

Certificate Specification NFQ Level 5

Engineering Technology 5M2061

1. Certificate Details

Title	Engineering Technology
Teideal as Gaeilge	Teicneolaíocht Innealtóireachta
Award Class	Major
Code	5M2061
Level	5
Credit Value	120
Purpose	The purpose of this award is to enable the learner to acquire the knowledge, skill and competence to safely utilise a range of techniques and processes to solve engineering related challenges and or to progress to further and or higher 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 preparation, construction and application of engineering components, relevant to current technology.
<i>Range</i>	Demonstrate knowledge of theoretical concepts related to engineering technology in the context of design, construction, installation and maintenance with significant depth in certain areas.
Know How & Skill	
<i>Range</i>	Demonstrate a broad range of techniques and site procedures currently utilised in the engineering sector to include safe use of hand tools, power tools and test equipment.
<i>Selectivity</i>	Exercise judgment in selecting appropriate materials and production methodologies in relation to stakeholders needs.
Competence	

<i>Context</i>	Apply knowledge and skills within a workshop and site environment, while engaging with a range of varied contexts relevant to engineering.
<i>Role</i>	Exercise some initiatives in an engineering environment while recognising the importance of teamwork and cooperation with all stakeholders.
<i>Learning to Learn</i>	Demonstrate an ability to direct and evaluate personal learning initiatives.
<i>Insight</i>	Reflect on personal values and display an insight into the role of engineering in business and in the context of the broader community.

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	<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 120. This will be achieved by completing:

Award Code	Title	Level	Credit Value
All of the following component(s)			
5N1608	Engineering Workshop Processes	5	15
A minimum credit value of 15 from the following components			
5N0690	Communications	5	15

5N1390	Personal Effectiveness	5	15
5N1367	Teamworking	5	15
5N0972	Customer Service	5	15

A minimum credit value of 15 from the following components

5N1356	Work Experience	5	15
5N2985	Personal and Professional Development	5	15
5N1433	Work Practice	5	15

A minimum credit value of 45 from the following components

5N1604	Computer Aided Draughting (2D)	5	15
5N0556	Maths for STEM	5	30
5N1610	Business Administration Skills	5	15
5N1570	Building Construction	5	30
5N1437	Control Systems	5	15
5N1606	Electronics	5	15
5N1637	Materials Science	5	15
5N1638	Mechanics	5	15
5N1460	Physics	5	15
5N1607	Engineering Drawing	5	15
5N1833	Mathematics	5	15
5N1794	Safety and Health at Work	5	15
5N2136	Engineering Workshop Theory	5	15

The remaining credit value of 30 can be obtained by using vocationally relevant component(s) from level 5. A maximum of 15 credits may be used from either level 4 or level 6.

3. Supporting Documentation

None

4. Specific Validation Requirements

There are no specific validation requirements for this award

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

Learning outcomes at this level include a broad range of skills that require some theoretical understanding. The outcomes may relate to engaging in a specific activity, with the capacity to use the instruments and techniques relating to an occupation. They are associated with work being undertaken independently, subject to general direction.

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 broad range of specialised skills and tools
	Selectivity	Evaluate and use information to plan and develop investigative strategies and to determine solutions to varied unfamiliar problems
Competence	Context	Act in a range of varied and specific contexts, taking responsibility for the nature and quality of outputs; identify and apply skill and knowledge to a wide variety of contexts
	Role	Exercise some initiative and independence in carrying out defined activities; join and function within multiple, complex and heterogeneous groups
	Learning to Learn	Learn to take responsibility for own learning within a managed environment
	Insight	Assume full responsibility for consistency of self- understanding and behaviour

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