



Australian Government

MSFID5006 Design interior lighting

Release: 1

MSFID5006 Design interior lighting

Modification History

Release 1 - New unit of competency

Application

This unit of competency covers designing lighting for an interior space to achieve lighting effects required by a design brief.

Licensing, legislative or certification requirements may apply to this unit and relevant state/territory and local government agencies should be consulted to determine any necessary certification or licensing for undertaking interior decoration and design work. Access to construction sites requires certification of general induction training specified by the *National Code of Practice for Induction for Construction Work* (ASCC 2007).

Pre-requisite Unit

MSFID4008 Assess interior light and recommend light fittings

Competency Field

Unit Sector

Interior Decoration and Design

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

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| 1 Assess project | 1.1 Applicable work health and safety (WHS), legislative and organisational requirements relevant to researching and recommending lighting design are verified and complied with |
| | 1.2 Project brief is reviewed, confirmed and clarified with client |
| | 1.3 Parameters for the project are assessed and confirmed |
| | 1.4 Resources are selected appropriate to work requirements and checked for operational effectiveness |

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| | 1.5 | Communication with others is established and maintained |
| 2 | Assess current light sources | 2.1 Site analysis is conducted to assess the natural light and artificial light sources |
| | 2.2 | Project plans and drawings and site documents are analysed to determine current and potential influences on light source |
| | 2.3 | Factors for consideration are analysed with regards to their impact on lighting |
| | 2.4 | Environmental sustainability of design is assessed in terms of lighting |
| | 2.5 | Design is analysed to determine requirements for achieving desired lighting effects |
| 3 | Design lighting for interior project | 3.1 Research is conducted to determine cost and energy efficient lighting options to meet the requirements of the integrated design solution |
| | 3.2 | Light fittings and light control devices and their locations are selected and specified on design documentation |
| | 3.3 | Structural design features are reviewed in terms of effect on lighting and specifications determined to support the overall design solution |
| | 3.4 | Non-structural design features are reviewed in terms of effect on lighting and potential improvements identified |
| | 3.5 | Special effects are selected and specified for design |
| | 3.6 | Electrician is consulted to confirm potential complications with changes to lighting design, estimate costing and determine wiring requirements to implement lighting schedule |
| | 3.7 | Lighting design is assessed for conformance to industry standards and regulations |
| 4 | Draw and present lighting design | 4.1 Structural and non-structural design features required to achieve lighting effects are documented on design drawings |
| | 4.2 | Work and product schedules are developed |
| | 4.3 | Costing is determined and documented |

4.4 Lighting features are presented to client

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency. Detail on appropriate performance levels for each furnishing unit of competency in reading, writing, oral communication and numeracy utilising the Australian Core Skills Framework (ACSF) are provided in the Furnishing Training Package Implementation Guide.

Range of Conditions

Specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included. Range is restricted to essential operating conditions and any other variables essential to the work environment.

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| Unit context includes: | <ul style="list-style-type: none">• WHS requirements, including legislation, building codes, material safety management systems, hazardous and dangerous goods codes, and local safe operating procedures or equivalent• work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures, Liveable and Accessible Housing Design guidelines, and organisation insurance requirements• work requires individual to demonstrate discretion, judgement and problem solving, plus self-management and learning skills |
| Lighting design includes: | <ul style="list-style-type: none">• selection of light fittings• determination of window positions and dimensions• uses of skylights• position of walls• balance of artificial and natural light sources• inclusion of light control devices |
| Project brief includes: | <ul style="list-style-type: none">• client needs and objectives• client aims and objectives, and criteria for evaluation• milestones• organisational or personal profiles and aims• image requirements and function• target market• budget |

