

# Φ Chartered Engineer

CEng MIEI - Engineers Ireland

Standard Route - Guidelines for the registered professional title of Chartered Engineer

# **Table of Contents**

1
2
3
4
5
6
9
10
14
15
16

# **Eligibility for the Standard Route**

## **Engineering Education**

As specified in the Chartered Engineer Regulations 2024, the engineering education required for the Standard Route to the Chartered Engineer title is an **accredited Master's degree** or an equivalent qualification. To apply for the Chartered Engineer title through the Standard Route, you must hold one of the following:

- Five-year Master's degree (Level 9 on the National Framework for Qualifications) accredited by Engineers Ireland
- 1-2 year Master's accredited by Engineers Ireland plus an undergraduate qualification accredited under the Washington Accord
- Bachelor's (Honours) degree (Level 8 on the National Framework for Qualifications) accredited by Engineers
  Ireland at the Chartered Engineer standard before 1st January 2013
- International qualification accredited under the Washington Accord
- An EU engineering qualification substantially equivalent to an Engineers Ireland accredited Bachelor's degree (on the basis of EU Directives on recognition of professional qualifications)
- A Second Cycle Degree listed on the European Engineering Education Database
- You can check whether your Irish qualification is accredited here

## **Engineering Experience**

To apply for the Chartered Engineer title through the Standard Route, you must have a **minimum of four years** of relevant experience of professional engineering practice after the achievement of the required engineering qualification. The development of the competences of a Chartered Engineer typically requires a longer period of experience. All applicants should first assess their own level of development in each competence (see Section 2 and Appendix 1).

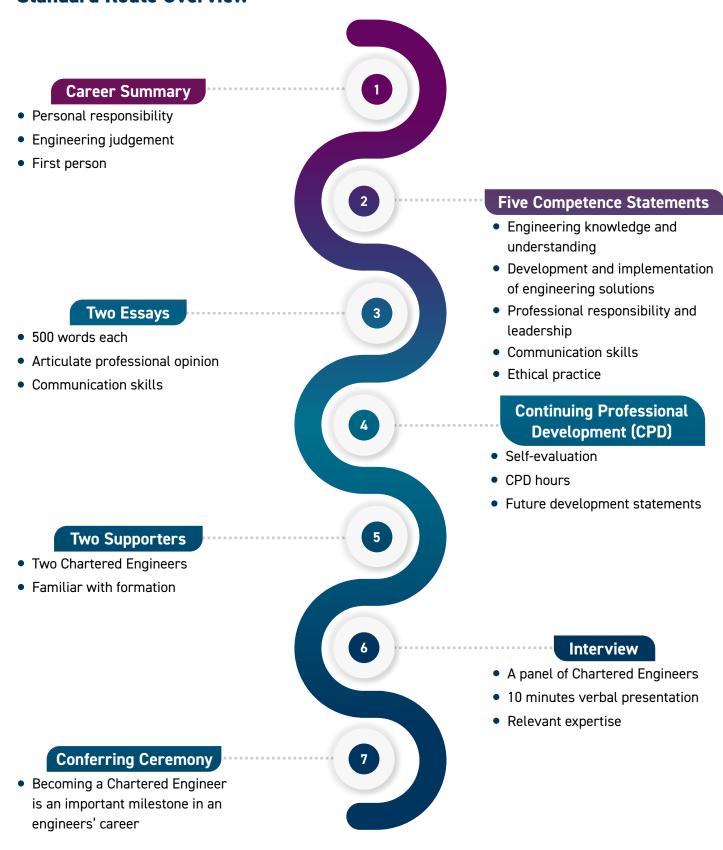
## **Engineering experience may include:**

- Full-time research involving significant engineering work
- Lecturing on engineering subjects on a third-level engineering programme
- Experience between an initial engineering qualification and achieving the required engineering qualification, e.g. experience between a Bachelor's and a Master's. This is accepted as a maximum of one year of engineering experience when approved in advance by Board of Examiners

Applicants must be able to demonstrate the achievement of the professional competences.

If you are unsure about your eligibility for the Standard Route to the Chartered Engineer title, please contact the Engineers Ireland team at titles@engineersireland.ie.

## **Standard Route Overview**



There are two deadlines each year: last Friday in January and last Friday in June.

## **Section 1. Career Summary**

### Career summary table

The career summary table should detail the different roles you have held over the course of your engineering career listed in chronological order. The assessors will examine the progression of your career to see how it has evolved and the experience you have gained. Your career summary table should include a list of the various projects you have worked on, in chronological order, to showcase the progression of your career.

### **Career summary report**

This section should be 2,000 words ± 5%. You should expand on the details you have provided in your career summary table, in particular your responsibilities. You should describe the responsible experience and CPD you have undertaken during your initial professional development. You should pay careful attention to identifying your own personal responsibilities throughout the application. The assessment will not be on how your employer or team delivered services but on your own involvement.

