

## GUIDANCE NOTES FOR CHARTERED ENGINEER CANDIDATES

### Introduction

1. UK-SPEC describes the standards to be met and ways in which individual candidates are to prepare for professional registration with the Engineering Council, and of the processes used in their assessment. Candidates have to meet specific educational requirements and demonstrate achievements, knowledge and understanding of engineering principles by writing a report. A Professional Review Interview will follow to establish how competencies gained through initial professional development and subsequent work experiences meet the competency standards set out in the UK-SPEC.

### Roles and Responsibilities of Chartered Engineers

2. The following general statements about definitions, roles and responsibilities provide the basis for the setting of standards, the specification of appropriate educational preparation and of programmes for initial professional development, and for the assessment of professional competence and commitment.
3. All engineers have a responsibility to society with regard to safety, to their legal and contractual obligation, and for the ethical and environmental impact of their work. All registered engineers agree to abide by IHEEM's Code of Conduct, which also embodies the Engineering Council's general guidelines.
4. Engineering is a profession directed towards the skilled application of a distinctive body of knowledge based on mathematics, science and technology, integrated with business management, which is acquired through education and professional development in a particular engineering discipline. Engineering is directed to developing, providing and maintaining infrastructure, goods and services for industry and the community.
5. Chartered Engineers develop solutions to engineering problems using new or existing technologies, through innovation, creativity and change and/or they may have technical accountability for complex systems with significant levels of risk. Chartered Engineers are able to demonstrate:
  - The theoretical knowledge to solve problems in new technologies and develop new analytical techniques
  - Successful application of the knowledge to deliver innovative products and services and/or take technical responsibility for complex engineering systems
  - Accountability for project, finance and personnel management and managing trade-offs between technical and socio-economic factors
  - Skill sets necessary to develop other technical staff
  - Effective interpersonal skills in communicating technical matters
6. The competence and commitment required of candidates for professional registration in all sections of the register are presented in the table in this section of the document (See Figure 1). Specific abilities and commitments are specified in Annex CA, and these form a basis of the assessment at Professional Review as outlined previously. Additional guidance is provided on the evidence to be elicited at Professional Review, both from documents and at interview. Whilst all of the items in Annex CA must be addressed at Professional Review, the extent to which each of the elements in 'A1 to E5' must be demonstrated will vary with the job role of the individual candidate. The balance is a key judgement to be made by peer assessors. However, all elements must be present to some extent.

## The UK-SPEC Criteria

7. The criteria for professional registration as a Chartered Engineer is set out in a document published by the Engineering Council called 'UK Standard for Professional Engineering Competence' (UK-SPEC). The competency statements have been reproduced and form a later section in this document.
8. UK-SPEC describes the qualification and competency criteria for professional registration as a Professional Engineer with the Engineering Council, and this policy remains a document of the Engineering Council. This document provides additional information and has been developed to assist IHEEM members to more fully understand the process by which Chartered Engineers are professionally registered.
9. UK-SPEC describes:
  - Standard and Individual routes to professional registration.
  - Idealised staged routes through education, initial professional development (incorporating training and responsible experience), professional review, professional registration and continuing professional development. This is done for ease of presentation. It is recognised that few people will go through a simple process, for most candidates, the elements will be interspersed over several years.
  - The mechanisms, by which various well-used courses and schemes are accredited, approved or otherwise formally recognised.
  - The variety of alternative approaches that are equally acceptable as routes to professional registration and to changing from one register section to another. Whilst these routes are equally acceptable as those formally recognised, there is inevitably a more complex and demanding assessment system at the end, because less has been determined and assured beforehand.
  - A process of **Professional Review**, as an assessment of:
    - current **competence** in professional practice;
    - personal **commitment** to professional codes of practice on conduct, risk, the environment and continuing professional development.

Personal and professional commitments to Society, their profession and to the environment are key aspects which need to be understood when preparing for Professional Review. UK-SPEC describes the 'Threshold Standards of Competence and Commitment' and classifies them in the following structure:

Threshold Standards of Competence and Commitments	A	Use a combination of general and specialist engineering knowledge and understanding to apply existing and emerging technology.
	B	Apply appropriate theoretical and practical methods to the analysis and solution of engineering problems.
	C	Provide technical and commercial management.
	D	Demonstrate effective interpersonal skills.
	E	Demonstrate a personal commitment to professional standards, recognising obligations to society, the professional and the environment.

