



## Packaging of Competency Standards for Vocational Qualifications (CVQ)

### CCAVCO2004      Level 2 – Camera Operations

Unit Code	Unit Title	Mandatory/ Elective
<b>AV00151</b>	Collect Information and Develop Shooting Ideas	Mandatory
<b>AV00152</b>	Recce Locations	Mandatory
<b>AV00153</b>	Co-Ordinate Use of Production's Lighting Resources	Mandatory
<b>AV00154</b>	Design Lighting for Camera	Mandatory
<b>AV00155</b>	Prepare Equipment to Modify and Control Light	Mandatory
<b>AV00156</b>	Prepare Battery Lighting Equipment and Systems	Mandatory
<b>AV00157</b>	Provide Monitors for Camera Shoot	Mandatory
<b>AV00158</b>	Set Lighting to Achieve Desired Effect	Mandatory
<b>AV00159</b>	Communicate and Co-Ordinate within Multi Camera Shoot	Mandatory
<b>AV00160</b>	Co-Ordinate Crew to Position Camera	Mandatory
<b>AV00161</b>	Position Video Camera	Mandatory
<b>AV00162</b>	Compose Image	Mandatory
<b>AV00163</b>	Expose Image	Mandatory
<b>AV00164</b>	Set Final Balance	Mandatory
<b>AV00165</b>	Monitor Final Picture Quality and Vision Control	Mandatory
<b>PGPCOR0031A</b>	Communicate in the Workplace	Mandatory
<b>PGPCOR0061A</b>	Work with Others	Mandatory
<b>PGPCOR0091A</b>	Perform Basic Industry Calculations	Mandatory

## AV00151: Collect Information and Develop Shooting Ideas

### Unit Descriptor:

This unit deals with the skills and knowledge required to collect information and develop shooting ideas. It includes the ability to interpret the script or brief and production budget information in order to produce a technical schedule in terms of crew and equipment, to ensure that the production needs are fully realised, and that safety requirements are met.

### ELEMENTS

Candidates must be able to:

### PERFORMANCE CRITERIA

1	Develop shooting idea	1.1	Check requirements of production and availability of resources throughout shoot
		1.2	Interpret script for shooting requirements and style, in consultation with producer, director and all relevant personnel
		1.3	Advise production team on meeting budgetary, time and safety requirements
		1.4	Advise on camera options, during discussions with colleagues and suggest solutions to any problems
		1.5	Pass on information derived from any discussions to production team promptly to ensure availability of resources
2	Collect information relevant to shooting	2.1	Give full consideration to, and make maximum use of, all information that will assist in meeting shooting brief
		2.2	Estimate technical requirements from script breakdown
		2.3	Liaise promptly with other departments, and immediately inform relevant personnel of any resultant changes or problems which may affect shooting brief
		2.4	Consider innovations fully, and assess their effect on shooting

### RANGE STATEMENT

**Technical requirements** include:

- Equipment
- Power requirements
- Accessibility

## UNDERPINNING KNOWLEDGE & SKILLS

Candidates must know:

1. what are the artistic and technical requirements
2. what are the types and availability of equipment, including back up equipment
3. how to cost, time and schedule camera resources for the production
4. what are the contingent factors likely to affect shooting
5. what are the resource requirements and production budgetary limits
6. what are the advantages and any disadvantages contained in the production proposals
7. where to access information about post production processes
8. how to identify costs if constructing a budget related to camera operations
9. what are the demands of the production schedule
10. how to clearly present the different options, and explain what commends them

## EVIDENCE GUIDE

### (1) Critical Aspects of Evidence

Evidence should include the ability to:

- develop shooting ideas in a pre-production meeting
- collect information relevant to the shooting from the pre-production meeting, recce and related communications

### (2) Method of Assessment

Assessors should gather a range of evidence, which is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, oral questioning/interview, work samples, projects/reports/logbooks and portfolio evidence. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

### (3) Context of Assessment

This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is, the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.

## AV00152: Recce Locations

### Unit Descriptor:

This unit deals with the skills and knowledge required to scout (recce) locations. It involves the ability to make decisions regarding the suitability of locations. It is about liaising closely with relevant departments, and offering full and prompt exchanges of information. It involves communicating effectively in order to express clearly the different options available, and what commends them.

<b>ELEMENTS</b>		<b>PERFORMANCE CRITERIA</b>	
Candidates must be able to:			
1	Assess studios or locations for production requirements	1.1	Visit and assess studio or location for production, in conjunction with production team
		1.2	Determine actual conditions likely to prevail during scheduled shooting time
		1.3	Confirm that location allows for production requirements
		1.4	Check that technical facilities on location are sufficient to meet camera requirements
		1.5	Check that logistics of transportation, access and set-up, and moving from one location to another, are feasible in relation to production schedule
		1.6	Confirm that locations meet, or can be adapted to meet, health and safety guidelines
		1.7	Assess power provisions of location for shooting
		1.8	Determine advantages and disadvantages of locations in line with established company practices and safety procedures
		1.9	Determine when location is considered unsuitable, and seek solution
		1.10	Determine degree of location alterations required after consultation with relevant persons

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|---|--|-----|---|
| 2 | Recce locations for shooting requirements            | 2.1 | Detail all site conditions and special requirements for shooting and production specifications                            |
|   |  | 2.2 | Advise production on any aspect of the venue that may cause problems for equipment, production crew or third parties      |
|   |  | 2.3 | Produce recce information log sheet concisely and legibly   |
|   |  | 2.4 | Produce risk assessments for each site and for relevant equipment   |
|   |  | 2.5 | Advise production of any special safety or security needs when equipment is left unattended                               |
|   |  | 2.6 | Inform production and suppliers of any changes where required   |
|   |  | 2.7 | Decide when specialist knowledge or construction is required for shooting   |
| 3 | Identify materials and electrical equipment required | 3.1 | Take action to deal with, potential lighting problems, including those affecting electronic equipment                     |
|   |  | 3.2 | Check that reasonable time allocation has been agreed with production for pre-light and de-rig                            |
|   |  | 3.3 | Check that all supply circuits are safe and of required type and rating   |
|   |  | 3.4 | Identify technical requirements of production in accordance with established practices and procedures                     |
|   |  | 3.5 | Estimate and evaluate production lighting schedule against lighting equipment list  |
|   |  | 3.6 | Select and provide lighting equipment, and consumables in accordance with requirements of person responsible for lighting |
|   |  | 3.7 | Test equipment and lighting for compliance with safety requirements and manufacturers' specifications                     |
| 4 | Specify camera equipment required                    | 4.1 | Choose camera equipment which is required for type of location, power supplies, and expected uses                         |
|   |  | 4.2 | Select equipment, within budgetary limits which allows for production flexibility and probable backup requirements        |
|   |  | 4.3 | Select camera equipment that meets required safety guidelines   |

- 4.4 Specify camera equipment which meets production requirements, and which is available within budgetary and time constraints
- 4.5 Book resources to facilitate production circumstances

## RANGE STATEMENT

### Technical requirements include:

- Equipment
- Power requirements
- Accessibility

### Suitable location includes:

- Size of location
- Location terrain
- Lighting/ light situation
- Audio situation
- Accessibility

### Logistics include:

- Transportation
- Access and set-up
- Moving from one location to another

## UNDERPINNING KNOWLEDGE & SKILLS

Candidates must know:

1. how to assess the advantages and disadvantages of studios or locations
2. what sources of information about studios or locations exist
3. what are the technical and artistic requirements of the production
4. what are any prevailing environmental conditions affecting the production
5. what are the relevant health and safety guidelines in relation to the use of studios or locations, and when to apply them
6. how to interpret the production brief into technical requirements
7. how to advise on the suitability of the site
8. how and when to apply the relevant industry working practices including professional guidance on the safe use of jib/cranes
9. what are the responsibilities to the equipment owners, production personnel, and the site owners+
10. how to assess the safety and security of the equipment when left unattended
11. how to keep accurate records
12. when and where to obtain specialist advice
13. what is the production schedule and its priorities
14. how to safely use electrical equipment and what is ip rating
15. what is the production's liability in relationship to your hiring of third parties' equipment
16. what is your responsibility under third party hire agreements
17. why lighting flickers on film, HDTV and super slow motion, and possible solutions.

18. how to ensure that the specified lighting equipment meets the national requirements and industry best practice in terms of testing and certification
19. what are the relevant regulations and requirements
20. how to inform production of any special conditions that apply to the use or handling of specific items of equipment
21. what are the responsibilities to the crew and production in relation to your ability to advise on the suitability of the chosen venue
22. how to interpret basic lighting techniques, including identifying particular requirements from the persons responsible for the lighting
23. how to ensure that the site conditions are adequate in order to provide a safe working environment for the crew
24. how to liaise with the location provider, organise work parties, and set up the pre-light by the agreed deadlines
25. how to assess electrical and structural loadings and how to co-ordinate the overall schedule
26. how to discuss the production companies' criteria for each location in terms of timetable, schedule, technical and, if applicable, budget requirements
27. how to check with production what Common Law, the rights of the public to access, or land ownership, may affect production locations
28. how to use presentation methods to communicate effectively, and to promote your interpretation of what is required
29. how to present your assessment of venue suitability and suggest suitable alternatives
30. how and when to provide working or emergency lights
31. how to provide exit signs, if required
32. what are the vehicle access requirements and any special requirements for LGV vehicles
33. what methods to use for suggesting types of luminaries and equipment to suit the location
34. how to ensure that all equipment detailed in your list is compatible
35. what are the specifications of the required equipment, and its availability
36. what are the special effects processes envisaged, if any, including laboratory effects or post production video effects
37. what are the advantages and disadvantages of the various shooting format options
38. how to contribute to script breakdown and schedules
39. what are the relevant health and safety implications when determining resources
40. how to present assessments and recommendations clearly

## EVIDENCE GUIDE

### (1) Critical Aspects of Evidence

Evidence should include the ability to:

- prepare written and verbal information that enables decisions to be made about the suitability of sites
- negotiate access to sites with sensitivity and good faith in relation to the rights of owners and authorities
- development of contracts, such as, talent release contracts, the use of property as location contracts, equipment rental or lease contracts

### (2) Method of Assessment

Assessors should gather a range of evidence, which is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, written questioning, oral questioning/interview, projects/reports/logbooks and portfolio of evidence. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

### (3) Context of Assessment

This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is, the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.



