CUFCAM03A Compose camera shots and operate a camera
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Modification History
Not applicable.

Unit Descriptor
This unit describes the skills and knowledge required to compose shots, position the camera, select the appropriate lens and lighting equipment, and operate a camera to achieve the required moving image in any environment, for single or multicam film or television productions.

Application of the Unit
Not applicable.

Licensing/Regulatory Information
Not applicable.

Pre-Requisites
Not applicable.

Employability Skills Information
Not applicable.

Elements and Performance Criteria Pre-Content
Not applicable.
## Elements and Performance Criteria

### Elements and Performance Criteria

<table>
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<th>Element</th>
<th>Performance Criteria</th>
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| 1  Compose shots | 1.1 Liaise with the relevant personnel and interpret and confirm the shot requirements so that aesthetic and technical production and script/production requirements are met  
1.2 Generate a range of ideas for the composition of shots which provide creative solutions to the production issues  
1.3 Discuss ideas and collaborate, as required, with relevant personnel to ensure contribution of ideas to the initial concept  
1.4 Reflect on and appraise ideas for implications on cost and time, technical feasibility, and suitability to meet the production requirements  
1.5 Devise shots to ensure that correct visual interpretation of the script/production requirements is met through close liaison with relevant personnel  
1.6 Ensure that composition of shots meets the aesthetic requirements and provides the correct visual interpretation of the script/production requirements |
| 2  Address lighting conditions | 2.1 Assess the quality and quantity of available light and determine the amount of correction required, if necessary  
2.2 Confirm that the available light is sufficient for the production requirements by utilising appropriate meters  
2.3 Correct mixed light sources to achieve a uniform colour balance  
2.4 Ensure corrective actions are taken to address changing or inadequate lighting conditions  
2.5 Liaise closely with lighting personnel to achieve the required image and agree to the use of artificial light sources |
3 Select and use corrective filters

3.1 Make use of corrective filters to: meet the creative/and or technical requirements of the production; change the effects of available light to the quality required to suit film in use; ensure that correct colour balance and light conditions are attained.

4 Select and use lens

4.1 Determine the required focal length, depth of field and select lens according to technical and creative requirements and available light.

4.2 Select focal length according to the type and stability of the camera mounting and degree of intended camera movement during the shot.

4.3 Control exposure by use of correct aperture.

5 Coordinate crew to position camera

5.1 Communicate the start and end of the moving shot clearly to all relevant personnel, as required.

5.2 Identify and clearly communicate the route and timing of camera movements.

5.3 Identify and discuss problems with relevant personnel and modify movements accordingly.

6 Position and operate camera to capture shots

6.1 Liaise with relevant personnel regarding the shots required and ensure that their sequence is clear and coherent.

6.2 Position camera for shots to ensure the safety of all personnel, performers and the general public.

6.3 Select camera positions to meet aesthetic and technical requirements and in consultation with the appropriate personnel.

6.4 Consider all camera shots and angles to ensure cuts between shots produce the desired result.

6.5 Consider editing and other post-production requirements whilst filming.

6.6 Adjust and move equipment, as required, during the shoot with consideration to the timelines and deadlines of the production schedule.

6.7 Move camera to capture planned or rehearsed shots, according to direction received from relevant.
personnel

7 Monitor the quality of the moving image during filming

7.1 Employ photographic and composition techniques to achieve the aesthetic requirements and to capture well composed and focused shots

7.2 Maintain the desired composition by ensuring that any camera movement is steady and smooth throughout the duration of the shot

7.3 Maintain focus throughout the filming

7.4 Execute zoom movements and focus changes to achieve the required image, and in accordance with any instructions from relevant personnel

7.5 Maintain camera and lighting conditions throughout filming to ensure that image and light quality meet the stylistic effect required

