

<b>Training Package</b>	Entertainment (CUE03)/Screen and Media (CUF07)	<b>HSC Requirements and Advice</b>
<b>Unit code</b>	<b>Unit title</b>	<b>HSC Indicative Hours</b>
<b>CUFLGT101A</b>	<b>Apply a general knowledge of lighting to work activities</b>	<b>10</b>

<b>Competency field</b>	Media and entertainment production – Lighting
<b>Unit descriptor</b>	This unit describes the performance outcomes, skills and knowledge required to complete basic lighting tasks in a range of production contexts. No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.
<b>Application of the unit</b>	<p>People assisting with lighting operations in the screen, media and entertainment industries apply the skills and knowledge outlined in this unit. They are working under the direct supervision of an experienced lighting technician.</p> <p>The role includes the need for an understanding of the role of lighting technicians, lighting system layouts and the functions of a range of lighting equipment. Equipment operation is at a routine level.</p> <p>Higher level skills associated with lighting operations are covered in units such as:</p> <ul style="list-style-type: none"> <li>• CUFLGT301A Prepare, install and test lighting equipment</li> <li>• CUFLGT302A Record and operate standard lighting cues.</li> </ul>
<b>Prerequisite units</b>	Nil
<b>Employability skills</b>	This unit contains employability skills.

### Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<b>Context of and specific resources for assessment</b>	<b>Method of assessment</b>
<p>Evidence of the following is <u>essential</u>:</p> <ul style="list-style-type: none"> <li>• completion of lighting related tasks according to health and safety procedures</li> <li>• recognition of lighting equipment, including key features and purpose.</li> </ul>	<p>Assessment <u>must</u> ensure:</p> <ul style="list-style-type: none"> <li>• practical demonstration of skills through the completion of a range of preparatory and set up tasks with industry-standard lighting equipment</li> <li>• project or work activities that allow knowledge to be applied to specific production contexts and situations</li> <li>• access to appropriate learning and assessment support when required</li> <li>• the use of culturally appropriate processes, and techniques appropriate to the oracy, language and literacy capacity of the assessee and the work being performed.</li> </ul>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• direct questioning combined with review of portfolios of evidence and third party workplace reports of on the job performance</li> <li>• direct observation of the candidate completing lighting related tasks</li> <li>• inspection of equipment set up by the candidate to determine whether set up meets production requirements</li> <li>• verbal or written questioning to assess knowledge of equipment types.</li> </ul>

		<b>Method of assessment cont/d</b>
		<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> <li>• BSBOHS201A Participate in OHS processes</li> <li>• CUETGE15B Handle physical elements safely during bump in/bump out.</li> </ul>

<b>Required Skills and Knowledge</b>		<b>HSC Requirements and Advice</b>
This section describes the skills and knowledge <u>required</u> for this unit.		
<p><b>Required skills</b></p> <ul style="list-style-type: none"> <li>• effective communication, literacy and teamwork skills sufficient to: <ul style="list-style-type: none"> <li>- work effectively as a member of a production team</li> <li>- interpret lighting plans</li> <li>- understand use of scale, lighting symbols and notation conventions</li> </ul> </li> <li>• technical skills sufficient to: <ul style="list-style-type: none"> <li>- operate a lighting desk at a basic level</li> <li>- undertake basic maintenance of lighting components, e.g. replacing bulbs, checking condition of cables</li> </ul> </li> <li>• numeracy skills sufficient to: <ul style="list-style-type: none"> <li>- count and sort equipment and use numerical features of lighting desks</li> <li>- understand and calculate power loadings (amperage).</li> </ul> </li> </ul>	<p><b>Required knowledge</b></p> <ul style="list-style-type: none"> <li>• the general scope and potential of lighting operations within different production contexts, e.g. theatre, music, corporate, film and television</li> <li>• basic understanding of electrical theory, e.g. watts, amps, kilowatts</li> <li>• roles and responsibilities of lighting technicians in different contexts, including career paths</li> <li>• the relationship between lighting operations and other technical and performance areas, including audio, vision systems and performance</li> <li>• lighting system options in a range of venue types</li> <li>• colour recognition</li> <li>• specialised terminology that applies to lighting operations</li> <li>• general features of lanterns and accessories, dimmers and control systems</li> <li>• overview of different types of automated lights and the special requirements of this type of technology, including: <ul style="list-style-type: none"> <li>- rigging orientation</li> <li>- powering</li> <li>- requirement for data supply and fixture addressing</li> </ul> </li> <li>• overview of appropriate use of standard pump propelled glycol based atmospheric (smoke) effects</li> <li>• requirements for storage of lighting equipment</li> <li>• OHS legislation and enterprise standards in relation to lighting operations, e.g. electrical restrictions.</li> </ul>	<p><b>Key Terms and Concepts</b></p> <ul style="list-style-type: none"> <li>• dimmers</li> <li>• lighting desk</li> <li>• lighting equipment and accessories</li> <li>• lighting plan</li> <li>• lighting systems</li> <li>• lights</li> <li>• patch system</li> <li>• power loadings.</li> </ul>