Figure 1

- Professional Review Guidance Documents (of which this is a part) amplify those 'Roles and Responsibility' statements with more detailed 'Competence and Commitment' outcome statements within the same structure. They also give guidance on the amount and type of evidence required at the Professional Review.
- The Institute has used the general '*Competence and Commitment*' statements and guidance as guidance, and then developed them into more precise and relevant criteria, using the technology and language of the health sector. Ideally, it is these converted statements that candidates will use to develop their portfolios. These statements can be found in Annex CB, 'Threshold Standards of Competence and Commitments for Chartered Engineers'.

### Professional Review

- A Professional Review Interview (PRI) is the process by which the final judgement for professional registration is made. Before a candidate is presented for review, administrative and peer judgements will have been made to ensure that there is a prima facie case. This prior clearance both reduces the work to be done by the Professional Review Assessors and highlights the particular contribution they have to make.
- Professional Reviews are of different complexity, and are sometimes described in six categories (see Figure 2). This need not directly concern individual candidates, except to explain why different reviews may well have focused on different areas and perhaps taken various lengths of time.

Category and Route to Professional Registration	Candidate's Starting Position in terms of accreditation, approval etc	Key Work to be demonstrated within the Professional Review Process
Standard Route	Accredited Educational Base and Professional Development Scheme	Assess experience and capability for adequate range and level against competence criteria.  Test Commitment to Codes of Conduct, Risk, CPD and Environment
Standard Route	Has mutually recognised non-UK qualification or other recognised status	As for Category '1' plus: Test ability to operate in the UK legal, professional and business environment
Standard or Individual Route	Education Base, or Initial Professional Development (IPD) is approved, and not 'accredited'	As for Category '1' plus: Test outcome of 'approved' aspect against competence criteria for relevance and suggest Individual route to registration
Standard or Individual Route	Seeks professional registration in another section of the register	As for Category '1' in new context plus:  a. Seek evidence of subsequent Professional Development  b. Evaluate that evidence and validate by further questioning, if necessary  Suggest Individual route to professional registration if further qualifications required
Individual Route	Educational Base or IPD is 'individual' and not accredited or approved	As for category '1' plus:  a. Seek evidence of prior formal assessment of the 'Individual' aspect for range and required level

		b. Evaluate that evidence and validate by further questioning, if necessary  Suggest Individual route to professional registration
Individual Route	No Educational Base	Individual route to professional registration  If successful then as Category 1

Figure 2

### Preparation by the Candidate

- The first stage of preparation is for the candidate to make contact with the Membership department at IHEEM to determine if their qualifications exemplify the required knowledge and understanding of a Chartered Engineer and if not, advice on the appropriate route(s) available.

Under the UK-SPEC regulations, there are two routes available for candidates to register as Professional Engineers, Standard and Individual. These are determined by the applicant's educational base.

Applicants who do not have exemplifying qualifications, knowledge and understanding, may do so in other ways, but must clearly demonstrate they have achieved the same level of academic learning, knowledge and understanding as those with exemplifying qualifications. The Membership department will advise candidates on available alternatives.

- It is not possible to register with the Engineering Council other than through a nominated Institution. Whilst the principles are the same, and all nominated Institutions must meet the UK-SPEC criteria as minima, there are some differences between the Institutes, both in the way the common requirements are expressed and in the way compliance is tested.
- In principle, there is nothing that the Professional Review assessors can assess which the candidates cannot determine for themselves.

The criteria describe competence statements which, through development by IHEEM, are written in a way which relates to the technology and culture of the candidate's employment in the healthcare sector.

- It is the intent that UK-SPEC gives opportunities for candidates to demonstrate their competence and commitment against objective criteria.
- Candidates must discuss with a member of staff in the Membership department of IHEEM the most appropriate section of the professional register for their application (i.e. EngTech, IEng or CEng registration). It is too easy to assume that this has been pre-determined by the educational course taken. Having completed an educational course, which has been accredited for a particular section, is a good start, but by no means pre-determines the outcome. It is also necessary to consider:
  - Whether the course was accredited for the full educational base criteria or, would need to be supplemented by further learning;
  - The relevance of the subject area of the educational course;
  - The candidates' Initial Professional Development and experience of professional work, in relation to the selected section of the register and class of membership

It is the assessed **Competence and Commitment**, which counts, not just the courses undertaken or qualifications achieved.

