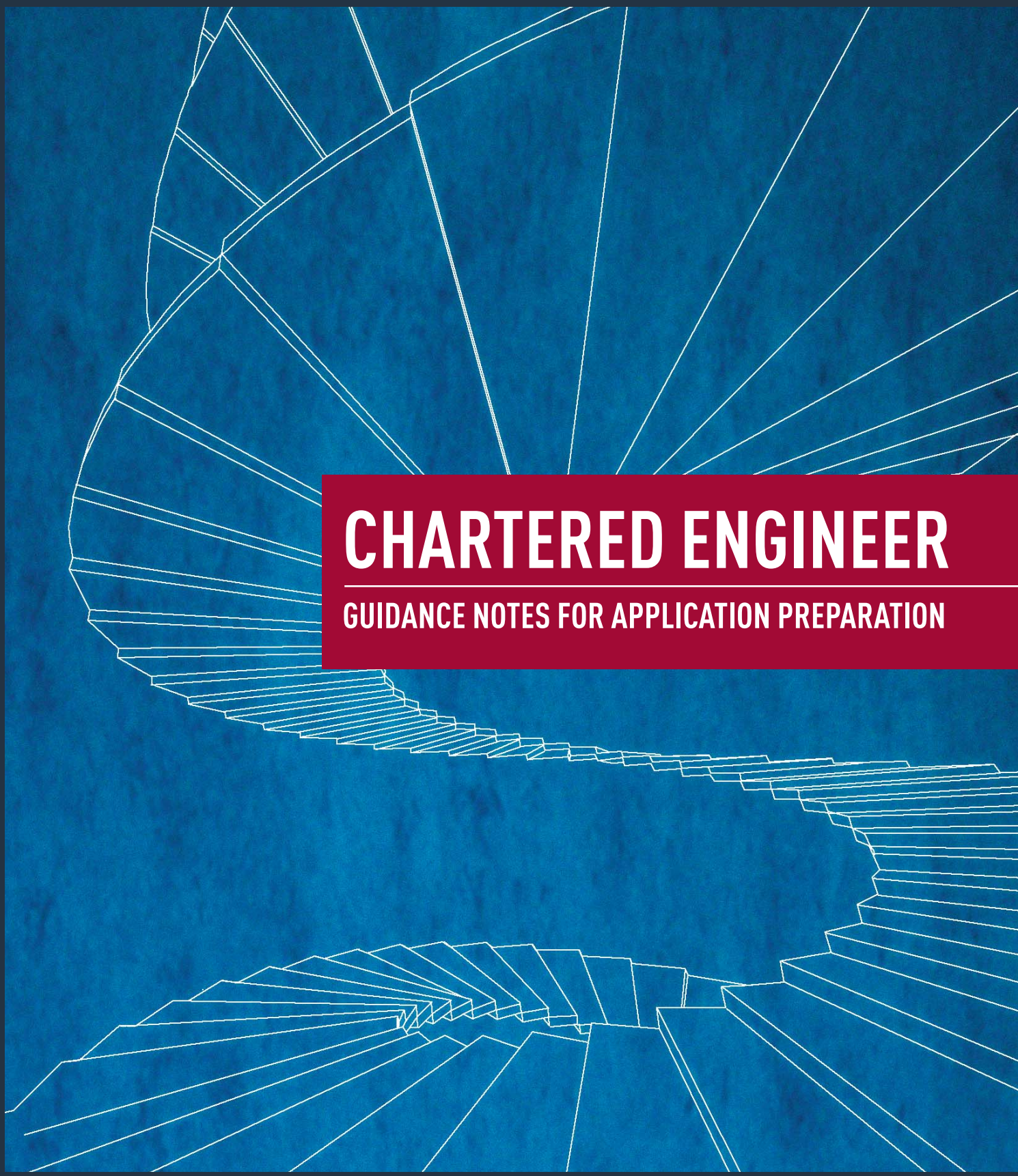
ENGINEERS IRELAND



CHARTERED ENGINEER

GUIDANCE NOTES FOR APPLICATION PREPARATION

www.engineersireland.ie

March 2014

INTRODUCTION

YOUR GUIDE TO MAKING A SUCCESSFUL APPLICATION

This document has been prepared to provide support, assistance, and advice to you as you prepare your application for assessment of your Phase 2 formation as a Chartered Engineer.

This document should be used in conjunction with the published regulations for the registered professional title Chartered Engineer, not instead of it.