7.6 Coordinate the efforts of other personnel to achieve the desired image

Required Skills and Knowledge

Not applicable.
Evidence Guide

Underpinning skills and knowledge
Assessment must include evidence of essential knowledge of, and skills in, the following areas:
interpretation of creative requirements to technical operation
a range of cameras and operational functions
cinematographic language
framing techniques and methods of composition
lens theory and application including range
camera to subject practice, ie lens to eyeline, crossing the line, matching shots
film and video types and differences, and compatibility of stock to equipment
a range of film types and their characteristics - black and white/colour, light sensitivity, speed and latitude, temperature requirements
different film and video formats and their uses
shutter speeds
relevant photographic principles such as exposure, tonal relationships, light sources, sensitivity and balancing, camera's interpretation of colour, colour correction techniques, colour temperature and compensation and how this determines the selection of gels and filters
operation and interpretation of information readout of colour temperature meter
different types of light measuring devices and their uses
use of light meters
the effect of different light sources, diffusion materials, filters and reflectors on the lighting environment which includes both performers and set properties and behaviour of light and effects on film making - absorption, refraction, reflection, visible light waves, division by wavelength into colours
types of artificial/introduced light sources available to a camera operator
performance characteristics of lenses
types of lenses available to the camera operator and their structure, physical composition and mechanical operation
use of exposure meters
exposure control exercised by aperture and effects of increase and decrease in f/stop
use of printed table to determine aperture
use of depth of field tables and methods of calculation involved in determining correct f/stop
focal length and relationship to depth of field
basic concepts and techniques of cable handling and compatibility with other equipment
basic concepts and techniques for maintaining battery power and loading film stocks
communication and conflict resolution techniques
basic understanding of ethics for the capture of news reports, where applicable
duty of care to colleagues and the general public
occupational and public health and safety procedures in relation to lifting, climbing rigs, using electrical equipment
detailed knowledge of the Australian film industry recommended safety code

Linkages to other units
This unit has linkages to the following units and combined training delivery and/or assessment may be appropriate:
CUFCAM04A - Operate a camera under special conditions
CUFCAM11A - Set up a camera
Critical aspects of evidence
The following evidence is critical to the judgement of competence in this unit:
the interpretation of creative and/or technical requirements and provision of additional ideas
in order to produce the desired style of the moving image captured
knowledge and application of photographic principles
technical knowledge of a range of cameras

Method and context of assessment
Assessment of this unit would most effectively be undertaken on the job due to the specific
workplace environment requirements. However, assessment of this unit can be undertaken in
a closely simulated workplace environment which reproduces all the elements of a production
situation including operating to a production schedule. The assessment event in the
simulated workplace environment should involve all the team members that would normally
participate in a film or television production and the use of current industry standard
equipment.
Assessment methods must include observation of performance during a practical
demonstration. Direct observation may need to occur on more than one occasion to establish
consistency of performance. A range of methods to assess the application of essential
underpinning knowledge must support this and might include:
practical demonstration, direct observation may need to occur on more than one occasion to
establish consistency of performance
role play
case studies
work samples or simulated workplace activities
oral questioning/interview aimed at evaluating the processes used in developing and realising
the creative concept
projects/reports/logbooks
third party reports and authenticated prior achievements
portfolios of evidence which demonstrate the processes used in developing and realising the
creative concept

Resource requirements
Assessment requires access to a range of equipment listed in the range of variables statement,
currently used by the cultural industries.

Underpinning skills and knowledge
Assessment must include evidence of essential knowledge of, and skills in, the following
areas:
interpretation of creative requirements to technical operation
a range of cameras and operational functions
cinematographic language
framing techniques and methods of composition
lens theory and application including range
camera to subject practice, ie lens to eyeline, crossing the line, matching shots
film and video types and differences, and compatibility of stock to equipment
a range of film types and their characteristics - black and white/colour, light sensitivity, speed
and latitude, temperature requirements
different film and video formats and their uses
shutter speeds
relevant photographic principles such as exposure, tonal relationships, light sources, sensitivity and balancing, camera's interpretation of colour, colour correction techniques, colour temperature and compensation and how this determines the selection of gels and filters operation and interpretation of information readout of colour temperature meter

different types of light measuring devices and their uses
use of light meters
the effect of different light sources, diffusion materials, filters and reflectors on the lighting environment which includes both performers and set properties and behaviour of light and effects on film making - absorption, refraction, reflection, visible light waves, division by wavelength into colours
types of artificial/introduced light sources available to a camera operator performance characteristics of lenses
types of lenses available to the camera operator and their structure, physical composition and mechanical operation
use of exposure meters
exposure control exercised by aperture and effects of increase and decrease in f/stop
use of printed table to determine aperture
use of depth of field tables and methods of calculation involved in determining correct f/stop focal length and relationship to depth of field
basic concepts and techniques of cable handling and compatibility with other equipment
basic concepts and techniques for maintaining battery power and loading film stocks
communication and conflict resolution techniques
basic understanding of ethics for the capture of news reports, where applicable
duty of care to colleagues and the general public
occupational and public health and safety procedures in relation to lifting, climbing rigs, using electrical equipment
detailed knowledge of the Australian film industry recommended safety code

