



QQI

Quality and Qualifications Ireland
Dearbhú Cáilíochta agus Cáilíochtaí Éireann

Component Specification NFQ Level TBC

Hazardous Materials .

1. Component Details

Title	Hazardous Materials
Teideal as Gaeilge	TBC
Award Type	Minor
Code	TBC
Level	6
Credit Value	5 Credits
Purpose	The purpose of this award is to equip the learner with the relevant knowledge, skill and competence to effectively and safely operate at a hazardous materials incident, as a member of a fire service team, cognisant of one's own safety, the safety of their team and the public.
Learning Outcomes	Learners will be able to: <ol style="list-style-type: none">1 Explain the principles and procedures for working at hazardous material incidents.2 Appraise the physical properties of materials and interpret their relevance at hazardous material incidents.3 Explain the methods and safety procedures relating to operating at a range of incidents involving hazardous materials including a transportation incident.4 Identify a hazardous material and retrieve relevant information from available sources.

- 5 Don and doff chemical protective clothing.
- 6 Wear chemical protective clothing in accordance with approved procedures in managing a hazardous materials incident.
- 7 Establish a safe working environment, including decontamination area and appropriate cordons.
- 8 Apply appropriate decontamination techniques and procedures.
- 9 Use initiative in utilising the appropriate techniques and tactics in the risk area, while wearing chemical protective clothing.
- 10 Implement best safety and professional practice in responding to a range of operational incidents.
- 11 Develop an understanding of the need to review and reflect on operational practice and use this to inform future performance and professional development.

Assessment

General Information

All assessment should be planned in accordance with the programme assessment strategy developed as part of the programme submission for validation. See **Policies and Criteria for Validation of Programmes**. Assessment should be undertaken consistently and reflect current assessment guidelines. See www.qqi.ie.

All FET assessment is criterion referenced. Successful achievement of the award is based on learners attaining the required standards of knowledge, skill or competence consistent with the **minimum intended programme learning outcomes**.

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 QQI's assessment requirements.

Programme validation will require providers to map each learning outcome to its associated assessment technique. All learning outcomes **must** be assessed and achieved in accordance with the **minimum intended module learning outcomes** set out in the validated programme.

Examination - Theory	30%
Skills Demonstration	70%

Description

Examination - Theory

An examination provides a means of assessing a learner's ability to recall and apply knowledge, skills and understanding within a set period of time and under clearly specified conditions.

A theory-based examination assesses the ability to recall, apply and understand specific theory and knowledge.

The assessor will devise a theory examination covering learning outcomes 1-4 inclusive.

This assessment must be passed in order to achieve the 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.

The assessor will devise one or more skills demonstrations covering learning outcomes 4-11 inclusive.

Assessing whether a learner does or does not achieve competence is a challenge for training in hazardous materials. A learner who

does not achieve competence in a task is potentially a danger to themselves, their colleagues and those members of the public they are entrusted to serve. A single serious event such as a panic reaction in the risk area, when performing a task during a skills demonstration assessment, must be carefully considered in light of the potential life safety implications.

This assessment is competency based, and is on a pass/fail basis. The candidate will be deemed to have failed if they have not achieved all available marks in these safety critical tasks. Assessment will be terminated in the event of a failure in any of the tasks set.

The learner is required to complete a skill demonstration in each of the areas listed:

- Scene safety arrangements – 15%
- Information retrieval – 15%
- Don and doff chemical protective clothing – 15%
- Decontamination arrangements – 10%
- Manage the effects of the incident – 15%

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

Recognition of Prior Learning (RPL)

To support the development and implementation of RPL with regard to access, granting credit/exemptions and achievement of awards/parts of awards, providers should refer to **QQI's Statutory Guidelines for Quality Assurance**, the **Policies and Criteria for Validation of Programmes** and the **Principles and Operational Guidelines for the Recognition of Prior Learning in Further and Higher Education and Training** available at www.qqi.ie

Grading

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

Specific Validation Requirements

The provider should have

1. Access to a training facility in compliance with current health and safety regulations
2. Access to fire service facilities of sufficient scale to ensure that all learners have access to the vehicles and equipment required to practice and achieve learning outcomes to include:
 - Suitably sized training rooms to accommodate classroom presentations
 - Suitably sized training space to provide briefs and debriefs in operational gear and storage of breathing apparatus (BA) sets
 - Suitably sized welfare, changing and drying facilities for operational gear
 - Suitably sized training areas to accommodate the various training exercises – this must include the ability to practice/demonstrate all the relevant layouts as per the

Standard Operational Guidance, including decontamination requirements

- A standard Class B pumping appliance with all associated equipment, including hose, ladders, portable pumps and main pumps
 - All associated hazardous material equipment, including self-contained BA sets, BA cylinders (200 or 300 bar), suitable BA cylinder filling facilities, BA control boards, entry control items, gas tight suits, associated decontamination equipment and connections
3. The maximum ratio should be 1 trainer to 6 learners.
 4. Stated policies and procedures by the provider to deal with potential risks that may be encountered.

Supporting Documentation

1. Current relevant legislation
2. Standard Operational Guidance Documentation – National Directorate for Fire and Emergency Management
3. Chemdata
4. Dangerous Goods Emergency Action Code List - National Chemical Emergency Centre UK
5. Emergency Response Guidebook - Guidebook for First Responders During the Initial Phase of a Dangerous Goods/ Hazardous Materials Incident. (U.S. Department of Transportation)
6. Health and Safety Authority statutory regulations, codes of practice and guidelines
7. Manufacturers' vehicle and equipment operating instructions

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.

In addition, learners will be required to successfully complete a physical test and medical examination and must have achieved the Firefighting Skills and the Using Breathing Apparatus awards.

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.