

Engineering Technician

Eng Tech MIEI – Engineers Ireland

**Regulations for the registered professional
title of Engineering Technician**

Foreword

Engineers Ireland is the professional body for engineers and engineering in Ireland. With more than 28,000 members across the island of Ireland and overseas, our responsibilities are to:

- Promote knowledge of engineering
- Establish and maintain standards of professional engineering and engineering education
- Provide opportunities for continuing professional development (CPD) for engineers and technicians
- Maintain standards of professional ethics and conduct
- Ensure that registered professional titles are granted to qualified applicants
- Act as the authoritative voice of the engineering profession in Ireland

Through the Institution of Civil Engineers of Ireland (Charter Amendment) Act 1969, Engineers Ireland is empowered to set down “the conditions subject to which students, engineering technicians or other persons may be associated with the Institution”. The registered professional title (henceforth ‘title’) of Engineering Technician is confined to those who have satisfied the Council of Engineers Ireland of their competence and experience.

Achieving the Engineering Technician title is a public statement of your professional competence. It is a seal of approval by your peers that you have developed your ability beyond that achieved in your academic formation to that of a professional practitioner. It is also a mark of your commitment to the continuing development of your professional expertise and ethical practice.

The Engineering Technician title is internationally recognised through agreements entered into by Engineers Ireland, thereby promoting international mobility. The educational standard for the Engineering Technician title is set out in Engineers Ireland’s Accreditation Criteria.

This document presents the regulations for the Engineering Technician title, including regulations for engineering education, engineering technician experience, the application, assessment and professional interview. The main changes to the previous (2005) regulations relate to the professional competence statements, process alignment with Engineers Ireland’s other professional titles and the introduction of the Technician (Open) grade for those without an accredited Higher Certificate.

Guidelines on applying for the registered professional title of Engineering Technician can be found on www.engineersireland.ie.

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1. The Engineering Technician

1.1 The Engineering Technician is competent to apply in a responsible manner proven techniques which are commonly understood by those who are expert in a branch of engineering, or those techniques specially prescribed by professional engineers. An Engineering Technician works under guidance within their allocated responsibility.

As an Engineering Technician you will:

- Use knowledge and understanding to apply technical and practical skills
- Contribute to the design, development, manufacture, commissioning, operation and maintenance of products, equipment, processes and services
- Accept and exercise appropriate technical, sustainable and commercial responsibility
- Use effective communication and interpersonal skills
- Make a personal commitment to live by the appropriate code of professional conduct, recognising obligations to society, the profession and the environment

1.2 If you are successful, you will be entitled to use the Engineering Technician title and the designatory letters Eng Tech MIEI after your name

1.3 There are two phases to becoming an Engineering Technician: engineering education and engineering technician experience. The requirements of these two phases are outlined in the following sections

2. Engineering Education

2.1 To become an Engineering Technician, you must acquire an appropriate understanding of the engineering principles associated with your engineering discipline. As specified in the Engineers Ireland Accreditation Criteria, the education standard for the Engineering Technician title is an accredited Higher Certificate. Applicants may also hold an equivalent qualification or educational standard as outlined below.

2.2 Standard Route

To apply for the Engineering Technician title through the Standard Route, you must hold one of the following:

- Higher Certificate (Level 6 on the National Framework for Qualifications) accredited by Engineers Ireland
- International qualification accredited under the Dublin Accord
- An EU engineering qualification substantially equivalent to an Engineers Ireland accredited Higher Certificate (on the basis of EU Directives on recognition of professional qualifications)

Refer to Section 4 of these regulations for applying through the Standard Route.

2.3 Experiential Learning Route

To apply for the Engineering Technician title through the Experiential Learning Route, you must be a Technician Member of Engineers Ireland. This route requires demonstrating the substantial equivalence of education and experience to the learning achieved in a Higher Certificate accredited by Engineers Ireland. Applicants must hold adequate experience for the achievement of this learning and the professional competences. Refer to Section 5 of these regulations for applying through the Experiential Learning Route.

3. Engineering Technician Experience and CPD

3.1 To become an Engineering Technician, you must develop competences to apply what you learned in your engineering education to engineering technician practice.

