work for this unit will be carried out in studios or workshops but the learner work can be contextualised further by visiting galleries, exhibitions and studios. If possible, professional practitioners should also be involved by giving a seminar, workshop or setting the assignment.

Tutors could consider integrating delivery of this unit with other relevant units learners are taking as part of their programme of study. Units such as *Information Graphics* and *Image Manipulation Using Computer Applications* could be integrated successfully within an assignment brief. Research and ideas can be generated in sketchbooks, either paper based or online, and further ideas and working pieces can be developed using various digital and/or traditional techniques. Learners should record their understanding of lens-based technologies as they work from initial ideas to the finished work, which would be presented to a professional standard for example mounted work at a formal presentation.

For learning outcome 1, learners should be directed towards examples of the work of others, from photographers such as Henri Cartier-Bresson, Bill Brandt, Diane Arbus, Nan Golding, Sebastian Selgado, Martin Parr and Dorothea Lange to present day digital photography and its use across media such as magazines, documentary, fine art, advertising, packaging and online communities. Learners will be encouraged to consider the ways in which these photographers work and go about creating images, the type of equipment used and the conditions under which they work.

Learning outcomes 2 and 3 are linked in that learners will need to demonstrate that they can develop ideas into final outcomes, for the given theme or assignment brief, using a variety of traditional and/or digital lens-based techniques. This should be delivered mainly through workshops that stimulate ideas development and motivate learners by supporting their practical exploration of lens-based image making. To develop work learners should be encouraged to be experimental but also guided through the correct and safe use of industry standard equipment. To make effective images, learners will need to develop an awareness of how familiarity with the technologies and techniques enables fuller exploitation of opportunities for image making. It is expected that learning outcomes 2 and 3 will be taught through creative and technical workshops that emphasise creativity as well as the technicalities of lens-based image making.

The delivery of technical workshops for, outcomes 2 and 3 is dependent on centre learning resources but may include some or all of the following.

Lighting (studio and natural), composition – portraits, landscapes, health and safety, generic equipment such as tripods, cable release, light metres and flash

Traditional (film) based technologies

- Camera usage and controls – shutter speed, aperture, depth of field, different lenses
- Darkroom techniques – developing and printing film, contact strips, test strips, photograms, pinhole cameras
- Film – black and white or colour, types and speed, loading

Digital technologies

- Camera usage and controls – shutter speed, aperture, depth of field, reviewing, memory capabilities, effects of using different lenses
- Storage devices – memory cards, internal memory, backup
- Computer software and hardware – scanners, lenses, image manipulation and editing software

Learning outcome 4 involves learners being taught how to review their own work against effectively a set of accepted criteria and the assignment brief. It would be beneficial at this stage for learners to refer back to the brief and assess their work against it along with recapping on technical areas of lens-based image making. This could be through the use of individual studio journals using note taking, research and points of discussion to evidence learning.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topic and suggested assignments/activities and/assessment
Introduction to brief **Assignment 1:** People and Places - Discussion – initial thoughts. - Potential, constraints, contexts. - Possible outcomes. - Idea generation.
Discussions and examples of work of others. - Past and present examples – illustration, photographic, collage. - Different media that uses lens-based images – web, print, animation, advertising. - Literal and abstract examples.

Topic and suggested assignments/activities and/assessment
Supported study time.   • Individual learning plans.   • Production of sketchbook work, mood boards, thumbnails and roughs (PDF or paper based).   • Annotation and research.   • Idea development.   • Informal discussions.   • Production of final outcomes.
Workshops.   • Camera techniques – depth of field, camera controls, flash, lighting, composition.   • Digital – image editing, software, hardware.   • Traditional – darkroom techniques, developing, film speeds, exposure, printing, paper.
Learner initiated study.   • Experiments following workshops.
Learner initiated study.   • Individual learning plans.   • Idea development.   • Time management.   • Formal discussion with tutors.   • Assignment feedback.   • Evaluations.   • Formal and informal presentation/discussion.
Peer assessment.   • Individual learning plans.   • Idea generation and development.   • Interim critique.   • Final critique.   • Discussion group.
Guest presenter.   • Designer.
Field trip.   • Exhibition.   • Museum.   • Studio.
Unit review and assessment.

