



Higher National Unit specification

General information

Unit title: Camera: An Introduction

Unit code: H4A3 34

Superclass: KF

Publication date: June 2013

Source: Scottish Qualifications Authority

Version: 01

Unit purpose

The purpose of this Unit is to enable learners to develop an understanding of the basic principles and practices of digital video cameras, lenses, formats and resolutions. This is a practical Unit that will enable learners to gain knowledge of different cameras, lenses and techniques used in digital video production and apply this knowledge to achieve greater creative control.

Outcomes

On successful completion of the Unit the learner will be able to:

- 1 Describe image capture equipment.
- 2 Rig, set and make adjustments to camera.
- 3 Frame, compose and record shots to achieve visual continuity.

Credit points and level

1 Higher National Unit credit at SCQF level 7: (8 SCQF credit points at SCQF level 7)

Recommended entry to the Unit

It would be useful for the learner to have successfully completed an appropriate NC course, a basic production Unit or have had previous practical experience of digital video camera or digital stills.

Higher National Unit specification: General information (cont)

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Core Skills

Opportunities to develop aspects of Core Skills are highlighted in the Support Notes for this Unit specification.

There is no automatic certification of Core Skills or Core Skill components in this Unit.

Context for delivery

If this Unit is delivered as part of a Group Award, it is recommended that it should be taught and assessed within the subject area of the Group Award to which it contributes.

Equality and inclusion

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

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

Higher National Unit specification: Statement of standards

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Acceptable performance in this Unit will be the satisfactory achievement of the standards set out in this part of the Unit specification. All sections of the statement of standards are mandatory and cannot be altered without reference to SQA.

Where evidence for Outcomes is assessed on a sample basis, the whole of the content listed in the Knowledge and/or Skills section must be taught and available for assessment. Learners should not know in advance the items on which they will be assessed and different items should be sampled on each assessment occasion.

Outcome 1

Describe image capture equipment.

Knowledge and/or Skills

- ◆ Cameras used in professional productions
- ◆ Differences between a prime lens and zoom lens
- ◆ Digital camera recording resolutions used in production
- ◆ Capture media used in production

Outcome 2

Rig, set and make adjustments to camera.

Knowledge and/or Skills

- ◆ Current health and safety regulations
- ◆ Rig and make adjustments to camera and tripod
- ◆ Basic focusing procedure
- ◆ White balance procedure
- ◆ Iris and its impact on exposure/contrast/depth of field
- ◆ Gain and shutter speed Formatting media
- ◆ Setting appropriate recording format
- ◆ Recording procedures, setting and using timecode

Outcome 3

Frame, compose and record shots to achieve visual continuity.

Knowledge and/or Skills

- ◆ Principles of picture composition
- ◆ Camera position
- ◆ Standards and conventions of shooting for editing
- ◆ Select appropriate focal length to achieve desired shots
- ◆ Adjust iris to control exposure/contrast/depth of field
- ◆ Standard production terminology

Higher National Unit specification: Statement of standards (cont)

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Evidence Requirements for this Unit

Learners will need evidence to demonstrate their skills and/or knowledge across all Outcomes.

Outcome 1

Learners will be required to describe the basic technical and theoretical principles of camera work. Written/oral assessment will be used to provide evidence of learners' knowledge and understanding of different camera types, lenses, recording resolutions (HD and SD) and formats (tape and solid state).

Outcomes 2 and 3

Evidence may be gained while observing the learner undertaking a practical assessment.

Learners must provide evidence of rigging and setting a camera and making adjustments to the camera and tripod settings to permit basic operation. They will also be required to apply camera functions and lens techniques to achieve creative control by framing, composing and recording shots to achieve visual continuity.