When describing your career, please highlight:

- Your personal contribution and responsibilities
- The problems you faced
- The solution(s) you found
- The engineering judgements you made; and
- The impact of your solution(s) or judgements

The career summary report should include the most pertinent information from your career to date. Make sure to focus on solid facts and what exactly you have achieved in your career to date. Rather than focusing on the company that you are employed with, focus on your own career progression and how you have contributed and developed professional competence in the workplace.

Keep in mind that it is beneficial to describe your work in terms of 'I did this', 'I was responsible for' and really outline clearly how you applied your engineering skills to particular projects. The entire process is built around a clear demonstration of how successful your approach has been and how you have applied your learned skills to solving engineering problems. No matter where the experience or project

was located geographically, the assessors will focus on your problem-solving abilities.

It is important to elaborate on the problems that you faced and the solutions that you discovered to show that you have the expertise expected of a Chartered Engineer. The key points to remember in the career summary report are how you used your engineering judgement, how you applied what you have learned and the judgements that you made in order to impact on the solutions.

Spelling, syntax and grammar are important. Applications with errors in this regard will be will not be approved at assessment stage.

There should be no hyperlinks, tables, graphs or imagery embedded in the text.

A glossary of terms (in alphabetical order) must be included in the relevant section of the application. The first use of a term or title in the report, which is subsequently abbreviated, must be given in full with its abbreviation.

# Section 2. Five Competence Statements

The European Quality Framework defines competence as "a demonstrated ability to apply knowledge, skills and attitudes for achieving observable results". Competence is simply the proven ability to do something effectively. Your professional competence as an engineer is your ability to apply and extend your skills and knowledge of engineering principles to solve non-routine problems in a safe, effective, sustainable and ethical way. The hallmark of a professional engineer is the ability to apply the learning outcomes gained during study to work-based situations.

#### The competences of a Chartered Engineer are:

- Engineering knowledge and understanding: Use a combination of general and specialist engineering knowledge and understanding to optimise the application of existing and emerging technology. Chartered Engineers must demonstrate how they:
  - 1.1 Maintain and extend sound theoretical knowledge of developments in engineering science and technology
  - 1.2 Understand and apply advanced knowledge of the widely applied engineering principles underpinning good practice
  - 1.3 Apply creative problem-solving approaches to their specific area of engineering expertise
  - 1.4 Apply emerging technologies and/or innovative approaches as appropriate to their specific area of engineering expertise
- 2. Development and implementation of engineering solutions: Apply appropriate theoretical and practical methods to the analysis and solution of complex engineering problems. Chartered Engineers must demonstrate how they:
  - 2.1 Identify and implement opportunities to improve a project, product or work stream
  - 2.2 Conduct appropriate research and provide meaningful input to design, evaluation and development of effective solutions
  - 2.3 Plan, implement, design and evaluate engineering solutions holistically, taking account of stakeholder views

2.4 Identify and take appropriate action in situations where unexpected conditions or circumstances are encountered

### 3. Professional responsibility and leadership:

Provide technical, sustainable, commercial and managerial leadership. Chartered Engineers **must** demonstrate how they:

- 3.1 Plan and manage effective project implementation
- 3.2 Take responsibility and make decisions on part, or all, of engineering projects
- 3.3 Develop the capabilities of people to meet the demands of changing technical, sustainable and managerial requirements
- 3.4 Bring about improvement through quality management
- **4. Communication skills:** Use effective communication and interpersonal skills. Chartered Engineers **must** demonstrate how they:
  - 4.1 Communicate technical information in a clear, concise and effective manner
  - 4.2 Communicate engineering solutions effectively to non-technical stakeholders
  - 4.3 Work inclusively with others and build effective teams
  - 4.4 Take responsibility for negotiation of commercial and/or technical aspects of engineering projects
- 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. Chartered Engineers 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

In your application you should provide 500 words ± 5% on how you can demonstrate each of the five competences. It is essential that you can demonstrate each of the five competences so clearly focus and equally attribute the same level of detail to each. Examples can be drawn from any stage of your career as long as you demonstrate the required level of underpinning engineering knowledge and experience.

When writing your competence statements you should provide clear examples of how you have developed the competence. You should include details of projects in which you have played a role, explaining your actual involvement and work, and how these have contributed to your formation as an engineer.

Your statements need to be concise, ensuring that your argument is clear and easy to understand. Don't just list your duties, include solid examples that show you have developed the required competence. You should write in the first person, using 'I' instead of 'we' or 'the team' (e.g., I designed it, I was responsible for, etc.). Examples can most effectively be described by referring to Appendix 1.

See Appendix 1 for the levels of competence development, including a framework for assessing your own level of development in each competence.

Further, discipline-specific guidance on the competences is available **here**.

## **Section 3. Two Essays**

Your application requires you to write two essays, each 500 words ± 5%. The purpose of the two essays is to provide you with an opportunity to articulate your professional opinions on important topics relevant to the professional practice of engineering.