## Organising the Evidence

17. The judgements made about the candidate, both within IHEEM's membership administration and at the Professional Review Interview, are based on evidence submitted by candidates in support of their case. In organising their evidence for the Professional Review, candidates should refer to Annex CB, Threshold Standards of Competence and Commitments for Chartered Engineers, which is included in this document. To match the objectives, candidates are advised to choose a small but significant number of projects or work activities in which they have been engaged. Ideally, these will be activities which:
  - Provide some 'hard evidence' for the reviewers, for example in the form of design studies, data sets, calculations, drawings, defect investigations, project plans, artefacts, photographs, computer programs etc.
  - Are the candidate's own work; or larger pieces of work in which the candidate's personal contribution is identified and substantiated;
  - Demonstrate each of the A1 to E5 'Competence and Commitment Statements' detailed in Annex CA of this document.
18. When compiling the report, candidates should use examples from their own experience within the healthcare environment to ensure that each of the UK-SPEC A-E statements are covered and cross referenced to the competency statement letters and numbers. When documenting their responsibilities against each of the competencies, candidates may find that some aspects of their involvement within certain projects cover more than one of the A-E statements. Each statement referred to must be referenced within the report next to the example given.
19. As an example, an Environmental Impact Assessment might be presented as part of the technical aspect of the project. It may also provide evidence for E2 and E3, with regards to ensuring systems satisfy requirements, whilst maintaining and enhancing the quality of the environment and community. Some of the 'communication' aspects of D1, D2 and D3 may also be found within this example. If some new learning was required in the project, there will be evidence, which can be used for E4 relating to Continuing Professional Development (CPD).
20. There is of course, a danger of putting too much reliance on one project. Professional registration is not narrow and job specific; it requires a breadth of experience and an ability to transfer capability from one area of work to another. So the candidate also needs to be able to demonstrate a reasonable range of work. For most people it would be difficult, if not impossible, to build the whole case on direct evidence which is transportable to the Professional Review venue. Planning ahead will provide several different approaches. For example:
  - Candidates who have studied an accredited further learning qualification, followed by an appropriate professional development programme, will not have to provide as much information within the report at the Professional Review stage, providing that they demonstrate that the required level of competence has been met.
  - Candidates who are seeking registration in a less structured manner, in mid-career, will need to read and understand the 'competence and commitment' statements, and then assemble sufficient relevant evidence from current and former work.
  - Candidates may well need to approach former work colleagues, clients or managers and ask them formally to certify work, which has been done in the past. These referees should not (and will not) be asked to make a judgement on a candidate, but only confirm (usually in writing) whether certain 'outcomes' were achieved and, if so, with what degree of reliability, repeatability etc. It is the Professional Review panel members who make a holistic judgement and come to a registration recommendation. This is based on all of the evidence; any single piece will rarely provide sufficient basis for a decision.
  - No matter what retrospective evidence and records are presented for the Professional Review, there will always be a requirement for evidence of reflection upon past work, evaluation of future needs and some form of action planning. Candidates must provide a completed Development Action Plan (CPD log report), as part of the evidence submitted for consideration at the Professional Review Interview.

21. No matter how much original material is available, it will only be valuable if it is indexed, cross-referenced and organised against the A1 to E5 criteria. Candidates must demonstrate that they have an understanding of each of the competencies, evidenced by describing personal involvement. Candidates are invited to provide hard evidence, such as designs and drawings, to complement their report at the Professional Review Interview. Guidance will be given as to what will be required at the interview, and what might be seen in advance to assist authentication.

**It is advisable to submit a Professional review report in the format shown in Annex CB of this document regarding Professional Development Objectives, as this clearly shows the objective statement number referred to whilst detailing evidence in a separate column.**

## **A FINAL WORD TO CANDIDATES**

22. When a report has been reviewed and found to be appropriate, candidates will then need to attend a Professional Review Interview, which is the final stage of assessment of competence and commitment prior to registration. It is up to the candidate to demonstrate that the criteria have been satisfied. Guidance is available from the Membership department at IHEEM.
23. For a successful outcome – evidence of meeting A1 to E5 competence and commitment statements in a sensible and balanced way is essential. That case must finally be proved by the candidate, by virtue of the material presented, and by the candidate's performance at the Professional Review Interview.

