ENGINEERS IRELAND

Associate Engineer

Regulations for the title of Associate Engineer

FOREWORD

Engineers Ireland is the operating title of the Institution of Engineers of Ireland.
Engineers Ireland, founded in 1835, represents all branches of the engineering profession and all categories of engineering in Ireland.

The fundamental aims of Engineers Ireland are:

- to promote knowledge of engineering and of engineering science
- to establish and maintain standards of engineering education and training
- to promote and provide opportunities for continuing professional development for engineers and engineering technicians
- to maintain standards of professional ethics and conduct
- to ensure that the Registered Professional Titles of Engineers Ireland are awarded only to appropriately qualified engineers and technicians.

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 title Associate Engineer is confined to those who have satisfied the Council of Engineers Ireland of their competence and experience.

Within Ireland, Engineers Ireland is the authoritative voice of the engineering profession on relevant national issues. It makes submissions and representations to Government and official bodies on national policy for infrastructure, budgets, industry, education and the overall development of the Irish economy.

October 2005

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**Courtesy Engineering Council U.K.*

1. THE ASSOCIATE ENGINEER

In this section

~ the general competences of an Associate Engineer are summarised
~the designatory letters you can use after your name are given.

1.1 As an Associate Engineer (Appendix 2) you will

- Exercise independent technical judgement at an appropriate level;
- Assume responsibility, as an individual or as a member of a team, for the management of resources and/or guidance of technical staff;
- Design, develop, manufacture, commission, operate and maintain products, equipment, processes and services;
- Actively participate in financial, statutory and commercial considerations and in the creation of cost effective systems and procedures;
- Utilise effective communication skills and actively participate in human and industrial relations;
- Make a personal commitment to live by the appropriate code of professional conduct which recognises obligations to society, the profession and the environment.

1.2 If you are successful you will be entitled to style yourself as an Associate Engineer and use the designatory letters AEng AMIEI after your name.

2. THE FORMATION OF AN ASSOCIATE ENGINEER

In this section

~the educational standard required of an Associate Engineer is described
~the competences to be acquired during Initial Professional Development.

2.1 When you completed your approved engineering technology degree/engineering diploma (level 7) programme*, which is the educational standard in Ireland for Associate Engineers, you acquired an appropriate understanding of the engineering principles associated with your engineering technology discipline.

This is the first phase in the formation of an Associate Engineer.

2.2 The second phase is called Initial Professional Development (IPD).

IPD involves the development of the competences (see Appendix 3) to apply what you learned in your degree/diploma, to the solution of engineering technology problems. This takes a minimum of three years for a four year degree and four years for a three year diploma/degree and involves training, experience and participation in training courses appropriate to your career path.

2.3 As an Associate Engineer you will have acquired certain competences both during your engineering technology studies and your IPD. These are listed in Appendix 3.

**See www.engineersireland.ie for list of approved programmes*

3. THE EDUCATIONAL STANDARD

In this Section

~ the approved engineering technology degree/diploma programme is described
~ educational standards equivalent to an accredited degree/diploma are listed.

3.1 THE APPROVED ENGINEERING TECHNOLOGY DEGREE/DIPLOMA (LEVEL 7) PROGRAMME IN IRELAND

3.1.1 The Accreditation Board of Engineers Ireland is responsible for accrediting and approving all engineering programmes in Irish universities and institutes of technology.

3.1.2 The list of engineering technology degree/diploma (level 7) programmes approved by Engineers Ireland can be found on our website. These programmes are accredited in accordance with Accreditation Criteria which are published on our website. Such accreditations are carried out by teams of assessors drawn from the academic staff of universities, institutes of technology, state agencies and industry and from professional bodies abroad with whom we have international agreements.

You must hold such a qualification (or equivalent, see 3.2 below) if you wish to be a candidate for the title of Associate Engineer.

3.2 OTHER EQUIVALENT EDUCATIONAL STANDARDS

You will also be considered eligible for candidacy for the AEng AMIEI title if:

a) You have been admitted to Associate Membership of Engineers Ireland (AMIEI) through our Special Process A or any other approved Alternative Route to Membership,
b) You hold an accredited engineering technology qualification accepted by Engineers Ireland through the Sydney Accord,*
c) Under EU Directives on recognition of professional qualifications, you hold an engineering technology qualification substantially equivalent to an engineering technology degree/diploma (level 7), accredited or approved by Engineers Ireland.