The essays should be a clear articulation of your opinions, arguments, conclusions and analysis, and not a repetition of quoted text or argument from another source. It is your argument that counts; regardless of whether the assessor agrees or disagrees with your stated opinion, what is important is that you have presented your opinion and conclusion based on a clear rationale. The essays are a vehicle to demonstrate your communications skills. In the interview, the panel members may ask you about your essays.

The first essay may be from an engineering subject area of your choice, articulating your professional opinion. The second must be from a list of topics that will be presented on the Engineers Ireland website every submission cycle. They will appear in June for the January deadline and in January for the June deadline of each year.

Please ensure that both essays are a clear articulation of your opinions, arguments, conclusions and analysis. Use phrases like 'I think'; 'In my opinion'; or, 'I found'. The assessors are looking for a strong opinion and well-defended backup of the topic you choose. The assessors will want to see clear evidence that you are passionate about engineering and that you have thought through the topic extensively.

Keep in mind that at interview one of your interviewers may hold a different/differing opinion on the subject, so it is advisable to be prepared to defend your points robustly. This is an opportunity to demonstrate your ability in competence 4, Communication Skills.

# Section 4. Continuing Professional Development (CPD)

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. For information on what constitutes CPD, see page 8.

This section of the application includes the CPD table and CPD plans. Firstly, complete the CPD Table by listing your CPD activities in chronological order. You are required to demonstrate a minimum of 35 hours of CPD per annum for the two years (24 months) prior to this application and a commitment to CPD in the previous years. When applying at the June deadline, you are required to demonstrate a minimum of 17.5 hours in this calendar year and the remaining 52.5 hours in the previous 18 months.

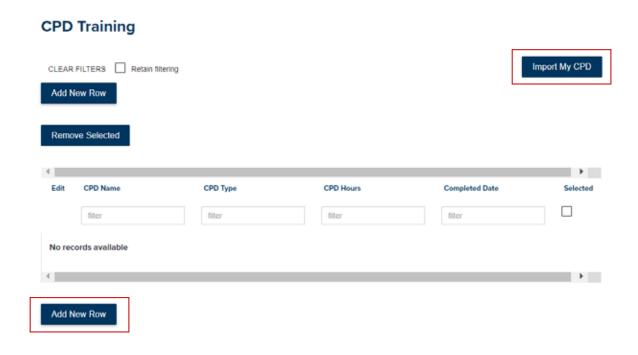
You should recognise that your learning and development will not cease after successful achievement of the registered professional title of Chartered Engineer. Instead, it should remain an essential part of your professional career, in line with your commitment to your professional development and the code of ethics.

Your CPD plans should include, in 200 words  $\pm$  5% per section, an indicative plan for your development over the short, medium and long term. When considering this, discuss the direction you wish your professional engineering career to go, how you intend to get there and what skills you will need to attain or improve to achieve your goals.

### The CPD Table

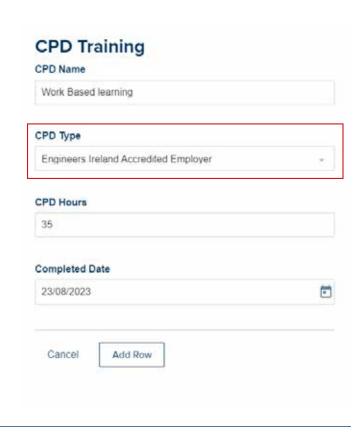
You can choose to "Import My CPD". This will automatically import any CPD that you have logged on your Engineers Ireland "My CPD" facility. Please note that you can only use the Import button once.

If you wish to include additional CPD that is not logged in your "My CPD", you can select "Add New Row".



If you are employed by an **Engineers Ireland Accredited Employer**, you have the option to select this under "CPD Type" when you "Add New Row" (see below). You can simply add 35 hours to the required "CPD Hours" field. Our assessors/interviewers will accept that you have completed the required CPD to the correct standard.

For further information, see Engineers Ireland CPD Policy: https://www.engineersireland.ie/Professionals/CPD-Careers/Record-My-CPD/CPD-policy.





## WHAT COUNTS AS CPD?





## **SELF-DIRECTED LEARNING**

**Structured Reading Structured Viewing** 

**Presentation Visiting Schools or Colleges to Promote Engineering** 

**Volunteer Work** 

**Successful Application** for Registered Professional Title



**Publishing a Journal Article** 



## **MENTORING AND COACHING**

Acting as a Mentor / Coach

**Being Mentored or Coached** as a Mentee / Coachee



## **COURSES / SEMINARS / CONFERENCES**

Attending a Course / Seminar / Conference

**Preparing / Delivering a Presentation** 

Undertaking e-Learning / **Computer Based Learning** 



### **FURTHER EDUCATION**

**Bachelor's Degree /** Master's Degree / PhD

Diploma

Certificate



For further information, see Engineers Ireland CPD Policy: www.engineersireland.ie/Professionals/CPD-Careers/Record-My-CPD/CPD-policy

## **Section 5. Two Supporters**

Applicants must provide two supporters of their application. Supporters should be familiar with all or part of your career as a professional engineer, and your engineering experience and ability. Supporters must be Chartered Engineers with Engineers Ireland or another professional body with which Engineers Ireland has an agreement.