## AV00153: Co-Ordinate Use of Production's Lighting Resources

### Unit Descriptor:

This unit deals with the skills and knowledge required to co-ordinate the use of the production's lighting resources. It involves the ability to interpret the lighting schedule's objectives, calculate what is required in working time, materials and equipment, and present your estimates to the decision makers. It is about scheduling the workload in order to meet targets. It is about monitoring the use of resources and, where applicable keeping production updated about the progress of the work against budget.

### ELEMENTS

Candidates must be able to:

### PERFORMANCE CRITERIA

1	Determine and recommend lighting resources	1.1	Identify specialist resources which production could use to meet schedule or script requirements
		1.2	Identify criteria for use of required specialist equipment in consultation with, production decision makers
		1.3	Provide copies of estimates identifying constraints, agreements or regulations to decision makers
		1.4	Identify potential problem areas in production schedule and suggest possible solutions
		1.5	Provide all information to decision makers within an agreed time frame for them to ask questions and seek clarification
		1.6	Determine objectives of lighting schedule, and advise on variables and outcomes for scheduling arrangements
		1.7	Estimate Lighting Director's or DOP's, or production's requirements for materials, crew and working practices
2	Schedule and control use of lighting resources	2.1	Identify specified objectives and targets of production, and schedule workload in order to meet targets
		2.2	Present production schedules in legible format to decision makers
		2.3	Provide equipment and labour to meet agreed schedule
		2.4	Estimate rigging or de-rigging timescales in conjunction with production schedules and equipment hire terms and conditions
		2.5	Organise work of team members efficiently to meet production deadlines

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|---|---|--|
|   | 2.6                                     | Delegate responsibility for areas of work to skilled team members in accordance with specified technical requirements              |
|   | 2.7                                     | Implement any changes in agreed schedules efficiently and promptly as possible in accordance with specified technical requirements |
| 3 | Review uses of resources for production | 3.1 Monitor use of resources according to company schedule   |
|   | 3.2                                     | Keep production updated, where applicable, about progress of work against budget   |
|   | 3.3                                     | Review progress when required at production meetings   |
|   | 3.4                                     | Record notes of production meetings attended according to established procedures   |
|   | 3.5                                     | Change and adapt work programmes to meet needs of production   |
|   | 3.6                                     | Advise production of limitations in use of specific resources  |

## RANGE STATEMENT

**Monitoring use of resources** includes:

- Time schedule
- Quantity required

## UNDERPINNING KNOWLEDGE & SKILLS

Candidates must know:

1. how to advise the person responsible for the lighting or the production department about schedule requirements
2. how to recommend any specialist equipment to production including any special safety regulations or precautions that apply when in use
3. who the decision makers are, and how to negotiate effectively
4. how to use information technology to compile schedules and equipment lists
5. what is the importance of recording contact names and a diary of schedules, resources, planned work, labour conditions, wages and agreements
6. what are the legal responsibilities to the production for the personnel and equipment under your control
7. what are the responsibilities owed to those staff who are under your control
8. what is the health & safety at work legislation and its impact on work team
9. what is the criteria for presenting suggestions which would help to improve production schedules

10. what are the legal implications if resources are not used according to the manufacturers' specifications
11. how to make reliable and accurate estimates of the resource requirements for production
12. how to interpret the relevant electrical standards, codes of practice, and guidance notes
13. how to apply any control of drivers' hours to the production, and how to make any recommendations for scheduling
14. what best practice in monitoring is, and how to implement it on the production
15. how to negotiate and record all requirements
16. how to record information about labour or specialist equipment agreements
17. how and when to apply the requirements relating to legal and third party responsibilities
18. how to provide evidence of your resource monitoring arrangements of working hours, lamp
19. what are the stocks, power consumption and consumables
20. how to delegate monitoring to qualified team members
21. how to monitor resource information if applicable, against the production budget
22. how to ensure that the resources are used within the limits of their intended use

## EVIDENCE GUIDE

### (1) Critical Aspects of Evidence

Evidence should include the ability to:

- identify the following requirements for materials, crew and working practices: labour quantities; consumable costs; working practices; safety requirements including HGV tachograph and driving hours
- complete lighting-related tasks according to health and safety procedures
- recognize lighting equipment, including key features and purpose
- determine and recommend lighting resources
- schedule and control the use of lighting resources
- review the use of resources

### (2) Method of Assessment

Assessors should gather a range of evidence, which is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, written questioning, oral questioning/interview, third party reports and portfolio of evidence. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

### (3) Context of Assessment

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## AV00154: Design Lighting for Camera

### Unit Descriptor:

This unit deals with the skills and knowledge required to design lighting for a single camera. It involves the ability to select and set the luminaires, accessories, filters and grip equipment needed, and ensure that they are positioned safely and appropriately. It is about briefing others in the production and technical teams about the lighting design in order to achieve the agreed pictorial quality of light.

### ELEMENTS

### PERFORMANCE CRITERIA

Candidates must be able to:

- |   |   |     |   |
|---|---|-----|---|
| 1 | Select luminaires, accessories, filters and equipment | 1.1 | Select luminaires and accessories to match power availability and where applicable, to meet budgetary constraints                                 |
|   |   | 1.2 | Check that luminaires selected can produce light quality required by production   |
|   |   | 1.3 | Select luminaires that meet production requirements   |
|   |   | 1.4 | Select filters, accessories or effects for production to achieve required results   |
| 2 | Position luminaires and accessories                   | 2.1 | Position luminaires to meet production requirements   |
|   |   | 2.2 | Position luminaires, control gear, and distribution taking into account cameras, actors, public and crew in accordance with established practices |
|   |   | 2.3 | Position luminaires to achieve agreed visual style  |
|   |   | 2.4 | Position luminaires taking into account size, weight, and accessibility to set  |
| 3 | Coordinate lighting design                            | 3.1 | Communicate need for any specialist equipment, taking into account timeframes necessary to implement specified recommendations                    |
|   |   | 3.2 | Convey lighting design to relevant person using specified terminology   |
|   |   | 3.3 | Resolve problems that may arise according to established procedures and practices   |
|   |   | 3.4 | Report changes in lighting design promptly to relevant person   |

- |   |                                    |     |   |
|---|------------------------------------|-----|---|
|   |                                    | 3.5 | Produce lighting plots where necessary, using specified terminology                 |
| 4 | Monitor picture and camera line up | 4.1 | Position camera and subject to avoid insuperable lighting problems and distractions |
|   |                                    | 4.2 | Line up monitors using required test signals  |
|   |                                    | 4.3 | Produce risk assessment of lighting according to established procedures             |

## RANGE STATEMENT

**Production requirements** include:

- Exposure
- Colour temperature
- Rendition

**Established practices** include:

- Safety procedures
- Accessibility
- Emergency evacuation procedures

## UNDERPINNING KNOWLEDGE & SKILLS

Candidates must have:

1. how to select luminaires on their criteria in terms of:
  - i. size, ii. power, iii. weight, iv. technical specification – spectral energy, distribution, luminance, light control, efficacy, v. cost
2. how to ensure luminaire performance conforms to the required technical and aesthetic effects relating to camera and lenses
3. what are the lamp power consumption characteristics: power factor, true power and apparent power
4. what are the principles of cinematography and photography, and how they can be applied
5. how to form a simple lighting design to meet the artistic and technical requirements of the production
6. what is the range of luminaires and how their characteristics determine their positioning and use
7. what the problems and constraints of different locations are, including total power available, effects of climatic conditions, and time of day, and how this determines the safe and effective use of equipment
8. what design constraints may apply to studios or location sets, and how these could affect the lighting design
9. what are the basic principles of effective sound acquisition and how this affects the lighting design
10. what are the basic principles of the camera technology
11. what is the importance of both camera and monitor line up
12. what is the variety of luminaires and accessories available, and the criteria for their use
13. what are the health and safety requirements applicable to luminaire use, and the principles applicable to the safe use of equipment
14. how to identify problems accurately and what remedial action to take
15. what is the role of the person responsible for the lighting in respect of any relevant health and safety regulations or industry best practices for the use of the equipment, in relation to the safety of the

crew, actors, and the public, and how you deal with reporting lines for incident management and control

16. what are the principles and properties of the different media and how they affect the lighting design
17. how to adjust the exposure range of the recording media
18. what are effective methods of communicating with members of the crew in order to clarify technical or specialist areas of information, including safe working practices, manual handling restrictions, safe loading characteristics of beams, trusses and support equipment, and the safe use of grip equipment
19. how to communicate the lighting design to others
20. how to document what has been done

## EVIDENCE GUIDE

### (1) Critical Aspects of Evidence

Evidence should include the ability to:

- effectively use communication, negotiation and project management skills to facilitate the design process
- develop creative lighting designs and plans that meet the artistic requirements of productions and address practical production requirements and constraints
- use research skills, including interpretation and adaptation of design concepts
- use a collaborative approach to work

### (2) Method of Assessment

Assessors should gather a range of evidence, which is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, oral questioning/interview, and portfolio of evidence. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

### (3) Context of Assessment

This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is, the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.

## AV00155: Prepare Equipment to Modify and Control Light

### Unit Descriptor:

This unit deals with the skills and knowledge required to prepare equipment to modify and control light. It involves the ability to use filters as specified by the person responsible for the lighting, attach filters to windows and filter frames, setting flag or frame stands, and assemble large frames and textiles. It is about agreeing on the lighting effects required.