** The Sydney Accord is an international agreement entered into by Engineers Ireland with other professional bodies in the UK, Canada, Australia, New Zealand, and South Africa. Through this Accord, the signatories accept each other's accreditation decisions thereby enabling mutual recognition of each signatory's accredited Engineering Technology Degree and Diploma (See our website for more information).*

4. INITIAL PROFESSIONAL DEVELOPMENT

In this Section

~ the Initial Professional Development required of an engineering technologist is described
~ the training you should undertake together with the type of experience you should acquire is explained.
~ the experiential value of teaching, research and working as an engineering technician is described.

4.1 TRAINING

4.1.1 Training is defined as the application of learning principles to improving technical and other skills through systematic activity monitored by appropriately competent people who are prepared to provide advice or counselling to the trainee in order to improve or correct performance.

4.1.2 Such training is provided by certain companies as part of a structured approach to training and development, broadly consistent with the recommendations of Engineers Ireland. A list of companies accredited for Continuing Professional Development (CPD) by Engineers Ireland in this respect is provided on our website.

4.1.3 The early stages of your IPD may involve a planned structured approach through a company's own training scheme. Alternatively, especially if you are working in a small company or one which does not employ a large number of professional engineers or engineering technologists, the approach will be more informal. In such a case, you may find yourself in an environment where you will be learning your engineering technology competences through the experience of your own practice.

4.1.4 Irrespective of your training environment, the primary concern of Engineers Ireland is that training should enable the engineering technologist to learn how to apply engineering principles to the solution of problems in the work place.

4.2 EXPERIENCE

4.2.1 The other element of IPD is experience of engineering technology practice. The proportion of your time spent in practice as opposed to training will obviously increase as you develop engineering competences.

4.2.2 A fundamental part of an engineering technologist's career is Continuing Professional Development (CPD). This is defined as the planned acquisition of knowledge, experience and skills and the development of personal qualities necessary for the execution of professional and technical duties throughout an engineering technologist's life. It encompasses both technical and non-technical matters.

4.2.3 You should engage in CPD from the earliest stages of your career. Engineers Ireland recommends that you should undertake a minimum of 5 days of appropriate CPD per annum (on average) during your period of IPD and that you should maintain a continuing record of your CPD. Our Assessors and Interviewers will expect you to demonstrate that you are actively involved in CPD.

4.3 OTHER EXPERIENCE FORMING PART OF IPD

4.3.1 Full-time research work may be accepted as constituting part of the IPD period.

4.3.2 If you have been lecturing on engineering subjects on a third-level engineering programme then this period will be taken into account as part of the IPD period.

4.3.3 If you have been working as an engineering technician prior to qualifying as an engineering technologist, Engineers Ireland may accept up to a maximum of one year of the IPD period as having been satisfied by that experience.

5. THE PROFESSIONAL REVIEW – DOCUMENTATION

In this Section

~ the Engineering Practice Report for your Professional Review is described
~ the requirement for Supporters and their input to the documentation is described
~ the Format and Presentation of the documentation are outlined.

5.1 The purpose of the Professional Review is to ascertain and verify that you have the competences of an Associate Engineer (Appendix 3)

5.2 To enable us to carry out this evaluation, we will need your Engineering Practice Report.

5.3 THE ENGINEERING PRACTICE REPORT

5.3.1 The purpose of the Report is to provide a comprehensive and clear account of your IPD.

5.3.2 The Report should be written using the first person singular. You should pay particular attention to ensuring that you communicate the information in the Report in a clear and articulate manner, as would be expected of an Associate Engineer. Spelling and use of grammar is deemed to be important by our Assessors and Interviewers. The report should be written in chronological order commencing at the date of graduation.

5.3.3 The Report should be prefaced as follows:

a) A photocopy of the front page of your Application Form for the title Associate Engineer
b) A title page (including your name, professional title being sought, date Report submitted)
c) A Table of Contents.

5.3.4 The content of the Report must consist of the following

a) Summary of Career Details
b) Training Courses undertaken
c) Description of your IPD.