### **References:**

- i. UK Standard for Professional Engineering Competence. Information may also be found on [www.engc.org.uk/ukspec](http://www.engc.org.uk/ukspec)
- ii. Competence and Commitment statements (CEng) listed in Annex CA
- iii. Professional Development Objectives (CEng) listed in Annex CB

Note: This document makes reference to UK-SPEC (3<sup>rd</sup> Edition) published January 2014. Candidates have 2 years from this date to complete their registration under the previous edition.

## Competence and Commitment Statements

## Annex CA

**Chartered Engineers** must be competent throughout their working life, by virtue of their education, training and experience, to:

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

A1. Maintain and extend a sound theoretical approach in enabling the introduction and exploitation of new and advancing technology.

*This could include an ability to:*

- Identify the limits of own personal knowledge and skills
- Strive to extend own technological capability
- Broaden and deepen own knowledge base through research and experimentation

A2. Engage in the creative and innovative development of engineering technology and continuous improvement systems.

*This could include an ability to:*

- Assess market needs and contribute to marketing strategies
- Identify constraints and exploit opportunities for the development and transfer of technology within own chosen field
- Promote new applications when appropriate
- Secure the necessary intellectual property (IP) rights
- Develop and evaluate continuous improvement systems

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

B1. Identify potential projects and opportunities.

*This could include an ability to:*

- Establish and help develop solutions to meet users' requirements
- Consider and implement new and emerging technologies
- Enhance engineering practices, products, processes, systems and services
- Use own knowledge of the employer's position to assess the viability of opportunities

B2. Conduct appropriate research, and undertake design and development of engineering solutions.

*This could include an ability to:*

- Identify and agree appropriate research methodologies
- Allocate and manage resources
- Develop the necessary tests
- Collect, analyse and evaluate the relevant data
- Undertake engineering design
- Prepare, present and agree design recommendations, with appropriate analysis of risk, and taking account of cost, quality, safety, reliability, appearance, fitness for purpose, security, intellectual property (IP) constraints and opportunities, and environmental impact

B3. Manage implementation of design solutions, and evaluate their effectiveness.

*This could include an ability to:*

- Ensure that the application of the design results in the appropriate practical outcome
- Implement design solutions, taking account of critical constraints, including due concern for safety and sustainability
- Determine the criteria for evaluation the design solutions
- Evaluate the outcome against the original specification
- Actively learn from feedback on results to improve future design solutions and build best practice

**C. Provide technical and commercial leadership.**

C1. Plan for effective project implementation.

*This could include an ability to:*

- Systematically review the factors affecting the project implementation including safety and sustainability considerations
- Define a holistic and systematic approach to risk identification, assessment and management
- Lead on preparing and agreeing implementation plans and method statements
- Ensure that the necessary resources are secured and brief the project team
- Negotiate the necessary contractual arrangements with other stakeholders (client, subcontractors, suppliers, etc)

C2. Plan, budget, organise, direct and control tasks, people and resources.

*This could include an ability to:*

- Set up an appropriate management systems
- Define quality standards, programme and budget within legal and statutory requirements
- Organise and lead work teams, co-ordinating project activities
- Ensure that variations from quality standards, programme and budgets are identified, and that corrective action is taken
- Gather and evaluate feedback, and recommend improvements

C3. Lead teams and develop staff to meet changing technical and managerial needs.

*This could include an ability to:*

- Agree objectives and work plans with teams and individuals
- Identify team and individual needs, and plan for their development
- Lead and support team and individual development
- Assess team and individual performance, and provide feedback

C4. Bring about continuous improvement through quality management

*This could include an ability to:*

- Promote quality throughout the organisation and its customer and supplier networks
- Develop and maintain operations to meet quality standards
- Direct project evaluation and propose recommendations for improvement.