### ELEMENTS

Candidates must be able to:

### PERFORMANCE CRITERIA

- |   |  |     |  |
|---|--|-----|--|
| 1 | Adjust luminaires for production                               | 1.1 | Adjust lighting equipment to requirements and instructions of person responsible for lighting                        |
|   |  | 1.2 | Identify faulty equipment, label and report to relevant personnel  |
|   |  | 1.3 | Identify problems experienced in performance of duties, and take action to rectify them using established procedures |
|   |  | 1.4 | Use luminaires and accessories safely in accordance with health and safety regulations                               |
| 2 | Set up colour correction and colour effect for production      | 2.1 | Determine methods required to meet specifications of rig plan in consultation with production team                   |
|   |  | 2.2 | Cut filters to required sizes according to specifications  |
|   |  | 2.3 | Check that correct colour frames are used for production   |
|   |  | 2.4 | Identify filter or correction particular installed in luminaires and record information using specified procedures   |
|   |  | 2.5 | Attach filter and filter frames according to established safety practices and procedures                             |
|   |  | 2.6 | Determine circumstances for use of heat resistant filters using specified procedures                                 |
|   |  | 2.7 | Use filters as specified by relevant personnel or the gaffer   |
| 3 | Prepare equipment suspension or support systems for production | 3.1 | Determine lighting supports requirements for luminaires using established safety practices and procedures            |
|   |  | 3.2 | Operate safely, and move, a range of stands or equipment on uneven or soft ground, or when access is restricted      |

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|---|-----|---|
|   | 3.3 | Set flag or frame stands using established safety practices and procedures                          |
|   | 3.4 | Hoist lighting equipment aloft using established safety practices and procedures                    |
|   | 3.5 | Position and set flags to achieve desired effect  |
|   | 3.6 | Assemble large frames and reflectors or diffusers using established safety practices and procedures |
|   | 3.7 | Assemble and use support equipment within existing industry requirements                            |
| 4 |     | Monitor lighting equipment and effect against production requirements                               |
|   | 4.1 | Determine lighting effects required in consultation with relevant personnel                         |
|   | 4.2 | Operate lighting effects according to agreed instructions or cues                                   |
|   | 4.3 | Rehearse lighting effects prior to shoot according to required instructions                         |
|   | 4.4 | Use equipment in accordance with manufacturers' instructions  |
|   | 4.5 | Monitor lighting equipment against script to maintain specified effect                              |
|   | 4.6 | Replace inoperative equipment quickly and efficiently with minimum disruption                       |

## RANGE STATEMENT

### Equipment includes:

- Large frames
- Reflectors
- Diffusers
- Flags
- Frame stands

### Filters include:

- Protective and UV filters
- Polarizing filters
- Neutral density filters
- Ultra thin filters
- Special effects filters
- Coloured filters
- Warming and cooling filters

## UNDERPINNING KNOWLEDGE & SKILLS

### Candidates must know:

1. how to identify the effect of a selected filter
2. how to use filter swatch from different manufacturers, to identify similar effects



3. how to ensure that the centre of gravity of any support system is in a position to prevent accidents
4. what is the relevant health and safety regulations, and the electrical or mechanical codes of practice and regulations, as they apply to the intended rig
5. how to ensure that rig or site problems, which occur naturally in connection with your duties, are reported and communicated correctly to those who need to know
6. how safe working practices affect the setting of luminaires and associated equipment
7. how to follow and understand the instructions and requirements of the person responsible for the lighting
8. how to work from a lighting rig plan or from the verbal instructions of the person responsible for the lighting
9. what is the health and safety or fire regulations and how they affect your work methods
10. what are the characteristics of fire retardant filters, BS3944, and how these affect their use
11. what are the existing industry requirements and how this affects the safe use of lifting equipment
12. what are the relevant regulations and industry best practices for working safely on heights, with due regard for the crew working below
13. how to identify faults or problems with lighting equipment, and how to resolve them
14. how lighting effects equipment should be used with regard to health and safety regulations and industry best practice
15. what are the methods of identifying common faults with filter or correction materials, and what are the problem solving and reporting procedures
16. how to produce hard shadows and soft shadows using flags or gobos
17. how to secure large frames with due regard to personnel safety
18. what are the safe methods of fixing or supporting stands, and who to contact for help
19. how to follow lighting instructions and cues effectively
20. what are the types of lighting effects available, when to use them, and the methods of achieving them

## EVIDENCE GUIDE

### (1) Critical Aspects of Evidence

Evidence should include the ability to:

- implement lighting designs in ways that address both the creative and technical requirements of productions
- set-up and test lighting options
- use knowledge of lighting terminology
- effectively use teamwork skills
- use knowledge and application of relevant OSHA health and safety procedures
- apply knowledge about how lighting set-ups need to take account of camera types and capture media being used

### (2) Method of Assessment

Assessors should gather a range of evidence, which is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, written questioning and oral questioning/interview. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be

permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

**(3) Context of Assessment**

This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is, the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.

## AV00156: Prepare Battery Lighting Equipment and Systems

### Unit Descriptor:

This unit deals with the skills and knowledge required to prepare battery lighting equipment and systems. It involves the ability to recognise the differences between AC and DC lighting, and prepare batteries and chargers and the battery lighting equipment. It involves selecting different types of batteries and using and storing them safely.

### ELEMENTS

### PERFORMANCE CRITERIA

Candidates must be able to:

- |   |   |      |   |
|---|---|------|---|
| 1 | Select and use battery lighting equipment and systems | 1.1  | Check battery equipment lists against lighting list as specified  |
|   |   | 1.2  | Identify discrepancies in equipment delivered and correct using established procedures and practices                                    |
|   |   | 1.3  | Identify problems in equipment delivery using established procedures and practices  |
|   |   | 1.4  | Calculate current flow in DC circuits using established procedures and practices  |
|   |   | 1.5  | Check that exposed terminals to connectors do not become a safety hazard using established procedures and practices                     |
|   |   | 1.6  | Check wiring integrity on battery belts, when provided using established procedures and practices                                       |
|   |   | 1.7  | Connect inverters to battery systems according to manufacturer's specifications   |
|   |   | 1.8  | Estimate useful life of battery systems using established procedures and practices  |
|   |   | 1.9  | Identify lead acid test procedures for life expectancy and cell condition   |
|   |   | 1.10 | Check that battery, when provided, operates safely or emergency system is tested and working using established procedures and practices |
| 2 | Store battery lighting equipment and systems          | 2.1  | Mark and label batteries according to charge state  |
|   |   | 2.2  | Store batteries safely, and label storage in accordance with any relevant regulations   |
|   |   | 2.3  | Check that batteries are charged in rotation, and are marked  |

in accordance with any relevant regulations

## RANGE STATEMENT

**Problems with equipment delivery** include:

- shortages
- incorrect types

## UNDERPINNING KNOWLEDGE & SKILLS

Candidates must know:

1. what is the difference between AC and DC power systems
2. what is the difference between series and parallel charging
3. what are the dangers and restrictions in the use of battery supplies
4. what is the charging parameters and limitations as applied to lead acid, nickel-cadmium, and lithium battery supplies; and their ratings
5. what are the problems arising out of misuse of, or incorrect, polarity
6. how to deal with battery acid spills, and what remedial action must be taken
7. how to transport and store batteries safely, and how to provide all necessary and any mandatory labelling
8. what are the safe methods for the disposal of batteries
9. what system to use to ensure that batteries get charged in rotation
10. how to advise any personnel in the safe use of battery equipment

## EVIDENCE GUIDE

### (1) Critical Aspects of Evidence

Evidence should include the ability to:

- charge and test various types of batteries according to manufacturers specifications and the requirements of the production
- implement systems for monitoring of battery charging (such as schedules and time sheets)

### (2) Method of Assessment

Assessors should gather a range of evidence, which is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, oral questioning/interview, projects/reports/logbooks, work samples and portfolio of evidence. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

### (3) Context of Assessment

This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is, the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace

situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.

## AV00157: Provide Monitors for Camera Shoot

### Unit Descriptor:

This unit deals with the skills and knowledge required to provide monitors for camera shoot. It involves the ability to provide vision monitoring facilities for multi camera television. It is about lifting, handling and positioning monitors, and precisely and carefully connecting, plugging and routing cables.

### ELEMENTS

### PERFORMANCE CRITERIA

Candidates must be able to:

- |   |  |   |
|---|--|---|
| 1 | Provide vision monitoring facilities for multi camera television | 1.1 Select monitor positions, in consultation with relevant personnel, in order to provide required line of sight for specified persons         |
|   |  | 1.2 Position monitors securely and stably in accordance with any relevant safety procedures and practices                                       |
|   |  | 1.3 Lift and handle monitors in accordance with any relevant safety procedures and practices  |
|   |  | 1.4 Provide shading and weather proofing for monitors, where necessary  |
|   |  | 1.5 Place monitors clear of lighting, and out of camera shots according to required instructions  |
| 2 | Signal connect vision monitors                                   | 2.1 Check that electrical safety test labels of equipment and cables being used in accordance with any relevant safety procedures and practices |
|   |  | 2.2 Confirm that equipment and cables show no signs of physical damage  |
|   |  | 2.3 Check that electrical supply is safe and ready for use in accordance with established procedures and practices                              |
|   |  | 2.4 Sling or ramp cables to avoid to conform to any relevant safety standards and established practices   |
|   |  | 2.5 Check that plugging up and switching on sequence, is maintained according to established practices and procedures                           |
|   |  | 2.6 Switch monitor feeds in accordance with instructions  |
|   |  | 2.7 Use test equipment or sources to obtain optimum picture quality   |

- 2.8 Rectify faults that occur in accordance with established practices and procedures

## RANGE STATEMENT

**Monitors** include:

- Cathode ray tube (CRT)
- Liquid crystal display (LCD)

**Test equipment/ sources** include:

- Spectraradiometer
- Chromaticity
- Luminance
- Observation

## UNDERPINNING KNOWLEDGE & SKILLS

Candidates must know:

1. what are the problems associated with in-vision monitors such as: frame flicker, strobe patterning, colour correction; and how to tackle them
2. what are the different types of monitors and monitoring facilities
3. how to mount or sling monitors safely and securely
4. what specialist feeds are monitors likely to require and for whom are monitors provided
5. how to interpret planning information
6. what sources are available for advice and information
7. how and when to apply the relevant health & safety guidelines and legislation
8. when and how to apply any relevant safe lifting and handling techniques
9. what are the types of cables, connectors and adapters in common use
10. what are the different types of video signal
11. what are the different sources of video feed such as: mixer output, previews, effects feeds; and who is responsible for providing them
12. how to feed several monitors from a single video source
13. what electrical and physical safety requirements may apply
14. how to switch monitor feeds during a production
15. how to adjust a picture monitor and use test signal generators
16. how to trace faults or incorrect plugging

## EVIDENCE GUIDE

### (1) Critical Aspects of Evidence

Evidence should include the ability to:

- position monitors in a Television Studio or for Outside Broadcast with complex monitoring requirements
- single connect vision monitors

### (2) Method of Assessment

Assessors should gather a range of evidence, which is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, oral questioning/interview, projects/reports/logbooks, work samples and portfolio of evidence. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

**(3) Context of Assessment**

This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is, the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.