5.3.5 Summary of Career Details

The Summary must be in chronological order commencing at date of graduation, sequentially numbered and must include the following in tabular format see (sample table in Appendix 5):

a) The name of the company/organisation which employed you
b) The title of the position you held
c) Your level of responsibility
d) The position, qualifications and/or membership of professional bodies of your immediate superior in each position
e) The duration of each phase of training you undertook, commencing from date of graduation and indicating start and finish dates (month and year)
f) The total periods claimed for training and responsible experience respectively.

5.3.6 Training Courses Undertaken

You should provide in tabular form a list of the Training Courses and CPD activities you have undertaken since you graduated (See sample table in Appendix 6).

5.3.7 Description of your IPD

a) General
The Description of your IPD should be comprehensive and accurate and linked to the Competences of an Associate Engineer (Appendix 3). It should be between 2500 and 3000 words in length.

b) Your Engineering Technology Work
Any particularly interesting or challenging problem which you have experienced should be described. You should provide information on any subject in which you have specialised or obtained exceptionally good experience. Where possible, an indication of the importance of projects should be given referring to factors such as innovation, cost or magnitude.

c) Extent of Personal Contribution and Personal Responsibility within Employing Organisation.
You must demonstrate the extent and character of the personal contribution and level of responsibility you have exercised and, where possible include some quantified measure of impact e.g. budget, level of risk, loss implications, etc. This information will assist the Interview Panel in reaching a judgement on your competence and personal responsibility. You should include specific information relating to your personal responsibility within your employing organisation. Your scope for freedom of action as well as the nature of any constraints imposed should be described.

5.4 VALIDATION OF IPD

a) You are required to have your application supported by an Associate Engineer and a Chartered Engineer or two Chartered Engineers familiar with all or part of your career as an engineering technologist and your engineering experience and ability.

b) Each supporter must sign your application form in the allocated sections.

c) Each supporter must read your Engineering Practice Report and initial any parts which they can validate.

d) You should note that Engineers Ireland may contact your supporters to discuss any aspect of your Report.

e) In exceptional circumstances, Engineers Ireland will consider alternative arrangements, where, because of the nature of a candidate's employment he/she cannot provide supporters who are Associate or Chartered Engineers. If this applies to you, you should propose alternative arrangements to Engineers Ireland at least two months before you submit your Engineering Practice Report.

f) Family members of candidates may not act as supporters.

5.5 FORMAT AND PRESENTATION OF REPORT

5.5.1 The documentation should be in one volume, with a transparent front cover and a spiral binding.

The required sequence of the documentation in the Report is as follows:
a) Photocopy of both sides of your application form
b) Title Page
c) Table of Contents
d) Summary of Career Details
e) Outline of Training undertaken
f) Description of your IPD.

5.5.2 The Report must be printed with a minimum font size of 12.

5.5.3 Each block of experience described in the Description of your IPD must follow the same numbering system as used in your Summary of Career Details.

5.5.4 The number of words in the Report should be indicated.

5.5.5 Presentation is an important feature of the Engineering Practice Report. The form and layout of the Report must facilatate Assessment. You should avoid the use of jargon, acronyms, shorthand terms, etc.

5.5.6 A Glossary of Terms must be included in an Appendix. The first use of a term or title in the Report which is subsequently abbreviated must be given in full with its acronym.

5.5.7 Spelling, grammar and syntax are important. Pages must be numbered. Candidates should provide reasonable spacing between sections. Drawings, diagrams and/or photographs may be included in an Appendix. The Report should be carefully edited.

5.6 STATEMENT OF AUTHENTICITY.

The Engineering Practice Report must end with the following Statement of Authenticity and be signed and dated by you:

I hereby certify that the Engineering Practice Report has been prepared in its entirety by me and that all statements and claims made therein are true and accurate.

5.7 SUBMISSION OF DOCUMENTATION TO ENGINEERS IRELAND

Four bound copies of the Report must be forwarded to Engineers Ireland together with the completed Application Form for the title Associate Engineer and accompanied by the Professional Interview fee. Receipt of application is normally acknowledged within two to three weeks.