Supporters may be a supervising academic or engineer within your current or past employment. You should note that Engineers Ireland may contact your supporters to discuss any aspect of your application. Family members may not support your application.

In exceptional circumstances, Engineers Ireland will consider alternative supporters, where, because of the nature of the applicant's employment, the applicant cannot provide two Chartered Engineers as supporters. Applicants must contact the Membership Team to discuss this option at least two months before submitting the application.

Once you decide to apply for the title, you should contact your two prospective supporters to ask them if they would be willing to validate your application. Don't leave it until the deadline is impending. You should encourage your supporters to take an active role in mentoring/guiding you through the process of compiling your application. You should ensure that you forward your draft application to both supporters at least one month prior to the deadline date. This will allow adequate time for your supporters to give you feedback on your application. Let your supporters know when the deadline is. You should ask both of your supporters to read your draft application thoroughly.

You should encourage them to give you constructive feedback on the following:

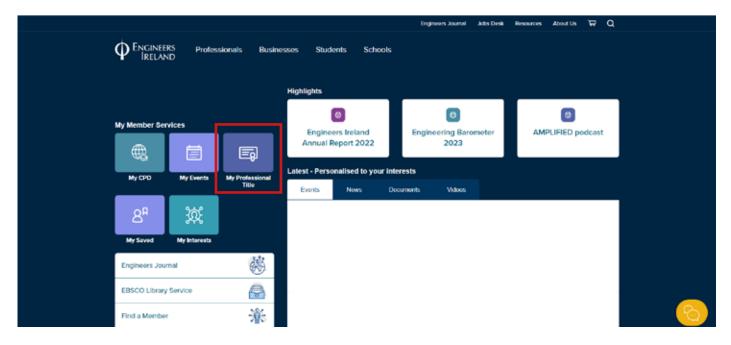
- Have you adequately expressed your own roles and responsibilities?
- Have you thoroughly demonstrated each of the competences?
- Are grammar, syntax and spelling of the standard expected of a professional report?
- Do your essays reflect your own opinions, arguments, analysis and conclusions?
- Are your supporters satisfied that you broadly meet the standard for Chartered Engineer?

Once you receive the feedback from both of your supporters on your draft application, you should then be able to finalise your application on your dashboard. Once you have completed this on your dashboard, your supporters will receive an email alert and they will be able to then formally validate your submission. Let your supporters know that this email alert is imminent.

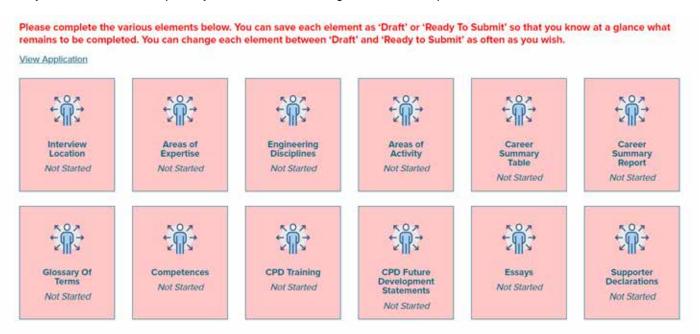
You will not be able to continue with the process until both supporters have formally validated your submission online. Once you have received our email notification that both supporters have validated your application, you will be able to submit your application on your dashboard and pay the professional interview fee.

## **Submitting your Application**

Log into your member dashboard and go to My Professional Title

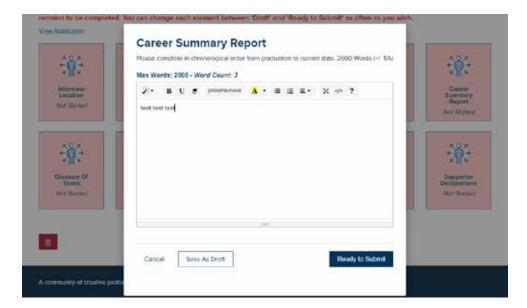


Once you click into the template, you'll see the following 12 tiles to complete



You can start each tile/section in any order

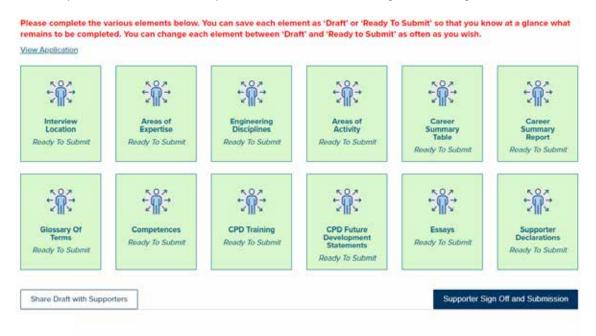
When you access a tile/section and enter text you'll then have the option to "save a draft" or "ready to submit"



"Ready to submit" means that you are happy with the content and can move on to the next tile/section of your choice

You may go back into a tile/section at any time and amend if you wish.