It is important that you understand the current requirements for becoming a Chartered Engineer. You should be absolutely confident that you meet the educational standard, have the requisite professional engineering experience and have acquired the five competences listed in the Chartered Engineer Phase 2 documentation before making your application.

Please ensure that you read the full regulations for the registered professional title of Chartered Engineer carefully when preparing your application. If you do have questions or queries at any stage of the application process, please contact our Membership Team:

Tel. +353 1 665 1334

or, Email: membership@engineersireland.ie.

Good luck on your journey to becoming a Chartered Engineer – the next important goal in your engineering career!

Damien Owens
Chartered Engineer
Membership Director and Registrar

TABLE OF CONTENTS

SECTION ONE

THE COMPETENCES OF A CHARTERED ENGINEER EXPLAINED

Use your copy of the five competences from the regulations for the registered professional title of Chartered Engineer and read them in conjunction with these guidance notes.
Make comparisons and then see where they fit into YOUR professional career and how YOU can demonstrate how you satisfy each competence.
This is NOT a layout for your application, but a useful tool when drafting your ideas in advance of preparing your application.

COMPETENCE ONE – YOUR KNOWLEDGE

Use a combination of general and specialist engineering knowledge and understanding to optimise the application of existing and emerging technology.
Includes, but is not restricted to:

	Examples
How YOU use the engineering theory you learned through your qualification and apply it to your practical experience.	
How YOU keep aware of, and improve your knowledge of, technological advances and innovations.	
How YOU implement innovation and knowledge gained in problem solving.	
How YOU successfully pass this knowledge on to the advantage of your project and company.	

COMPETENCE TWO – APPLYING YOUR KNOWLEDGE

Apply appropriate theoretical and practical methods to the analysis and solution of engineering problems.
Includes, but is not restricted to:

	Examples
How YOU apply your engineering knowledge and experience to improve and innovate.	
How YOU continually review situations and take the initiative to enhance products and processes.	
How YOU plan, cost, analyse, correct, and modify.	
How YOU actively participate in consultation.	

SECTION ONE

THE COMPETENCES OF A CHARTERED ENGINEER EXPLAINED

COMPETENCE THREE – DEMONSTRATING YOUR LEADERSHIP

Provide technical, commercial, and managerial leadership.
Includes, but is not restricted to:

	Examples
How YOU prepare, structure and agree the development and improvement of a project.	
How YOU project manage resources, processes and technical and non-technical teams.	
How YOU develop and improve the capabilities and skills of your staff.	
How YOU promote, apply, and improve quality standards and quality control.	

COMPETENCE FOUR – HOW YOU COMMUNICATE

Use effective communication and interpersonal skills.
Includes, but is not restricted to:

	Examples
How YOU develop, maintain, and promote effective working relationships.	
How YOU present, clarify, discuss, and identify plans, proposals and common goals.	
How YOU continuously improve your written and spoken communication skills.	
How YOU resolve conflicts, promote confidence, and effectively negotiate with all project participants.	

SECTION ONE

THE COMPETENCES OF A CHARTERED ENGINEER EXPLAINED

COMPETENCE FIVE – PROFESSIONAL STANDARDS

Make a personal commitment to abide by the appropriate code of professional conduct, recognising obligations to society, the profession and the environment.
Includes, but is not restricted to:

	Examples
How YOU place responsibility for the welfare, health and safety of the community at all times before responsibility to the profession, to sectional interests, or to other engineers.	
How YOU comply with the Code of Ethics of Engineers Ireland.	
How YOU maintain adequate knowledge in order to implement appropriate safe systems of work.	
How YOU take precautions when dealing with hazards.	
How YOU approach issues which impact on the environment.	
How YOU set personal goals to achieve personal and professional objectives.	

SECTION TWO

COMPLETING THE APPLICATION

This section aims to explain each part of your application and should be read in conjunction with Section 8 of the regulations for the registered professional title of Chartered Engineer.

2.1 COMPETENCE STATEMENTS

What is competence?

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, and ethical way.

The hallmark of a professional engineer is the ability to apply the learning outcomes gained during study to work-based situations. During your professional review, this is assessed as competences. The European Quality Framework defines competence as "a demonstrated ability to apply knowledge, skills and attitudes for achieving observable results".

You should review Section 8 of the Regulations before completing this section of your application. Please note that the attributes listed in this section of the regulations are to assist you in your application, you are not obliged to answer all of the questions. It is quite likely that you will not be able to demonstrate work experience in every area, but you should be able to demonstrate sufficient experience within each of the competences.

