



QQI

Quality and Qualifications Ireland
Dearbhú Cáilíochta agus Cáilíochtaí Éireann

Special Purpose Specification NFQ Level 6

Commercial Scuba Diving Operations

1. Certificate Details

Title	Commercial Scuba Diving Operations
Teideal as Gaeilge	TBC
Award Type	Special Purpose
Code	TBC
Level	6
Credit Value	20
Purpose	The purpose of this award is to enable the learner to acquire the relevant knowledge, skills and competence to effectively and safely carry out commercial scuba diving activities and tasks in a wide variety of contexts working as a member of a team, in accordance with current regulations and legislation.
Statements of Knowledge, Skill and Competence	Learners will be able to:

Knowledge

<i>Breadth</i>	Demonstrate comprehensive knowledge of commercial scuba diving theory, principles and practices.
<i>Kind</i>	Demonstrate knowledge and understanding of relevant theoretical concepts and abstract thinking with a firm grasp of the significant underpinning theory, techniques and procedures relevant to commercial scuba diving.

Know How & Skill

<i>Range</i>	Utilise a comprehensive range of specialised skills and tools in a variety of underwater environments and conditions.
<i>Selectivity</i>	Apply theoretical concepts and technical skills to solve well-defined abstract problems in varied commercial scuba diving settings.

Competence

<i>Context</i>	Operate safely and effectively in a range of challenging underwater environments in accordance with current regulations and legislation, consistent with operational best practice and apply appropriate control measures to manage related risks
<i>Role</i>	Contribute effectively, both individually as a diver and as a dive team member, to underwater operations in a range of challenging environments. Have regard for operational protocols, own safety and dive team safety.
<i>Learning to Learn</i>	Learn to evaluate own learning and identify needs within a structured learning environment; assist others in identifying learning needs.
<i>Insight</i>	Reflect on operational experiences to inform future performance and professional development.

The learning outcomes associated with this award are outlined in the associated Component Specifications.

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 must have:

- occupational first aid training recognised by the Health and Safety Authority,
- A National Powerboat Certificate (ISA or equivalent)
- A valid certificate of medical fitness to dive by an HSA approved medical practitioner (or equivalent certificate)
- meet any additional access requirements as outlined in the component specification for this award.

Transfer	Achievement of this award will enable the learner to transfer to other appropriate programmes leading to awards at the same level of the National Framework of Qualifications.
Progression	Achievement of this award will enable the learner to progress to other appropriate programmes leading to awards at the next or higher levels of the National Framework of Qualifications.
Progression Awards	Learners who successfully complete this award may progress to Level 6 Special Purpose Surface Supplied Diving Operations.
Grading	<p>Pass</p> <p>Merit</p> <p>Distinction</p> <p>The grade achieved will be determined by the grades achieved on the components</p>

2. Certificate Requirements

The total credit value required for this certificate is 20 This will be achieved by completing:

Award Code	Title	Level	Credit Value
All of the following component(s)			
TBC	Commercial Scuba Diving	6	20

3. Supporting Documentation

1. Professional Diver's Handbook – (John Bevan ISBN9780950824260)
2. Relevant Occupational Diving Manual –
3. US Navy Dive Tables – (Best Publishing & other sources)
4. Enriched Air Tables – (Best Publishing & other sources)
5. Current national legislation, regulations and code of practice relevant to commercial diving
6. The International Diving Schools Association Diving Standards (<http://www.idsaworldwide.org/>)

4. Specific Validation Requirements

The provider must have all of the following in place to offer this award:

1. Appropriate insurance to cover all risks
2. All boats used must be licence accordingly and operated by suitably qualified persons.
3. Commercial scuba diving equipment including underwater communication systems –
4. Suitable diving platform for work in open water environment
5. Access to suitable sheltered body of water with depths up to 30 metres
6. Compression chamber and qualified personnel on site of diving operations
7. First aid equipment and therapeutic oxygen delivery systems onsite
8. Suitable range of tools and work pieces for use underwater –
9. High and low pressure breathing air compressors (air quality to meet EN12021:2014)
10. A space suitably equipped for the repair and maintenance of commercial diving equipment.
11. Appropriately qualified commercial/occupational and certified diving instructors with adequate experience in teaching and commercial diving operations.
12. This component can only be validated within a programme for the overall Special Purpose award, i.e. validation on a component basis is not available.

5. 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 QQI 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.

7. 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

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 &	Range	Demonstrate comprehensive range of specialised skills and tools.
Skill	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 allocation of resources; form, and function within, multiple complex and 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 worldview, reflecting engagement with others.

