

PROFESSIONAL INSTITUTION REGISTRATION

UK - SPEC CHARTERED ENGINEER

STANDARDS OF COMPETENCE AND COMMITMENT FOR CHARTERED ENGINEERS	
<p>Chartered Engineers must be competent throughout their working life, by virtue of their education, training and experience, to:</p>	
A	<p>Use a combination of general and specialist engineering knowledge and understanding to optimise the application of existing and emerging technology.</p>
A1	<p>Maintain and extend a sound theoretical approach in enabling the introduction and exploitation of new and advancing technology and other relevant developments.</p> <p><i>This could include an ability to:</i></p> <ul style="list-style-type: none"> ▪ 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	<p>Engage in the creative and innovative development of engineering technology and continuous improvement systems.</p> <p><i>This could include an ability to:</i></p> <ul style="list-style-type: none"> ▪ Establish users' needs ▪ Assess marketing 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 rights ▪ Develop and evaluate continuous improvement systems
B	<p>Apply appropriate theoretical and practical methods to the analysis and solution of engineering problems.</p>
B1	<p>Identify potential projects and opportunities.</p> <p><i>This could include an ability to:</i></p> <ul style="list-style-type: none"> ▪ Explore the territory within own responsibility for new opportunities ▪ Review the potential for enhancing engineering products, processes, systems and services ▪ Use own knowledge of the employer's position to assess the viability of opportunities

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<p>B2</p>	<p>Conduct appropriate research, and undertake design and development of engineering solutions.</p> <p><i>This could include an ability to:</i></p> <ul style="list-style-type: none"> ▪ Identify and agree appropriate research methodologies ▪ Assemble the necessary resources ▪ Carry out the necessary tests ▪ Collect, analyse and evaluate the relevant data ▪ Draft, present and agree design recommendations o <p>Undertake engineering design</p>
<p>B3</p>	<p>Implement design solutions, and evaluate their effectiveness.</p> <p><i>This could include an ability to:</i></p> <ul style="list-style-type: none"> ▪ Ensure that the application of the design results in the appropriate practical outcome ▪ Identify the required cost, quality, safety, reliability, appearance, fitness for purpose and environmental impact of the outcome ▪ Determine the criteria for evaluating 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
<p>C</p>	<p>Provide technical and commercial leadership.</p>
<p>C1</p>	<p>Plan for effective project implementation.</p> <p><i>This could include an ability to:</i></p> <ul style="list-style-type: none"> ▪ Identify the factors affecting the project implementation ▪ 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.)
<p>C2</p>	<p>Plan, budget, organise, direct and control tasks, people and resources.</p> <p><i>This could include an ability to:</i></p> <ul style="list-style-type: none"> ▪ Set up appropriate management systems ▪ Agree quality standards, programme and budget ▪ Organise and lead work teams, coordinating 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

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C3	<p>Lead teams and develop staff to meet changing technical and managerial needs.</p> <p><i>This could include an ability to:</i></p> <ul style="list-style-type: none"> ▪ 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	<p>Bring about continuous improvement through quality management.</p> <p><i>This could include an ability to:</i></p> <ul style="list-style-type: none"> ▪ 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	<p>Demonstrate effective Interpersonal Skills.</p>
D1	<p>Communicate in English with others at all levels.</p> <p><i>This could include an ability to:</i></p> <ul style="list-style-type: none"> ▪ Contribute to, chair and record meetings and discussions ▪ Prepare letters, documents and reports ▪ Exchange information and provide advice to technical and non-technical colleagues
D2	<p>Present and discuss proposals.</p> <p><i>This could include an ability to:</i></p> <ul style="list-style-type: none"> ▪ Prepare and deliver appropriate presentations ▪ Lead and sustain debates with audiences ▪ Feed the results back to improve the proposals
D3	<p>Demonstrate personal and social skills.</p> <p><i>This could include an ability to:</i></p> <ul style="list-style-type: none"> ▪ Know and manage own emotions, strengths and weaknesses ▪ Be aware of the needs and concerns of others ▪ Be confident and flexible in dealing with new and changing interpersonal situations ▪ Identify, agree and work towards collective goals ▪ Resolve conflicts and create, maintain and enhance productive working relationships

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<p>E</p>	<p>Demonstrate a personal commitment to professional standards, recognising obligations to society, the profession and the environment.</p>
<p>E1</p>	<p>Comply with relevant codes of conduct.</p> <p><i>This could include an ability to:</i></p> <ul style="list-style-type: none"> ▪ Comply with the rules of professional conduct of own professional body ▪ Work constructively within all relevant legislation and regulatory frameworks, including social and employment legislation
<p>E2</p>	<p>Manage and apply safe systems of work.</p> <p><i>This could include an ability to:</i></p> <ul style="list-style-type: none"> ▪ 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 ▪ Manage, evaluate and improve these systems
<p>E3</p>	<p>Undertake engineering activities in a way that contributes to sustainable development.</p> <p><i>This could include an ability to:</i></p> <ul style="list-style-type: none"> ▪ 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 encourage stakeholder involvement
<p>E4</p>	<p>Carry out continuing professional development necessary to maintain and enhance competence in own area of practice.</p> <p><i>This could include an ability to:</i></p> <ul style="list-style-type: none"> ▪ Undertake reviews of own development needs ▪ Prepare action plans to meet personal and organisational objectives ▪ Carry out planned (and unplanned) CPD activities ▪ Maintain evidence of competence development ▪ Evaluate CPD outcomes against the action plans ▪ Assist others with their own CPD