Learners must provide recorded evidence in the form of raw footage to demonstrate their Knowledge and/or Skills across both Outcomes by showing that they can meet all the requirements as dictated by the programme/project brief. This will include:

- ◆ Following current health and safety regulations while rigging, setting and de-rigging equipment.
- ◆ Using camera controls and functions to achieve creative visual control. This will include an awareness of how gain and shutter speed affect the image and how to re-set it to standard.
- ◆ Providing recorded evidence in the form of 5–10 discrete camera set ups split between natural and artificial lighting that demonstrate the use of lens focal length and iris to achieve creative visual control and technical ability with conventional camera shots, framing and composition.
- ◆ Applying standard rules and technical conventions of camera set ups by positioning the camera at the correct angle, height and distance for the required shot.
- ◆ Providing a series of recorded camera shots that could be successfully edited into a sequence and that displays an understanding of continuity within the production process.
- ◆ Using standard production terminology.



Higher National Unit: Support Notes

Unit title: Camera: An Introduction

Unit Support Notes are offered as guidance and are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 40 hours.

Guidance on the content and context for this Unit

This Unit is intended to be a comprehensive introduction to using a digital video camera. It also intends to embed basic theory behind camera, lens, resolution and formats used throughout industry.

It is envisaged that the learner will be a member of a production team following an integrated approach to assessment with other Units including sound, lighting and editing. The procedures and standards should follow current industry practice.

While acknowledging that not all centres will have access to professional broadcast camera equipment, it is intended that learners gain knowledge and understanding of such equipment.

Guidance on approaches to delivery of this Unit

Outcome 1

Describe image capture equipment.

This Outcome is concerned with:

- ◆ Different types of professional camera equipment in current use. The Unit focuses on the single camera but learners should be aware of different shooting styles, eg cameras in outside broadcasts and multi-camera operations.
- ◆ Different types of lenses used on digital video cameras.
- ◆ Effects of different focal lengths on the image.
- ◆ Effects of different resolutions used for a specific platform or output.
- ◆ Differences between recording formats, compatibility/workflow with editing software and end use for production.

Higher National Unit: Support Notes (cont)

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Tutors should prompt learners to research a range of digital video cameras and lenses after a short introduction to the range of professional cameras and lenses in current use. The differences between a prime lens and a zoom lens in video production should be introduced drawing attention to the drawbacks and potential benefits of each lens. Practical demonstrations will be necessary to illustrate the effect of focal length, over and under exposure, contrast and depth of field on the visual image. Learners may be presented with practical demonstrations of the effects of resolution when working with different output platforms.

The tutor will introduce issues surrounding workflow, compatibility and end use of the production.

Outcome 2

Rig, set and make adjustments to camera.

This Outcome is concerned with:

- ◆ Mounting a camera on to a tripod and making adjustments to the tripod, camera plate and camera to achieve a given shot.
- ◆ Positioning the camera in respect of location, height and direction.
- ◆ Sustaining visual continuity.
- ◆ Selection of focal length.
- ◆ Making adjustments to the camera iris for exposure/contrast/depth of field.
- ◆ Ensuring gain and shutter controls are set to 'normal' or adjusted to achieve creative control.
- ◆ Checking and/or setting back focus where appropriate.
- ◆ Selecting format and resolution appropriate to workflow and final output platform.
- ◆ Recording raw footage as per the brief.
- ◆ Supporting oral and/or written evaluative evidence.

This should take the form of a tutor led demonstration highlighting health and safety concerns from the outset. This will usually include manual handling and working at heights.

The tutor can use a step by step approach to camera rigging and prompt the learner to design their own 'preparation for shooting' check list. The tutor may prepare a pre-recorded visual presentation that demonstrates camera controls/functions and their effect on the visual image.

Outcome 3

Frame and compose shots to achieve visual continuity.

This Outcome is concerned with setting up the camera in terms of focal length, positioning and direction in order to achieve visual continuity for a given sequence. The evidence for this Outcome will be submitted footage. The evidence for this can be generated as part of a project, camera raw footage and/or a sequence of shots.

Higher National Unit: Support Notes (cont)

Unit title: Camera: An Introduction

Learners should be introduced to the principles of picture composition. These will include:

- ◆ Positioning a camera and its effects on framing and composition.
- ◆ Focal length.
- ◆ Lens height and distance and its effects on perspective and matching eye-line.
- ◆ Depth of field.
- ◆ Subject moving into or out of a framed shot to assist visual continuity.
- ◆ Varying of shots (ECU to LS) to achieve visual continuity.

