

Component Specification

Commissioning of Emergency Lighting Systems

NFQ Level 6

6N0860

1. Component Details

Title	Commissioning of Emergency Lighting Systems
Teideal as Gaeilge	Córais Soilsithe i gcás Éigeandála a Choimisiúnú
Award Class	Minor
Code	6N0860
Level	6
Credit Value	5
Purpose	The purpose of this award is to equip the learner with the knowledge, skill and competence to commission and inspect emergency lighting installations which must comply with the requirements of the emergency lighting standard I.S. 3217 and industry best practice.
Learning Outcomes	<p>Learners will be able to:</p> <ol style="list-style-type: none"> 1 Describe the impact of commissioning and periodic inspection on the activities of others in the building to include the effect of testing on normal lighting, the impact if no Central Test Unit (CTU) is installed, the risk of duration testing to building safety and the methods employed to minimise risk 2 Develop an efficient method statement for performing the full commissioning function on an installation to include what to do before visiting a site, before discharge, during discharge, after the discharge period and measuring lux levels

- 3 Interpret a manufacturer's spacing table to evaluate if a given luminaire spacing meets photometric performance
- 4 Diagnose the root cause or possible causes of a range of common installation based system faults to include filament failure on a twin-spot, fitting not on the CTU, battery failure, mixed supplies at a fitting, self-test faults
- 5 Assess if the construction of fittings used in an installation meet the requirements of the current standard for emergency lighting systems
- 6 Initiate a function test on a central addressable system
- 7 Initiate an identification routine on a central addressable system
- 8 Label components on a central addressable system at the programming panel
- 9 Develop a log book template that meets current I.S.3217 requirements
- 10 Commission an emergency lighting installation following a best practice method statement to meet current I.S. 3217 requirements including documenting the results.

Assessment

General Information

Details of FET assessment requirements are set out in [Assessment Guidelines for Providers](#).

All FET assessment is criterion referenced. Successful achievement of the award is based on learners attaining the required standards of knowledge, skill or competence.

The techniques set out below are considered the optimum approach to assessment for this component. In exceptional circumstances providers may identify alternative assessment techniques through the provider's application for programme validation which are **reliable** and **valid** but which are more appropriate to their context.

Assessment of a number of components may be integrated across programmes for delivery, provided that the learning outcomes of each minor award are assessed.

Group or team work may form part of the assessment, provided each learner's achievement is separately assessed.

All providers are required to submit an assessment plan as part of their application for programme validation. Assessment Plans will include information relating to scheduling and integration of assessment. See current FET validation guidelines at www.qqi.ie.

Assessment Techniques

In order to demonstrate that they have reached the standards of knowledge, skill and competence identified in all the learning outcomes, learners are required to complete the assessment(s) below.

The assessor is responsible for devising assessment instruments (e.g. project and assignment briefs, examination papers), assessment criteria and mark sheets, consistent with the techniques identified below and FETAC's assessment requirements.

Programme validation will require providers to map each learning outcome to its associated assessment technique. See current FET validation guidelines at www.qqi.ie.

All learning outcomes **must** be assessed and achieved

Assignment	50%
Skills Demonstration	50%

Description

Assignment

An assignment is an exercise carried out in response to a brief with specific guidelines as to what should be included. An assignment is usually of short duration and may be carried out over a specified period of time.

The assessor will devise an assignment based on learning outcomes, 1,2,3,5,9 & 10.

A typical assignment should involve a learner receiving:

- design drawings featuring conforming and non-conforming siting and spacing of emergency luminaires,
- a set of product specification sheets and fire officer instructions in relation to escape routes.

The learner must commission the system off the drawing by:

- detailing a method statement for how to carry out the work

Marks 10

- listing deviations or confirm compliance to I.S.3217:2008 to include: product conformance, means of simulating failure of supply, fittings at essential sites, signage pictogram , fitting does not illuminate on test

Marks 30

- drawing up a logbook and compliance certificate with I.S. 3217 deviations listed.

Marks 10

Total 50

Weighting Factor:

The learner must achieve 35 marks to pass this assignment.

This assessment must be passed in order to achieve this award.

Skills Demonstration

A skills demonstration is used to assess a wide range of practical based learning outcomes including practical skills and knowledge. A skills demonstration will require the learner to complete a task or series of tasks that demonstrate a range of skills.

This is a competency based assessment.

The assessor will devise a skills demonstration based on learning outcomes 4, 6,7,8. The learner must complete 4 tasks based on the learning outcomes. All tasks are weighted and must be completed satisfactorily in order to pass the skills demonstration. The skills demonstration will be terminated if learner actions result in potentially unsafe practice.

- Diagnose the root cause or possible cause of a range of common installation based system faults to include: filament failure on a twin-spot, fitting not on CTU, battery failure, mixed supplies at fitting, self-test faults.

Marks 20

- Initiate a function test on a central addressable system.

Marks 10

- Initiate an identification routine on a central addressable system and record the address of each connected fitting.

Marks 10

- Label components on a central addressable system.

Marks 10

Total 50

Weighting Factor

All tasks in the Skills Demonstration must be completed to satisfactory standard.