- timeline
 - consultation requirements
 - colour requirements
- Clients include:**
- suppliers
 - manufacturers
 - private clients
 - colleagues
 - retailers
 - the public
- Parameters include:**
- scope of brief
 - approval to make changes (legislative and planning)
 - effect or feel trying to be achieved
 - functionality (short and long term)
 - budget restrictions
 - established timelines
- Resources include:**
- computers
 - computer software
 - design software
 - computer-aided design (CAD) software
 - colour boards
 - storyboards
 - swatches
 - product based colour systems, such as Munsell or similar
 - colour matching system, such as Pantone Matching System (PMS)
 - journals (directions magazines)
 - artistic equipment and products
 - model making equipment
- Site analysis includes:**
- a visit to the building (home, office or other) to achieve a feel for the intention of the project brief and how natural light may effect it, to assess the level of radiation from the sun into the space and the angles and obstructions caused by other buildings, vegetation or man-made objects, and recording information and taking photos
- Natural light includes:**
- light emitted directly by the sun or reflected from it
- Artificial light includes:**
- lamps
 - ceiling lights
 - spotlights
 - floodlights
 - dimmers
 - wall lights

Factors for consideration include:	• light-emitting diode (LED) • energy efficient globes • ultraviolet (UV) exposure • aspect and orientation • window treatments • light characteristics • colour • space layout • construction methods and materials
Light control devices include:	• motorised or automated mechanisms linked to window treatments
Structural design features include:	• placement and dimensions of walls • windows • doors • flooring and ceiling features • poles • posts • columns
Non-structural lighting design features include:	• use of colour • fixtures • fittings • finishes • soft furnishings • furniture
Special effects include:	• dimming • spotlight • flooding • brightness • creating space • creating focus
Personal protective equipment includes:	• that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures include:	• work instructions, including plans, drawings and designs • workplace procedures relating to reporting and communication • manufacturer specifications and operational procedures

Unit Mapping Information

Supersedes and is equivalent to LMFID5006A Design interior lighting.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0601ab95-583a-4e93-b2d4-cfb27b03ed73>

Assessment Requirements for MSFID5006 Design interior lighting

Modification History

Release 1 - New unit of competency

Performance Evidence

- Interpret work orders and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Identify materials used in the work process
- Follow work instructions, operating procedures and inspection processes to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Assess light for its environmental impact and ability to meet lighting design requirements and provide clients with cost-effective and efficient lighting solutions
- Apply design elements and principles in recommending light design and provide documented lighting layout and schedule
- Use mathematical ideas and techniques to correctly complete measurements, calculate area/volume and estimate material requirements
- Communicate ideas and information to enable confirmation of work requirements and specifications, presentation of design/colour concepts, and the reporting of work outcomes and problems
- Use computer operations for internet searches and CAD operations
- Analyse light fitting performance characteristics
- Initiate new ideas and work techniques
- Avoid backtracking, work flow interruptions or wastage
- Work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity

Knowledge Evidence

- State or territory WHS legislation, regulations, standards and codes of practice relevant to the full range of processes for assessing interior light and recommending light design
- Organisational and site standards, requirements, policies and procedures
- Australian lighting standards and drawing conventions
- Research sources for lighting
- Ergonomics, anthropometrics, proxemics and aesthetic values
- Natural light characteristics and controls
- Artificial light characteristics and controls
- Structural influences on lighting
- Design themes and design development

- Sketching and drawing techniques
- Procedures for the recording, reporting and maintenance of workplace records and information
- Appropriate mathematical procedures for estimation and measurement
- Environmental protection requirements
- Established communication channels and protocols
- Relevant problem identification and resolution techniques

Assessment Conditions

- Assessors must:
 - hold training and assessment competencies as determined by the National Skills Standards Council (NSSC) or its successors
 - have vocational competency in the furnishing industry at least to the level being assessed with broad industry knowledge and experience, usually combined with a relevant industry qualification
 - be familiar with the current skills and knowledge used and have relevant, current experience in the furnishing industry.
- Assessment methods must confirm consistency of performance over time rather than a single assessment event and in a range of workplace relevant contexts.
- Assessment must be by observation of relevant tasks with questioning on underpinning knowledge and, where applicable, multimedia evidence, supervisor's reports, projects and work samples.
- Assessment is to be conducted on single units of competency or in conjunction with other related units of competency. Foundation skills are integral to competent performance in the unit and should not be assessed separately.
- Assessment must occur on the job or in a workplace simulated facility with relevant process, equipment, materials, work instructions and deadlines.
- Access is required to materials, equipment and specifications relevant to designing interior lighting.

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