Examples should be given of how to maintain basic visual continuity when devising a series of shots to edit as a sequence; change of shot size and angle, overlap of actions, 180° degree rule (crossing-the-line). Learners should be made aware of the need to record sufficient camera shots to enable them to produce an appropriate edited sequence.

The tutor may prepare a pre-recorded visual presentation that illustrates the standards and conventions for framing and composition used in industry. This can lead into a guided discussion and practical demonstration of how a professional camera operator might handle and use the principles of composition, movement and camera placement to achieve a given look or effect on the visual image.

The learner may work as a member of a production team developing a broad range of skills while communicating with other members of the team. This would provide opportunities to engage in adapting professional camera work while considering the critical elements that made such work memorable. Learners should be encouraged to look for internal and external opportunities to use and further develop their skills and knowledge.

The learner could be guided towards resources offered by professional bodies including the BBC Training and Skillset UK.

Guidance on approaches to assessment of this Unit

Evidence generated will likely be as a result of the learner participating as a member of a production team where an integrated approach to assessment across several Units may take place.

Evidence can be generated using different types of instruments of assessment. The following are suggestions only. There may be other methods that would be more suitable to learners.

Centres are reminded that prior verification of centre devised assessments would help to ensure that the national standard is being met. Where learners experience a range of assessment methods, this helps them to develop different skills that should be transferable to work or further and higher education.

The evidence could be obtained during the natural process of the learners undertaking the role of camera person during a production project, which will necessarily involve teamwork.

Higher National Unit Support Notes (cont)

Unit title: Camera: An Introduction

The required skills can only be acquired through significant practice, feedback from tutors and peers, and self-evaluation. During the initial learning stages it is envisaged that guidance and prompting will be required.

The required standard will require learners to be able to carry out the competences efficiently and with no prompting and meet all the requirements as dictated by the programme/project brief.

Outcome 1

Part of this Outcome should be assessed in the form of a short-answer or multiple-choice written assessment.

Outcomes 2 and 3

The tutor will need to observe the learner in a practical setting possibly followed by guided discussion. The learner must provide visual evidence for the remainder of the Outcomes. The tutor could:

- ◆ Observe learner rigging and making adjustments to the tripod, camera and camera controls that establishes knowledge and skill of basic operational use.
- ◆ Set short specific camera tasks that test learner's ability to achieve task effectively and within a given time scale (standard camera shots, depth of field, exposure, white balance and adjusting shutter and gain to normal settings).
- ◆ Set given brief (continuity sequence) that will test the learner's ability to achieve task effectively within a given time scale.
- ◆ Set given brief (opening sequence) that will test learner's ability to achieve task while exploring a variety of camera techniques to achieve creative control.

It is envisaged that all learners will be assessed in the practical aspects including rigging and de-rigging of tripod/camera equipment and follow current health and safety guidelines before they set out on individual tasks or team productions.

The learner should be re-assessed in all elements that they have failed to achieve and should be offered a second attempt to achieve practical camera operations and rigging before undertaking any further tasks.

Opportunities for e-assessment

E-assessment may be appropriate for some assessments in this Unit. By e-assessment we mean assessment which is supported by Information and Communication Technology (ICT), such as e-testing or the use of e-portfolios or social software. Centres which wish to use e-assessment must ensure that the national standard is applied to all learner evidence and that conditions of assessment as specified in the Evidence Requirements are met, regardless of the mode of gathering evidence. The most up-to-date guidance on the use of e-assessment to support SQA's qualifications is available at www.sqa.org.uk/e-assessment

Higher National Unit Support Notes (cont)

Unit title: Camera: An Introduction

Opportunities for developing Core and other essential skills

In this Unit learners will learn how to use a video camera. Depending on the learning and teaching approaches adopted, the Unit provides opportunities for developing three components of the Core Skill of *Communication*, two components of *Problem Solving*, one component of *Numeracy* and one component of *Working with Others*.

Communication: Oral Communication at SCQF level 6

It is likely that learners will work as part of a production team developing a broad range of skills while communicating with other members of the team. They will need to convey information and ideas to ensure they achieve the shot intended taking account of the situation and audience. Learners may also contribute to classroom debates and discussions all of which will require them to use vocabulary, register and sentence structure appropriate to the audience involved.