Element	Performance Criteria	Range Statement	HSC Requirements and Advice
1 Make preparations for lighting set-up.	1.1 Confirm work requirements with <b>relevant personnel</b> with reference to designated lighting plans.	<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. <b>Bold italicised</b> wording, if used in the performance criteria, is detailed below.</p> <p>Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p> <p><b>Relevant personnel</b> may include:</p> <ul style="list-style-type: none"> <li>• camera crew</li> <li>• clients</li> <li>• customers</li> <li>• lighting designer</li> <li>• lighting technicians</li> <li>• performers/actors</li> <li>• special effects operators</li> <li>• supervisor.</li> </ul>	<p><b>Learning experiences for the HSC must address:</b></p> <p>A basic understanding of a range of lighting and lighting control system options including:</p> <ul style="list-style-type: none"> <li>• different entertainment industry contexts <ul style="list-style-type: none"> <li>- live performance</li> <li>- theatre</li> <li>- events</li> <li>- multi-media presentations.</li> </ul> </li> <li>• different venue types <ul style="list-style-type: none"> <li>- indoor</li> <li>- outdoor.</li> </ul> </li> </ul> <p>Knowledge of possible career pathways in lighting and roles and responsibilities of a range of lighting personnel including:</p> <ul style="list-style-type: none"> <li>• lighting designer</li> <li>• lighting operator</li> <li>• follow spot operator</li> <li>• lighting technician</li> <li>• production electrician.</li> </ul> <p>A basic understanding of:</p> <ul style="list-style-type: none"> <li>• the principles of <ul style="list-style-type: none"> <li>- light theory</li> <li>- subtractive and additive colour mixing</li> </ul> </li> <li>• electrical theory <ul style="list-style-type: none"> <li>- watts</li> <li>- amps</li> <li>- kilowatts.</li> </ul> </li> </ul> <p>A basic understanding of the effect of:</p> <ul style="list-style-type: none"> <li>• colour on objects</li> <li>• colour on mood.</li> </ul> <p>Positioning of lights to achieve different:</p> <ul style="list-style-type: none"> <li>• effect</li> <li>• mood.</li> </ul> <p>General features and purpose of a range of lighting equipment including:</p> <ul style="list-style-type: none"> <li>• patch panels</li> </ul>