**Linkages to other units**
This unit has linkages to the following units and combined training delivery and/or assessment may be appropriate:
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The following evidence is critical to the judgement of competence in this unit:
the interpretation of creative and/or technical requirements and provision of additional ideas in order to produce the desired style of the moving image captured
knowledge and application of photographic principles
technical knowledge of a range of cameras

**Method and context of assessment**
Assessment of this unit would most effectively be undertaken on the job due to the specific workplace environment requirements. However, assessment of this unit can be undertaken in a closely simulated workplace environment which reproduces all the elements of a production situation including operating to a production schedule. The assessment event in the simulated workplace environment should involve all the team members that would normally participate in a film or television production and the use of current industry standard equipment.
Assessment methods must include observation of performance during a practical demonstration. Direct observation may need to occur on more than one occasion to establish consistency of performance. A range of methods to assess the application of essential underpinning knowledge must support this and might include:

- practical demonstration, direct observation may need to occur on more than one occasion to establish consistency of performance
- role play
- case studies
- work samples or simulated workplace activities
- oral questioning/interview aimed at evaluating the processes used in developing and realising the creative concept
- projects/reports/logbooks
- third party reports and authenticated prior achievements
- portfolios of evidence which demonstrate the processes used in developing and realising the creative concept

**Resource requirements**
Assessment requires access to a range of equipment listed in the range of variables statement, currently used by the cultural industries.
Range Statement

Environments where cameras may be operated include:
in a studio
on location - interior
on location - exterior
day
night

Shoots may include:
single
multi camera

Types of production include:
electronic field production (EFP)
electronic news gathering (ENG)
feature films
documentaries
short films
animated productions
commercials
filmed events or performances
music video
television productions of any type, eg music, drama, comedy, variety, sport, current affairs
live or prerecorded television productions

Shots may include:
extreme close up
close up
mid shot
long shot
wide shot
high angle
eye level shot
low angle
establishing or master shot
point of view shot
cutaway shot

Camera movement may be:
static
pan
tilt
track in
track out
crab
crane

Film gauges may include:
super 16mm
16mm
35mm
65mm
Equipment and accessories may include:
- Arriflex
- Bolex
- Aaton
- IMAX
- Panavision
- rostrum camera
- platten glass
- video split monitor
- cables
- mounts
- filters
- lenses:
  - lens hood
  - lens filters
  - matte box
  - lens support
- wide angle adaptor
- Betacam
- Betacam SP
- Digital betacam
- Digital DVC pro
- DV Cam
- Mini DV
- 1 inch tube
- 2/3 inch tube
- 2/3 inch CCD in both large format and portable configuration
- video split monitor
- lighting kit
- lighting bulbs
- lights
- filter wheel
- viewfinders
- diopter
- zoom demands
- focus demands
- shot boxes
- cue card holders
- headphones
- autocue monitor
- talkback
- tallies and return video

**Video camera may:**
- be manually controlled
- be computer controlled
- combine camera and recorder function
- separate the camera function from record function
Operation of camera may include:
hand held operation
fixed/supported camera

Meters used to determine lighting conditions and requirements may include:
light meter
exposure meter
colour temperature meter

Lenses may include:
normal
long
zoom
fixed
macro
micro

Performance characteristics of lenses may include:
resolution
contrast
image shift
sharpness
zoom
mechanical operation

Filters may include:
colour correction
colour
graduated: hard edge, soft edge, attenuated coloured, neutral density
correction filters
ultraviolet
polarising
chromatic
starburst
non specific colour
enhancers

Introduced light sources may include:
key light
fill light
back light
bounced light
effect light, eg on backgrounds

Artificial light sources may include:
interior lights
spot light
flood light
HMI
tungsten

Power sources may include:
mains power
generators
batteries
Battery types may include:
Ni-Cad
lead/acid
lithium ION

Requirements for the shoot may include:
specific lighting conditions
technical
creative

Relevant personnel may include:
supervisor
head of department
director of photography
director
camera operator
focus puller
grips
camera assistants
gaffer
lighting personnel
technical director
other technical staff
other specialist staff
floor manager
safety officer

Reports may be:
computer generated
manually written

Documentation may include:
stock order forms
fault reports
film and battery labels
shotlists
script
production schedule
running sheet

Environments where cameras may be operated include:
in a studio
on location - interior
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other technical staff
other specialist staff
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**Unit Sector(s)**
Not applicable.