The competences of an Engineering Technician are:

1. Engineering knowledge and understanding:

Use knowledge and understanding to apply technical and practical skills. Engineering Technicians **must** demonstrate how they:

- 1.1 Review and select techniques, procedures and methods to undertake tasks
- 1.2 Apply appropriate scientific and engineering principles
- 1.3 Contribute to the achievement of technological tasks
- 1.4 Apply emerging technologies and innovative approaches as appropriate to their tasks

2. Development and implementation of engineering solutions:

Contribute to the design, development, manufacture, commissioning, operation and maintenance of products, equipment, processes and services. Engineering Technicians **must** demonstrate how they:

- 2.1 Identify well-defined problems
- 2.2 Apply appropriate methods to identify causes and achieve satisfactory solutions
- 2.3 Identify, organise and use resources effectively with due regard to cost, safety, quality and sustainability
- 2.4 Identify and take action in situations where unexpected conditions or circumstances are encountered

3. Professional responsibility and leadership:

Accept and exercise technical, sustainable and commercial responsibility. Engineering Technicians **must** demonstrate how they:

- 3.1 Work reliably and effectively without close supervision, to the appropriate code of conduct
- 3.2 Accept responsibility for work of self and others

3.3 Keep abreast of developments within the specific field of engineering

3.4 Accept, allocate and supervise technical and other tasks

4. Communication skills: Use effective communication and interpersonal skills. Engineering Technicians **must** demonstrate how they:

- 4.1 Communicate technical information in a clear, concise and effective manner
- 4.2 Work reliably and effectively without close supervision
- 4.3 Function as an effective and inclusive member of a team
- 4.4 Accept, allocate and supervise technological tasks and related issues

5. Ethical practice: Make a personal commitment to live by the appropriate code of professional conduct, recognising obligations to society, the profession and the environment. Engineering Technicians **must** demonstrate how they:

- 5.1 Comply with the Code of Ethics of Engineers Ireland and discharge their responsibilities in an ethical manner
- 5.2 Understand and apply safe systems of work
- 5.3 Undertake their engineering work in an environmentally conscious manner to achieve sustainable outcomes
- 5.4 Carry out and record CPD necessary to maintain and enhance competence in their own area of practice

3.2 The development of these competences requires relevant experience of engineering technician practice after the achievement of the required qualification. This takes a minimum of three years and involves relevant engineering experience and continuing professional development (CPD). The proportion of your time spent in professional practice as opposed to training will obviously increase as you develop engineering competences.

3.3 Other accepted engineering technician experience may include undertaking a professional engineering apprenticeship (accepted as a maximum of one year of

engineering experience when approved in advance by Board of Examiners)

- 3.4. CPD is the planned acquisition of knowledge, experience and skills, and the development of the personal qualities necessary for the execution of professional and technical duties throughout an engineer's professional life. As per the Engineers Ireland CPD policy, all members are required to undertake and record a minimum of 35 hours of CPD per annum. Applicants must demonstrate their CPD for each of the two years prior to the submission of their application.

4. Standard Route

- 4.1 Applicants must be a member of Engineers Ireland for a minimum of three months immediately prior to applying
- 4.2 Applicants must have completed the engineering education required by Section 2.2 of these Regulations
- 4.3 Applicants must complete the online application form provided by Engineers Ireland by the designated deadline
- 4.4 Applicants must demonstrate how they have developed the competences of an Engineering Technician as presented in Section 3 of these Regulations
- 4.5 Applicants must include a record of their CPD and provide an indicative plan for their professional development over the short, medium, and long term
- 4.6 Applicants must provide two supporters of their application. Supporters should be familiar with all or part of the applicant's career as an engineering technician, and their engineering experience and ability. Supporters must hold the title of Chartered Engineer, Associate Engineer or Engineering Technician with Engineers Ireland or another professional body with which Engineers Ireland has an agreement. In exceptional circumstances, Engineers Ireland will consider alternative supporters, where, because of the nature of the applicant's employment, the applicant cannot provide Chartered Engineers, Associate Engineers or Engineering Technician supporters. Applicants must contact the Membership Team to discuss this option at least two months before submitting the application.
- 4.7 Applications are assessed by a member(s) of Engineers Ireland who is/are considered competent by the Board of Examiners. The purpose of the Assessment is to determine whether the applicant broadly meets the requirements of these Regulations and whether the applicant should be allowed to proceed to the Professional Interview.
- 4.8 The Professional Interview is conducted by a panel of two or three members of Engineers

Ireland who are considered competent by the Board of Examiners to make recommendations on the suitability of candidates for the Engineering Technician title and whose knowledge and experience are appropriately aligned to that of the applicant. The members of the Interview Panel are required to satisfy themselves that the applicant has reached an acceptable level in the competences of an Engineering Technician.