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			<ul style="list-style-type: none"> <li>• dimmers</li> <li>• floods</li> <li>• par luminaires</li> <li>• cyc lights</li> <li>• fresnel luminaires</li> <li>• PC luminaires</li> <li>• profiles</li> <li>• ellipsoidals</li> <li>• automated lights</li> <li>• strobes</li> <li>• follow spots.</li> </ul> <p>Lighting plans including:</p> <ul style="list-style-type: none"> <li>• universal lighting symbols</li> <li>• scale</li> <li>• notation conventions</li> <li>• elevation</li> <li>• sight lines</li> <li>• section/side view.</li> </ul> <p>An awareness of other documentation in production plans including:</p> <ul style="list-style-type: none"> <li>• lantern schedules</li> <li>• colour call sheets</li> <li>• event sheet</li> <li>• cue sheet</li> <li>• prompt copy</li> <li>• running sheet</li> <li>• script</li> <li>• libretto.</li> </ul> <p>The importance of:</p> <ul style="list-style-type: none"> <li>• confirming work requirements</li> <li>• following supervisor's instructions for lighting requirements.</li> </ul> <p>Awareness of other personnel involved in decision making regarding lighting requirements including:</p> <ul style="list-style-type: none"> <li>• camera crew</li> <li>• clients</li> <li>• customers</li> <li>• lighting designer</li> </ul>

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			<ul style="list-style-type: none"> <li>• lighting technicians</li> <li>• performers/actors</li> <li>• special effects operators</li> <li>• supervisor</li> <li>• director</li> <li>• producer.</li> </ul> <p>Awareness of the role of external hirers such as lighting hire companies.</p>
	<p>1.2 Correctly identify appropriate rigging and positioning points for <i>lights and lighting equipment</i>.</p>	<p><i>Lights and lighting equipment</i> may include:</p> <ul style="list-style-type: none"> <li>• architectural fixtures, e.g. wall lights</li> <li>• cyclorama lights</li> <li>• ellipsoidal profile</li> <li>• floods</li> <li>• fresnels</li> <li>• outside broadcast equipment</li> <li>• PAR (parabolic aluminised reflector) lamps</li> <li>• PC (pebbled convex) lamps</li> <li>• profile</li> <li>• snoots</li> <li>• studio and theatre based equipment.</li> </ul>	<p><b>Learning experiences for the HSC must address:</b></p> <p>Working knowledge of a range of lights and lighting equipment.</p> <p>A basic understanding of the following bump in processes:</p> <ul style="list-style-type: none"> <li>• rigging</li> <li>• patching</li> <li>• framing</li> <li>• gelling</li> <li>• focusing</li> <li>• light control programming.</li> </ul> <p>Occupational health and safety (OHS) requirements in relation to lighting.</p> <p>Safe work practices relevant to lighting operations including:</p> <ul style="list-style-type: none"> <li>• use of personal protective equipment (PPE) <ul style="list-style-type: none"> <li>- gloves</li> <li>- goggles</li> <li>- appropriate clothing and footwear</li> <li>- harness</li> </ul> </li> <li>• correct manual handling</li> <li>• safe posture</li> <li>• safe work techniques <ul style="list-style-type: none"> <li>- operating at heights</li> <li>- maintaining appropriate ventilation</li> <li>- handling hot surfaces</li> <li>- using electricity.</li> </ul> </li> </ul>

