



Taken from the UK Standard for Professional Engineering Competence and Commitment (UK-SPEC)

Fourth edition

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Professional registration

Achieving professional registration as an Engineering Technician (EngTech), Incorporated Engineer (IEng), or Chartered Engineer (CEng) demonstrates that an engineer or technician has reached a set standard of knowledge, understanding and occupational competence.

Professional registration sets individual engineers and technicians apart from those who are not registered. Gaining a professional title establishes a person's proven knowledge, understanding and competence. Registration also demonstrates an individual's commitment to professional standards and to developing and enhancing competence through Continuing Professional Development (CPD).

The Engineering Council and UK-SPEC

The Engineering Council sets the Standards which need to be met for an individual to become professionally registered. The Engineering Council is the UK's regulatory body for the engineering profession. It operates under a Royal Charter and is governed by a Board that represents UK Licensees as well as individuals from industries and sectors with an interest in the regulation of the profession.

These competence statements are taken from the UK Standard for Professional Engineering Competence and Commitment (UK-SPEC), fourth edition. UK-SPEC forms part of the Standard used by the UK engineering profession to assess the competence and commitment of individual engineers and technicians. It was developed collaboratively in consultation with engineers representing the breadth of the profession, from industry, academia and many different disciplines and specialisms.

To download the full UK-SPEC document for free please visit the Engineering Council website: www.engc.org.uk/ukspec

Engineering Technician (EngTech)	Incorporated Engineer (IEng)	Chartered Engineer (CEng)
<p>Engineering Technicians apply proven techniques and procedures to the solution of practical engineering problems.</p> <p>Engineering Technicians shall demonstrate:</p> <ul style="list-style-type: none"> • Engineering knowledge and understanding to apply technical and practical skills • Evidence of their contribution to either the design, development, manufacture, commissioning, decommissioning, operation or maintenance of products, equipment, processes or services • Supervisory or technical responsibility • Effective interpersonal skills in communicating technical matters • The ability to operate in accordance with safe systems of work and to demonstrate appropriate understanding of the principles of sustainability • Commitment to professional engineering values. 	<p>Incorporated Engineers maintain and manage applications of current and developing technology, and may undertake engineering design, development, manufacture, construction and operation.</p> <p>Incorporated Engineers shall demonstrate:</p> <ul style="list-style-type: none"> • The theoretical knowledge to solve problems in developed technologies using well proven analytical techniques • Successful application of their knowledge to deliver engineering projects or services using established technologies and methods • Contribution to the financial and planning aspects of projects or tasks and to leading and developing other professional staff • Effective interpersonal skills in communicating technical matters • The ability to specify and operate to safe systems of work and to demonstrate appropriate consideration of the principles of sustainability • Commitment to professional engineering values. 	<p>Chartered Engineers develop solutions to complex engineering problems using new or existing technologies, and through innovation, creativity and technical analysis.</p> <p>Chartered Engineers shall demonstrate:</p> <ul style="list-style-type: none"> • The theoretical knowledge to solve problems in new and established technologies and to develop new analytical techniques • Successful application of the knowledge to deliver innovative products and services and/or taking technical responsibility for complex engineering systems • Responsibility for the financial and planning aspects of projects, sub-projects or tasks • Leadership and development of other professional staff through management, mentoring or coaching • Effective interpersonal skills in communicating technical matters • Understanding of the safety and sustainability implications of their work, seeking to improve aspects where feasible • Commitment to professional engineering values.

Engineering Technician (EngTech)	Incorporated Engineer (IEng)	Chartered Engineer (CEng)
<p>The Competence and Commitment Standard for Engineering Technicians</p> <p>Engineering Technicians must be competent throughout their working life, by virtue of their education, training and experience in the following ways:</p>	<p>The Competence and Commitment Standard for Incorporated Engineers</p> <p>Incorporated Engineers must be competent throughout their working life, by virtue of their education, training and experience in the following ways:</p>	<p>The Competence and Commitment Standard for Chartered Engineers</p> <p>Chartered Engineers must be competent throughout their working life, by virtue of their education, training and experience in the following ways:</p>
<p>A. Knowledge and understanding</p> <p>Engineering Technicians shall use engineering knowledge and understanding to apply technical and practical skills.</p>	<p>A. Knowledge and understanding</p> <p>Incorporated Engineers shall use a combination of general and specialist engineering knowledge and understanding to apply existing and emerging technology.</p>	<p>A. Knowledge and understanding</p> <p>Chartered Engineers shall use a combination of general and specialist engineering knowledge and understanding to optimise the application of advanced and complex systems.</p>
<p>The applicant shall demonstrate that they:</p>	<p>The applicant shall demonstrate that they:</p>	<p>The applicant shall demonstrate that they:</p>
<p>1. Review and select appropriate techniques, procedures and methods to undertake tasks</p>	<p>1. Have maintained and extended a sound theoretical approach to the application of technology in engineering practice</p>	<p>1. Have maintained and extended a sound theoretical approach to enable them to develop their particular role</p>
<p>2. Use appropriate scientific, technical or engineering principles.</p>	<p>2. Use a sound evidence-based approach to problem-solving and contribute to continuous improvement.</p>	<p>2. Are developing technological solutions to unusual or challenging problems, using their knowledge and understanding and/or dealing with complex technical issues or situations with significant levels of risk.</p>
<p>B. Design, development and solving engineering problems</p> <p>Engineering Technicians shall contribute to the design, development, manufacture, construction, commissioning, decommissioning, operation or maintenance of products, equipment, processes, systems or services.</p>	<p>B. Design, development and solving engineering problems</p> <p>Incorporated Engineers shall apply appropriate theoretical and practical methods to design, develop, manufacture, construct, commission, operate, maintain, decommission and recycle engineering processes, systems, services and products.</p>	<p>B. Design, development and solving engineering problems</p> <p>Chartered Engineers shall apply appropriate theoretical and practical methods to the analysis and solution of engineering problems.</p>
<p>The applicant shall demonstrate that they:</p>	<p>The applicant shall demonstrate that they:</p>	<p>The applicant shall demonstrate that they:</p>
<p>1. Identify problems and apply appropriate methods to identify causes and achieve satisfactory solutions</p>	<p>1. Identify, review and select techniques, procedures and methods to undertake engineering tasks</p>	<p>1. Take an active role in the identification and definition of project requirements, problems and opportunities</p>
<p>2. Identify, organise and use resources effectively to complete tasks, with consideration for cost, quality, safety, security and environmental impact.</p>	<p>2. Contribute to the design and development of engineering solutions</p>	<p>2. Can 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</p>
	<p>3. Implement design solutions for equipment or processes and contribute to their evaluation.</p>	<p>3. Can implement engineering tasks and evaluate the effectiveness of engineering solutions.</p>