Communication: Written Communication (Reading) at SCQF level 6

In order to complete Outcome 1 of the Unit learners will have to become familiar with the theoretical aspects of camera work. This will involve research into a range of digital cameras and lenses in current use which will require them to read written text much of which may involve technical and complex language.

Communication: Written Communication (Writing) at SCQF level 6

In order to complete the Unit, learners will have to generate evidence to demonstrate that they have achieved all three Outcomes. Assessment for Outcome 1 could involve learners responding to short answer questions which will require them to produce written text much of which may involve technical and complex language.

Problem Solving: Critical Thinking at SCQF level 6

In order to complete the Unit, learners will have to interpret a given brief and complete tasks to effectively meet the brief. The learner will have to compare and consider the choices available while also taking into account the end use of the product. The learner will gain an understanding and appreciation of the relationship between camera controls and functions; the selection of lens focal length; and the positioning of the camera while seeking to obtain a visually creative image. The learner will evaluate recorded material and decide on the effectiveness of making adjustments to camera and lens settings.

Problem Solving: Planning and Organising at SCQF level 6

In order to complete the Unit, learners will have to plan their activities. Before starting the task, learners will need to plan their research to ensure they meet the given brief. This will involve a number of different aspects such as deciding on an approach, providing a series of camera shots that display an understanding of continuity with the production process etc.

Numeracy: Using Number at SCQF level 5

The learner will develop analytical skills to select appropriate shooting locations for a variety of given tasks. The learner will produce a number of production plans or plots and a schedule which considers timescale.

Higher National Unit Support Notes (cont)

Unit title: Camera: An Introduction

Working with Others: Working Co-operatively with Others at SCQF level 6

The learner will likely be working on a team that is integrating other associated Units such as sound, lighting and editing. During this phase the learner will collaborate with others while considering individual preferences, working methods and shared goals within a task. Opportunities will arise for the learner to review and discuss their own performance with the aim of becoming more efficient and competent in the technical area. The learner will also have the chance to put some of the theories (of cameras and lenses) into practice while expanding both skill set and knowledge. It is probable that the learner will have to engage with other members of staff and/or external contacts dependant on the range and nature of the tasks (briefs) they are given. This will provide the learner with opportunities to demonstrate how resourceful they can be in identifying locations and organising contributors.

Other essential skills

Throughout the Unit learners will develop knowledge and skills which are specifically intended to encourage enterprise and initiative and to enhance their employability in the Creative Industries sector. Because these skills are readily transferable, they could also be applied to many other areas of employment — such as photography, video and film.

History of changes to Unit

Version	Description of change	Date

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General information for learners

Unit title: Camera: An Introduction

This section will help you decide whether this is the Unit for you by explaining what the Unit is about, what you should know or be able to do before you start, what you will need to do during the Unit and opportunities for further learning and employment.

The Unit will introduce you to basic camera and lens theory whilst engaging you in a range of basic camera techniques in practical settings. You will progress from simple camera tasks and on to more complex and demanding assignments.

You will be instructed in safe camera and equipment rigging; use of camera controls and functions; and conventional camera shooting techniques. You will also be introduced to a range of digital video cameras, lenses, formats and resolutions currently used by industry.

You will gain knowledge of professional, industrial and domestic cameras, lenses, formats and resolutions used across a variety of platforms and gain basic skills in safe handling of camera equipment while you develop camera operational skills. You will develop an understanding of camera controls and functions enabling you to influence and achieve creative images. This will also include the importance of 'timecode' and taking measures to ensure that timecode is not 'broken' unnecessarily.

Assessment for Outcome 1 will be by short written or multiple choice questions and for Outcomes 2 and 3, you will be required to undertake practical assignments which are likely to be assessed through observation and the production of footage.

While undertaking this Unit, there will be opportunities to develop Core Skills, such as, *Communication, Numeracy, Problem Solving and Working with Others*.

This Unit is part of the HNC/HND Creative Industries: Television. If undertaken as part of these awards there will be opportunities for progression to Degree programmes such as, the BA TV.