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			<p>A basic awareness of lighting control systems in a range of performance venues.</p> <p>Selection of and positioning points for lamps according to lighting plan.</p> <p>Understanding the importance of safe and effective positioning of lighting equipment.</p>
	1.3 Correctly identify cables and connectors used with different lighting components.		<p><b>Learning experiences for the HSC must address:</b></p> <p>Cables including:</p> <ul style="list-style-type: none"> <li>• 3-phase</li> <li>• 240 volts.</li> </ul>
	1.4 Identify and sort lighting equipment and accessories in preparation for set up, ensuring appropriate handling and taking account of equipment differences.		
	1.5 Follow enterprise procedures and comply with OHS requirements at all times.		<p><b>Learning experiences for the HSC must address:</b></p> <p>Safe work practices and procedures.</p>
2 Complete tasks using lighting equipment.	2.1 Correctly use a <i>lighting desk</i> to bring up channels for focusing and adjustment.	<p><i>Lighting desk</i> may include:</p> <ul style="list-style-type: none"> <li>• controlled lighting effects</li> <li>• lighting desk peripherals, e.g.: <ul style="list-style-type: none"> <li>- monitors</li> <li>- printers</li> <li>- external memory storage</li> <li>- riggers' controls</li> <li>- desk lamp</li> <li>- control cables</li> <li>- effects unit</li> </ul> </li> <li>• back up equipment</li> <li>• manual preset operation</li> <li>• manual/memory desks</li> <li>• manually operated desks</li> <li>• single scene sub master operation</li> <li>• sub master cue stacker and playback</li> <li>• theatrical cue set up and playback.</li> </ul>	<p><b>Learning experiences for the HSC must address:</b></p> <p>An awareness of types of lighting desks/boards:</p> <ul style="list-style-type: none"> <li>• manual control desks</li> <li>• memory systems – analogue and digital.</li> </ul> <p>General features of a lighting desk:</p> <ul style="list-style-type: none"> <li>• lighting circuits</li> <li>• faders</li> <li>• presets</li> <li>• display monitors</li> <li>• dead black out (DBO).</li> </ul> <p>Lighting desk operations including:</p> <ul style="list-style-type: none"> <li>• back-up equipment</li> <li>• controlled lighting effects</li> <li>• lighting desk peripherals</li> <li>• manual/memory desks</li> </ul>

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			<ul style="list-style-type: none"> <li>• manual preset operation</li> <li>• manually operated desks</li> <li>• scene submaster operation</li> <li>• submaster cue stacking and playback</li> <li>• theatrical cue set up and playback.</li> </ul> <p>An awareness of lighting desk protocols.</p>
	<p>2.2 Correctly and safely power up <i>dimmers</i> and set up <i>patch system</i>.</p>	<p><i>Dimmers</i> may include:</p> <ul style="list-style-type: none"> <li>• analogue dimmers</li> <li>• multiplexed analogue dimmers</li> <li>• multiplexed digital dimmers, e.g. DMX512</li> <li>• MUX and DMUX units, e.g. analogue conversion</li> <li>• single unit (follow spot) dimmers, e.g. Model 1 or Monopak</li> <li>• small self contained dimmable controllers, e.g. Fourpack, Quadpak.</li> </ul> <p><i>Patch system</i> may include:</p> <ul style="list-style-type: none"> <li>• automated lighting, i.e. direct power and data lines required (no dimmer)</li> <li>• distributed dimming, e.g. dimmers located where required</li> <li>• distributed patching, e.g. patch lines from a single dimmer to lights</li> <li>• dual systems, i.e. combination of both layouts as above.</li> </ul>	<p><b>Learning experiences for the HSC must address:</b></p> <p>A basic awareness of dimmers including:</p> <ul style="list-style-type: none"> <li>• analogue</li> <li>• multiplexed analogue</li> <li>• multiplexed digital</li> <li>• MUX and DMUX units</li> <li>• single unit (follow spot) dimmers</li> <li>• small self-contained dimmable controllers</li> </ul> <p>A basic awareness of patch system layouts including:</p> <ul style="list-style-type: none"> <li>• automated lighting</li> <li>• distributed dimming</li> <li>• distributed patching</li> <li>• dual systems.</li> </ul>
	<p>2.3 Attach <i>light beam control accessories</i> to ensure <i>use of lights</i> is according to instructions and procedures.</p>	<p><i>Light beam control accessories</i> may include:</p> <ul style="list-style-type: none"> <li>• animation discs</li> <li>• barn doors</li> <li>• black wrap</li> <li>• colour frames</li> <li>• cookies</li> <li>• cut outs</li> <li>• doughnuts and top hats</li> <li>• flags</li> <li>• flood mechanisms</li> <li>• fresnel/PC barn doors</li> <li>• gel frames</li> </ul>	<p><b>Learning experiences for the HSC must address:</b></p> <p>A basic knowledge of light beam accessories and their purpose including:</p> <ul style="list-style-type: none"> <li>• gel types</li> <li>• gel frames</li> <li>• barn doors</li> <li>• gobos and gobo holders</li> <li>• iris</li> <li>• doughnuts</li> <li>• top hats</li> <li>• black wrap</li> <li>• shutters</li> </ul>

