



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **CUFCAM03A Compose camera shots and operate a camera**

**Release: 1**

## **CUFCAM03A Compose camera shots and operate a camera**

### **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.

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### **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

<b>Element</b>	<b>Performance Criteria</b>
1 Compose shots	<ul style="list-style-type: none"><li>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</li><li>1.2 Generate a range of ideas for the composition of shots which provide creative solutions to the production issues</li><li>1.3 Discuss ideas and collaborate, as required, with relevant personnel to ensure contribution of ideas to the initial concept</li><li>1.4 Reflect on and appraise ideas for implications on cost and time, technical feasibility, and suitability to meet the production requirements</li><li>1.5 Devise shots to ensure that correct visual interpretation of the script/production requirements is met through close liaison with relevant personnel</li><li>1.6 Ensure that composition of shots meets the aesthetic requirements and provides the correct visual interpretation of the script/production requirements</li></ul>
2 Address lighting conditions	<ul style="list-style-type: none"><li>2.1 Assess the quality and quantity of available light and determine the amount of correction required, if necessary</li><li>2.2 Confirm that the available light is sufficient for the production requirements by utilising appropriate meters</li><li>2.3 Correct mixed light sources to achieve a uniform colour balance</li><li>2.4 Ensure corrective actions are taken to address changing or inadequate lighting conditions</li><li>2.5 Liaise closely with lighting personnel to achieve the required image and agree to the use of artificial light sources</li></ul>

- 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

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### **Resource requirements**

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## 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  
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**Shoots may include:**

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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  
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**Unit Sector(s)**

Not applicable.