Assessment

To achieve P1, learners will be expected to provide evidence in the form of a sketchbook (electronic or paper based), design boards, annotated notes etc that show they have researched the work of others. They should show awareness of the differences between film-based and digital processes, even though their practical work may only concentrate on one of these areas.

For P2, learners will need to use their understanding of lens-based processes to inform the development of their work and how to generate ideas using basic idea generating techniques. At this stage, they may be producing test prints and experimenting with cropping and other forms of image manipulation. For all the pass criteria, learners should produce evidence through sketchbook annotation (digital or paper based) interim critiques, computer printouts, and individual learning plans that cover the learning that has taken place including the generation and development of ideas, the production, presentation and review of final outcomes.

For P3, learners will need to work from the brief and draw their work for P2 together to produce final work, either prints or screen based. They should consider the various formats possible for print and screen and the intended audience.

For P4, learners should show evidence that they are identifying opportunities to use appropriate technologies and techniques for the brief, for example using lenses and settings to allow for grab shots at a crowded event.

For P5, learners need to reflect on their working processes and outcomes through notation, presentation at a critique and/or through a more formal summing up statement or on screen presentation.

For M1, learners must provide a variety of evidence in the form of digital or paper-based annotated sketchbooks, design boards and discussion evidence that shows they have investigated the work of others effectively and can confidently use correct technologies within their work.

For M2, learners will have used their research to learn about the potential and suitability of specific techniques and processes, and will be able to relate these directly to their intentions for their practical work. This will influence the choices they make regarding equipment, processes and any adaptations or refinements they apply to their practical ideas development. For M3, learners will demonstrate competence in the way that they apply the results of their investigations into the work of others to the origination and development of their own final outcomes.

For M4, learners should show that they have an clear understanding of the use of lens-based technologies. A coherent and individual approach to the development of ideas and final solutions should be evident within learners' work. Justification of these ideas and solutions should also be evident in the form of written notes, annotation of visual evidence, verbal feedback and possibly learning journals.

Learners will produce final designs that show an individual and thoughtful process of decision making has taken place. Learners will present their work for a given brief coherently to an effective standard of presentations identifying how the design contexts, opportunities, constraints and communication issues of the brief have impacted on their design work.

For D1, learners will need to demonstrate they have a considered understanding of lens-based technologies and influences. They should show that they can apply this understanding creatively and fluently to the set brief using a wide variety of techniques which convey a comprehensive knowledge of lens-based technologies and influences.

For D2, learners should demonstrate confidence in the production and presentation of imaginative work, which could be produced in a variety of ways including screen based or printed outcomes. Work should be presented to high standard and convey their skills and understanding. Acceptable forms of evidence are the same as for pass and merit level.

For D3, learners will need to show evidence that they have considered the value of their work in the context of similar work by others, and that they have considered the implications for future work in this area.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the pass, merit and distinction criteria in the assessment and grading grid. This is for guidance and it is recommended that centres either write their own assignments or adapt any Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
P1, P2, P3, P4, P5, M1, M2, M3, M4, D1, D2, D3	**Assignment 1**: People and Places	Documentary photographer commissioned to record specific place during a specific period.	Evidence to include the following. Sketchbook (paper based or digital) consisting of research into examples of others' work and relevant images, annotated notes. Development of ideas (experiments with ideas using traditional and/or digital media). Final piece/s mounted to a professional standard, formal presentation/critique that incorporates an overall evaluation of learner work against the given criteria.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

This unit forms part of the BTEC Art and Design sector suite. This unit has particular links with the following unit titles in the BTEC Art and Design suite:

Level 1	Level 2	Level 3
Introduction to Photography	Working with Graphic design Briefs	Website Design
	Working with Photography Briefs	Words and Images in Graphic Design
		Image Manipulation Using Computer Applications

Essential resources

Specialist photographic studios and workshops will be required. These should be equipped with appropriate equipment, hardware, software and materials to fulfil the practical work in this unit. Access to photographic equipment such as cameras and tripods is essential. A well-stocked learning resource centre should be available with appropriate research materials in the form of books, magazines and internet facilities.

Employer engagement and vocational contexts

Centres should develop links with practising artists, craftspeople and designers, to deliver assignments to learners or to provide work experience.