- 4.9 Where the interview panel recommends awarding the Engineering Technician title, this recommendation is forwarded to the Membership & Qualifications Board for approval
- 4.10 Where the interview panel recommends that the Engineering Technician title is not awarded, this recommendation is forwarded to the Board of Examiners to ensure that the feedback and advice given is fair, consistent and helpful
- 4.11 The assessment and interview process is subject to a Quality Assurance Policy designed by Engineers Ireland to assure continuing high quality and the integrity of the procedures
- 4.12 All Assessors and Interviewers are bound by the Council of Engineers Ireland to maintain complete confidentiality in relation to all aspects of the review procedure, documentation and associated candidate data
- 4.13 Applicants have the right to appeal as per the Engineers Ireland Appeals Policy

5. Experiential Learning Route

- 5.1 Applicants must be a member of Engineers Ireland for a minimum of three months immediately prior to applying
- 5.2 Applicants must have completed the engineering education required by Section 2.3 of these Regulations
- 5.3 There are three steps in the Experiential Learning Route application:
 - initial assessment (application and approval to proceed)
 - education assessment (application, interview and approval to proceed), and
 - professional competence assessment (application and interview)

5.4. Initial Assessment

- 5.4.1 Applicants must complete the initial assessment application provided by Engineers Ireland. Applications can be submitted every month (except August).
- 5.4.2 Applicants must succinctly indicate how their education and experience is substantially equivalent to the learning achieved in a Higher Certificate accredited by Engineers Ireland by providing evidence of the following learning outcomes:

L01 – Knowledge and Understanding

Knowledge and understanding of the basic mathematics, sciences, data science, analytics, and other technologies related to the branch of engineering

L02 – Problem Analysis

The ability to identify, formulate and analyse well-defined problems in their particular branch of engineering

L03 – Design

The ability to contribute to the design of solutions to well-defined engineering problems

L04 – Investigation

The ability to investigate to facilitate the solution of well-defined problems within the particular branch of engineering

L05 – Professional and Ethical Responsibilities

Understanding of and commitment to professional and ethical responsibilities towards people and the environment in the practice of engineering

L06 – Teamwork and Lifelong Learning

The ability to work effectively independently and in diverse and inclusive teams, and to prepare for lifelong learning.

L07 – Communication

The ability to communicate effectively on well-defined engineering activities to diverse audiences

L08 – Engineering Management

Knowledge and understanding of basic engineering management principles relevant to the branch of engineering and an ability to apply these to one's own work

- 5.4.3 The initial assessment application is reviewed by the Membership & Qualifications Board. The purpose of this initial assessment is to determine whether the applicant broadly meets the requirements of these Regulations and whether the applicant should be allowed to proceed to the education assessment.

5.5. Education Assessment

- 5.5.1 Where approval to proceed is granted, applicants must complete the education assessment online form provided by Engineers Ireland by the designated deadline
- 5.5.2 Applicants must provide greater detail on how their education and experience is substantially equivalent to the learning achieved in a Higher Certificate accredited by Engineers Ireland by providing evidence of the eight learning outcomes listed in Section 5.4
- 5.5.3 Applicants will be offered the opportunity to be assigned a mentor. Applicants may decide to appoint their own informal mentor or to continue with a mentor appointed by Engineers Ireland. Applicants will be asked to confirm that they were in contact with their mentor and that

the mentor reviewed their education assessment application prior to its submission. The mentor will have no input to the assessment process or the final decision.