Once you have completed all tiles/sections you'll see that the tiles change colour to green.



You now have the following choices:

- Share draft with supporters
- Supporter sign-off and submission
- Delete (and start again)

If you choose to "Share Draft with Supporters", your application will be automatically forwarded to your two supporters for review via their dashboards (or a unique email link if not members with Engineers Ireland).

You may then change any aspect of your application on the recommendation of your supporter(s). Your dashboard status will not change.

Once you select "Supporter sign-off and submission", your application will, again, be automatically forwarded to your two supporters for review via their dashboards (or a unique email link if not members with Engineers Ireland).

Your dashboard status for your application will now show as "Awaiting Supporters".



## Professional Title Application (Awaiting Supporters)

Return to Dashboard

One or both supporters, after review, may ask you to make amendments. Once you make the amendments, you now have the option to "resubmit to supporters".

Even if only one supporter has suggested amendments, your updated application will be sent to both supporters again for final sign-off.



Once both supporters have reviewed your application and approved it, your application status will show as "Supported".

## Professional Title Application (Supported)

Return to Dashboard

You will now see two remaining tiles/sections to complete:

- Declaration
- Payment

Please complete the various elements below. You can save each element as 'Draft' or 'Ready To Submit' so that you know at a glance what remains to be completed. You can change each element between 'Draft' and 'Ready to Submit' as often as you wish.

View Application





Submit Application

On completion of these final tiles/sections you then select "submit application"

"Submit application" forwards you application to Engineers Ireland for review.

Once "Submit Application" has been selected, your dashboard status will show the following:

## Professional Title Application (Submitted)

Return to Dashboard

If you experience any technical issues, please contact titles@engineersireland.ie.

# What happens after I submit my application?

After the deadline your application is assessed and if successful you will be invited to the interview stage. The assessment part of the process could take from 6 - 8 weeks, with some applications taking longer as they may be part of our internal quality assurance process. After assessment, you will receive an email notification with one of the following results:

#### 1. Approved for interview

Your application has been reviewed and the assessor is of the opinion that it broadly meets the requirement of the regulations. In exceptional cases only, where the assessor believes the content of the application is sufficient but there are some small areas of improvement, you will be asked to update and resubmit your application for this deadline.

#### 2. Not approved for interview

The assessor has identified deficits in your application and has indicated your report will need to be re-written and resubmitted for the next deadline.

#### 3. Defer

Your assessor has identified deficits in your application and has indicated you should defer your application to further develop your competences and offers a recommended timeline to resubmit.

## **Interview**

The professional interview gives you the chance to share and authenticate your involvement and ownership of the evidence already presented in your application. Engineers Ireland will explore the depth and breadth of your engineering knowledge and experience in your requested areas of practice.

This is your chance to show your commitment to high standards of professionalism and your demonstrated understanding of ethical behaviour. It is also an opportunity for the interview panel to explore further all required competences. An understanding of the Chartered Engineer competences, the definitions of engineering activities and engineering problems, and how these are reflected in your engineering practice are essential.

You will be interviewed by two or three Chartered Engineers from your discipline.

### The interview process

When your application has been assessed and you are deemed ready for the interview stage, you will be contacted to make appropriate arrangements. Your interview will be conducted via Zoom or a similar video conference platform. An in-person interview can be arranged if necessary. The interview should typically take 60 minutes and comprises the following:

- Introduction by the chair of the interview panel on how the interview will be conducted
- 10-minute uninterrupted presentation by you this
  is your opportunity to impress, so make sure that
  it's not just a summary of your application your
  interviewers have already read this. The panel will
  want to know about significant engineering work
  you have undertaken, perhaps additional projects
  which were not included in your application, or
  an update on a project which was incomplete at
  the time of submitting your application. You are
  permitted to use visual aids (such as PowerPoint)
  during your presentation.
- After your 10-minute presentation, your interview panel will then further investigate the following: the five competences; your career summary report; your two essays; your future development statements and your presentation

