

CEng Competence Statement

CONFIDENTIAL WHEN COMPLETE
STATEMENT OF COMPETENCES TO BE FILLED IN BY APPLICANTS FOR CEng
TO BE RETURNED WITH YOUR APPLICATION FORM

The following information provides examples showing how you consider that you meet the competences for Chartered Engineer as set out in the Engineering Council UK Standard for Professional Engineering Competence and Commitment (UK-SPEC) Fourth Edition.

You may use as few or as many words as you feel are appropriate to convey your evidence for each competency. However, it would be appreciated if you could keep it short and concise at under 300 words per competence.

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 advanced and complex systems.

A1. Maintained and extended a sound theoretical approach to enable you to develop your particular role.

Examples of evidence:

- Formal training related to your role
- Learning and developing new engineering knowledge in a different industry or role
- Understanding the current and emerging technology and technical best practice in your area of expertise
- Developing a broader and deeper knowledge base through research and experimentation
- Learning and developing new engineering theories and techniques in the workplace

Please type your responses below:

A2. Developing technological solutions to unusual or challenging problems, using knowledge and understanding and/or dealing with complex technical issues or situations with significant levels of risk.

Examples of evidence:

- Carrying out technical research and development
- Developing new designs, processes or systems based on new or evolving technology
- Carrying out complex and/or non-standard technical analysis
- Developing solutions involving complex or multi-disciplinary technology
- Developing and evaluating continuous improvement systems
- Developing solutions in safety-critical industries or applications

Please type your responses below:

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

B1. Take an active role in the identification and definition of project requirements, problems and opportunities.

Examples of evidence:

- Identifying projects or technical improvements to products, processes, or systems
- Preparing specifications, taking account of functional and other requirements
- Establishing user requirements
- Reviewing specifications and tenders to identify technical issues and potential improvements
- Carrying out technical risk analysis and identifying mitigation measures
- Considering and implementing new and emerging technologies

Please type your responses below:

B2. Identify the appropriate investigations and research needed to undertake the design, development and analysis required to complete an engineering task and conduct these activities effectively.

Examples of evidence:

- Identifying and agreeing appropriate research methodologies
- Investigating a technical issue, identifying potential solutions, and determining the factors needed to compare them
- Identifying and carrying out physical tests or trials and analysing and evaluating the results
- Carrying out technical simulations or analysis
- Preparing, presenting, and agreeing design recommendations, with appropriate analysis of risk, and taking account of cost, quality, safety, reliability, accessibility, appearance, fitness for purpose, security (including cyber security), intellectual property constraints and opportunities, and environmental impact

Please type your responses below:

B3. Implement engineering tasks and evaluate the effectiveness of engineering solutions.

Examples of evidence:

- Ensuring that the application of the design results in the appropriate practical outcome
- Implementing design solutions, taking account of critical constraints, including due concern for safety, sustainability and disposal or decommissioning
- Identifying and implementing lessons learned
- Evaluating existing designs or processes and identifying faults or potential improvements including risk, safety and life cycle considerations
- Actively learning from feedback on results to improve future design solutions and build best practice

Please type your responses below:

C. Demonstrate technical and commercial leadership.

C1. Plan the work and resources needed to enable effective implementation of a significant engineering task or project.

Examples of evidence:

- Preparing budgets and associated work programmes for projects or tasks
- Systematically reviewing the factors affecting the project implantation including safety, sustainability and disposal or decommissioning considerations
- Carrying out a task or project risk assessment and identifying mitigation measures
- Leading on preparing and agreeing implementation plans and method statements
- Negotiating and agreeing arrangements with customers, colleagues, contractors, and other stakeholders, including regulatory bodies
- Ensuring that information flow is appropriate and effective

Please type your responses below:

C2. Manage (organise, direct and control) programme or schedule, budget and resource elements of a significant engineering task or project.

Examples of evidence:

- Operating or defining appropriate management systems including risk registers and contingency systems
- Managing the balance between quality, cost, and time
- Monitoring progress and associated costs and cost forecasts, taking appropriate actions when required
- Establishing and maintaining appropriate quality standards within legal and statutory requirements
- Interfacing effectively with customers, contractors, and other stakeholders

Please type your responses below:

C3. Lead teams or technical specialisms and assist others to meet changing technical and managerial needs.