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



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Quality and Qualifications Ireland
Dearbhú Cáilíochta agus Cáilíochtaí Éireann

Component Specification NFQ Level 6

Commercial Scuba Diving

1. Component Details

Title	Commercial Scuba Diving
Teideal as Gaeilge	TBC
Award Type	Minor
Code	Click here to enter text.
Level	6
Credit Value	20
Purpose	The purpose of this award is equip the learner with the knowledge, skill and competence to dive safely in a range of diving environments using open circuit self-contained breathing equipment to a depth of 30 metres cognisant of one's own safety and the safety of diving team members. The learner will be able to use appropriate hand tools to carry out work related tasks including visual inspection, rigging, underwater search and recovery, survey and lift bag use.
Learning Outcomes	Learners will be able to:
Knowledge	Unit 1: Preparatory Commercial Diving
	1 Explore the origins and development of the major items of diving equipment and significant diving techniques
	2 Interpret the properties and behaviour of liquids, gases, light and sound and the principles of buoyancy as they

affect the diver and diving operations

3 Outline the structure and function of the human body to include the effect of pressure and its impact on diving practice and associated illnesses

4 Evaluate the causes, signs and symptoms of typical diving related illnesses

5 Analyse the duties of employers and employees as specified in current health and safety legislation and related diving regulations and codes of practice

6 Explore the role of communication and training in the promotion and provision of health and safety in occupational diving environments to include hand and lifeline signals, hardwire and through water communications

7 Explain the purpose, use, safety considerations and handling of diving plant and equipment to include personal equipment, compressors, high pressure cylinders and gasses under pressure and lift bags

8 Assess the use, limitations, layout and function of a typical compression chamber

9 Explain the need for, and function of, planned maintenance schedules, including pre and post dive equipment checks

10 Explain the function of simple underwater work tasks to include use of hand tools, rigging and typical knots

11 Outline the principles, limitations and application of different seabed searches to include line, sector and visual

12 Describe the advantages and disadvantages of typical underwater inspection techniques

13 Evaluate typical hazards which may arise in the dive environment, identifying the precautions required to prevent or minimize them to include hydrostatic pressure differential, lifting operations, lifeline snagging, confined spaces, vessels, nets, cages and subsea electrical units

14 Utilise standard, nitrox and surface air decompression tables to generate dive profiles

Unit 2 Commercial Scuba Diving

Skill	1	Generate an underwater survey report following established writing and illustration principles
	2	Conduct dives in nil visibility, moderate currents and varying bottom conditions
	3	Maintain diver log books
	4	Generate a diving project plan to include method statement, risk assessment and emergency plan
	5	Complete a chamber dive to at least 40m, performing a comprehension test at depth and acting as a chamber attendant.
	6	Utilise personal equipment, wet and dry suits, full face and half masks, reserve systems, delayed and surface marker buoys
	7	Perform the procedures necessary to deal with an emergency, both as a diver, a standby diver (in water and surface) and as a member of a dive team, including simulated rescue of an unconscious diver from underwater, administration of first aid and emergency oxygen and communication with medical personnel
	8	Communicate effectively utilising hand signals, lifeline signals, hard wire and through water communications during SCUBA operations
	9	Dive safely and competently on air and nitrox to include the following minimum times under water and completing appropriate in-water decompression stops: <ul style="list-style-type: none">- Depth 0-25m; Total bottom time (TBT) 500 minutes; Minimum of 15 dives and minimum bottom time (MBT) per dive of 20 minutes- Depth 26-30m; TBT 150 minutes; minimum of 5 dives and MBT 20 minutes
Competence	10	Perform simple work tasks safely and efficiently: Tie appropriate knots underwater, find an object using two different types of search, carry out an underwater inspection, measurement, survey task, use a lifting bag to

move an object and use a range of hand tools.

- 11 Carry out user maintenance of diving suits, personal equipment and underwater communication systems, on low and high pressure compressors, and be able to charge all types of diving cylinder and analyse air purity
- 12 Demonstrate competence to act as a member of a surface dive team by dressing and undressing a diver, tending a diver using life-line and communication equipment and carrying out pre and post dive equipment checks and maintenance.

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.

Skill Demonstration	50%
Examination	40%
Collection of Work	10%

Description

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 assessment must be passed in order to achieve the award

Collection Work

A self-reported record by an individual in which he/she describes learning experiences, activities, responses, skill acquired etc.

This assessment must be passed in order to achieve the award

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.

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

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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

A valid certificate of medical fitness to dive by an HSA approved medical practitioner (or equivalent certificate)

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.

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Competence	Context	Utilise diagnostic and creative skills in a range of functions in a wide variety 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 take responsibility for own learning within a managed environment.

Insight

Express an internalised, personal world view, reflecting engagement with others.

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

Draft for consultation