

<b>Training Package</b>	<b>Entertainment (CUE03)</b>	<b>HSC Requirements and Advice</b>
<b>Title</b>	<b>Apply a general knowledge of lighting to work activities</b>	
<b>Unit code</b> <b>CUELGT09A</b>	<b>Unit Descriptor</b> This unit provides the foundation knowledge required to complete a range of general lighting-related tasks in a live venue environment. It includes the need for an understanding of the role of the lighting technician, overall lighting system layout and basic equipment recognition. Tasks would generally be completed under supervision.	<b>HSC Indicative Hours</b>  <b>10</b>

<b>Evidence Guide</b>			
<b>Underpinning skills and knowledge</b>	<b>Linkages to other units</b>	<b>Resource requirements</b>	<b>HSC Requirements and Advice</b>
<p>Assessment must include evidence of the following knowledge and skills:</p> <ul style="list-style-type: none"> <li>the general scope and potential of lighting operations within different live production contexts, eg theatre, music, corporate</li> <li>the relationship between lighting operations and other technical and performance areas, including audio, vision systems and performance</li> <li>typical roles and responsibilities of the lighting technicians in different context, including career paths</li> <li>lighting system options in a range of venue types</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 rigging orientation, powering, requirement for data supply and fixture addressing</li> <li>overview of appropriate use of standard pump propelled glycol-based atmospheric (smoke) effects</li> <li>organisational and legislative occupational health and safety legislation in particular relation to lighting operations, eg electrical restrictions</li> <li>knowledge of colour recognition</li> <li>requirements for storage of lighting equipment</li> <li>literacy skills sufficient to interpret lighting plans, understand use of scale, lighting symbols and notation conventions</li> <li>numeracy skills sufficient to count and sort equipment and use numerical features of lighting desks.</li> </ul>	<p>This unit underpins and has linkages to general technical units and all other lighting units and combined assessment and/or training with those units may be appropriate eg:</p> <ul style="list-style-type: none"> <li>CUFSAF01B Follow health, safety and security procedures</li> <li>CUETGE11A Handle physical elements safely during bump in/bump out.</li> </ul>	<p>Assessment of this unit requires access to:</p> <ul style="list-style-type: none"> <li>a range of lighting equipment as identified in the Range Statement</li> <li>an environment in which lighting can be set up and operated</li> <li>lighting plan for interpretation.</li> </ul>	<p><b>Key Terms and Concepts</b></p> <ul style="list-style-type: none"> <li>3-phase power</li> <li>cables</li> <li>career pathways</li> <li>cleaning, maintenance and storage of light equipment and accessories</li> <li>colour call sheets</li> <li>communication</li> <li>dimmers</li> <li>documentation</li> <li>effects of colour</li> <li>electrical safety</li> <li>lamp types</li> <li>licensing requirements</li> <li>light beam accessories</li> <li>light theory</li> <li>lighting components</li> <li>lighting control systems</li> <li>lighting desk/board operations</li> <li>lighting equipment</li> <li>lighting operations</li> <li>lighting personnel</li> </ul>

Method and context of assessment	Critical aspects of evidence	HSC Requirements and Advice
<p>The assessment context must provide for:</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-current lighting equipment</li> <li>• project or work activities that allow knowledge to be applied to specific production contexts and situations.</li> </ul> <p>Assessment may incorporate a range of methods to assess performance and the application of essential underpinning knowledge, and might include:</p> <ul style="list-style-type: none"> <li>• direct observation of the candidate completing lighting-related tasks</li> <li>• evaluation of equipment which has been set up by the candidate</li> <li>• oral or written questioning to assess knowledge of equipment types</li> <li>• review of portfolios of evidence or third party workplace reports of on-the-job performance by the candidate.</li> </ul> <p>Assessment methods should closely reflect workplace demands and the needs of particular groups (eg people with disabilities, and people who may have literacy or numeracy difficulties such as speakers of languages other than English, remote communities and those with interrupted schooling).</p>	<p>The following evidence is critical to the judgement of competence in this unit:</p> <ul style="list-style-type: none"> <li>• recognition of lighting equipment, including key features and purpose</li> <li>• completion of lighting-related tasks in accordance with health and safety procedures.</li> </ul>	<ul style="list-style-type: none"> <li>• lighting plan</li> <li>• lighting schedule</li> <li>• lighting technician</li> <li>• occupational health and safety (OHS)</li> <li>• organisational procedures</li> <li>• patch location</li> <li>• patching</li> <li>• positioning points</li> <li>• production plan documentation</li> <li>• reporting</li> <li>• rigging</li> <li>• safe work practices</li> <li>• subtractive and additive colour mixing.</li> </ul>

### Key competencies in this unit

Key competencies are built into all workplace competencies. The following table describes those applicable to this unit. Trainers and assessors should ensure that they are addressed in training and assessment.