## AV00158: Set Lighting to Achieve Desired Effect

### Unit Descriptor:

This unit deals with the skills and knowledge required to set lighting to meet the desired effect. It involves the ability to provide luminaries at the lighting intensity appropriate to the production's requirements. It is about obtaining the desired direction, quality and colour of light, controlling and adjusting the light, and providing a safe working environment.

### ELEMENTS

### PERFORMANCE CRITERIA

Candidates must be able to:

1	Verify intensity, direction and quality of light	1.1	Check that light sources perform within their design limits
		1.2	Determine when production objectives are unachievable and decide on solutions or compromises
		1.3	Alter light source to meet production expectations
		1.4	Alter light source in accordance with technical requirements
		1.5	Use diffusion filter or swatches to obtain light reproduction or light quality in accordance with technical requirements
		1.6	Use range of lighting equipment in accordance with technical requirements
		1.7	Establish consistent filtering and correction for both camera and lighting
		1.8	Instruct technicians about camera position according to production requirements
		1.9	Communicate with relevant personnel on lighting issues that require clarification
		1.10	Communicate with relevant personnel when production requirements are unachievable
2	Verify colour effect, temperature and correction filters	2.1	Check that required filters are in place and functional in accordance with technical requirements
		2.2	Communicate when lighting design requires modifications in accordance with technical requirements
		2.3	Unify colour temperature of mixed light sources where required
		2.4	Rectify technical problems regarding colour balance in collaboration with relevant personnel to satisfy technical

		requirements
3	Control light beam to meet agreed effect	<p>3.1 Confirm that connectors and luminaires are identified with numbered labels to ensure consistent connection and control</p> <p>3.2 Select and use grip hardware for fine positioning of luminaires in accordance with technical requirements</p> <p>3.3 Control light source using accessories to meet specified requirements</p> <p>3.4 Use luminaire or ballast controls to obtain agreed effect</p> <p>3.5 Apply lighting effects to production from specialised equipment, in safe and controlled environment</p>

## RANGE STATEMENT

### Accessories include:

- Barn doors
- Snoots
- Flags
- Nets
- Scrims
- Gobos
- Dimmer shutters

### Altering light source includes:

- Setting
- Colour temperature
- Beam angle
- Flag setting
- Reflector setting

### Production expectations include:

- Light quality
- Ambience
- Consistency

### Camera position includes:

- Light source direction
- Quality
- Intensity,

### Lighting equipment requirements include:

- Camera shutter speeds
- Electrical supply frequency
- Powering the lighting

## UNDERPINNING KNOWLEDGE & SKILLS

Candidates must know:

1. what are the different types of light measuring equipment available, and their uses
2. what is the effect that the performer or subject has on the lighting arrangements, in terms of complexion, quality of light, and mood of setting
3. how light levels can affect the mood of the production
4. how your working practices affect other departments
5. what are the different luminary technologies and their application to the use of effects
6. what are the types of ancillary equipment available, including, barn doors, dimmer shutters, gobos, flags, stipple boards, filters, diffusion; and the criteria for their safe use
7. how to produce a range of effects using different luminaires, ancillary equipment and techniques
8. how to work with, and interpret ideas from the production team

9. how to assess the load capacity of the lighting grip hardware
10. how the health and safety requirements affect you, within your area of control
11. how you control risks which occur naturally in the performance of your duties
12. what criteria determine the safe use of effects
13. what is the portraiture over small and large areas
14. what are the principles of scenic and architectural lighting
15. how the different light sources, diffusion materials, and filters or reflectors used produce the desired results
16. what are the different lighting plans in common use, and how to interpret them
17. what are the colour correction techniques and how their application affects the outcome
18. what is the way that the camera interprets colour and thus determines filter selection
19. what are the uses of hard and soft sources and how to control them
20. when and why to use reflected light
21. what are the different types of lighting instruments and sources, and how to get the best performance from them
22. how to use par lenses to shape the light beam to meet the desired effect
23. what are the lines of communication in the event of equipment failure, and the use of clear, explicit language in order to overcome problems
24. how to ensure that support staff are aware of the safety requirements placed on them if crew or actors are to work, or perform, below moving suspension systems

## EVIDENCE GUIDE

### (1) Critical Aspects of Evidence

Evidence should include the ability to:

- verify intensity, direction and quality of light for production using associated equipment (doors, frames, stands, flags etc.) on two occasions
- verify colour effect, temperature and correction filters for production
- control light beam to meet agreed effect for production

### (2) Method of Assessment

Assessors should gather a range of evidence, which is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, oral questioning/interview, projects/reports/logbooks, work samples and portfolio of evidence. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

### (3) Context of Assessment

This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is, the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual

working alone or as part of a team. The assessment environment should not disadvantage the candidate.

## AV00159: Communicate and Co-Ordinate within Multi Camera Shoot

### Unit Descriptor:

This unit deals with the skills and knowledge required to communicate and co-ordinate within a multi camera shoot. It involves the ability to use correctly and interpret the various communication and co-ordination facilities that are used by camera operators within a multi-camera television shoot. It is about verbal communication using electronic talkback, visual co-ordination using viewfinder feeds, monitors and cue lights; and interpreting written information and non-verbal communication. It involves both communication within the camera crew, and communication between the camera crew and others involved in the production.

### ELEMENTS

### PERFORMANCE CRITERIA

Candidates must be able to:

- |   |                            |      |   |
|---|----------------------------|------|---|
| 1 | Communicate with work team | 1.1  | Obtain and connect talkback apparatus according to requirements of the shoot  |
|   |                            | 1.2  | Prevent leakage of talkback onto programme sound, or into the working environment   |
|   |                            | 1.3  | Identify and interpret talkback information specifically directed to operating role in accordance with technical requirements |
|   |                            | 1.4  | Identify and interpret written information which is specifically directed to operating role or other personnel                |
|   |                            | 1.5  | Make clear operational notes which, if necessary, can easily be interpreted by another operator                               |
|   |                            | 1.6  | Use specified signals or gestures when verbal communication is impracticable  |
|   |                            | 1.7  | Route communication, where necessary, using established guidelines and procedures   |
|   |                            | 1.8  | Check that any talkback facilities between colleagues provide clear communication   |
|   |                            | 1.9  | Interpret general talkback information using established practices and procedures   |
|   |                            | 1.10 | Identify and interpret talkback information which is directed to relevant personnel, but which may affect operating role      |

- |   |                          |   |
|---|--------------------------|---|
|   | 1.11                     | Use talkback information to enhance the quality of shots, the timing of camera moves, and the transitions between shots                       |
|   | 1.12                     | Observe appropriate protocols when using reverse talkback to production team, or to other areas   |
| 2 | Use visual co-ordination |   |
|   | 2.1                      | Check camera cue lights, identifying any limitations in operation   |
|   | 2.2                      | Use camera cue lights to co-ordinate camera shots, movements and repositions  |
|   | 2.3                      | Select external viewfinder feed which operates in accordance with specified technical requirements  |
|   | 2.4                      | Co-ordinate shots with those of other operators using external viewfinder feeds, mixed feeds or monitors                                      |
|   | 2.5                      | Enhance the appearance and timing of transitions between specified camera techniques using external viewfinder feeds, mixed feeds or monitors |
|   | 2.6                      | Modify shot composition when accommodating specified camera effects using external viewfinder feeds, mixed feeds or monitors                  |

## RANGE STATEMENT

### Talkback information includes:

- programme sound
- commentary
- shot and camera numbers
- countdowns
- bar-counts

### Transition camera techniques include:

- Shots
- Cuts
- Mixes
- Dissolves
- Wipes

### Camera effects include:

- Super-impositions
- Split screens
- Other electronic effects

## UNDERPINNING KNOWLEDGE & SKILLS

### Candidates must know:

1. what are the communication chains and protocols which apply in multi-camera television
2. what are the methods of non-verbal communication which may be used when there is a need for silent working
3. what are the terminology and abbreviations used on shooting scripts, running orders, shot cards and camera plans
4. what are the various talkback circuits, and how they are used within a multi-camera television shoot

5. how to obtain, connect and operate different types of talkback apparatus
6. what are the health and safety aspects of talkback use
7. how to identify and correctly interpret relevant information received via talkback
8. how to use talkback information to enhance the quality of shots
9. how and when it is appropriate to use reverse talkback to the production team, 'racks', or other facility areas
10. what are the sources of external viewfinder feeds, and how they may be changed
11. how to use external viewfinder information to co-ordinate and complement your camera output with the overall, ongoing programme content
12. how to use external viewfinder information to enhance transitions between shots, and to monitor any super-impositions or electronic effects which may affect the composition of the image
13. what are the different types of camera cue lights, and how to interpret them
14. what is the routing of your camera output and who may make use of it, even when you are not 'on shot'

## EVIDENCE GUIDE

### (1) Critical Aspects of Evidence

Evidence should include the ability to:

- use knowledge of the appropriate terminology used in multi camera productions and how such terminology should be applied
- communicate with and coordinate crew during a multi camera production according to the artistic requirements of the production

### (2) Method of Assessment

Assessors should gather a range of evidence, which is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, oral questioning/interview, projects/reports/logbooks, work samples and portfolio of evidence. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

### (3) Context of Assessment

This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is, the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.