Links with employers are essential to delivery of the programme in terms of work experience and future employment.

Vocational learning support resources include:

● Learning and Skills Network – www.vocationallearning.org.uk

Business and finance advice:

● local and regional Business Link – www.businesslink.gov.uk

Assignments should be vocationally relevant and centres should consider live briefs where possible.

Partnerships with establishments that offer relevant progression routes could be developed and encouraged.

Creative & Cultural Skills (www.ccskills.org.uk), the sector skills council for design have launched the web portal Creative Choices (www.creative-choices.co.uk). This portal has a range of information about careers in the design sector, including job descriptions.

Skillset, the sector skills council for creative media, provide details (www.skillset.org/photo) about careers advice and industry information, plus a regularly updated news and events page.

Indicative reading for learners

Textbooks

Eastland J – *Essential Darkroom Techniques* (Cassell, 1995) ISBN 978-0304345489

Freeman M – *The Photographer's Eye: Composition and Design for Better Digital Photos* (Focal Press, 2007) ISBN 9780240809342

Ingledew J – *Photography (Portfolio Series)* (Laurence King, 2005) ISBN 978-1856694322

Langford M – *Langford's Advanced Photography, Seventh Edition* (Focal Press, 2008) ISBN 978-0240520384

Langford M – *The Story of Photography* (Focal Press, 1998) ISBN 978-0240514833

Marien-Warner M – *Photography: A Cultural History* (Laurence King, 2006) ISBN 978-1856694933

Peterson B – *Understanding exposure; How to Shoot Great Photographs with a Film or Digital Camera* (Amphoto, 2004) ISBN 978-0817463007

Journals

British Journal of Photography

Digital Camera

Websites

www.bjp-online.com	the British Journal of Photography
www.canon.co.uk	lenses and cameras
www.dcmag.co.uk	digital camera magazine
www.ilfordphoto.com	Ilford photo website
www.kenrockwell.com	lens and camera reviews and advice
www.schoolofphotography.com	online courses

Delivery of personal, learning and thinking skills

The table below identifies the opportunities for personal, learning and thinking skills (PLTS) that have been included within the pass assessment criteria of this unit.

Skill	When learners are ...
Independent enquirers	discussing assignment requirements researching and annotating evaluating work
Creative thinkers	idea generation and development development of final outcomes evaluating work
Reflective learners	evaluating own work and that of others presenting ideas and final solutions
Team workers	generating ideas developing software and hardware skills
Self-managers	researching and annotating developing ideas and final solutions managing time and workload
Effective participators	idea generating peer assessing discussing work.

Although PLTS are identified within this unit as an inherent part of the assessment criteria, there are further opportunities to develop a range of PLTS through various approaches to teaching and learning.

Skill	When learners are ...
Reflective learners	giving feedback on assessment decision
Team workers	discussing ideas
Self-managers	organising time and managing resources effectively
Effective participators	participating in critiquing own work and that of others.

Functional Skills – Level 2

Skill	When learners are …
ICT – Use ICT systems	
Select, interact with and use ICT systems independently for a complex task to meet a variety of needs	researching examples of words and images developing and producing final outcomes
Manage information storage to enable efficient retrieval	effectively backing up digital files
Troubleshoot	working through any issues using correct procedures
ICT – Find and select information	
Select and use a variety of sources of information independently for a complex task	finding related examples to support development of ideas
Access, search for, select and use ICT-based information and evaluate its fitness for purpose	finding and using relevant information to support the development of ideas and the formulation of opinions
ICT – Develop, present and communicate information	
Bring together information to suit content and purpose	researching, idea development and producing final outcomes
Mathematics	
Understand routine and non-routine problems in a wide range of familiar and unfamiliar contexts and situations	depth of field scale
Identify the situation or problem and the mathematical methods needed to tackle it	depth of field scale
English	
Speaking and listening – make a range of contributions to discussions and make effective presentations in a wide range of contexts	presenting of ideas development, evaluation analysis
Reading – compare, select, read and understand texts and use them to gather information, ideas, arguments and opinions	assignment opportunities, contexts and constraints
Writing – write documents, including extended writing pieces, communicating information, ideas and opinions, effectively and persuasively	annotating ideas writing an evaluation.