2.2 CAREER SUMMARY TABLE

This is a sample of the table that will form part of your application. This should be completed in chronological order from graduation to current date.

Employment dates		Company/Project name	Position	Responsibilities	Supervisior
From	To				
Sept 03	Oct 04	ABC Group	Graduate Manufacturing Engineer	Training, bill of materials, review of product materials.	Brendan Aherne, Lead Engineer
Oct 04	May 05	XYZ Engineering	Assistant Project Engineer	ETC!!	

SECTION TWO

COMPLETING THE APPLICATION

2.3 CAREER SUMMARY REPORT

This section of your application should expand on the details you have provided in your career summary table, in particular the responsibilities column. You should describe the responsible experience and training 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 did your solution(s) or judgements have.

This section should be no more than 2,000 words

2.4 CPD AND FUTURE DEVELOPMENT STATEMENT

2.4.1. CPD table

This is a sample of the table that will form part of your application. This should be completed in reverse chronological order from current date back.

Please list your CPD activities under the headings below. Ideally your CPD should be a blend of these various types as per the table below. Please expand to give information on each of the activities including why it was important and how you applied/incorporated it into your role. For information on what constitutes CPD, please see Section Five of these guidance notes. For your application you are required to demonstrate a minimum of five days, or 40 hours, CPD per annum for the two years prior to application for the registered professional title of Chartered Engineer.

	Date	CPD hours claimed
Courses/seminars E.g., in-company training, post graduate academic courses, external training courses.		
Work based learning E.g., mentoring, coaching, research, IT skills development.		
Self-directed study E.g., professional institution activities – attending/preparing lectures, preparation of articles/papers, structured reading.		

2.4.2. Future development statements

This will form part of your application. It is important to realise 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 future development statement should include an indicative plan for your development over the short, medium, and long term.

Short-term goals (12 months)	Medium-term goals (12-24 months)	Long-term goals (2-5 years)

2.5 ESSAYS

Essay one can be from an engineering subject area of your choice, articulating your professional opinion.
Essay two must be chosen from the current list of essay titles on the website.

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'.

2.6 GLOSSARY OF TERMS

In the glossary section of your application, you should include any term which you use.

Example of a possible glossary	
CEng MIEI	Chartered Engineer and Member of Engineers Ireland
CPD	Continuing Professional Development
IPD	Initial Professional Development
MIEI	Member of Engineers Ireland
BIM	Building Information Modelling

2.7 GENERAL TIPS

- Ensure you submit your application online in time for one of the two annual deadlines.
- Consult with a colleague who has successfully completed the process to read your submission and offer comments.
- Ensure that both of your supporters have given permission to receive your application for review to their email address.
- Ensure that alternative supporters are approved at least two months prior to the deadline.
- CHECK, CHECK and RE-CHECK, especially spelling, grammar and syntax, as your application will be rejected until the next deadline if these are an issue.
- Remember, your application is a perfect example of your achievement of competence four.

SECTION THREE

DEVELOPMENT OF COMPETENCE

In order to be successful in achieving the registered professional title of Chartered Engineer, you must achieve the following minimum levels of development in each of the five competences:

- a minimum of level 2 in all five competences; and,
- a minimum of level 3 in three of the five competences, one of which must be competence one or two.

The levels of development are defined in Section 10 of the regulations. To give you more guidance, these levels of development are expanded below. This aims to give you a greater understanding of what is required within each competence.

3.1 COMPETENCE ONE: ENGINEERING KNOWLEDGE

Use a combination of general and specialist engineering knowledge and understanding to optimise the application of existing and emerging technology.

Level 1	Level 2	Level 3	Level 4
Candidate: ■ may provide evidence of broadening the knowledge or skills gained from their academic formation; ■ demonstrates having applied engineering principles in routine situations under supervision and with a low level of personal responsibility; and, ■ has awareness of the opportunity to use, create and/or advance new technologies in their organisation.	**Candidate:** ■ provides evidence of broadening their engineering knowledge and skills; ■ demonstrates having applied engineering principles in routine situations with personal responsibility, and under supervision in more complex situations; ■ demonstrates evidence of contributing to the application, adoption, or advancement of new technologies within their organisation; and, ■ provides examples of contributing to creative solutions that have been successfully implemented.	**Candidate:** ■ provides evidence of their responsibility in enhancing effectiveness of their project(s) through their technical knowledge and skills; ■ 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; ■ provides examples of their use of and/ or development of new technologies; and, ■ provides examples of their technical creativity in analysing, recommending, and implementing solutions.	**Candidate:** ■ 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; ■ provides clear evidence of leading the advancement of, or exploitation of, new or existing technologies; and, ■ provides examples of initiating and leading innovative approaches to engineering problems.