## AV00160: Co-Ordinate Crew to Position Camera

### Unit Descriptor:

This unit deals with the skills and knowledge required to co-ordinate the crew to position a camera. It involves the ability to understand the inter-relationships of the various camera crew roles, deal with timing, and the path the camera will take, and identify what actions are required for the safe operation of the equipment.

### ELEMENTS

Candidates must be able to:

### PERFORMANCE CRITERIA

1	Assert readiness to start	1.1	Check that personnel are aware of, and follow, relevant working procedures and practices
		1.2	Check that required safety certificates for equipment or risk assessments are available and current
2	Direct crew for positioning of camera	2.1	Discuss route and timing of camera move with relevant personnel
		2.2	Communicate with crew, to define camera position, route and timing of move
		2.3	Check that crew makes notes and marks to ensure specified recreation of rehearsed shots
		2.4	Check that crew is provided with required communication facilities, where required, to production and equipment in use
		2.5	Determine requirements of shot into discrete instructions for different operators involved
		2.6	Resolve problems with coordination of crew within limits of responsibility

### RANGE STATEMENT

#### Relevant working procedures and practices

include:

- Health and safety legislation
- Risk assessments
- Instructions relative to camera equipment operations

#### Communication facilities include:

- Comms
- Headphones
- Talkback
- Shot box
- External cues



## UNDERPINNING KNOWLEDGE & SKILLS

Candidates must know:

1. what are the relevant health and safety legislation, industry guidelines, and any other instructions for the camera equipment in use, and how to observe safe methods of working
2. how to confirm the existence and validity of any safety certificates if required
3. how to advise on the preparation of a risk assessment if required
4. how to acknowledge the responsibilities of any staff supplied with the equipment by its owner, whilst assuming overall responsibility for its safe use
5. what are the requirements for the correct positioning of the camera
6. how to allocate responsibilities to the available personnel
7. what problems may occur, and how to modify the operation to deal with them
8. how to communicate with and co-ordinate the crew

## EVIDENCE GUIDE

### (1) Critical Aspects of Evidence

Evidence should include the ability to:

- co-ordinate crew to position camera in studio or location

### (2) Method of Assessment

Assessors should gather a range of evidence, which is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, oral questioning/interview, projects/reports/logbooks, work samples and portfolio of evidence. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

### (3) Context of Assessment

This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is, the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.

## AV00161: Position Video Camera

### Unit Descriptor:

This unit deals with the skills and knowledge required to move and position the video camera. It involves the ability to track the mounting safely and achieve the required artistic effect. It involves swinging the arm safely and achieving the required artistic effect. It involves interpreting the production's needs in order to provide safe movements of the camera mounting it is about understanding the limitations of the equipment within its operating environment, assessing risks, and complying with any industry guidelines.

### ELEMENTS

### PERFORMANCE CRITERIA

Candidates must be able to:

- |   |                              |     |   |
|---|------------------------------|-----|---|
| 1 | Track camera                 | 1.1 | Move camera at specified pace following requirements of relevant personnel  |
|   |                              | 1.2 | Check that route, timing, start and finish points of camera movement suit production requirements of shot   |
|   |                              | 1.3 | Report to camera operator moves which are outside capabilities of equipment, which are unsafe, or which are restricted by working environment or personnel available, and seek required solutions |
|   |                              | 1.4 | Notify personnel explicitly of intended timing and route of each move   |
|   |                              | 1.5 | Verify that route is free from non-essential personnel, cables and other hazards  |
|   |                              | 1.6 | Use required communication techniques to enhance the quality, and safety, of camera moves and positions   |
|   |                              | 1.7 | Use monitor, where available to observe shot composition and to enhance quality of moves and positions  |
|   |                              | 1.8 | Recreate camera positions and moves established during rehearsals, when specified, making marks or notes as required  |
|   |                              | 1.9 | Reposition camera between shots, without obstructing other operators, and within time available   |
| 2 | Swing arm to position camera | 2.1 | Check that arm is securely assembled and appropriately balanced before use  |
|   |                              | 2.2 | Check that crane arm is secure before adding or removing equipment and, if applicable, when camera operator mounts  |

- or dismounts
- 2.3 Route camera cable, together with auxiliary cables, to avoid hazards when tracking
  - 2.4 Co-ordinate swing with other operators, where necessary while moving camera at specified pace following requirements of relevant personnel
  - 2.5 Check that route, timing, start and finish points of camera movement suit production requirements of shot
  - 2.6 Report to camera operator, moves which are outside the capabilities of equipment, which are unsafe, or which are restricted by working environment or personnel available, and seek required solutions
  - 2.7 Check that route is free from non-essential personnel, cables and other hazards
  - 2.8 Maintain visibility of both ends of crane arm at all times and, in event of an emergency, take action in accordance with established practices and procedures
  - 2.9 Check that tracking surface remains stable throughout continuous operation, over several takes, and rectify slippage or instability if necessary
  - 2.10 Follow relevant Health and Safety legislation, risk assessments and other instructions for camera equipment in use, and observe safe methods of working
  - 2.11 Check that crane arm is secure when not in use in accordance with established practices and procedures
- 3 Elevate camera
- 3.1 Check that route is free from non-essential personnel, cables and other obstructions
  - 3.2 Move camera at specified pace following the director's requirements
  - 3.3 Time all vertical and horizontal movements to suit production requirements
  - 3.4 Check that route, start and finish points of camera movement suit production requirements of shot
  - 3.5 Report to production personnel moves which are outside the capabilities of equipment, or restricted by available personnel, and seek solutions in accordance with established practices and procedures
  - 3.6 Notify all personnel explicitly of intended route and working heights

- 3.7 Check that environmental conditions are within equipment's specification
- 3.8 Use communication techniques to enhance the quality and effectiveness of move
- 3.9 Secure system after use in accordance with established practices and procedures

## RANGE STATEMENT

### Relevant personnel include:

- Camera operator
- Director

### Camera specified pace includes:

- Minimizing of jolts
- Minimizing of turbulence

### Communication techniques include:

- Comms
- Headphones
- Talkback
- Shot box
- External cues

## UNDERPINNING KNOWLEDGE & SKILLS

Candidates must know:

1. what are the principles for the operating tracking equipment
2. what are the safety considerations of tracking equipment
3. what is the intended route
4. what are any other intended movements
5. what are the positional limitations of the equipment
6. what is the relevant health and safety legislation, risk assessments and other instructions for the crane operation, and the safe methods of working
7. what are the lifting and handling techniques related to the safe movement of heavy equipment
8. what are the basic principles of inertia, momentum and angular momentum, and how they might affect the operation
9. what are the principles for the operating crane equipment
10. what are the positional limitations of the crane, and the area within which it is operating
11. how to assess and control the risks associated with swinging a crane arm
12. what are the priorities and methods for controlling an unforeseen hazard
13. what are the environmental factors which may affect the safety of the operation, such as wind speed and the proximity to overhead power lines, and how to identify safe working procedures
14. what are the basic principles of picture composition, particularly as they apply to moving pictures
15. how picture composition and perspective are affected by the position of the camera, and how these change with camera movement
16. what are the communication techniques and equipment used by video camera crane crews
17. what are the procedures for reporting any operation considered to be unsafe

18. what special procedures to apply when operating crane arms over audiences or members of the public
19. how to determine whether the equipment has been correctly assembled
20. how to maintain good visibility of both ends of the crane arm
21. how to check that all fitted equipment and accessories are safe and secure and will remain so during the operation of the arm
22. how to operate the tracking and elevation equipment
23. what safety considerations may apply to tracking equipment with pressure systems
24. how to balance the loads of a hydraulic or gas charged system
25. how any pressure systems work, their safe working loads and their relevance
26. how to recharge any pressure systems
27. what are the positional, balance and height limitations of the equipment
28. what is the suitability and strength of any tracking surfaces
29. how to avoid damage to the tracking surface

## EVIDENCE GUIDE

### (1) Critical Aspects of Evidence

Evidence should include the ability to:

- track the camera in a genuine work situation
- swing the arm to position the camera
- elevate the camera
- understand and actively respond to the hazards accompanying the handling, moving and fixing of heavy equipment, to that end communications with crew, artist and production must cover these considerations in a clear and precise manner.

### (2) Method of Assessment

Assessors should gather a range of evidence, which is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, oral questioning/interview, projects/reports/logbooks, work samples and portfolio of evidence. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

### (3) Context of Assessment

This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is, the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.

## AV00162: Compose Image

### Unit Descriptor:

This unit deals with the skills and knowledge required to compose the image. It involves the ability to contribute to the artistic input of the production through effective camera movement and good composition. It involves the framing and composition of moving pictures for film, television or video. It is about empathising with production requirements, and having an appreciation of the artistic and practical aspects of the production. It involves co-ordinating with others in order to achieve the desired results, and monitoring the technical and aesthetic quality of the image.