- 5.6. Applicants must provide two supporters of their application. Supporters should be familiar with all or part of the applicant's career as an engineering technician, and their engineering experience and ability. Supporters must hold the title of Chartered Engineer, Associate Engineer or Engineering Technician with Engineers Ireland or another professional body with which Engineers Ireland has an agreement. In exceptional circumstances, Engineers Ireland will consider alternative supporters, where, because of the nature of the applicant's employment, the applicant cannot provide Chartered Engineers, Associate Engineers or Engineering Technicians supporters. Applicants must contact the Membership Team to discuss this option at least two months before submitting the application.
- 5.6.1 Education assessment applications are assessed by a member(s) of Engineers Ireland who is/are considered competent by the Board of Examiners. The purpose of the Assessment is to determine whether the applicant broadly meets the requirements of these Regulations and whether the applicant should be allowed to proceed to the Education Assessment Interview.
- 5.6.2 The Education Assessment Interview is conducted by a panel of two or three members of Engineers Ireland who are considered competent by the Board of Examiners. The members of the Interview Panel are required to satisfy themselves that the applicant has achieved learning substantially equivalent to that of a Higher Certificate accredited by Engineers Ireland.
- 5.6.3 Where the interview panel recommends proceeding to the Professional Competence Assessment, this recommendation is forwarded to the Membership & Qualifications Board for approval

5.7 Professional Competence Assessment

- 5.7.1 Where approval to proceed is granted, applicants must complete the professional competence assessment online form provided by Engineers Ireland by the designated deadline
- 5.7.2 Applicants must demonstrate how they have developed the competences of an Engineering Technician as presented in Section 3 of these Regulations
- 5.7.3 Applicants must include a record of their CPD and provide an indicative plan for their professional development over the short, medium, and long term
- 5.8 Applicants must provide two supporters of their application. These supporters must hold the title of Chartered Engineer, Associate Engineer or Engineering Technician with Engineers Ireland or another professional body with which Engineers Ireland has an agreement. In exceptional circumstances, Engineers Ireland will consider alternative supporters, where, because of the nature of the applicant's employment, the applicant cannot provide Chartered Engineers, Associate Engineers or Engineering Technicians supporters. Applicants must contact the Membership Team to discuss this option at least two months before submitting the application.
- 5.8.1 Applications are assessed by a member(s) of Engineers Ireland who is/are considered competent by the Board of Examiners. The purpose of the Assessment is to determine whether the applicant broadly meets the requirements of these Regulations and whether the applicant should be allowed to proceed to the Professional Interview.
- 5.8.2 The Professional Interview is conducted by a panel of two or three members of Engineers Ireland who are considered competent by the Board of Examiners to make recommendations on the suitability of candidates for the Engineering Technician title and whose knowledge and experience are appropriately aligned to that of the applicant. The members of the Interview Panel are required to satisfy themselves that the applicant has reached an acceptable level in the competences of an Engineering Technician
- 5.8.3 Where the interview panel recommends awarding the Engineering Technician title, this recommendation is forwarded to the Membership & Qualifications Board for approval.
- 5.8.4 Where the interview panel recommends that the Engineering Technician title is not awarded, this recommendation is forwarded to the Board of Examiners to ensure that the feedback and advice given is fair, consistent and helpful
- 5.9 The assessment and interview process is subject to a Quality Assurance Policy designed by Engineers Ireland to assure continuing high quality and the integrity of the procedures
- 5.10 All Assessors and Interviewers are bound by the Council of Engineers Ireland to maintain complete confidentiality in relation to all aspects of the review procedure, documentation and associated candidate data
- 5.11 Applicants have the right to appeal as per the Engineers Ireland Appeals Policy

6. International Professional Title Recognition

- 6.1 A Mutual Recognition Agreement (MRA) is an agreement between certain countries to provide mutual recognition of an engineer's professional title. Engineers Ireland has signed a number MRAs with other professional bodies which cover Engineering Technician title. For the MRA to apply, applicants must have been elected to the title under that professional body's standard professional review and must be a member of that professional body in good standing.
- 6.2 EU Directives provide for the mutual recognition of professional qualifications between EU member states. Provided there are no substantial differences, as defined in these Directives, between such a qualification and the Engineering Technician title, Engineers Ireland will grant this title to holders of such qualifications.
- 6.3 The Agreement for International Engineering Technicians (AIET) establishes an international benchmark competence standard for individuals practicing as fully qualified engineering technicians. It is a multi-national agreement between engineering organisations that provides a framework for the recognition of substantial equivalence of standards and quality assurance systems. Engineers Ireland is a member of the AIET.



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