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		<ul style="list-style-type: none"> <li>• gels</li> <li>• gobos/gobo holders/rotators</li> <li>• iris</li> <li>• profile shutters.</li> </ul> <p><i>Use of lights</i> may include:</p> <ul style="list-style-type: none"> <li>• avoiding incorrect orientation of a lamp (which can reduce filament and lantern life)</li> <li>• identifying the correct replacement lamp and wattage of lanterns</li> <li>• identifying the different types of lamp bases</li> <li>• knowing how heat is dissipated by a lantern</li> <li>• using correct bubble handling techniques.</li> </ul>	<ul style="list-style-type: none"> <li>• spun</li> <li>• standard pump propelled glycol-based or oil-based atmospheric (smoke) effects.</li> </ul> <p>Importance of adhering to instructions when undertaking lighting activities including:</p> <ul style="list-style-type: none"> <li>• enterprise/organisation policies and procedures</li> <li>• supervisor's oral and written instructions</li> <li>• lighting plans</li> <li>• licensing requirements</li> <li>• manufacturer's specifications</li> <li>• operator manuals.</li> </ul>
	2.4 Correctly handle cables, including rolling/ unrolling, storage and safe manual handling.		
	2.5 Identify problems with equipment promptly, take action within the scope of individual responsibility or report to relevant personnel.		<p><b>Learning experiences for the HSC must address:</b></p> <p>Equipment checks including:</p> <ul style="list-style-type: none"> <li>• electrical safety</li> <li>• mechanical safety</li> <li>• electrical function</li> <li>• electronic function.</li> </ul> <p>Cleaning, maintenance and storage of lighting equipment and accessories.</p> <p>Documentation of:</p> <ul style="list-style-type: none"> <li>• use and performance of equipment</li> <li>• operational faults and malfunctions</li> <li>• completed maintenance</li> <li>• repair tasks and outcomes.</li> </ul> <p>Understanding of lines of reporting and communicating with supervisors within the enterprise/organisation.</p> <p>Reporting including:</p> <ul style="list-style-type: none"> <li>• formal/informal</li> <li>• written/verbal.</li> </ul>

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	<p>2.6 Check and replace <i>spares and consumables</i> and ensure production equipment is ready and available to productions at specified locations.</p>	<p><i>Spares and consumables</i> may include:</p> <ul style="list-style-type: none"> <li>• batteries</li> <li>• bulbs</li> <li>• cables</li> <li>• cables</li> <li>• fuses</li> <li>• gaffer tape</li> <li>• gels.</li> </ul>	
	<p>2.7 Communicate appropriately with relevant personnel, clients or the public during the completion of tasks.</p>		<p><b>Learning experiences for the HSC must address:</b></p> <p>Strategies for the promotion of cooperative working environments including:</p> <ul style="list-style-type: none"> <li>• good communication</li> <li>• mutual respect</li> <li>• understanding roles and responsibilities of others</li> <li>• positive working relationships</li> <li>• application of codes of conduct, workplace policies and procedures</li> <li>• teamwork.</li> </ul> <p>Relationship between lighting operations and other technical and creative areas including:</p> <ul style="list-style-type: none"> <li>• audio</li> <li>• vision systems</li> <li>• staging</li> <li>• stage manager</li> <li>• performers</li> <li>• director</li> <li>• front of house.</li> </ul> <p>Importance of lighting personnel liaising with other production staff including:</p> <ul style="list-style-type: none"> <li>• director</li> <li>• stage manager</li> <li>• sound designer</li> <li>• sound technician.</li> </ul>