### ELEMENTS

Candidates must be able to:

### PERFORMANCE CRITERIA

- |   |                              |      |   |
|---|------------------------------|------|---|
| 1 | Position camera for shooting | 1.1  | Select positions for shots as agreed to by relevant personnel, and which do not interfere with camera positions in accordance with specified technical requirements |
|   |                              | 1.2  | Select camera position and lens angle (focal length) that achieves required perspective, framing and composition of image, and which permits desired depth of field |
|   |                              | 1.3  | Adjust camera positions to compensate for changes in performers' positions, or other variables  |
|   |                              | 1.4  | Select lens angle (focal length) relevant to given style of camera movement, and which achieves desired framing and composition                                     |
|   |                              | 1.5  | Move camera to agreed position quietly and with due regard to the safety of self and others   |
|   |                              | 1.6  | Check that desired camera movements are practical, and can be carried out without injury to others  |
|   |                              | 1.7  | Arrange route, timing, start and finish points of any camera movement in order to maintain required composition and agreed style, throughout shot                   |
|   |                              | 1.8  | Move camera at specified pace that is appropriate to the agreed and desired effects of the shot   |
|   |                              | 1.9  | Check that discrete camera movements are in harmony to achieve the desired result in accordance with specified technical requirements                               |
|   |                              | 1.10 | Co-operate with relevant personnel for overall benefit of   |

			production
2	Capture and monitor image	2.1	Frame and compose camera image to meet required style of production, and intended mood of shot
		2.2	Frame and compose shot so that it is compatible with other shots in intended sequence
		2.3	Frame and compose shot to take into account intended laboratory processes, post-production or vision mixing effects
		2.4	Frame and compose image to allow for required aspect ratio or ratios
		2.5	Confirm that quality of image meets required technical standards, and agreed mood and effects
		2.6	Report and rectify practical problems which hinder desired composition
		2.7	Advise performers on variations in position or movement, either directly or through a third party
		2.8	Re-create during shoot shots established during rehearsals

## RANGE STATEMENT

### Camera movements include:

- Pan
- Tilt
- Crane or track
- Any zooms or focus changes

### Agreed and desired effects of the shot

#### includes:

- Mood of the shot
- Duration of the shot
- Any artistes' movement
- Musical tempo
- Other performance related motivation

## UNDERPINNING KNOWLEDGE & SKILLS

Candidates must know:

1. what are the principles of picture composition: how to compose an image in terms of shape, line, texture, tone, colour, and proportion; and their relationships to one another, particularly as they apply to moving pictures
2. how the position of the camera, in terms of lens height, distance from the subject and lateral position, affects the framing and composition of the shot
3. how camera position, lens angle and camera movement affect the perspective of the shot in terms of mass, line, tone, texture, colour and parallax
4. how to achieve the required depth of field
5. what aspect ratio is required for the shoot, and whether the image may subsequently be seen in any other aspect ratio or ratios
6. how to modify framing and composition to allow for different aspect ratios
7. what are the technical or practical problems which may hinder the desired composition, and how to deal with them
8. how shots are assembled into a sequence, and how the sequence of shots affects the composition of each individual shot
9. how to frame shots to allow for any mixes, dissolves, wipes or other transitions j) how laboratory processes, post-production or vision mixing effects may affect the framing and composition of the shot, if the sequence contains superimpositions or split-screens
10. how to frame and compose a shot when artiste or camera movement is anticipated
11. what lens angles (focal lengths) are appropriate to a given style of camera movement
12. how to maintain a composed image throughout any camera movement
13. how to maintain a composed image throughout any subject or artiste movement
14. what is the agreed style of the production and the intended mood of the shot
15. how to give constructive advice to artistes and others, concerning variations in position or movement, to achieve the required composition
16. how to liaise with production colleagues
17. what sources of advice exist



## EVIDENCE GUIDE

### (1) Critical Aspects of Evidence

Evidence should include the ability to:

- position the camera during shooting
- select camera lens angle
- frame and compose camera image to meet required production style
- report and rectify problems which hinder desired composition
- advise performers on variations in position or movement

### (2) Method of Assessment

Assessors should gather a range of evidence, which is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, oral questioning/interview, projects/reports/logbooks, work samples and portfolio of evidence. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

### (3) Context of Assessment

This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is, the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.

## AV00163: Expose Image

### Unit Descriptor:

This unit deals with the skills and knowledge required to expose the image. It involves the ability to achieve the correct exposure by means of the set-up and use of monitoring equipment and camera controls, and be accurate as to the requirements of exposure for focus, shutter frequency and filters.

### ELEMENTS

### PERFORMANCE CRITERIA

Candidates must be able to:

1	Set up video camera exposure monitoring	1.1	Set up viewfinder to achieve required exposure in accordance with specified technical requirements
		1.2	Use available test signal generators to achieve preferred monitoring settings
		1.3	Check which level the zebra information is indicating to determine practical implications
		1.4	Position and adjust monitors and viewfinders to provide best available viewing conditions
		1.5	Lock monitor controls according to manufacturer's instructions, or mark in accordance with specified technical requirements
2	Expose and colour correct image	2.1	Identify solutions, where natural lighting conditions are causing problems
		2.2	Achieve required effect through colour balance, gain or film speed, filtration, or any other camera facility
		2.3	Set exposure to meet focussing needs, and allow for filters and effects
		2.4	Set and monitor exposure for adjustment needs throughout shot
3	Expose image for portable single camera shoots with lights	3.1	Confirm requirements of shoot from script or from production colleagues
		3.2	Rig luminaires with due regard to safety of self and others, and without damage to property
		3.3	Check that luminaire and accessories are safe, and suitable for purpose in accordance with specified technical requirements

- 3.4 Place luminaire taking into account needs of production
- 3.5 Balance light where necessary to give correct colour temperature throughout scene, according to production's needs
- 3.6 Achieve required effects through white balance, gain and shutter controls
- 3.7 Set exposure setting to meet requirements of focus, and allow for filters and effects.
- 3.8 Confirm that there is sufficient light to allow recording medium to re-produce scene as required
- 3.9 Seek effective solutions, where other lighting conditions are causing problems
- 3.10 Monitor exposure for adjustment needs throughout shot
- 3.11 Meet lighting requirements within agreed budget

## RANGE STATEMENT

### Test signal generators include:

- Colour bars
- Flat fields
- Multibursts, sweep and pulse
- Ramp signal/ staircase signal
- Convergence patterns
- Bowtie signal
- PLL test signal
- Equalizer test signal
- SDI checkfield

### Monitoring settings include:

- Brightness
- Contrast
- Colour balance

## UNDERPINNING KNOWLEDGE & SKILLS

Candidates must know:

1. how to set up the viewfinder
2. why zebra may be used, and how to establish a zebra level
3. how to interpret the zebra information in relation to camera gamma and knee
4. what is the criteria for selecting optimum positions for monitors and test equipment
5. what test signal equipment could be used to achieve a correct monitor set-up
6. how to check that controls are secure
7. what are the common filter requirements and their uses
8. how to use internal, if fitted, or external light metering equipment

9. what the most common sources of light might be, and their colour temperatures
10. what are the filter factors and their effect on exposure
11. what are the methods of facilitating movement between interior and exterior lighting
12. what are the features of the camera that could have an effect on exposure and colour balance
13. what are the exposure requirements of the production, such as day or night
14. what are the uses and limitations of auto iris, if fitted
15. what are the basic concepts of lighting and exposure
16. what are the types of lighting, and their suitability for portable single cameras
17. what are the common filter types and their uses
18. what are the uses of general purpose filters and their exposure factors
19. what are the relevant health and safety legislation, risk assessments, and other instructions for the equipment in use and how to implement safe methods of working

## EVIDENCE GUIDE

### (1) Critical Aspects of Evidence

Evidence should include the ability to:

- set up exposure monitoring in a studio or on location
- expose the image in a studio or on location
- confirm that there is sufficient light to allow recording medium to re-produce scene as required

### (2) Method of Assessment

Assessors should gather a range of evidence, which is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, oral questioning/interview, projects/reports/logbooks, work samples and portfolio of evidence. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

### (3) Context of Assessment

This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is, the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.

## AV00164: Set Final Balance

### Unit Descriptor:

This unit deals with the skills and knowledge required to determine the final balance. It involves the ability to ensure that light levels, combined with the lens aperture setting, reproduce the desired result. It involves monitoring action and movements to ensure that the required lighting effect is maintained.

### ELEMENTS

### PERFORMANCE CRITERIA

Candidates must be able to:

- |   |  |     |  |
|---|--|-----|--|
| 1 | Determine exposure of image                        | 1.1 | Set camera position, exposure and contrast in collaboration with production personnel                                    |
|   |  | 1.2 | Confirm use of playback recording media in accordance with specified technical requirements                              |
|   |  | 1.3 | Set light levels for complete camera shot covering camera movements  |
|   |  | 1.4 | Adjust intensity of luminaire outputs individually using range of available methods                                      |
|   |  | 1.5 | Control exposure for both low light level, high contrast and high light level, low contrast                              |
|   |  | 1.6 | Set lens aperture, where required according to recording material in use   |
|   |  | 1.7 | Check that light levels are technically correct for recording medium in accordance with specified technical requirements |
|   |  | 1.8 | Inform the lighting crew of technical problems   |
| 2 | Determine aesthetic and technical quality of image | 2.1 | Check that action area is illuminated in line with director's requirements   |
|   |  | 2.2 | Check that lighting meets desired effect across range of camera movement   |
|   |  | 2.3 | Maintain continuity of lighting in line with director's requirements   |
|   |  | 2.4 | Reproduce light quality and image to lighting style agreed by design team  |
|   |  | 2.5 | Check that all lighting meets director's requirements, and implement required changes                                    |
|   |  | 2.6 | Identify faults, using playback media, to ensure that set and  |

- production resources are not wasted
- |   |                              |     |  |
|---|------------------------------|-----|--|
| 3 | Monitor action and movements | 3.1 | Identify unwanted shadows, glare, reflections or flare, and take necessary action to rectify them  |
|   |                              | 3.2 | Identify and take required action to maintain desired light levels, and to deal with unwanted light  |
|   |                              | 3.3 | Instigate necessary light changes to meet production objectives  |
|   |                              | 3.4 | Interpret aesthetically, performer's appearance, position, movements and co-ordination against design or rehearsal, by reference to picture monitors |

## RANGE STATEMENT

Methods of adjusting luminaire outputs include:

- Adjusting current
- Adjusting pulse width modulation (PWM) duty cycle

## UNDERPINNING KNOWLEDGE & SKILLS

Candidates must know:

1. how to accurately identify unwanted shadows, glare, reflections or flare, and how to take the necessary action to rectify them
2. how to identify and take the appropriate action to maintain the desired light levels, or to deal with unwanted light
3. how to monitor the technical and aesthetic requirements of the design
4. how to interpret picture composition, techniques and methods
5. what are the Colour Separation Overlays (ChromaKey) principles and techniques, and how and when to apply them
6. how to identify changing light levels associated with exterior shoots, and how to overcome problems created by them
7. how to use light meters or pan glasses to assist the balance
8. how to refine the balance by interpreting the monitor displays, when available

## EVIDENCE GUIDE

**(1) Critical Aspects of Evidence**

Evidence should include the ability to:

- determine exposure of the image
- determine aesthetic and technical quality of the image

**(2) Method of Assessment**

Assessors should gather a range of evidence, which is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, oral questioning/interview, projects/reports/logbooks, work samples and portfolio of evidence. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

**(3) Context of Assessment**

This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is, the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.