Level 1 = Perform      Level 2 = Administer and Manage      Level 3 = Design and Evaluate

Key competencies	Level	Examples
Collecting, organising and analysing information	1	Reading lighting plan to determine equipment requirements
Communicating ideas and information	1	Discussing work requirements with supervisor
Planning and organising activities	1	Positioning and placing equipment ready for installation
Working with others and in teams	1	Liaising with other technicians during set up
Using mathematical ideas and techniques	1	Calculating the number of lamps required
Solving problems	1	Adjusting position of equipment
Using technology	1	Using hand tools

Element	Performance Criteria	Range Statement	HSC Requirements and Advice
1 Make preparations for lighting set up	1.1 Extract key information from lighting plans and confirm requirements with supervisor	The following explanations identify how this unit may be applied in different workplaces, sectors and circumstances.	<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 the principles of:</p> <ul style="list-style-type: none"> <li>• light theory</li> <li>• subtractive and additive colour mixing.</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>General features and purpose of a range of lighting equipment including:</p> <ul style="list-style-type: none"> <li>• patch panels</li> <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>

Element	Performance Criteria	Range Statement	HSC Requirements and Advice
			<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>• lighting 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 following supervisor's instructions for lighting requirements.</p>
	<p>1.2 Correctly identify appropriate rigging and positioning points for lighting equipment</p>		<p><b>Learning experiences for the HSC must address:</b></p> <p>A basic understanding of the following processes:</p> <ul style="list-style-type: none"> <li>• rigging</li> <li>• patching</li> <li>• framing</li> <li>• gelling</li> <li>• focussing</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> </ul>

Element	Performance Criteria	Range Statement	HSC Requirements and Advice
			<ul style="list-style-type: none"> <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> <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 used to connect 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 Correctly identify and sort equipment and accessories in preparation for set up, ensuring appropriate handling and taking account of equipment differences	<p>Conventional lights to be used <b>must</b> include:</p> <ul style="list-style-type: none"> <li>• floods and PARS and cyc lights</li> <li>• fresnel and pebbled convex (PC) lanterns</li> <li>• profile, ellipsoidal profile</li> </ul> <p>Use of conventional lights <b>must</b> include:</p> <ul style="list-style-type: none"> <li>• finding out the correct replacement lamp and wattage of the lantern</li> <li>• awareness of the different types of lamp bases</li> <li>• correct bubble handling techniques</li> <li>• awareness of how heat is dissipated by a lantern</li> <li>• when incorrect orientation of a lamp may reduce filament and lantern life</li> </ul>	
2 Complete tasks using lighting equipment	2.1 Correctly use the lighting desk to bring up channels for focussing	<p>Use of lighting desk <b>must</b> include:</p> <ul style="list-style-type: none"> <li>• manual preset operation</li> <li>• theatrical cue set up and playback</li> <li>• single scene submaster operation (a single set of channel levels being stored in a fader for later use)</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>

Element	Performance Criteria	Range Statement	HSC Requirements and Advice
		<ul style="list-style-type: none"> <li>• submaster cue stacking and playback (a series of cues, namely sets of channel levels and fade times, stored in sequence and recalled later)</li> </ul>	<ul style="list-style-type: none"> <li>• lighting circuits</li> <li>• faders</li> <li>• presets</li> <li>• display monitors.</li> </ul> <p>Lighting desk operations including:</p> <ul style="list-style-type: none"> <li>• manual preset operation</li> <li>• theatrical cue set up and playback</li> <li>• single scene submaster operation</li> <li>• submaster cue stacking and playback.</li> </ul> <p>An awareness of lighting desk protocols.</p>
	2.2 Correctly and safely power up dimmers and set up patch location	<p>Use of dimmer and patch system layouts may include:</p> <ul style="list-style-type: none"> <li>• distributed dimming dimmers located where required</li> <li>• distributed patch patch lines from a single dimmer location to destination lights</li> <li>• dual systems combination of the above two systems</li> <li>• automated lighting requirements – direct power and data lines required (no dimmer).</li> </ul>	<p><b>Learning experiences for the HSC must address:</b></p> <p>A basic awareness of dimmer and patch system layouts including:</p> <ul style="list-style-type: none"> <li>• distributed dimmers located where required</li> <li>• distributed patch lines from a single dimmer location to destination lights</li> <li>• dual systems combination of the above two systems</li> <li>• automated lighting requirements.</li> </ul>
	2.3 Match light beam control accessories to lights and use in accordance with instructions	<p>Light beam control accessories may include:</p> <ul style="list-style-type: none"> <li>• gel types and gel frames</li> <li>• barn doors</li> <li>• gobos and gobo holders</li> <li>• iris</li> <li>• doughnuts and top hats</li> <li>• black wrap</li> <li>• shutters</li> <li>• spun</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> <li>• spun</li> <li>• standard pump propelled glycol-based or oil-based atmospheric (smoke) effects.</li> </ul>

Element	Performance Criteria	Range Statement	HSC Requirements and Advice
			Importance of adhering to instructions when undertaking lighting activities including: <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 any problems with equipment promptly, take action within the scope of individual responsibility or report to supervisor	Use of conventional lights must include: <ul style="list-style-type: none"> <li>• finding out the correct replacement lamp and wattage of the lantern</li> <li>• awareness of the different types of lamp bases</li> <li>• correct bubble handling techniques</li> <li>• awareness of how heat is dissipated by a lantern</li> <li>• when incorrect orientation of a lamp may reduce filament and lantern life</li> </ul>	<b>Learning experiences for the HSC must address:</b> Equipment checks including: <ul style="list-style-type: none"> <li>• electrical safety</li> <li>• mechanical safety</li> <li>• electrical function</li> <li>• electronic function.</li> </ul> Cleaning, maintenance and storage of lighting equipment and accessories. Documentation of: <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> Understanding of lines of reporting and communicating with supervisors within the enterprise/organisation. Reporting including: <ul style="list-style-type: none"> <li>• formal/informal</li> <li>• written/verbal.</li> </ul>
	2.6 Communicate appropriately with other technicians, performers or customers during the completion of tasks		<b>Learning experiences for the HSC must address:</b> Strategies for the promotion of cooperative working environments including: <ul style="list-style-type: none"> <li>• good communication</li> <li>• mutual respect</li> <li>• understanding roles and responsibilities of others</li> </ul>

Element	Performance Criteria	Range Statement	HSC Requirements and Advice
			<ul style="list-style-type: none"> <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>