

Cambridge **TECHNICALS LEVEL 3**

PERFORMING ARTS

Cambridge
TECHNICALS
2016

Unit 19

Stage lighting design and operation

H/507/6488

Guided learning hours: 60

Version 1 September 2015

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Essential resources required for this unit: Lighting equipment

This unit is internally assessed and externally moderated by OCR.

UNIT AIM

Stage lighting design and operation is an umbrella term which describes the various processes involved in the creative and practical aspects of lighting for the stage to communicate the intentions of the text and the director's interpretation of it to an audience. These processes are to be found in the theatre, television and film industries and offer a wide and stimulating range of career possibilities.

This unit will give you an understanding of the diverse range of skills demanded by these processes. You will learn about the role of the lighting designer and the role of lighting operations technician and the techniques and methods that are used. You will also have an opportunity to fulfil these roles and develop your understanding of them further. You will learn how to create designs to a design brief and construct a lighting plan or plot which you will use in operating a show. The skills that you will learn are transferable into a range of other professions.

TEACHING CONTENT

The teaching content in every unit states what has to be taught to ensure that learners are able to access the highest grades.

Anything which follows an i.e. details what must be taught as part of that area of content. Anything which follows an e.g. is illustrative; it should be noted that where e.g. is used, learners must know and be able to apply relevant examples in their work, although these do not need to be the same ones specified in the unit content.

For internally assessed units you need to ensure that any assignments you create, or any modifications you make to an assignment, do not expect the learner to do more than they have been taught, but must enable them to access the full range of grades as described in the grading criteria.

Learning outcomes	Teaching content
The Learner will:	Learners must be taught:
1. Understand theatre lighting equipment, design methodology and their purposes	The process and methodology of lighting design i.e.: 1.1 Lighting design practitioners and their methods <ul style="list-style-type: none"> • key practitioners • analysing texts from the perspective of lighting design • key terminology and concepts i.e. visibility, brightness, naturalism, mood, colour, form, composition, distribution, movement and direction • properties of light, i.e. luminance, chrominance, colour theory • managing light sources, i.e. angle, focus, projection 1.2 How to produce a lighting plan using lighting design software <ul style="list-style-type: none"> • types of luminaries • calculating, distances and angles to all permanent lighting positions in a given venue • performance characteristics (e.g. lamp wattage, throw, spread) • accessories, including lamps, cabling, connectors, colour filters and other ancillary equipment • programming and operation of the most popular lighting control systems
2. Understand the design process of planning a lighting plot to a brief	A range of methods and equipment used in lighting design and operation, i.e. 2.1 Method <ul style="list-style-type: none"> • measuring, calculating, scaling, drawing, luminance, colour theory, plotting, rigging, risk assessment, testing. • drawing and presenting of lighting plans • creation of lists, e.g. inventories, gel cutting lists, cable allocations • calculation of power requirements, circuit information, weight loadings • use of designer tools, e.g. beam angle calculation, gobo template options • pre-programming of data into a lighting console

Learning outcomes	Teaching content
The Learner will:	Learners must be taught:
	<p>2.2 Equipment and resources</p> <ul style="list-style-type: none"> • drawing equipment • manufacturer's specifications • calculator • CAD software
<p>3. Be able to facilitate lighting operations in a live performance</p>	<p>Lighting operations practices, i.e.:</p> <p>3.1 Health and safety:</p> <ul style="list-style-type: none"> • familiarity with access equipment, warning cries, personal safety equipment, safety signage, available courses, e.g. PLASMA access tower course <p>3.2 Rigging:</p> <ul style="list-style-type: none"> • safe methods of hanging, connecting, attaching, angling, focussing <p>3.3 Operating;</p> <ul style="list-style-type: none"> • operating the lighting console • allocation of channels, presets, faders and blackouts • programming and execution of control functions, e.g. channel allocation, pairing, presetting of levels, delays, fade times and chaser sequences
<p>4. Be able to review lighting design and operations in live performance</p>	<p>To identify and review lighting design and operations outcomes:</p> <p>4.1 Identify strengths and weaknesses in:</p> <ul style="list-style-type: none"> • design concept • selection of materials • application of method • technical and aesthetic production outcomes • health and safety practices