Engineering Technician (EngTech)	Incorporated Engineer (IEng)	Chartered Engineer (CEng)
C. Responsibility, management and leadership Engineering Technicians shall accept and exercise personal responsibility.	C. Responsibility, management and leadership Incorporated Engineers shall provide technical and commercial management.	C. Responsibility, management and leadership Chartered Engineers shall provide technical and commercial leadership.
The applicant shall demonstrate that they:	The applicant shall demonstrate that they:	The applicant shall demonstrate that they:
1. Work reliably and effectively without close supervision, to the appropriate codes of practice	1. Plan the work and resources needed to enable effective implementation of engineering tasks and projects	1. Plan the work and resources needed to enable effective implementation of a significant engineering task or project
2. Accept responsibility for the work of themselves or others	2. Manage (organise, direct and control), programme or schedule, budget and resource elements of engineering tasks or projects	2. Manage (organise, direct and control), programme or schedule, budget and resource elements of a significant engineering task or project
3. Accept, allocate and supervise technical and other tasks.	3. Manage teams, or the input of others, into own work and assist others to meet changing technical and management needs	3. Lead teams or technical specialisms and assist others to meet changing technical and managerial needs
	4. Take an active role in continuous quality improvement.	4. Bring about continuous quality improvement and promote best practice.
D. Communication and interpersonal skills Engineering Technicians shall use effective communication and interpersonal skills.	D. Communication and interpersonal skills Incorporated Engineers shall demonstrate effective communication and interpersonal skills.	D. Communication and interpersonal skills Chartered Engineers shall demonstrate effective communication and interpersonal skills.
The applicant shall demonstrate that they:	The applicant shall demonstrate that they:	The applicant shall demonstrate that they:
1. Communicate effectively with others, at all levels, in English	1. Communicate effectively with others, at all levels, in English	1. Communicate effectively with others, at all levels, in English
2. Work effectively with colleagues, clients, suppliers or the public	2. Clearly present and discuss proposals, justifications and conclusions	2. Clearly present and discuss proposals, justifications and conclusions
3. Demonstrate personal and social skills and awareness of diversity and inclusion issues.	3. Demonstrate personal and social skills and awareness of diversity and inclusion issues.	3. Demonstrate personal and social skills and awareness of diversity and inclusion issues.
E. Personal and professional commitment Engineering Technicians shall demonstrate a personal commitment to an appropriate code of professional conduct, recognising obligations to society, the profession and the environment.	E. Personal and professional commitment Incorporated Engineers shall demonstrate a personal commitment to professional standards, recognising obligations to society, the profession and the environment.	E. Personal and professional commitment Chartered Engineers shall demonstrate a personal commitment to professional standards, recognising obligations to society, the profession and the environment.
The applicant shall demonstrate that they:	The applicant shall demonstrate that they:	The applicant shall demonstrate that they:
1. Understand and comply with relevant codes of conduct	1. Understand and comply with relevant codes of conduct	1. Understand and comply with relevant codes of conduct
2. Understand the safety implications of their role and apply safe systems of work	2. Understand the safety implications of their role and manage, apply and improve safe systems of work	2. Understand the safety implications of their role and manage, apply and improve safe systems of work
3. Understand the principles of sustainable development and apply them in their work	3. Understand the principles of sustainable development and apply them in their work	3. Understand the principles of sustainable development and apply them in their work
4. Carry out and record the Continuing Professional Development (CPD) necessary to maintain and enhance competence in their own area of practice	4. Carry out and record the Continuing Professional Development (CPD) necessary to maintain and enhance competence in their own area of practice	4. Carry out and record the Continuing Professional Development (CPD) necessary to maintain and enhance competence in their own area of practice
5. Understand the ethical issues that may arise in their role and carry out their responsibilities in an ethical manner.	5. Understand the ethical issues that may arise in their role and carry out their responsibilities in an ethical manner.	5. Understand the ethical issues that may arise in their role and carry out their responsibilities in an ethical manner.