**D. Demonstrate effective interpersonal skills.**

D1. Communicate in English with others at all levels

*This could include an ability to:*

- Lead, chair, contribute to and record meetings and discussions
- Prepare communications, documents and reports on complex matters
- Exchange information and provide advice to technical and non-technical colleagues

D2. Present and discuss proposals.

*This could include an ability to:*

- Prepare and deliver appropriate presentations on strategic matters
- Lead and sustain debates with audiences
- Feed the results back to improve the proposals.
- Raise the awareness of risk

D3. Demonstrate personal and social skills.

*This could include an ability to:*

- Know and manage own emotions, strengths and weaknesses
- Be aware of the needs and concerns of others especially where related to diversity and equality
- Be confident and flexible in dealing with new and changing interpersonal situations
- Identify, agree and lead work towards collective goals
- Create, maintain and enhance productive working relationships and resolve conflicts

**E. Demonstrate a personal commitment to professional standards, recognising obligations to society, the profession and the environment.**

E1. Comply with relevant codes of conduct.

*This could include an ability to:*

- Comply with the rules of professional conduct of own professional body
- Lead work within all relevant legislation and regulatory frameworks, including social and employment legislation.

E2. Manage and apply safe systems of work.

*This could include an ability to:*

- Identify and take responsibility for own obligations for health, safety and welfare issues
- Ensure that systems satisfy health, safety and welfare requirements
- Develop and implement appropriate hazard identification and risk management systems and culture
- Manage, evaluate and improve these systems
- Apply a sound knowledge of health and safety legislation

E3. Undertake engineering activities in a way that contributes to sustainable development.

*This could include an ability to:*

- Operate and act responsibly, taking account of the need to progress environmental, social and economic outcomes simultaneously
- Use imagination, creativity and innovation to provide products and services which maintain and enhance the quality of the environment and community, and meet financial objectives
- Understand and secure stakeholder involvement in sustainable development
- Use resources efficiently and effectively

E4. Carry out and record CPD necessary to maintain and enhance competence in own area of practice including;

*This could include an ability to:*

- Undertake reviews of own development needs
- Plan how to meet personal and organisational objectives
- Carry out planned (and unplanned) CPD activities
- Maintain evidence of competence development
- Evaluate CPD outcomes against any plans made
- Assist others with their own CPD

E5. Exercise responsibilities in an ethical manner

## Chartered Engineer – Threshold Standards of Competence and Commitment

Italics represent Engineering Council Generic Standard and Guidance, other fonts represents IHEEM's interpretation of competent statements and skills to be demonstrated.

	Engineering Council Generic Standards	Engineering Council Generic Guidance	IHEEM's Healthcare Standards
<b>A</b>	<b><i>Use a combination of general and specialist engineering knowledge and understanding to optimise the application of existing and emerging technology.</i></b>		<b>Use a combination of general and specialist engineering knowledge and understanding to optimise the application of existing and emerging technology in the fields of Specialist Medical Healthcare Equipment/Engineering Services, Building Services engineering design, installation and maintenance – Heating, Hot and Cold Water, Ventilation and Air Conditioning.</b>
A1	<i>Maintain and extend a sound theoretical approach in enabling the introduction and exploitation of new and advancing technology</i>	<i>Engage in formal post-graduate academic study. Learn and develop new engineering theories and techniques in the workplace. Broaden your knowledge of engineering codes, standards and specifications.</i>	Undertake studies of engineering healthcare services; learn and develop new engineering theories and techniques associated with these services. Demonstrate the use and understanding of Hospital Technical Memorandum codes of practice.
A2	<i>Engage in the creative and innovative development of engineering technology and continuous improvement systems.</i>	<i>Lead/manage market research, and product and process research and development. Cross disciplinary working involving complex projects. Conduct statistically sound appraisal of data. Use evidence from best practice to improve effectiveness.</i>	Demonstrate through the use of Healthcare engineering project examples, involvement with creative and innovative developments. Describe multi disciplinary working arrangements in respect of a particular project. Demonstrate techniques that are used to appraise data leading to the selection of a particular project or engineering solution. e.g Net present worth or option appraisal processes.