GRADING CRITERIA

LO	Pass	Merit	Distinction
	The assessment criteria are the Pass requirements for this unit.	To achieve a Merit the evidence must show that, in addition to the Pass criteria, the candidate is able to:	To achieve a Distinction the evidence must show that, in addition to the pass and merit criteria, the candidate is able to:
1. Understand theatre lighting equipment, design methodology and their purposes	P1: Explain theatre lighting equipment, methodology and their purpose to inform the lighting design process	M1: Compare design methods and operational techniques	
2. Understand the design process of planning a lighting plot to a brief	P2: Recommend appropriate equipment and design methods	M2: Plan the design of a lighting plot to a brief	
3. Be able to facilitate lighting operations in a live performance	P3: Demonstrate a range of operational techniques using methods and equipment	M3: Apply lighting operations process for a live performance	
4. Be able to review lighting design and operations in live performance	P4: Review lighting design and operations in live performance		D1: Evaluate the design process in fulfilling the brief and suggest improvements
	P5: Identify weak points in the process		

ASSESSMENT GUIDANCE

Assessment and Grading Criteria

These criteria should give learners the opportunity to use the research for **P1** to inform the lighting design planning process at **M1** and, using the hindsight of production realisation reflect on the usefulness of that research at **D1**.

To achieve **P2** and **P3**, learners should produce portfolio evidence showing their competent understanding of a range of equipment and methods used in lighting design and operation.

M2 should be awarded when learners provide evidence of a realistic and workable page to stage strategy for the practical realisation of a lighting design plot and **M3** for the live performance operation of a plot that is fit for purpose.

D1 requires learners to produce an evaluative response in the form of a formal report showing awareness of how research has informed both the lighting design and operations processes in technical, aesthetic and functional terms as well as the overall success of the project in performance.

For **P4**, learners should demonstrate an ability to review each stage of the process from planning to realisation from within the context of live performance outcomes. **P5** requires them to have identified any weakness at each of these stages. This review process should be based on both the portfolio design record and experience gained from practical application.

MEANINGFUL EMPLOYER INVOLVEMENT - a requirement for the Foundation Diploma and Diploma (Tech Level) qualifications

The 'Diploma' qualifications have been designed to be recognised as Tech Levels in performance tables in England. It is a requirement of these qualifications for centres to secure for every learner employer involvement through delivery and/or assessment of these qualifications.

The minimum amount of employer involvement must relate to at least one of the mandatory units, although we encourage you to find ways to engage with employers for other units as well.

Eligible activities and suggestions/ideas that may help you in securing meaningful employer involvement for this unit are given in the table below.

Please refer to the *Qualification Handbook* for further information including a list of activities that are not considered to meet this requirement.

Meaningful employer involvement	Suggestion/ideas for centres when delivering this unit
1. Learners undertake structured work experience or work placements that develop skills and knowledge relevant to the qualification.	Relationships could be built with local theatres, venues and performing companies to shadow the stage lighting design and operations teams at work. Backstage tours and workshops with tour companies are an option for the learners to get a practical experience and view the final product of a company.
2. Learners undertake project(s), exercises(s) and/or assessments/examination(s) set with input from industry practitioner(s).	
3. Learners take one or more units delivered or co-delivered by an industry practitioner(s). This could take the form of master classes or guest lectures.	Industry experts could be invited to deliver lectures or workshops and to provide feedback to learners at key milestones.
4. Industry practitioners operating as 'expert witnesses' that contribute to the assessment of a learner's work or practice, operating within a specified assessment framework. This may be a specific project(s), exercise(s) or examination(s), or all assessments for a qualification.	

To find out more

ocr.org.uk/performingarts

or call our Customer Contact Centre on **02476 851509**

Alternatively, you can email us on **vocational.qualifications@ocr.org.uk**



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