6. THE PROFESSIONAL REVIEW – PROCEDURE

In this Section

~ the procedure which is followed once your Engineering Practice Report is submitted is outlined
~ the timetable and schedule used for processing applications are given.

6.1 Engineers Ireland processes applications for the title Associate Engineer twice annually. The deadlines for submission are the last Friday in January and the last Friday in June.

TIMETABLE FOR PROCESSING AEng AMIEI APPLICATIONS

Deadline for submission of report	Assessment Day	Professional Interviews	Decisions posted to candidates
Last Friday, January	4th Wednesday, February	April / May / June	May / June / July
Last Friday, June	4th Wednesday, July	November / December / January	December / January / February

6.2 Reports are assessed by Assessors drawn from the Professional Interviewers of Engineers Ireland.

6.3 The purpose of the Assessment is to determine if the Report broadly meets the requirements as laid down in the Regulations and if in the opinion of the Assessor, you should be allowed to proceed to the Professional Interview.

6.4 If your Report is not satisfactory you will normally be advised of this within two weeks of the Assessment Day and

a) asked to modify the Report in accordance with specific requirements before re-submission
or
b) advised to defer your application for a specified period while you further develop your competences.

6.5 Professional Interviews are held either at the offices of Engineers Ireland or in Regional Branches, as appropriate.

6.6 Normally the result of your Professional Interview is submitted for approval to the next scheduled meeting of the Membership and Qualifications Board. The Board meets monthly with the exception of the month of August.

7. THE PROFESSIONAL INTERVIEW

In this Section

~ the criteria which apply to the membership of your Interview Panel are outlined
~ the objective of the Professional Interview is described
~ the duration and format of the Professional Interview is given
~ the confidentiality of the process is described
~ the Quality Assurance procedure is notified
~ how unsuccessful candidates should proceed is outlined

7.1 You will be interviewed by a panel of three members of Engineers Ireland who are Chartered Engineers and who are considered competent by the Board of Examiners to make recommendations on the suitability of candidates for the title of Associate Engineer and whose knowledge and experience are similar to yours.
In exceptional circumstances, the Interview Panel may consist of two members.

7.2 The members of the Interview Panel are required to satisfy themselves that you have reached an acceptable level in the competences described in Appendix 3. They will exercise flexibility in interpreting the content of your Report and careful judgement in reaching a recommendation in respect of your application.

7.3 The Interview will last for approximately 45 minutes and you will be given ten minutes at the start of the Interview in which to give an uninterrupted verbal summary of your Report, highlighting significant engineering technology work you have undertaken. You may use visual aids, up to A4 size, as appropriate for use across a table. No other visual aids are acceptable.

7.4 The Interviewers will then question you in relation to the content of your Report, focusing on the competences of an Associate Engineer (Appendix 3).

7.5 The Interview process is subject to a Quality Assurance Procedure designed by Engineers Ireland to assure continuing high quality and the integrity of the procedures.

7.6 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 and documentation.

7.7 If you are unsuccessful at interview you will given the reasons for this and, in most cases, advised as to what you must do to make up any deficit before re-applying for the title.

8 RECOGNITION OF PROFESSIONAL TITLES FROM OTHER COUNTRIES

In this section

- *The criteria which apply to the recognition of professional titles in EU member states and other countries will be described.*
- *The procedure to be followed by those seeking the Associate Engineer title on the basis of these criteria is outlined.*

8.1 EU Directives issued in 1989, 1992 and 2005 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 AEng title, Engineers Ireland will grant this title to holders of such qualifications.

8.2 Applicants should complete the AEng application form on our website and submit it as instructed. Such applicants will not be required to submit to the professional review process.

APPENDIX 1

CHECKLIST FOR CANDIDATES

1. Read the publication "Associate Engineer" (this document)

2. Title Page should include
   - Name of Candidate
   - Title being sought
   - Date Report was submitted

3. Include Table of Contents

4. Include tabular Summary of Career Details

5. Include table of Training Courses undertaken

6. The Description of IPD must:
   a) Be 2500 – 3000 words in length
   b) include comprehensive information on training and experience
   c) describe growth and development of career
   d) demonstrate technical depth of engineering practice
   e) state your precise role in various projects and emphasise the degree of personal responsibility in the facets of engineering technology in which you were engaged
   f) avoid excessive use of jargon, acronyms and abbreviations
   g) include headings
   h) avoid use of colloquialisms
   i) include Glossary of Terms
   j) end with signed and dated Statement of Authenticity.