			Demonstrate the use of continuous improvement by the use of quality systems.
<b>B</b>	<b><i>Apply appropriate theoretical and practical methods to the analysis and solution of engineering problems.</i></b>		<b>Give examples of design interpretation including calculations design documentation and technical specifications, within one or more of the range of healthcare engineering applications. Also show where engineering options were analysed which lead to the implementation of a particular scheme. Business cases, Present worth analysis and other like models could be used to demonstrate competence in this area.</b>
<b>B1</b>	<i>Identify potential projects and opportunities.</i>	<i>Involvement in the marketing of and tendering for new engineering products, processes and systems. Involvement in the specification and procurement of new engineering products, processes and systems. Set targets, and draft programmes and action plans. Schedule activities.</i>	Describe one or two significant engineering projects and opportunities that you have identified and developed to a satisfactory conclusion from concept, design, specification and tender.
<b>B2</b>	<i>Conduct appropriate research and undertake design and development of engineering solutions</i>	<i>Carry out formal theoretical research. Evaluate numerical and analytical tools. Carry out applied research on the job. Lead/manage value engineering and whole life costing. Lead design teams. Draft specifications. Develop and test options. Identify resources and costs of options. Produce concept designs, and develop these into detailed designs. Be aware of IP constraints and opportunities.</i>	Describe any involvement with research, design and development of engineering solutions, describing particularly how the research was carried out and how the design was developed using mathematical and computer based models. Describe involvement with value engineering and whole life cycle costing.

B3	<i>Implement design solutions and evaluate their effectiveness</i>	<i>Follow the design process through into product or service realisation and its evaluation. Prepare and present reports on the evaluation of the effectiveness of the designs, including risk, safety and life cycle considerations. Manage product improvement. Interpret and analyse performance. Determine critical success factors.</i>	Describe by reference to a project the process of implementing a particular engineering design solution and how the criteria were developed for use with the evaluation process.
<b>C</b>	<b><i>Provide technical and commercial leadership</i></b>		<b>Show details of senior positions held in an organisation demonstrating technical and commercial leadership.</b>
C1	<i>Plan for effective project implementation.</i>	<i>Lead/manage project planning activities. Produce and implement procurement plans. Carry out project risk assessments. Collaborate with key stakeholders, and negotiate agreement to the plans. Plan programmes and delivery of tasks. Identify resources and costs. Negotiate and agree contracts/work orders.</i>	Describe the implementation plan for an engineering project undertaken. Describe involvement with risk assessment processes and collaboration with key stakeholders involved with a particular project.
C2	<i>Plan budgets, organise, direct and control tasks, people and resources.</i>	<i>Take responsibility for and control project operations. Manage the balance between quality, cost and time. Manage contingency systems. Manage project funding, payments and recovery. Satisfy legal and statutory obligations. Lead/manage tasks within identified financial, commercial and regulatory constraints.</i>	Describe how a particular project was implemented, particularly how costs, quality and project timing were controlled.
C3	<i>Lead teams and develop staff to meet changing technical and managerial needs.</i>	<i>Carry out/contribute to staff appraisals. Plan/contribute to the training and development of staff. Gather evidence from colleagues of the management, assessment and feedback that you have provided.</i>	Describe roles where staff development was an essential element of responsibility and the techniques used to guide and develop staff.

		<i>Carry out/contribute to disciplinary procedures.</i>	
<b>C4</b>	<i>Bring about continuous improvement through quality management</i>	<i>Plan and implement best practice methods of continuous improvement, e.g. ISO 9000, EFQM, balanced scorecard. Carry out quality audits. Monitor, maintain and improve delivery. Identify, implement and evaluate changes to meet quality objectives.</i>	Describe involvement with Quality Systems and how they led to continuous improvements.
<b>D</b>	<b><i>Demonstrate effective interpersonal skills</i></b>		<b>Written and verbal communications will be assessed through all elements of the professional review process.</b>
<b>D1</b>	<i>Communicate in English with others at all levels</i>	<i>Reports, letters, emails, drawings, specifications and working papers (e.g. meeting minutes, planning documents, correspondence) in a variety of formats. Engaging or interacting with professional networks.</i>	<p>Demonstrate the ability to communicate-</p> <ul style="list-style-type: none"> <li>• With colleagues at all levels - Boards, Superiors, Subordinates etc.</li> <li>• Chairing and recording discussions of meetings.</li> <li>• Preparing letters documents and reports.</li> <li>• Exchanging information and providing advice to technical and non-technical colleagues.</li> <li>•</li> </ul>
<b>D2</b>	<i>Present and discuss proposals</i>	<i>Presentations, records of discussions and their outcomes.</i>	<p>Demonstrate the ability to present and discuss proposals by-</p> <ul style="list-style-type: none"> <li>• Preparing and delivering appropriate presentations</li> <li>• Leading and sustaining debate with audiences</li> <li>• Feeding the results back to improve the proposals</li> </ul>