### **Preparation tips**

- Make sure you completely understand the Chartered Engineer competences and you are familiar with your evidence presented in your application
- Ensure you understand the Engineers Ireland Code of Ethics and ethical behaviour principles, the current engineering environment and how it impacts on you (regulation, sustainability, major changes to codes and legislation, occupational health and safety, etc.)
- Talk to others who have recently received their professional title and to your two supporters to get some hints, tips, reassurance and encouragement
- Anticipate questions you may be asked and know what your responses may be
- Be confident we understand you will have nerves, but Engineers Ireland would not have invited you to the professional interview if, from the evidence presented to date, we didn't think you were ready for this final step
- Approach the interview in a relaxed and calm frame of mind
- The interview process is not a formal technical review of your abilities – you will not be asked to perform any calculations or recite formulas, etc. – the interview process is not an exam
- The interview panel will at all times endeavour to only enquire about the general engineering principles you used in the lifecycle of any project you shared in your Chartered Engineer application
- At any stage, if you are uncomfortable with any question being asked by the interview board in terms of client confidentiality, prejudice, discrimination, etc., you can ask for the question to be withdrawn
- For projects that you have worked on, be sure to describe carefully what your own individual contribution was – remember the interview panel is interested in what you personally have been doing, not your company or team as a whole
- In answering questions during the interview, be ready to provide more details, for example about the technical content of the work done or about the structure of the team and your place in it

- The interview panel's main goal is to see how over the recent years you have gained the experience to demonstrate the five competences of Chartered Engineer
- The matters discussed in the interview are confidential and may not be repeated by any party outside the interview

## **Outcome and appeals**

Your interview panel will not divulge the outcome of your interview to you. The outcome is submitted for ratification to our Membership and Qualification Board (MQB) at its monthly meeting. A formal notification will be issued in writing by email to you by Engineers Ireland – circa three to four weeks after the interview. If you are awarded the title of Chartered Engineer, you will be invited to receive your Chartered Engineer certificate at a future conferring ceremony.

If you are not awarded the title of Chartered Engineer, you will be advised accordingly. Your interview feedback will firstly be reviewed by our Board of Examiners (BEX) in order to ensure that the advice given to you is fair, consistent and helpful. You will be given a recommended time-frame in which to submit a re-application. It should be noted that the overall success rate of the professional review process for each application deadline is 85-90%.

### Appeal procedure

If you are not awarded the title of Chartered Engineer, you have the right to appeal if you feel that the interview didn't follow Engineers Ireland's prescribed procedures. Please contact Engineers Ireland for further details of the appeals procedure at titles@engineersireland.ie.

# Appendix 1 - Levels of Competence Development

Engineers Ireland has prepared assessment criteria as guidance for both you as a candidate preparing your application and for the assessors of your application. For each competence there are levels of development. This is indicative of the strengths and weaknesses applicants may have within their personal development. It also aims to provide a framework for all professional engineers, before and after they have achieved the registered professional title of Chartered Engineer, to continue their professional development.

The levels of development within the assessment criteria are described below. These are the levels your interview panel will use to assess your development within the competences required of a Chartered Engineer. To achieve the registered professional title of Chartered Engineer, you must achieve the following minimum levels of development:

- a minimum of level 3 in competence 5 and two other competences, one of which must competence 1 or competence 2
- a minimum of level 2 in the remaining competences

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Candidate:  demonstrates through a range of experience that he/she delivers their role under supervision with low level of personal responsibility  demonstrates limited understanding and knowledge of the competence required of a Chartered Engineer	Candidate:  demonstrates through a range of experiences that he/she delivers their role with personal responsibility in routine situations and with supervision in more complex circumstances  demonstrates an adequate understanding, knowledge and practice, under supervision, of the competences required of a Chartered Engineer	Candidate:  demonstrates through a range of experiences that he/she delivers their role with personal responsibility in nonroutine or complex situations and/or in responsible charge of significant engineering work  demonstrates a good understanding, knowledge and substantial responsible practice of the competences required of a Chartered Engineer	Candidate:  demonstrates through a range of experiences that he/she delivers their role with autonomy and is often primarily responsible for significant engineering work and for the development of others  demonstrates an excellent understanding, knowledge and exceptional responsible practice of the competences required of a Chartered Engineer
Level 1	Level 2	Level 3	Level 4

To give you more guidance, these levels of development are expanded in the following pages. This aims to give you a greater understanding of what is required within each competence. Some discipline-specific guidance on the competences is available **here**.

# 1. Engineering knowledge and understanding

Use a combination of general and specialist engineering knowledge and understanding to optimise the application of existing and emerging technology. Chartered Engineers **must** demonstrate how they:

- 1.1 Maintain and extend sound theoretical knowledge of developments in engineering science and technology
- 1.2 Understand and apply advanced knowledge of the widely applied engineering principles underpinning good practice
- 1.3 Apply creative problem-solving approaches to their specific area of engineering expertise
- 1.4 Apply emerging technologies and/or innovative approaches as appropriate to their specific area of engineering expertise