7. Include the Professional Interview Fee

8. Include charts and diagrams where appropriate in appendices

9. Edit carefully, using a spell-check facility

10. Pages should be numbered

11. Indicate actual number of words in Report.

12. Ensure the Associate Engineer or Chartered Engineers verifying your experience have signed your Application Form and initialled your Report as appropriate.

APPENDIX 2

DEFINITION OF AN ASSOCIATE ENGINEER

The Associate Engineer is competent to apply in a responsible manner current engineering technologies in a chosen field. He/she exercises independent technical judgement and works with significant autonomy within his/her allocated responsibility. The performance of his/her engineering work requires an understanding of relevant financial, commercial, statutory, safety, management, social and environmental considerations.

APPENDIX 3

THE COMPETENCES OF AN ASSOCIATE ENGINEER*

Six Competences of an Associate Engineer are listed and analysed in terms of the range of abilities normally associated with each one.

Competence 1
Exercise independent technical judgement at an appropriate level.

This normally includes the ability to:

a) Develop, review and select techniques, procedures and methods to undertake tasks;
b) Apply appropriate scientific and engineering principles;
c) Undertake a significant role in the achievement of technical tasks.

Competence 2
Assume responsibility, as an individual or as a member of a team, for the management of resources and/or guidance of technical staff.

This includes the ability to:

a) identify and specify resource requirements;
b) plan and co-ordinate activities against objectives;
c) assist in the preparation and control of budgets;
d) monitor and control performance against agreed targets (criteria);
e) manage change;
f) exhibit leadership in the working environment supporting team members and managing work groups and projects.

Competence 3
Design, develop, manufacture, commission, operate and maintain products, equipment, processes and services.

This includes an ability to:

a) identify problems;
b) formulate solutions;
c) evaluate options, considering cost, safety, quality, reliability, appearance and environmental impact;
d) prepare and implement plans;
e) evaluate results.

**Courtesy Engineering Council U.K.*

Competence 4

Actively participate in financial, statutory and commercial considerations and in creation of cost effective systems and procedures.

This includes an ability to:

a) operate within the financial and commercial constraints of an organisation and the overall statutory framework;
b) contribute to the design and development of systems and procedures;
c) assist in the identification of costs and benefits;
d) monitor and assess operation against criteria;
e) assist in the evaluation of criteria.

Competence 5

Utilise effective communication skills and actively participate in human and industrial relations.

This includes an ability to:

a) use oral, written and electronic methods for the communication of technical and other information;
b) utilise people management skills.

Competence 6

Make a personal commitment to live by the appropriate code of professional conduct which recognises obligations to society, the profession and the environment.

In order to achieve this commitment they must:

a) comply with the Code of Ethics of Engineers Ireland;
b) manage and apply safe systems of work;
c) undertake their engineering work in compliance with the Codes of Practice on Risk and the Environment;
d) carry out the continuing professional development necessary to ensure competence in their areas of future interested practice;
e) support new entrants to the profession in their initial continuing professional development.

APPENDIX 4

Glossary of Acronyms

IPD	Initial Professional Development
CPD	Continuing Professional Development
CEng MIEI	Chartered Engineer and Ordinary Member of the Institution of Engineers of Ireland.
MIEI	Ordinary Member of The Institution of Engineers of Ireland
FEANI	European Federation of Engineering Professional Bodies
AEng AMIEI	Associate Engineer and Associate Member of the Institution of Engineers of Ireland
Eng Tech IEI	Engineering Technician and Technician Member of the Institution of Engineers of Ireland

APPENDIX 5

SAMPLE SUMMARY OF CAREER DETAILS TABLE

Employment Dates		Company	Position	Responsibilities	Supervisor	Duration claimed for:	
From	To					Training	Responsible Experience

Appendix 6

Sample Table of Training Courses Undertaken

Course Title	Duration	Venue

ENGINEERS IRELAND

Engineers Ireland
22 Clyde Road
Ballsbridge
Dublin 4.
Tel: 00 353 1 668 4341/6090234
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