3.2 COMPETENCE TWO: APPLICATION OF ENGINEERING KNOWLEDGE

Apply appropriate theoretical and practical methods to the analysis and solution of complex engineering problems.

Level 1	Level 2	Level 3	Level 4
Candidate: ■ is involved in repetitive type design/project work, applying current knowledge without opportunity to expand or deepen it; ■ has limited responsibility for design solutions/ value engineering; and, ■ has limited opportunity for applying engineering knowledge to all aspects of a problem.	**Candidate:** ■ demonstrates application of engineering knowledge, including how they conducted research, analysis, and derive solutions under supervision; ■ provides examples of their involvement in business concept development, leading to clear project outcomes; and, ■ demonstrates an understanding of holistic approach in delivery of a project.	**Candidate:** ■ demonstrates evidence of personal responsibility in delivering non-routine engineering solutions to complex problems; ■ provides examples of having personally delivered engineering solutions using analysis and evaluation to clearly present options to clients/colleagues; and, ■ demonstrates planning and implementation of a holistic approach in delivery of a project.	**Candidate:** ■ demonstrates evidence of significant responsibility in delivering non-routine engineering solutions to complex problems; ■ provides examples of personal responsibility for, and demonstrates significant creativity in, the evaluation, presentation and implementation of solutions to complex engineering problems; and, ■ demonstrates responsibility for a holistic approach in the delivery of a project.

SECTION THREE

DEVELOPMENT OF COMPETENCE

3.3 COMPETENCE THREE: LEADERSHIP

Provide technical, commercial and managerial leadership.

Level 1	Level 2	Level 3	Level 4
Candidate: ■ normally works under supervision with limited level of personal responsibility; ■ contributes to identifying own training needs ■ demonstrates having limited responsibility for the supervision of others; and, ■ demonstrates awareness of the implementation of quality management	**Candidate:** ■ demonstrates evidence of leadership, with increasing responsibility for the contribution of technical and other staff; ■ demonstrates evidence of contributing to the overall outcome and delivery of a project on time and on budget; ■ demonstrates areas of personal responsibility in the project decision-making and delivery process; ■ displays evidence of input to decisions in progressing projects and developing systems; ■ contributes to the development of the capabilities of staff; and, ■ contributes to the implementation of quality management.	**Candidate:** ■ demonstrates personal responsibility for the contribution of technical and other staff; ■ provides examples of their responsibility for key engineering decisions, process/systems improvements and team development; ■ demonstrates evidence of achieving continuous improvement in business outcomes through quality management; ■ has responsibility for identifying the training needs of their team; and, ■ demonstrates evidence of planning a project where they have led a team, without necessarily having direct line management responsibility for the staff involved.	**Candidate:** ■ demonstrates clear evidence of leadership within their organisation; ■ provides examples of their personal responsibility for the business outcomes demonstrated through budget/cost control and involvement in business development; ■ demonstrates clear evidence of their responsibility for the motivation, development and performance management of technical and other staff; and, ■ demonstrates evidence of strategic thinking in project/assignment implementation, particularly with respect to risk assessment and risk management.

3.4 COMPETENCE FOUR: EFFECTIVE COMMUNICATIONS AND INTERPERSONAL SKILLS

Use effective communication and interpersonal skills.

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 stakeholders; and, ■ provides evidence of having had only limited opportunity to build teams and negotiate.	**Candidate:** ■ demonstrates evidence of good written, communication, and interpersonal skills; ■ demonstrates evidence of handling negotiations with a range of stakeholders and evidence of sucessul outcomes; and, ■ demonstrates evidence of team work and negotiation skills.	**Candidate:** ■ demonstrates evidence of very good written, communication and interpersonal skills; ■ provides examples of their responsibility for negotiations within a project and their ability to coalesce multidisciplinary teams resulting in effective delivery of projects; ■ provides examples of papers or presentations presented to peers/clients/ stakeholders; and, ■ achieves outcomes by utilising a network of professional contacts.	**Candidate:** ■ demonstrates evidence of excellent written, communication and interpersonal skills; ■ provides examples of their responsibility in delivering optimal results through managing strong or difficult negotiations with stakeholders; ■ demonstrates evidence of knowledge sharing through the development of technical papers or delivery of information sessions or peer reviews; and, ■ influences standards and/or policy by utilising a network of professional contacts.