## AV00165: Monitor Final Picture Quality and Vision Control

### Unit Descriptor:

This unit deals with the skills and knowledge required to monitor final picture quality and vision control. It involves the ability to identify the technical quality required for each shot, and any technical faults, and make balanced judgements about corrections.

### ELEMENTS

Candidates must be able to:

### PERFORMANCE CRITERIA

- |   |                                   |     |   |
|---|-----------------------------------|-----|---|
| 1 | View final cuts for video grading | 1.1 | Identify technical faults in programme material and take necessary action to correct them   |
|   |                                   | 1.2 | Assess shot by applying knowledge of lift, gain, gamma and colour bias in context with other shots in the scene, using the appropriate tests and monitoring equipment |
|   |                                   | 1.3 | Balance need for corrections to analogue the digitally produced images with the fact that they generate excessive picture noise                                       |
|   |                                   | 1.4 | Identify corrections to analogue and digitally produced images that are limited as they generate excessive picture noise  |
| 2 | Specify video grading requirement | 2.1 | Identify time available for grading, and take required action to prevent over runs  |
|   |                                   | 2.2 | Identify particular shots or sequences which have definition details required by production   |
|   |                                   | 2.3 | Provide relevant personnel with clear, accurate and complete instructions for grading   |
|   |                                   | 2.4 | Inform colleagues of problems with particular scene or shot number, to enable correct sequences or shots to be identified and retrieved                               |

### RANGE STATEMENT

**Definition details** include:

- Tone
- Mood
- Light level



## UNDERPINNING KNOWLEDGE & SKILLS

Candidates must know:

1. what are the technical fault diagnosis procedures, and what action to take for each scenario
2. how to monitor the functions of lift, gain, gamma and colour bias, for continuity
3. what are the basic principles of video equipment, its range of uses, and the facilities that video offers
4. how to detail accurately the information necessary to enable personnel to grade the pictures
5. what editing and colouring processes and techniques there are, and the criteria for their selection
6. how to assess the quality of picture which is appropriate to the style of production
7. what are the different methods of vision control
8. how to line up and match cameras
9. how to line up and match monitors
10. how to balance the need for corrections to analogue and digitally produced images with the possibility that the corrections may generate excessive picture noise

## EVIDENCE GUIDE

### (1) Critical Aspects of Evidence

Evidence should include the ability to:

- identify technical faults
- assess the technical quality of each shot and make balanced judgements about corrections
- grade pictures and identify timescales for grading

### (2) Method of Assessment

Assessors should gather a range of evidence, which is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, oral questioning/interview, projects/reports/logbooks, work samples and portfolio of evidence. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

### (3) Context of Assessment

This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is, the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.

**PGPCOR0031A: Communicate in the workplace**

## Competency Descriptor:

This unit deals with the skills and knowledge required for interacting with people internally and externally through verbal, nonverbal and written communications in the workplace and the ability to follow verbal and written workplace instructions.

## Competency Field: Communications

ELEMENT OF COMPETENCY		PERFORMANCE CRITERIA	
1. Communicate verbally	1.1	Language used in all communications is clear concise and appropriate to client, assignment and organisation's requirements.	
	1.2	Active listening skills and questioning techniques are used to clarify issues.	
	1.3	Established communication pathways are used for routine and non-routine communication.	
	1.4	Appropriate tone and body language is presented in all communication.	
2. Communicate non verbally	2.1	Non-verbal communication is positive, culturally appropriate and tailored to the audience.	
	2.2	Non-verbal communication is consistent with verbal communication.	
3. Communicate with clients	3.1	Questioning, learning and summarising skills are used to establish client needs.	
	3.2	The needs of clients are addressed in line with organisation's policy and procedures.	
	3.3	Confidentiality is observed in accordance with organisation's policies and procedures.	
4. Give and receive instructions	4.1	Instructions received are acted upon within an agreed time frame and to meet organisation needs.	
	4.2	Difficulties/problem areas are identified and communicated to the appropriate person in a timely manner.	



- |    |   |  |
|----|---|--|
|    | 4.3   | Clarification of instructions is sought from the appropriate person.   |
|    | 4.4   | Instructions are relayed clearly, concisely and accurately and confirmation of understanding obtained.                         |
| 5. | Take part in group discussions and informal meetings                  |  |
|    | 5.1   | Contributions are made in small informal group activities and meetings to facilitate outcomes.                                 |
|    | 5.2   | Responses are sought from, and provided to, other group members in a constructive way.   |
|    | 5.3   | Views and opinions of individuals or a group are understood, acknowledged and accurately represented to others where required. |
| 6. | Prepare and process routine written correspondence, notes and records |  |
|    | 6.1   | Information and ideas are presented in a format, language and timeframe to meet organisation's requirements.                   |
|    | 6.2   | Presentation of written documents meets organisation's standards of style and accuracy.  |
|    | 6.3   | Documents are processed to comply with legislative requirements and organisation's policy and procedures.                      |

## RANGE STATEMENTS

This unit applies to activities associated with the essential operations linked to communicating in the workplace.

Clients may include:

- external
- internal
- members of other departments
- representatives of other organisations
- representatives of non government organisations
- contractors
- members of the public
- persons from culturally and linguistically diverse backgrounds
- people with hearing/vision impairments

Instructions may be:

- verbal
- non verbal
- written and may include requests
- directions



Workplace may include:

- office
- workshop
- operational area
- large organization
- small organization
- one-man operation
- studio

Non verbal communication may include:

- body language
- gestures and signals

Routine correspondence may include:

- brief notes
- documents
- number of themes covered in document would be simple and limited

Modes of communication may include:

- written
- face to face
- radio
- telephone
- facsimile
- information technology systems
- pamphlets translated in other languages for persons from culturally and linguistically diverse backgrounds
- gestures
- use of interpreters
- signals
- visual signalling re vessels

Client needs may include:

- information
- advice
- directions
- assistance

## EVIDENCE GUIDE

Competency is to be demonstrated by the ability to communicate in the workplace in accordance with the performance criteria and the range listed within the range of variables statement.

### (1) Critical Aspects and Evidence

It is essential that competence be observed in the following aspects:

- demonstrate knowledge of verbal and non-verbal communication techniques, usage of the official language and
- demonstrate communication skills effectively interacting with clients
- communicate verbally and non verbally
- demonstrate command of the official language
- application of appropriate communication techniques, linguistic skills and social interaction skills
- produce written communication to required standards
- receive and communicate information, instructions and views
- compliance with organisational guidelines, policies and procedures

**(2) Pre-requisite Relationship of Units**

The pre-requisite for this unit is:

- Nil

**(3) Underpinning Knowledge and Skills****Knowledge**

Knowledge of:

- effective verbal communication techniques
- effective non verbal communication techniques
- group communication techniques
- written communication skills
- small group dynamics
- pronunciations and diction of the official language
- importance of tone and body language in communication
- grammar, punctuation and vocabulary of the official language
- standard practices for producing written communication
- organisation's policies, procedures and guidelines
- communication technology

**Skill**

The ability to:

- follow written instructions
- give and receive verbal instructions
- interact with clients
- communicate in group setting
- use technology effectively
- produce written communication

**(4) Resource Implications**

The following resources should be made available:

- workplace (actual enterprise or simulated)
- opportunities for interacting with a range of clients
- equipment and other resources
- organisational policies, regulations and guidelines

**(5) Method of Assessment**

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Evidence may be collected in a variety of ways including:

- direct observation
- oral questioning
- written tests
- case studies
- evaluation of work done
- evaluation of workplace records, job documents and performance appraisals
- testimonials from clients
- portfolio of evidence of previous works and qualifications
- authenticated assessments and/or assignments from relevant training courses
- supporting statement from supervisor or previous employer

Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.

Simulated activities must closely reflect the workplace.

**(6) Context of Assessment**

Assessment may take place on the job, off the job or a combination of both of these. However, assessment of this unit would most effectively be undertaken on the job due to the specific workplace requirements. Off the job assessment must be undertaken in a closely simulated workplace environment.



## CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualification Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> <li>Carries out established processes</li> <li>Makes judgement of quality using given criteria</li> </ul>	<ul style="list-style-type: none"> <li>Manages process</li> <li>Selects the criteria for the evaluation process</li> </ul>	<ul style="list-style-type: none"> <li>Establishes principles and procedures</li> <li>Evaluates and reshapes process</li> <li>Establishes criteria for evaluation</li> </ul>

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

**PGPCOR0061A: Work with others**

## Competency Descriptor:

This unit deals with the skills and knowledge needed to work harmoniously and effectively with team members, colleagues and others in a work environment.

Competency Field: Printing and Graphic Arts

ELEMENT OF COMPETENCY	PERFORMANCE CRITERIA
1. Participate in the work/group process	1.1 The relevant work requirements for the group/process are correctly identified.
	1.2 Own role and role of each individual in meeting work requirements are correctly identified and own role is performed to expectations.
	1.3 Appropriate assistance is provided to other team members involved in the work group/process as required and constructive contributions are made to meeting work requirements.
	1.4 Time and resource constraints are accounted for in planning for and fulfilling work requirements.
	1.5 Work place activities are conducted in compliance with the organization's work policies, procedures and conventions covering acceptable workplace conduct.
	1.6 Individual differences into are taken into account when performing work activities to achieving work requirements.
	1.7 Strengths of individuals are utilised to develop others in the group and the sharing of knowledge is incorporated in the group/process activities.
2. Contribute to the flow of information and ideas	2.1 Work outcomes are enhanced by sharing information and ideas relevant to the work activity with others.
	2.2 Information provided to others is relevant, timely and accurate.
	2.3 Information and ideas required to assist in the achievement of work requirements are sought from the appropriate persons when required.