Level 1	Level 2	Level 3	Level 4
Candidate:	Candidate:	Candidate:	Candidate:
<ul> <li>may provide evidence of broadening the knowledge or skills gained from their academic formation</li> <li>demonstrates having applied engineering principles in routine situations under supervision and with a low level of personal responsibility</li> <li>provides little evidence of applying problem solving approaches</li> <li>has awareness of the opportunity to use, create and/or advance new technologies in their organisation</li> </ul>	<ul> <li>provides evidence         of broadening their         engineering knowledge         and skills</li> <li>demonstrates having         applied engineering         principles in routine         situations with personal         responsibility, and under         supervision in more         complex situations</li> <li>provides examples of         contributing to creative         solutions that have         been successfully         implemented</li> <li>demonstrates evidence         of contributing to the         application, adoption,         or advancement of new         technologies within their         organisation.</li> </ul>	<ul> <li>provides evidence of their responsibility in enhancing effectiveness of their project(s) through their technical knowledge and skills</li> <li>provides evidence of personal responsibility for the development of non-routine products/ services/designs through the application of their knowledge and understanding of engineering principles</li> <li>provides examples of their technical creativity in analysing, recommending, and implementing solutions</li> <li>provides examples of their use of and/or development of new technologies</li> </ul>	<ul> <li>provides evidence of exemplary personal responsibility for the development of significant products/ services/designs through the application of their excellent knowledge and understanding of engineering principles</li> <li>provides evidence of leading the development of non-routine products/ services/designs through advanced technical expertise</li> <li>provides examples of initiating and leading innovative approaches to engineering problems</li> <li>provides clear evidence of leading the advancement of, or exploitation of, new or existing technologies</li> </ul>

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# 2. Development and implementation of engineering solutions

Apply appropriate theoretical and practical methods to the analysis and solution of complex engineering problems. Chartered Engineers **must** demonstrate how they:

- 2.1 Identify and implement opportunities to improve a project, product or work stream
- 2.2 Conduct appropriate research and provide meaningful input to design, evaluation and development of effective solutions
- 2.3 Plan, implement, design and evaluate engineering solutions holistically, taking account of stakeholder views
- 2.4 Identify and take appropriate action in situations where unexpected conditions or circumstances are encountered

Level 1	Level 2	Level 3	Level 4
Candidate:	Candidate:	Candidate:	Candidate:
<ul> <li>is involved in repetitive type design/project work, applying current knowledge without opportunity to expand or deepen it</li> <li>has limited responsibility for design solutions/value engineering</li> <li>has limited opportunity for applying engineering knowledge to all aspects of a problem</li> <li>has had limited opportunity to deal with unexpected conditions or circumstances</li> </ul>	<ul> <li>demonstrates application of engineering knowledge, including how they conducted research, analysis, and derive solutions under supervision</li> <li>provides examples of their involvement in design, evaluation and development of effective solutions, leading to clear project outcomes</li> <li>demonstrates an understanding of holistic approach in delivery of a project</li> <li>has dealt with unexpected conditions or circumstances with guidance from others</li> </ul>	<ul> <li>demonstrates         evidence of personal         responsibility in         delivering non-routine         engineering solutions to         complex problems</li> <li>provides examples         of having personally         delivered engineering         solutions using         research, analysis and         evaluation to clearly         present options to         others</li> <li>demonstrates planning         and implementation of         a holistic approach in         delivery of a project</li> <li>can demonstrate         examples where they         have taken appropriate         action dealing with         unexpected conditions         or circumstances</li> </ul>	<ul> <li>demonstrates         evidence of significant         responsibility in         delivering non-routine         engineering solutions to         complex problems</li> <li>provides examples of         personal responsibility         for, and demonstrates         significant creativity         in, the evaluation,         presentation and         implementation of         solutions to complex         engineering problems</li> <li>demonstrates         responsibility for leading         a holistic approach in         the delivery of a project</li> <li>regularly takes         appropriate action         dealing with unexpected         conditions or         circumstances</li> </ul>
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# 3. Professional responsibility and leadership

Provide technical, sustainable, commercial and managerial leadership. Chartered Engineers **must** demonstrate how they:

- 3.1 Plan and manage effective project implementation
- 3.2 Take responsibility and make decisions on part, or all, of engineering projects
- 3.3 Develop the capabilities of people to meet the demands of changing technical, sustainable and managerial requirements
- 3.4 Bring about improvement through quality management

Level 1	Level 2	Level 3	Level 4
Candidate:  • normally works under supervision with limited level of personal responsibility  • demonstrates having limited responsibility for decisions on projects  • contributes to identifying own training needs  • demonstrates awareness of the implementation of quality management	Candidate:  demonstrates evidence of leadership, planning and managing routine tasks or projects  demonstrates areas of personal responsibility in the decision making and delivery process on small projects or parts of larger projects  contributes to the development of the capabilities of staff  contributes to the implementation of quality management	Candidate:  demonstrates personal responsibility for leading the contribution of teams delivering multiple projects or complex work  provides examples of their responsibility for key engineering decisions, process/systems improvements and team development  has responsibility for identifying the training needs of their team, without necessarily having direct line management responsibility  demonstrates evidence of achieving continuous improvement in business outcomes through quality management	Candidate:  demonstrates clear evidence of being in a key leadership position showing strategic thinking in planning and managing projects/assignments  provides examples of their personal responsibility for significant decisions on large or complex projects  demonstrates clear evidence of their responsibility for the motivation, development and performance management of technical and other staff  leads teams to improve systems and bring improvement through quality management
NOVICE			<b>EXPERT</b>