SECTION THREE

DEVELOPMENT OF COMPETENCE

3.5 COMPETENCE FIVE: ETHICAL PRACTICE

Make a personal commitment to abide by the appropriate code of professional conduct, recognising obligations to society, the profession and the environment.

Level 1	Level 2	Level 3	Level 4
Candidate: ■ demonstrates limited awareness and understanding of standards and codes of practice within their area of expertise; ■ provides limited evidence of their awareness of risk assessment; ■ provides limited examples of the application of the Engineers Ireland code of ethics in their practice; and, ■ demonstrates limited self-evaluation leading to their continuing professional development.	**Candidate:** ■ demonstrates evidence of their basic awareness and understanding of standards and codes of practice within their area of expertise; ■ can relate their role to this understanding and give limited examples of remediation measures they applied with regard to risk and health and safety issues; ■ provides evidence of their basic awareness and application of the Engineers Ireland Code of Ethics; ■ provides evidence of continuing professional development but limited self-evaluation and future development planning; and, ■ provides examples of limited involvement in their professional body.	**Candidate:** ■ demonstrates reasonably good evidence of the application and understanding of standards and codes of practice within their area of expertise; ■ provides good examples of their solid understanding of the implications of health and safety legislation to their practice and also clear evidence of their commitment to environmental sustainability; ■ provides good examples of the application of the Engineers Ireland Code of Ethics within their work; ■ demonstrates good self-evaluation influencing their continuing professional development choices and a structured approach to their future career plan; and, ■ provides examples of their involvement in promoting and growing the profession through involvement with the work of Engineers Ireland.	**Candidate:** ■ provides strong evidence of their application and understanding of standards and codes of practice within their area of expertise; ■ provides strong examples of their involvement in decisions with regard to the remediation of health and safety issues, risks and environmental sustainability; ■ demonstrates in detail their practice in complying with the Engineers Ireland Code of Ethics; ■ demonstrates that they approach their development in a structured manner to achieve excellence in their professional practice; and, ■ demonstrates they are active participants in the work of Engineers Ireland to promote the knowledge within, and profile of, the engineering profession.

SECTION FOUR

TIPS FOR YOUR PROFESSIONAL INTERVIEW

4.1. Prepare your 10-minute presentation in advance of your interview. This is your 10 minutes to impress, so make sure that it's not just a summary of your application – your interviewers have already read this.
For example, 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 during your presentation (max A3 size). You can also use a laptop or tablet, however, this should be ready to present when you enter the room, you will not be permitted access to the room in advance of your interview.

4.2. You are encouraged to practice your presentation in front of others – this will help you demonstrate competence four – communication skills.

4.3. You should review your application before your interview

4.4. You should review the five competences of a Chartered Engineer to ensure you are fully familiar with what the interviewers will be assessing you against during your interview.

4.5. Ensure that you arrive at least 10 minutes before the start of your interview and check the date.

4.6. Do you know the venue of your interview? Is there parking, and if so, do you need to pay for it.

4.7. Don't forget your photographic identification.

4.8. Do your research. If you are giving statistics, make sure that they are correct and up to date.

4.9. Nervousness can make people race through their interview, so concentrate on speaking slowly and pause appropriately.

4.10. If you disagree with your panel, be persuasive rather than aggressive. Convince them of your point of view. Say that you accept their point of view but that you feel differently and explain why.

SECTION FIVE

WHAT CONSTITUTES CPD

Revision August 2013

There are many ways to build up your CPD. Remember you are required to have five days CPD per year for the two years prior to you applying for the registered professional title Chartered Engineer.

TYPES OF FORMAL CPD

(i.e., excluding on-the-job general learning and development)

In-company training courses or lectures	
Type	**Time credit**
Classroom-based training	Actual duration
Lecture series or lunch and learns	Actual duration
e-learning courses	Actual duration
Formal induction training	Actual duration
For senior engineers	
Type	**Time credit**
Teaching classes or tutoring materials preparation	Actual class time plus material preparation time
Postgraduate further engineering education	
Type	**Time credit**
Relevant Masters Degree from an institution recognised by Engineers Ireland	Up to 50 days (up to 25 university days per annum over 2 years)
Accredited degree in engineering/science related subjects	Up to 60 days (up to 20 university days per annum over 3 years)
Accredited Diploma in engineering/science related subjects	Up to 20 days
Accredited Certificate in engineering/science related subjects	Up to 15 days
Other relevant academic courses with qualifications	Actual lecture time
External training courses/CPD seminars	
Type	**Time credit**
Courses run by a recognised institution or training provider covering specific technical subjects, sector specific subjects or generic training (e.g., management, law, finance, accounting, health and safety, human resources, environmental issues, computer applications, etc.)	Actual course duration
e-learning courses	Actual course duration
For senior engineers	
Type	**Time credit**
Courses such as: conflict resolution, management, influencing skills, PR and media training, advanced-level training, systems thinking training, etc.	Actual course duration

