



Australian Government

UEEEL0036 Design effective and efficient lighting for residential and commercial buildings

Release: 1

UEEEL0036 Design effective and efficient lighting for residential and commercial buildings

Modification History

Release 1. This is the first release of this unit of competency in the UEE Electrotechnology Training Package.

Application

This unit involves the skills and knowledge required to design effective and efficient lighting for residential and commercial buildings.

It includes preparing and developing lighting design for residential and commercial buildings, and obtaining approval of the design.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

UEEEL0063 Provide photometric data for illumination system design

UEEEL0070 Select effective and efficient light sources and luminaries for given locations and designs.

Competency Field

Electrical

Unit Sector

Electrotechnology

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare to design lighting

PERFORMANCE CRITERIA

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

1.1 Work health and safety (WHS)/occupational health and safety (OHS) processes and procedures for a given work area are identified, obtained and applied

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| | 1.2 | Scope, extent and nature of the lighting work requirements are determined from design brief |
| | 1.3 | Safety and regulatory requirements for the lighting design are identified, obtained and applied in accordance with relevant industry standards |
| | 1.4 | Work is planned to meet scheduled timelines in consultation with others involved in the lighting installation or associated work |
| 2 | Develop lighting design | |
| | 2.1 | Lighting performance and equipment design is applied in accordance with relevant industry standards |
| | 2.2 | Alternative lighting design/s is considered based on the requirements outlined in the design brief |
| | 2.3 | Safety, functional and budgetary considerations are incorporated in the lighting design |
| | 2.4 | Lighting design draft is checked in accordance with relevant industry standards and design brief requirements |
| | 2.5 | Lighting design is documented for submission to appropriate person/s for acceptance and approval |
| | 2.6 | Solutions to unplanned events are identified in accordance with workplace procedures |
| 3 | Obtain approval for lighting design | |
| | 3.1 | Lighting design is presented and explained to client representative and/or relevant person/s |
| | 3.2 | Requests for alterations to the design are negotiated with relevant person/s in accordance with workplace procedures |
| | 3.3 | Final lighting design is documented and approval obtained from appropriate person/s in accordance with workplace procedures |
| | 3.4 | Quality of work is monitored in accordance with workplace procedures and relevant industry standards |

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the UEE Electrotechnology Training Package Companion Volume Implementation Guide.

Lighting design must be demonstrated in at least three of the following:

- large residential lighting design
- indoor area shop lighting
- stairway or stairwell lighting
- flood lighting
- amenities lighting
- lighting for specific commercial processes and tasks
- lighting for ambient and aesthetic effect
- display lighting
- security lighting

Unit Mapping Information

This unit replaces and is equivalent to UEENEEG186A Design effective and efficient lighting for residential and commercial buildings.

Links

Companion Volume implementation guides are found in VETNet - -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6>

Assessment Requirements for UEEEL0036 Design effective and efficient lighting for residential and commercial buildings

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions on at least one occasion and include:

- determining the extent and nature of the lighting requirements from a design brief
- identifying and understanding safety and other requirements to which the lighting design shall comply
- planning to meet scheduled timelines
- applying appropriate knowledge of lighting performance compliance and lighting equipment in designing the lighting
- considering alternative arrangements for the lighting design
- documenting and presenting the lighting design
- responding appropriately to requests to alter the design
- documenting and obtaining approval of the lighting design
- dealing appropriately with unplanned events
- applying relevant industry standards
- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, including using risk control measures
- applying sustainable energy practices
- following quality and workplace procedures
- developing lighting design, including:
 - using lighting equipment
- updating work documents.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions and include knowledge of:

- lighting design, including:
 - lighting principles
 - lighting applications

- safety aspects of lighting
- energy efficiency
- integrating various lighting types into one application
- control and energy management
- interpreting and applying manufacturers' technical data
- architectural considerations
- utilising natural lighting
- use of computer programs for lighting design
- safety, functional, maintenance and budgetary factors in the lighting design
- problem-solving techniques
- relevant industry standards
- relevant manufacturer specifications and operating instructions
- relevant quality workplace procedures
- relevant job safety assessments or risk mitigation processes
- relevant sustainable energy practices
- relevant tools, equipment, resources and materials
- relevant WHS/OHS legislated requirements
- relevant workplace documentation
- relevant workplace policies and procedures.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in suitable workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated suitable workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or simulations
- relevant and appropriate materials, tools, facilities, equipment and personal protective equipment (PPE) currently used in industry
- applicable documentation, including workplace procedures, equipment specifications, regulations, relevant industry standards, codes of practice and operation manuals.

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