## 4. Communication skills

Use effective communication and interpersonal skills. Chartered Engineers **must** demonstrate how they:

- 4.1 Communicate technical information in a clear, concise and effective manner
- 4.2 Communicate engineering solutions effectively to non-technical stakeholders
- 4.3 Work inclusively with others and build effective teams
- 4.4 Take responsibility for negotiation of commercial and/or technical aspects of engineering projects

Level 1	Level 2	Level 3	Level 4
Candidate:  demonstrates limited communication or presentation skills, including written and interpersonal skills  demonstrates limited evidence of communications with non-technical stakeholders  provides evidence of having had only limited opportunity to work inclusively and build teams  has limited experience in negotiations	Candidate:  demonstrates evidence of good written, communication, and interpersonal skills  demonstrates evidence of communication with a range of stakeholders with support from others  demonstrates evidence of working effectively and inclusively in diverse teams  has some experience negotiating commercial and/or technical aspects of projects with guidance from others	Candidate:  demonstrates evidence of very good written, communication and interpersonal skills  provides examples of papers or presentations to non-technical stakeholders  demonstrates skills in building inclusive and effective multidisciplinary teams, resulting in effective delivery of projects  provides examples of their responsibility for negotiations within a project	Candidate:  demonstrates evidence of excellent written, communication and interpersonal skills  demonstrates evidence of delivery of presentations or documentation to nontechnical stakeholders giving a clear message and gaining their trust  demonstrates strong, inclusive leadership to inspire high-performing multidisciplinary teams resulting in exemplary project delivery  provides examples of their responsibility in delivering optimal results through managing strong or difficult negotiations with stakeholders
NOVICE			<b>EXPERT</b>

## 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. Chartered Engineers **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

Level 1	Level 2	Level 3	Level 4
Candidate:	Candidate:	Candidate:	Candidate:
<ul> <li>candidate:         <ul> <li>demonstrates</li> <li>limited awareness</li> <li>and understanding</li> <li>of the Engineers</li> <li>Ireland Code of</li> <li>Ethics, standards</li> <li>and codes of practice</li> <li>within their area of</li> <li>expertise</li> </ul> </li> <li>provides limited</li> <li>evidence of their</li> <li>awareness of safety</li> <li>and safety risk</li> <li>assessment</li> <li>does not have</li> <li>examples to</li> <li>demonstrate</li> <li>working in an</li> <li>environmental</li> <li>conscious manner to</li> <li>achieve sustainable</li> <li>outcomes</li> </ul> <li>demonstrates</li> <li>limited self-</li> <li>evaluation leading</li> <li>to their continuing</li> <li>professional</li> <li>development</li>	<ul> <li>candidate:         <ul> <li>demonstrates evidence of their basic awareness and understanding of the Engineers Ireland Code of Ethics, standards and codes of practice within their area of expertise</li> <li>can give limited examples of risk assessment and mitigation measures they applied with regard to health and safety risks</li> <li>has limited examples of where they have considered sustainability in their work</li> <li>provides evidence of CPD but limited self-evaluation and future development planning. Limited involvement in Engineers Ireland</li> </ul> </li> </ul>	<ul> <li>Candidate:         <ul> <li>demonstrates good evidence of the application and understanding of the Engineers Ireland Code of Ethics, standards and codes of practice within their area of expertise</li> <li>provides good examples of their solid understanding of the implications of health and safety legislation to their practice and has examples of practical application</li> <li>can provide strong examples of where they have shown commitment to environmental sustainability with evidence of successful outcomes</li> <li>demonstrates good self-evaluation influencing their CPD choices and a structured approach to their future career plan; provides examples of their involvement in promoting and growing the profession through involvement with the work of Engineers Ireland</li> </ul> </li> </ul>	<ul> <li>Candidate:         <ul> <li>provides strong evidence of leadership in the application and understanding of the Engineers Ireland Code of Ethics, standards and codes of practice within their area of expertise</li> <li>provides strong examples of their leadership in the assessment and mitigation of health and safety risks within their organisation</li> <li>provides examples of where they inspire change within projects or their organisation to implement improvements in sustainability and minimise environmental impacts with evidence of successful outcomes</li> <li>demonstrates that they approach their development in a structured manner to achieve excellence in their professional practice; demonstrates they are active participants in the work of Engineers Ireland to promote the engineering profession</li> </ul> </li> </ul>
NOVICE			EXPERT