SECTION FIVE

WHAT CONSTITUTES CPD

Revision August 2013

Professional institution activities	
Type	**Time credit**
Attending a relevant lecture	Actual lecture time
Organising a technical conference or lecture series	Up to 3 days per annum
Participating in a committee, council or special task fore	Actual meeting time (up to 3 days per annum)
For senior engineers	
Type	**Time credit**
Preparing and delivering an engineering-related paper/presentation	Up to 3 days per annum
Special study-leave including exam time	
Type	**Time credit**
This is covered by the allowances for Masters, Degrees, Diplomas and Certificates shown above	
For those sitting other formal examinations not covered above	Actual exam time
Special benchmarking visits or assignments	
Type	**Time credit**
Targeted visits of a learning nature or active attendance at a work-related conference/ seminar when the cost is borne by the company or individual as an expense (i.e., not charged to a client)	Actual time of visit (excluding travel time)
Visits to company or installation, at home or abroad, would fall into this category where planned as a developmental activity	Actual time at venue or site (excluding travel time)
Professional titles	
Type	**Time credit**
Upon successful achievement of a registered professional title – Chartered Engineer, Associate Engineer, or Engineering Technician	One day
Structured reading	
Type	**Time credit**
Where structured reading is identified as part of a professional development plan, e.g., familiarisation with new legislation or new technology	Up to one day per annum
Knowledge management	
Type	**Time credit**
Where formal knowledge sharing activities are planned and run in-house	Actual session times up to a max of 2 days per annum

SECTION FIVE

WHAT CONSTITUTES CPD

Revision August 2013

Technical blogs	
Type	**Time credit**
Staff who host a technical blog, deemed beneficial as a knowledge source to other technical staff	One day per annum
Mentoring	
Type	**Time credit**
Staff who have completed formal training in mentoring skills and up-keep these skills by meeting with a designated mentee a minimum of four times per annum	One day per annum
Volunteer work for a charitable organisation	
Type	**Time credit**
Engineers/technicians who volunteer to assist with the work of a registered charitable organisation, at home or abroad, can claim up to a maximum of three days, provided the volunteer work is of a technical nature and involves imparting technical skills and know-how to aid works, local citizens, etc.	Up to three days. This can be claimed for one year only
Other	
Type	**Time credit**
Aspects not covered above, which you judge to be appropriate as CPD	

Note:

We understand that small-sized organisations and self-employed engineers may not have engaged in as much further education and/or classroom-based CPD in recent years, as they might have done previously. We would encourage you to think about how you record valuable CPD that has happened on the job. To do this, you must identify the non-routine elements of your work, which have been CPD for you in recent years, i.e., it can't be CPD if it was your usual work routine and you learned nothing. Think about: new desktop research; actual research; new investigations; specific reading and study to learn about new codes, practices, standards or materials, non-routine tenders, etc.

So, even if you don't have five days average classroom-based CPD for each of the two years before applying, you may still comply with the CPD requirement by presenting evidence of new and non-routine work elements that were, *de facto*, CPD for you as a practitioner in a small organisation, or as a self-employed engineer.

SECTION SIX

THE ENGINEERS IRELAND CODE OF ETHICS

The backbone of our professional organisation is our Code of Ethics. Every member pledges to adhere to these and should, at all times in their professional practice, be cognisant of their meaning and content.

Membership of Engineers Ireland gives you rights and privileges. In return, you must meet the standards and conduct set by Engineers Ireland in its Code of Ethics. The Code applies to all categories of members of Engineers Ireland. It is the duty of each member to comply with the provisions of the Code.

The Code is divided into four parts:

1. Relations with colleagues, clients, employers and society in general.
2. Environmental and social obligations.
3. Maintenance and development of professional conduct and standards.
4. Enforcement procedures and disciplinary action.

Download the Code of Ethics booklet.

Engineers Ireland,
22 Clyde Road,
Ballsbridge,
Dublin 4,
Ireland.
Tel: +353 (0)1 665 1300
Web: www.engineersireland.ie

Membership team +353 (1) 665 1334 or
membership@engineersireland.ie