- |    |  |   |
|----|--|---|
|    | 2.4  | Information is recorded in the required detail and in the specified format.   |
|    | 2.5  | Relevant work information is systematically and accurately maintained and filed for easy retrieval.   |
|    | 2.6  | Differences in languages and cultural differences in communication styles are identified and their impact on the work process is accounted for. |
| 3. | Deal effectively with issues, problems and conflicts |   |
|    | 3.1  | Issues, problems and conflicts encountered in the work place are identified and assessed.   |
|    | 3.2  | Issues, problems and conflicts are discussed with team members and solutions are suggested or they are referred to the appropriate person.      |

## RANGE STATEMENT

This unit applies to activities associated with the essential operations linked to working with others.

Working with others may include:

- one-to-one communication in a group or team
- taking part in informal discussions
- following instructions
- consulting with the community
- taking part in meetings
- dealing with conflict

Work requirements may include:

- goals
- objectives
- priorities
- specified targets or results
- time frames
- coordination with other work processes
- clear role definitions
- application of particular procedures
- organisation of work materials
- roster arrangements or particular approaches to work processes specified by the organisation or work group

Groups may include:

- established or ad hoc work units
- working parties
- task forces
- committees
- self directed teams

Techniques to resolve issues, problems or conflicts may include:

- problem solving
- negotiation
- conflict resolution
- use of a mediator or conciliator



Working with others requires individual diversity to be taken into account including:

- cultural, racial and ethnic background
- physical requirements
- gender
- languages
- customs
- religious and traditional beliefs

## EVIDENCE GUIDE

Competency is to be demonstrated by the ability to work with others in accordance with the performance criteria and the range listed within the range of variables statements.

### (1) Critical Aspects of Evidence

It is essential that competence be observed in the following aspects:

- participate in work process and contribute to achievement of goals and objectives
- demonstrate the ability to communicate effectively with others within the range of situations required for the job role
- provide ideas, lend assistance to others and resolve conflicts
- identify and fulfil own role in work process and utilise the strengths of others
- deal effectively with resource and time constraints and personal differences
- prepare for and conduct work operations in accordance with procedures
- demonstrate the ability to work effectively as part of a team
- demonstrate knowledge of effective communication techniques, including active listening, questioning and non-verbal communication

### (2) Pre-requisite Relationship of Units

The pre-requisite for this unit is:

- Nil

**(3) Underpinning Knowledge and Skills**Knowledge

Knowledge of:

- individual roles and responsibilities and relationships to others
- techniques for managing own work load such as
  - meeting deadlines
  - acknowledging if tasks are beyond current capacity
  - handling tasks or problems as far as possible then referring on to others as required
- acceptable workplace conduct, including
  - regular attendance
  - punctuality
  - maintaining an orderly workspace,
  - appropriate standards of personal presentation and hygiene
  - self-confidence and self-respect
  - acceptance of constructive criticism and a willingness for self-improvement
  - good humoured approach to others and adaptability and flexibility
- team work principles
- effective communication techniques
- conflict resolution techniques
- occupational health and safety principles

Skills

The ability to:

- apply teamwork principles
- communicate effectively
- manage own work
- work harmoniously with others
- apply listening and questioning skills

**(4) Resource Implications**

The following resources should be made available:

- workplace (actual enterprise or simulated)
- enterprise policies and procedures



**(5) Method of Assessment**

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Evidence may be collected in a variety of ways including:

- direct observation
- oral questioning
- written tests
- case studies
- evaluation of work done
- evaluation of workplace records, job documents and performance appraisals
- testimonials from clients
- portfolio of evidence of previous works and qualifications
- authenticated assessments and/or assignments from relevant training courses
- supporting statement from supervisor or previous employer

Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.

Simulated activities must closely reflect the workplace.

**(6) Context of Assessment**

Assessment may take place on the job, off the job or a combination of both of these. However, assessment of this unit would most effectively be undertaken on the job due to the specific workplace environment requirements. Off the job assessment must be undertaken in a closely simulated workplace environment.



## CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> <li>Carries out established processes</li> <li>Makes judgement of quality using given criteria</li> </ul>	<ul style="list-style-type: none"> <li>Manages process</li> <li>Selects the criteria for the evaluation process</li> </ul>	<ul style="list-style-type: none"> <li>Establishes principles and procedures</li> <li>Evaluates and reshapes process</li> <li>Establishes criteria for evaluation</li> </ul>

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.

**PGPCOR0091A: Perform basic industry calculations**

## Competency Descriptor:

This unit deals with the skills and knowledge required to perform basic industry calculations and applies to all individuals operating in the printing and graphic arts industry.

Competency Field: Printing and Graphic Arts

ELEMENT OF COMPETENCY		PERFORMANCE CRITERIA	
1. Calculate costs and dimensions	1.1	Additions, subtractions, multiplications and divisions of costs and dimensions are correctly calculated.	
	1.2	Material and time costs are correctly calculated for the elements of a brief.	
	1.3	Percentages of cost and time are correctly calculated to fulfil the requirements of a brief.	
	1.4	Results of calculations are correctly recorded.	
2. Calculate area, density and volume	2.1	The areas of design components are correctly calculated in accordance with job specifications.	
	2.2	The density and/or volume of fluids and colours are correctly calculated and applied.	
	2.3	Percentages of areas, densities and volumes are correctly calculated to fulfil the requirements of a brief.	
	2.4	Enlargements and reductions are correctly calculated.	
3. Calculate and draw geometric shapes	3.1	Angles, areas and diameters are correctly calculated to fulfil the requirements of a brief.	
	3.2	Geometric shapes are calculated and drawn correctly, by hand or on computer, in accordance with design specifications.	
4. Use basic measuring tools and apply results of measurement	4.1	Appropriate measuring tools are selected and used correctly and accurately.	
	4.2	Measurements are correctly interpreted and used in appropriate calculations.	



## RANGE STATEMENT

This unit applies to activities associated with the essential operations linked to performing basic industry calculations.

Calculation may include:

- area
- perimeter
- angles
- scales
- quantities
- ratios (ingredients/elements and triangulation)
- proportion
- volume
- arithmetic
- percentages
- geometry

Measurements may include:

- linear quantities
- volume
- density
- angular dimensions

Workplace procedures may relate to:

- safety
- process-specific procedures
- use of materials
- recycling
- cost control
- reporting

Measuring tools may include:

- micrometers
- scales
- humidity meters
- pH meters
- screen angle and screen ruling gauges
- dot gain scales and pantone colour matching
- rule
- tape measure
- protractor
- square

Job instruction may involve:

- verbal direction/instruction
- written instruction
- provision of job drawing and details



## EVIDENCE GUIDE

Competency is to be demonstrated by the ability to perform basic industry calculations in accordance with the performance criteria and the range listed within the range of variable statements.

### (1) Critical Aspects of Evidence

It is essential that competence be observed in the following aspects:

- apply mathematical principles to calculation and measurements
- perform correct measurements and calculations on jobs according to performance criteria
- demonstrate the ability to find and use information relevant to the task from a variety of information sources
- accurate interpretation and recording of measurements and calculations
- safe use of and accurate reading of measuring devices
- calculate and produce drawings and shapes
- compliance with Occupational Health and Safety requirements and industry standards
- work in accordance with organisational policies, procedures and quality requirements

### (2) Pre-requisite Relationship of Units

The pre-requisite for this unit is:

- Nil



**(3) Underpinning Knowledge and Skills**Knowledge

Knowledge of:

- different applications of arithmetic, percentages, geometry and drawing
- quick approximations of expected answers
- calculations required for enlargements and reductions
- use of basic measurement tools
- calculating devices
- enterprise policies and procedures
- quality standards
- occupational health and safety requirements
- drawings and specifications
- materials relevant to the work process
- mathematical operations in geometry, measurement and calculations
- costing relevant to the work activity
- charts and graphs
- units of measurements
- relationship between quantities
- application of mathematical procedures including addition, subtraction, multiplication, division, percentages and fractions

Skill

The ability to:

- read and interpret drawings/instructions
- measure and calculate
- record measurements
- use measuring devices
- operate electronic calculating devices
- interpret mathematical information
- communicate effectively
- use measuring devices and equipment safely

**(4) Resource Implications**

The following resources should be made available:

- workplace (actual enterprise or simulated)
- relevant calculating and measuring devices and equipment
- work instructions/drawing and materials
- enterprise policies and procedures and quality standards
- occupational health and safety requirements

**(5) Method of Assessment**

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Evidence may be collected in a variety of ways including:

- direct observation
- oral questioning
- written tests
- case studies
- evaluation of work done
- evaluation of workplace records, job documents and performance appraisals
- testimonials from clients
- portfolio of evidence of previous works and qualifications
- authenticated assessments and/or assignments from relevant training courses
- supporting statement from supervisor or previous employer

Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.

Simulated activities must closely reflect the workplace.

**(6) Context of Assessment**

Assessment may take place on the job, off the job or a combination of both of these. However, assessment of this unit would most effectively be undertaken on the job due to the specific workplace environment requirements. Off the job assessment must be undertaken in a closely simulated workplace environment.



## CRITICAL EMPLOYABILITY SKILLS

Three levels of performance denote level of competency required to perform a task. These levels do not relate to the NCTVET Qualification Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

Levels of Competency		
Level 1.	Level 2.	Level 3.
<ul style="list-style-type: none"> <li>Carries out established processes</li> <li>Makes judgement of quality using given criteria</li> </ul>	<ul style="list-style-type: none"> <li>Manages process</li> <li>Selects the criteria for the evaluation process</li> </ul>	<ul style="list-style-type: none"> <li>Establishes principles and procedures</li> <li>Evaluates and reshapes process</li> <li>Establishes criteria for evaluation</li> </ul>

Collect, analyse and organise information	Level 1	
Communicate ideas and information	Level 1	
Plan and organise activities	Level 1	
Work with others and in team	Level 1	
Use mathematical ideas and techniques	Level 1	
Solve problems	Level 1	
Use technology	Level 1	

Please refer to the Assessment Guidelines for advice on how to use the Critical Employability Skills.