D3	<i>Demonstrate personal and social skills</i>	<i>Records of meetings.</i> <i>Evidence from colleagues of your personal and social skills.</i> <i>Take responsibility for productive working relationships.</i> <i>Apply diversity and anti-discrimination legislation.</i>	<p>The following examples could be used to demonstrate these competencies-</p> <ul style="list-style-type: none"> <li>• Know and manage own emotions, strengths and weaknesses</li> <li>• Be aware of the needs and concerns of others</li> <li>• Be confident and flexible in dealing with new and changing interpersonal situations.</li> <li>• Identify and work towards collective goals.</li> <li>• Resolve conflicts and create, maintain and enhance productive working relationships.</li> </ul>
E	<b><i>Demonstrate a personal commitment to professional standards, recognising obligations, to society, the profession and the environment</i></b>		<b>Your commitment will be to become part of the engineering profession and uphold standards to which all members subscribe. You need to show that you have read and understand IHEEM's Code of conduct.</b>
E1	<i>Comply with relevant codes of conduct.</i>	<i>Work with a variety of conditions of contract.</i> <i>Demonstrate initiative in and commitment to the affairs of your professional body.</i>	Read and demonstrate understanding of the Institutes code of conduct by describing the requirements in your submission. Include references to conduct with relation to codes used in the Health Service, e.g. Hospital Technical Memorandums etc.
E2	<i>Manage and apply safe systems of work</i>	<i>Undertake formal H&amp;S training.</i> <i>Work with H&amp;S legislation and best practice, e.g. HASAW 1974, CDM regs, OHSAS 18001:2007 and company safety policies.</i> <i>Carry out safety audits.</i> <i>Identify and minimise hazards.</i> <i>Assess and control risks.</i> <i>Evaluate the costs and benefits of safe working.</i>	Give examples of managing and applying Health and Safety issues, COSHH, CDM and risk assessments. All NHS Trusts and Companies will have a systematic approach to these and other safety standards and regulations (European, National, Local and Organisational). The development and use of permit to work systems could also apply to this area of competence.

		<i>Deliver strategic H&amp;S briefings and inductions.</i>	
E3	<i>Undertake engineering activities in a way that contributes to sustainable development</i>	<i>Carry out environmental impact assessments. Carry out environmental risk assessments.</i> <i>Plan and implement best practice environmental management systems, e.g. ISO 14000.</i> <i>Manage best practice risk management systems e.g. ISO 31000.</i> <i>Work within environmental legislation.</i> <i>Adopt sustainable practices. Achieve social, economic and environmental outcomes.</i>	Give examples of environmental assessments, energy conservation and waste management initiatives. Indicate where stakeholders were involved.
E4	<i>Carry out and record CPD necessary to maintain and enhance competence in own area of practice</i>	<i>Keep up to date with national and international engineering issues.</i> <i>Maintain CPD plans and records.</i> <i>Involvement with the affairs of your professional body.</i> <i>Evidence of your development through on-the-job learning, private study, in-house courses, external courses and conferences.</i>	Your submission should show how you have kept yourself up to date with new technologies and methods of working. E.g. Educational study, company demonstrations, reading of Journals etc. Once a member of IHEEM, attend Branch meetings and seminars. Indicate where reviews have been undertaken of particular individual development needs. CPD is an obligatory requirement of maintaining registration. IHEEM National officers can give advice on all aspects of CPD
E5	<i>Exercise responsibilities in an ethical manner</i>	<i>Give an example of where you have applied ethical principles as described in the Statement of Ethical Principles on page 33 of UK-SPEC (3<sup>rd</sup> Edition – 2014)</i> <i>Give an example of where you have applied/upheld ethical principles as defined by your organisation or company, which may be in its company or brand values.</i>	