



QQI

Quality and Qualifications Ireland
Dearbhú Cáilíochta agus Cáilíochtaí Éireann

Certificate Specification NFQ Level 4

Engineering Skills 4M2895

1. Certificate Details

Title	Engineering Skills
Teideal as Gaeilge	Scileanna Innealtóireachta
Award Type	Major
Code	4M2895
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 engineering skills which enable employment, under direct supervision, in a variety of engineering sectors, or progression to further education or training.
Statements of Knowledge, Skill and Competence	Learners will be able to:
Knowledge	
<i>Breadth</i>	Demonstrate a broad range of knowledge related to engineering concepts.
<i>Kind</i>	Demonstrate knowledge of some theoretical concepts and abstract thinking relevant to engineering including a concrete understanding of precision, mathematics, engineering sectors and communications.
Know How & Skill	
<i>Range</i>	Demonstrate a moderate range of skills and tools used in an engineering context.

Selectivity Select appropriate procedures from known solutions to solve a variety of predictable engineering problems.

Competence

Context Apply precision skills, mathematical and communications skills, following prescribed health and safety procedures, in a range of familiar and unfamiliar engineering contexts.

Role Demonstrate good precision, 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 an engineering 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
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All of the following component(s)

4N0689	Communications	4	15
4N1987	Mathematics	4	10

A minimum credit value of 30 from the following components

4N1289	Technical Drawing	4	10
4N1290	Electronics	4	10
4N1291	Engineering Workshop Processes	4	10
4N2886	Milling	4	10
4N2890	Turning	4	10
4N2885	Precision Measurement	4	5
4N2887	Plated Through Hole Technology Inspection	4	10
4N2888	Surface Mounted Technology Inspection	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 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
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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	Some theoretical concepts and abstract thinking, with significant depth in some areas

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

