Dearbhú Cáilíochta agus Cáilíochtaí Éireann
Quality and Qualifications Ireland

Certificate Specification NFQ Level 4

Science Skills 4M2911

1. Certificate Details

Title	Science Skills
Teideal as Gaeilge	Scileanna Eolaíochta
Award Class	Major
Code	4M2911
Level	4
Credit Value	90
Purpose	The purpose of this award is to enable the learner to develop the relevant knowledge, skill and competence in a broad range of scientific skills which enable employment, under direct supervision, in a variety of science sectors, or progression to further education or training.
Statements of Knowledge, Skill and Competence	Learners will be able to:
Knowledge	
Breadth	Demonstrate a broad range of knowledge related to scientific concepts.
Kind	Demonstrate knowledge of some theoretical concepts and abstract thinking relevant to science including a concrete understanding of laboratory skills, a core science, mathematics, communications and popular science.
Know How & Skill	
Range	Demonstrate a moderate range of skills and tools used in a science context.
Selectivity	Select appropriate procedures from known solutions to solve a variety of predictable science problems.
Competence	
Context	Apply laboratory skills, mathematical, and personal and interpersonal skills, following prescribed health and safety

		procedures, in a range of familiar and unfamiliar science contexts.
	Role	Demonstrate good laboratory, mathematical, and teamworking skills, and quality awareness in a supervised environment.
	Learning to Learn	Take responsibility for personal learning, time management, study skills, research skills, report writing, teamworking, health and safety, and quality of work in a structured context.
	Insight	Reflect on personal performance and learning to inform self understanding when working in a science environment.
		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.
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 a range of different awards.
Grading		Pass Merit Distinction The grade achieved will be determined by the grades achieved on the components

2. Certificate Requirements

The total credit value required for this certificate is 90. This will be achieved by completing:

Award Code	Title	Level	Credit Value
All of the following component(s)			
4N0689	Communications	4	15
4N2825	Laboratory Techniques	4	10
4N1987	Mathematics	4	10
A minimum credit value of 10 from the following components			

4N2826	Physics	4	10
4N2827	Chemistry	4	10
4N2828	Biology	4	10
A minimum credit value of 10 from the following components			
4N2829	Everyday Science	4	10
4N0682	Horticultural Science	4	10
4N1186	Plant Identification, Care and Maintenance	4	10
4N2830	Food and Nutrition	4	10
4N2910	Human Biology	4	10
A minimum credit value of 15 from the following components			
4N1168	Work Experience	4	15
4N1170	Work Practice	4	15

The remaining credit value of 20 can be obtained by using vocationally relevant component(s) from level 4. A maximum of 10 credits may be used from either level 3 or level 5.

3. Supporting Documentation

None

4. Specific Validation Requirements

There are no specific validation requirements

5. Europass Certificate Supplement

The Europass Certificate Supplement for this award can be accessed at: **www.qqi.ie**.

6. 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
6	120	15	5,10,30	>5 and <120

Guide to Level

Independence is the hallmark of this level. Learning outcomes at this level correspond to a growing sense of responsibility for participating in public life and shaping one's own life. The outcomes at this level would be associated with first-time entry to many occupational sectors.

Strand	**Sub-strand**	**Nature of learning**
Knowledge	Breadth	Broad range of knowledge
	Kind	Mainly concrete in reference and with some elements of abstraction or theory
Know How & Skill	Range	Demonstrate a moderate range of practical and cognitive skills and tools

	Selectivity	Select from a range of procedures and apply known solutions to a variety of predictable problems
Competence	Context	Act in familiar and unfamiliar contexts
	Role	Act with considerable amount of responsibility and autonomy
	Learning to Learn	Learn to take responsibility for own learning within a supervised environment
	Insight	Assume partial responsibility for consistency of self-understanding and behaviour

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