0 marks for not completing the task to a satisfactory standard

The learner must achieve 35 marks to pass this assignment.

Recognition of Prior Learning (RPL)

Learners may be assessed on the basis of their prior knowledge and experience. Providers must be specifically quality assured to assess learners by this means. To do so they must complete B10, see Provider's Quality Assurance Guidelines and be included on the Register of RPL approved providers. See RPL Guidelines at www.fetac.ie for further information and registration details.

Grading

Pass	50% - 64%
Merit	65% - 79%
Distinction	80% - 100%

Specific Validation Requirements

The provider must have the following in place to offer this award: Emergency lighting self-contained demonstration equipment to include the following fittings: maintained, non-maintained, sustained, Exit box, twin-spot, LED, self-test fittings with a Central Test Unit and with the capability to simulate faults to include lamp failure, charger failure and battery failure.

1. Emergency lighting automatic addressable test system demonstration panel with reporting interface with at least five connected ballasts and the ability to simulate faults to include lamp failure, battery failure, charger failure and communications failure.
2. Emergency Lighting central powered panel to demonstrate central powered system configuration
3. An actual completed functioning emergency lighting installation with at least 6 lighting circuits and at least one installed Central Test Unit.

Supporting Documentation

1. I.S. 3217:2008, Manufacturers photometric data and product specification sheets

Access

To access programmes leading to this award the learner should have reached the standards of knowledge, skill and competence associated with the preceding level of the National Framework of

Qualifications. This may have been achieved through a formal qualification or through relevant life and work experience.

Transfer

Successful completion of this component award enables the learner to transfer to programmes leading to other certificates where this component is a mandatory or an elective requirement.

2. FET Award Standards

QQI award standards are determined within the National Framework of Qualifications (NFQ), <http://www.nfq-qqi.com>. QQI determines standards for the education and training awards that it makes itself and that are made by providers to whom it has delegated authority to make an award. Providers offering programmes leading to QQI awards **must** have their programme(s) validated in accordance with current validation policy (see www.qqi.ie).

Award standards are designed to be consistent with the NFQ's award classes i.e. major, special purpose, supplemental and minor awards. They are expressed in terms of **learning outcomes** i.e. concise statements of what the learner is expected to know or be able to do in order to achieve a particular award. Learning outcomes for FET awards are contained within the associated specifications:

AWARD CLASS	STANDARDS	AWARDS
Major Award	Certificate Specification	Certificate (Levels 1 to 5) Advanced Certificate (Level 6)
Supplemental Award	Supplemental Specification	Supplemental Certificate (Level 3 to 6)
Special Purpose	Specific Purpose Specification	Specific Purpose Certificate (Levels 3 to 6)
Minor Award	Component Specification	Component Certificate (Levels 1 to 6)

Award standards are thresholds, they describe standards of knowledge, skill or competence to be acquired, and where appropriate, demonstrated, by a learner before an award may be made.

Award standards will be reviewed from time to time as necessary. Minor changes may be made by the QQI executive outside the review cycle where necessary. Changes to standards are published on QQI's website. Providers with validated programmes and providers with delegated authority to make awards are responsible for monitoring relevant standards and making necessary responses to changes.

3. FET Credit

Every FET certificate and component specification includes an FET credit value (Table 1). FET credit is quantified in multiples of 5 FET credits (up to 50 hours of learner effort). Learner effort is based on the time taken by typical learners at the level of the award to achieve the learning outcomes for the award. It includes all learning time involved including: guided learning hours, self-directed learning and assessment.

Table 1: FET Credit Values

NFQ Level	Major Awards Credit Values	Default Credit Values Minor Awards	Other Permitted Minor Award Credit Values	Special Purpose and Supplemental Award Credit Value Ranges
1	20	5	10	
2	30	5	10	
3	60	10	5,20	>5 and <60
4	90	10	5,15,20	>5 and <90
5	120	15	5,10,30	>5 and <120
6	120	15	5,10,30	>5 and <120

Guide to Level

Learning outcomes at this level include a comprehensive range of skills which may be vocationally-specific and/or of a general supervisory nature, and require detailed theoretical understanding. The outcomes also provide for a particular focus on learning skills. The outcomes relate to working in a generally autonomous way to assume design and/or management and/or administrative responsibilities. Occupations at this level would include higher craft, junior technician and supervisor.

Strand	Sub-strand	Nature of learning
Knowledge	Breadth	Specialised knowledge of a broad area
	Kind	Some theoretical concepts and abstract thinking, with significant underpinning theory
Know How & Skill	Range	Demonstrate a comprehensive range of specialised skills and tools
	Selectivity	Formulate responses to well defined abstract problems
Competence	Context	Act in a range of varied and specific contexts involving creative and non-routine activities; transfer and apply theoretical concepts and/or technical or creative skills to a range of contexts
	Role	Exercise substantial personal autonomy and often take responsibility for the work of others and/or for the allocation of resources; form and function within, multiple and complex heterogeneous groups.
	Learning to Learn	Learn to evaluate own learning and identify needs within a structured learning environment; assist others in identifying learning needs
	Insight	Express an internalised, personal world view, reflecting engagement with others.

Extract from 'Determinations for the Outline National Framework of Qualifications': NQAI