Examples of evidence:

- Agreeing objectives and work plans with teams and individuals
- Reinforcing team commitment to professional standards
- Leading and supporting team and individual development
- Assessing team and individual performance, and providing feedback
- Seeking input from other teams or specialists where needed and managing the relationship
- Providing specialist knowledge, guidance and input in your specialism to engineering teams, engineers, customers, management and relevant stakeholders
- Developing and delivering a teaching module at Masters level, or leading a University research programme

Please type your responses below:

C4. Bring about continuous quality improvement and promote best practice.

Examples of evidence:

- Promoting quality throughout the organisation as well as its customer and supplier networks
- Developing and maintaining operations to meet quality standards eg ISO 9000, EQFM
- Supporting or directing project evaluation and proposing recommendations for improvements
- Implementing and sharing the results of lessons learned

Please type your responses below:

D. Demonstrate effective communication and interpersonal skills.

D1. Communicate effectively with others, at all levels, in English.

Examples of evidence:

- Preparing reports, drawings, specifications and other documentation on complex matters
- Leading, chairing, contributing to and recording meetings and discussions
- Exchanging information and providing advice to technical and non-technical colleagues
- Engaging or interacting with professional networks

Please type your responses below:

D2. Clearly present and discuss proposals, justifications and conclusions.

Examples of evidence:

- Contributing to scientific papers or articles as an author
- Preparing and delivering presentations on strategic matters
- Preparing bids, proposals or studies
- Identifying, agreeing and leading work towards collective goals

Please type your responses below:

D3. Demonstrate personal and social skills and awareness of diversity and inclusions issues.

Examples of evidence:

- Knowing and managing own emotions, strengths and weaknesses
- Being confident and flexible in dealing with new and changing interpersonal situations
- Identifying, agreeing and working towards collective goals
- Creating, maintaining and enhancing productive working relationships, and resolving conflicts
- Being supportive of the needs and concerns of others, especially where this relates to diversity and inclusion

Please type your responses below:

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

E1. Understand and comply with relevant codes of conduct.

Examples of evidence:

- Demonstrating compliance with your Licensee's Code of Professional Conduct
- Identifying aspects of the Code which are particularly relevant to your role
- Being aware of the legislative and regulatory frameworks relevant to your role and how they conform to them
- Leading work within relevant legislation and regulatory frameworks, including social and employment legislation

Please type your responses below:

E2. Understand the safety implications of your role and manage, apply and improve safe systems of work.

Examples of evidence:

- Identifying and taking responsibility for your own obligations and ensuring that others assume similar responsibility for health, safety and welfare issues
- Ensuring that systems satisfy health, safety and welfare requirements
- Developing and implementing appropriate hazard identification and risk management systems and culture
- Managing, evaluating and improving these systems
- Applying a sound knowledge of health and safety legislation, for example: HASAW 1974, CDM regulations, ISO 45001 and company safety policies

Please type your responses below:

E3. Understand the principles of sustainable development and apply them in your work.

Examples of evidence:

- Operating and acting responsibly, taking account of the need to progress environmental, social and economic outcomes simultaneously
- Providing products and services which maintain and enhance the quality of the environment and community, and meet financial objectives
- Recognising how sustainability principles, as described in the Guidance on Sustainability on page 48 can be applied to your day-to-day work
- Understanding and securing stakeholder involvement in sustainable development
- Using resources efficiently and effectively in all activities
- Taking action to minimise environmental impact in your area of responsibility

Please type your responses below:

E4. Carry out and record the Continuing Professional Development (CPD) necessary to maintain and enhance competence in your own area of practice.

Examples of evidence:

- Undertaking reviews of your own development needs
- Planning how to meet personal and organisational objectives
- Carrying out planned and unplanned CPD activities
- Maintaining evidence of competence development
- Evaluating CPD outcomes against any plans made
- Assisting other with their own CPD

Please type your responses below:

E5. Understand the ethical issues that may arise in your role and carry out responsibilities in an ethical manner.

Examples of evidence:

- Understand the ethical issues that you may encounter in your role
- Giving an example of where you have applied ethical principles as described in the Statement of Ethical Principles on page 47
- Giving an example of where you have applied, or upheld ethical principles as defined by your organisation or company

Please type your responses below: