

1 **UK STANDARD FOR PROFESSIONAL ENGINEERING**
2 **COMPETENCE (UK-SPEC)**
3 4th Edition

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1 Foreword

2 Engineering is all around us, satisfying everything from our basic needs to our more complex
3 dreams and ambitions. The engineers and technicians who make this possible
4 enjoy contributing to teams through technical endeavour to sustain and improve lives. They
5 possess an incredible range of creative talent that is underpinned by their enquiring minds and
6 balanced by their intellect and judgement.

7 Today's and tomorrow's engineers play a vital role in finding solutions to key issues facing
8 society, by designing and delivering systems that drive social and economic development.
9 These challenges include environmental protection, climate change, affordable healthcare for
10 all, deforestation, security, including cyber-security, safety, mobility, food supply, clean water
11 and the development of sustainable energy sources. The contribution of competent engineers
12 is vital, therefore, in enhancing our quality of life.

13 Society rightly places great faith in the engineering profession, trusting engineers and
14 technicians to regulate themselves on its behalf. This trust can only be delivered through
15 significant individual commitment that is publicly demonstrated by the attainment of the
16 professional competence and behaviours that are described in this Standard.

17 Those who aspire to be recognised as professional engineers and technicians require
18 independent assessment of their competence and commitment, and the UK Standard for
19 Professional Engineering Competence (UK-SPEC) provides the means to achieve this.

20 UK- SPEC has been developed collaboratively by members representing the breadth of the
21 profession, from industry and academia, and from the many different disciplines and
22 specialisms that make up the 'Universe of Engineering'.

23 Operating under a Royal Charter, the Engineering Council is charged with regulating the
24 engineering profession in the United Kingdom, setting the standard for the practice of
25 engineering, and maintaining the registers of professional engineers and technicians. The
26 Engineering Council is governed by a Board representing the Professional Engineering
27 Institutions in the UK, together with individuals drawn from industries and sectors with an
28 interest in regulation of the engineering profession. This internationally recognised UK
29 Standard is published by the Engineering Council on behalf of the UK engineering profession.
30 First published in 2003, it was developed in collaboration with the profession and is kept under
31 review. It was most recently reviewed in 2019.

1 **The purpose of UK-SPEC**

2 Professional registration with the Engineering Council is based on demonstration of
3 competence and commitment. The UK Standard for Professional Engineering Competence (UK-
4 SPEC) describes the competence and commitment requirements that have to be met for registration as an
5 Engineering Technician (EngTech), Incorporated Engineer (IEng) or Chartered Engineer (CEng). It includes
6 examples of activities that could demonstrate achievement of the requirements, to enable
7 individuals and employers to find out whether they or their staff can meet the registration
8 requirements. Qualifications that exemplify the required underpinning knowledge and
9 understanding are listed, however it should be noted that there are other ways of
10 demonstrating this requirement.

11 This document also explains the steps necessary to achieve professional registration; the
12 requirement to maintain and enhance competence once registered; and the obligations to act
13 with integrity and in the public interest that are placed on registrants through their
14 membership of a licensed Professional Engineering Institution (PEI).

15 A matrix comparing requirements for all three titles is provided as Annex A and a
16 glossary of terms is included as Annex B.

17 **Career development and progression**

18 Registration in any category demonstrates valued recognition of an individual's engineering
19 competence and commitment. However further learning through experiential or other routes and
20 professional development may also enable individuals to progress, from EngTech to IEng and from
21 IEng to CEng, as their career develops. There will be a need for any necessary additional
22 knowledge and skills to be assessed before an individual can demonstrate the required
23 competence and commitment to be registered for a different title.

24 **Why register?**

25 Professional registration underpins the systems and processes that ensure the current and
26 future safeguarding of society. It provides employers, government and society, in the UK and
27 overseas, with the confidence that professionally registered engineers and technicians possess
28 and maintain the knowledge, skills and behaviours required to meet the engineering and
29 technological needs of today, whilst also catering for the needs of future generations.

30 Registration sets individual professionals apart from engineers and technicians who are not
31 registered. It establishes their proven knowledge, understanding and competence. In
32 particular, registration demonstrates a commitment to professional standards, and to
33 developing and enhancing competence.

34 Employers of professionally registered engineers have the assurance of knowing that their
35 employees have had their competence independently assessed, their credentials verified, and
36 their commitment to continuing professional development (CPD) established. They will have
37 gained the recognition of their peers as meeting UK standards for knowledge and experience,
38 which are internationally recognised. Maintaining registration requires continued membership
39 of a Professional Engineering Institution which ensures that registrants are exposed to new
40 developments in their profession and provides opportunities to benefit from these. It also
41 means that they are governed by a professional code of conduct and receive assistance in
42 determining their obligations under this code.

1 In some cases, evidence of employing professionally registered engineers will be necessary for
2 the award of contracts, both in the UK and internationally. Some employers use the framework
3 offered by UK-SPEC as a basis for their own organisational needs and rely on achievement of
4 registration to demonstrate readiness for promotion.

5 Further benefits for individuals can be found at: www.engc.org.uk/benefits and for employers
6 at www.engc.org.uk/information-for-employers

7 **International context**

8 Many professionally registered engineers are nationals of, or working in, countries outside the UK.
9 The standing of Engineering Technicians, Incorporated Engineers and Chartered Engineers as
10 defined by UK-SPEC is widely recognised around the world. In some cases, professional registration is
11 required for particular work. Professional registration can therefore be helpful when applying for
12 jobs and tendering for work abroad.

13 As well as reflecting the requirements of global engineering in UK-SPEC, the Engineering
14 Council is active within a number of multilateral mutual recognition agreements with national
15 engineering bodies in other countries. In particular, the organisation was a founder member
16 of the Washington Accord, which since 1989 has extended well beyond the original six English-
17 speaking countries. The Engineering Council has subsequently worked with international
18 partners to develop the Sydney and Dublin Accords, the International Engineering
19 Technologists Agreement and the International Professional Engineers Agreement. Together
20 with the APEC Engineers Agreement, governance of these now sits within the International
21 Engineering Alliance.

22 Within Europe the Engineering Council is a member of the European Network of Accreditation
23 of Engineering Education (ENAE), which authorises accreditation and quality assurance
24 agencies to award the EUR-ACE® label to accredited engineering degree programmes. In
25 addition, the Engineering Council has worked within the European Federation of National
26 Engineering Associations (FEANI) to strengthen the voice of engineers at the European level.

27 The Engineering Council continues to be committed to helping engineers and technicians are
28 on the UK registers to contribute to engineering in other countries, as well as to admitting to
29 its register those who have developed their professional engineering competence in other
30 countries and can demonstrate that they meet the UK Standard.

31 **How to register**

32 Professional registration is open to all engineers and technicians who can demonstrate competence
33 and commitment to perform professional work to the necessary standard.

34 Anyone wishing to be registered must apply through one of the Professional Engineering Institutions
35 licensed by the Engineering Council, listed at www.engc.org.uk/institutions Institutions will
36 provide details about registration, including the process and typical time-scales.

37 The assessment process is known as a professional review. The process starts with an
38 application made in accordance with the requirements of the chosen institution. A detailed
39 description of the format for this will be provided by the institution, but any claim of
40 qualifications, experience or training will need formal documented evidence. When submitting
41 details, applicants will need to show how this relates to the required competences and
42 commitment.

1 A 2-stage professional review process, including an interview, is mandatory for CEng and IEng,
2 although in some engineering disciplines PEIs may specify additional or alternative methods of
3 assessing competences.

4 To assist potential registrants, their advisers and professional review assessors in deciding the
5 most appropriate category of registration, a matrix comparing requirements for all three titles
6 is provided in Annex A.

7 Members of a Professional Affiliate (see glossary) that has an agreement with a licensed institution to assess
8 its members for registration may apply through the institution. For a current list of Professional Affiliates
9 please see www.engc.org.uk/affiliates

10 **What is competence?**

11 Competence is having the knowledge, skill and behaviour to carry out engineering tasks
12 successfully and safely within an engineer's field of practice. This includes having the
13 individual skills, knowledge and understanding, personal behaviour and approach, to be able
14 to work collaboratively with others to allow the achievement of the intended outcomes.
15 Competence includes the ability to make professional judgements when needed and an
16 awareness of the limitations of one's own ability and knowledge in order to seek assistance
17 when required.

18 There are five generic areas of competence for all registrants, broadly covering:

19 A Knowledge and understanding

20 B Design and development of processes, systems, services and products

21 C Responsibility, management and leadership

22 D Communication and inter-personal skills

23 E Professional commitment

24 **What is professional commitment?**

25 Engineering professionals are required to demonstrate a personal and professional
26 commitment to society, to the environment and to their profession. In demonstrating overall
27 competence, they are required to show that they have adopted a set of values and behaviours
28 that maintain and enhance the reputation of the profession. This will include:

- 29 • maintaining public safety;
- 30 • complying with codes of conduct, codes of practice and the legal/regulatory
31 framework;
- 32 • managing and applying safe systems of work;
- 33 • undertaking work in a way that demonstrates a commitment to protecting the
34 environment and contributes to sustainable development;
- 35 • carrying out the CPD necessary to maintain and enhance competence;•
- 36 • adopting a security-minded approach to professional and personal life;
- 37 • recognizing inclusivity and diversity;

- 1 • actively participating within the profession; and
- 2 • exercising responsibilities in an ethical manner.

3 The Engineering Council has published a CPD Code for Registrants, (see page 9), as well as
4 guidance on risk, sustainability, whistleblowing and security (see page 28).

5 **Ethical standards**

6 The Statement of Ethical Principles developed by the Engineering Council and the
7 Royal Academy of Engineering (www.engc.org.uk/professional-ethics) sets a standard
8 to which members of the profession should aspire in their working habits and
9 relationships. The values on which it is based should apply in every situation in which
10 engineers and technicians exercise their judgement.

11 Further information on the required standards is available from a variety of sources. Each
12 institution will have its own Code of Conduct, in line with the generic framework on page 27 of
13 this document and supporting guidance.

14 **Preparing for Registration**

15 Many larger employers run approved graduate training and development schemes. While
16 these schemes are of course geared to the specific needs of their organisations, they are
17 frequently designed to help engineers on the way to registration and may have been
18 accredited by one or more of the PEIs.

19 Some employers use occupational standards or competence frameworks in determining job
20 descriptions and staff development, even without a formal scheme, and these may assist in
21 developing a personal competence profile. Otherwise aspiring registrants should use the
22 competence and commitment statements in this document and seek advice and guidance
23 from the relevant PEI, which may be able to put them in touch with a mentor to assist them
24 through the process and help them address any gaps in their development.

25 Pages 11-26 of this document set out the threshold generic competence and commitment
26 standards for registration as an Engineering Technician, Incorporated Engineer or Chartered
27 Engineer, and include some examples of the kind of evidence which would help to
28 demonstrate these. The list of examples is not intended to be exhaustive. There may be other
29 examples and local equivalents.

30 Academic or vocational education formally accredited or approved to Engineering Council
31 standards is often used to demonstrate attainment of the knowledge and understanding
32 needed to underpin professional competence. Underpinning knowledge and understanding
33 may be acquired in other ways and in parallel with the development of the profile of
34 competence and professional activity. The PEI can provide advice and may have an
35 appropriate process that can be used.

36 For all categories, those seeking registration must maintain a detailed record of their
37 professional development, responsibilities and experience, verified by supervisors or mentors,
38 to enable candidates to provide best evidence for the professional review.

39

40

1 Exemplifying qualifications

2 The knowledge, understanding and skills to underpin performance are an essential component
3 of competence. This provides the foundation of the underlying logic and philosophy for
4 engineering practices and standards and ensures that decisions are based on a full
5 understanding rather than simple reliance on a set of instructions.

6 Formal education is often the usual, but is not the only, way of demonstrating the necessary
7 underpinning knowledge and understanding. The requirements for each registration category
8 are exemplified by accredited or approved educational qualifications with learning outcomes
9 intended to develop underpinning knowledge and understanding. These learning outcomes
10 are set out in the Engineering Council publications Accreditation of Higher Education
11 Programmes (AHEP) and the Approval of Qualifications and Apprenticeships Handbook
12 (AQAH). The exemplifying qualifications required for each registration category are as follows:

Engineering Technician	Incorporated Engineer	Chartered Engineer
<p>Successful completion of an Apprenticeship or other work-based learning programme approved by their PEI.</p> <p>Or, alongside appropriate working experience, they will hold:</p> <ul style="list-style-type: none"> • a qualification, approved by a licensed PEI, in engineering or construction set at level 3 (or above) in the Regulated Qualifications Framework/National Qualifications Framework for England and Northern Ireland; or at level 6 (or above) in the Scottish Credit and Qualifications Framework; or at level 3 (or above) in the Credit and Qualifications Framework for Wales; • Or equivalent qualifications or apprenticeships accredited or approved by a licensed PEI or at an equivalent level in a relevant national or international qualifications framework. ** 	<ul style="list-style-type: none"> • An accredited Bachelors or honours degree in engineering or technology • An accredited HNC or HND in engineering or technology (for programmes started before Sept 1999) • An HNC or HND started after Sept 1999 (but before Sept 2010 in the case of the HNC) or a Foundation Degree in engineering or technology, plus appropriate further learning to degree level • An NVQ4 or SVQ4 that has been approved by a licensed engineering institution, plus appropriate further learning to degree level* • Or equivalent qualifications or apprenticeships accredited or approved by a licensed PEI or at an equivalent level in a relevant national or international qualifications framework. ** 	<ul style="list-style-type: none"> • An accredited Bachelors degree with honours in engineering or technology, plus either an appropriate Masters degree or engineering doctorate accredited by a Professional Engineering Institution, or appropriate further learning to Masters level*; • An accredited integrated MEng degree. • Or equivalent qualifications or apprenticeships accredited or approved by a licensed PEI or at an equivalent level in a relevant national or international qualifications framework. **

13 *See www.qaa.ac.uk for qualification levels and HE reference points.

14 ** For example, the OECD's International Standard Classification of Education (ISCED)
15 framework.

1 The Engineering Council website provides searchable databases of accredited and approved
2 programmes. Please check the Engineering Council website: www.engc.org.uk/courses

3 **Other routes**

4 Many potential registrants have not had the advantage of formal training but are able to
5 demonstrate they have acquired the necessary competence through substantial working
6 experience. Applicants who have who have acquired underlying knowledge and understanding
7 through other qualifications or experiential learning can submit their education, career history
8 and training record to a PEI for assessment. If, as a result of this initial assessment, the PEI
9 considers that additional evidence of knowledge and understanding is required, it then advises
10 the applicant on the nature and extent of this. Knowledge and understanding can be
11 demonstrated through, for example:

- 12 • successfully completing further qualifications, either in whole or in part, as
13 specified by the PEI
- 14 • providing evidence of having completed recorded work-based or experiential
15 learning acceptable to the PEI
- 16 • Writing a technical report, based on their experience, and demonstrating their
17 knowledge and understanding of engineering principles
- 18 • any combination of these.

19 Applicants without the types of qualifications described on page 8 may apply for an Individual
20 Route assessment. This process, administered by the applicant's PEI, includes assessment of
21 prior learning and of current performance. Evidence of employer recognition of competences
22 and relevant skills may be helpful.

23 Applicants should consult their institution for advice on the most appropriate option.

24 **Assessment of competence and commitment**

25 In the UK there is separation of the standards setting and assessment functions. The
26 Engineering Council sets the standard, and the assessment of competence and commitment is
27 carried out by the licensed PEI through which the applicant is applying for registration. All
28 applicants have to be members of a PEI that is relevant to their discipline.

29
30 To become professionally registered, applicants must have their competence and commitment
31 assessed through a professional review. This is a peer review process, by registrants who are
32 competent and trained to undertake this kind of assessment. The first stage of the professional
33 review will consist of a review of documentary evidence that provides examples of how the
34 candidate meets the underlying knowledge, understanding and competence requirements.
35 The PEI will specify the requirements for this submission. The second stage is a professional
36 review interview which is mandatory for Incorporated Engineer and Chartered Engineer
37 candidates. For Engineering Technician candidates, an interview is at the discretion of the PEI.
38

39 Applicants submit evidence in support of their application including details of:

- 40 a) educational record and possession of exemplifying or other qualifications;
- 41 b) structured or other professional development;
- 42 c) areas of accountability for the exercise of engineering and technical judgement;
- 43 d) evidence of effective interpersonal skills;
- 44 e) a plan for future professional development; and
- 45 f) professional qualifications awarded by other national, regional or international

1 authorities.

2 Applicants are assessed against the standards listed in this document, which may be adapted by
3 the PEI to relate specifically to the particular technologies or industries with which it is
4 concerned. There is no prescribed time period for the development of competence and
5 commitment – it depends on many factors such as prior qualifications or experience, job role
6 and personal circumstances.

7 Following a review of the documented evidence, the PEI will decide whether the applicant is
8 ready for registration. The PEI will be able to advise how best to present evidence of training and
9 experience. Where shortfalls in evidence emerge, PEIs will usually be able to suggest ways in
10 which these can be addressed. This may involve further learning, training or additional
11 experience.

12 On completion of the professional review, a decision will be made by a designated committee of
13 the PEI. A positive decision will result in registration of the candidate as an Engineering
14 Technician, Incorporated Engineer or Chartered Engineer. Retention of the title requires
15 continued membership of a PEI licensed for that title, or a Professional Affiliate which has a
16 registration agreement with an PEI licensed for that title, and payment of an annual fee.

17 **Maintaining and enhancing competence**

18 Continuing professional development (CPD) is essential for the maintenance and enhancement
19 of the required competence and commitment. For professionally registered engineers, this
20 obligation underpins the value of the professional titles of Engineering Technician,
21 Incorporated Engineer and Chartered Engineer, as well as serving society and enabling it to
22 have confidence in the engineering profession.

23 The responsibility for managing CPD rests ultimately with the individual. At professional
24 review, all applicants for registration will demonstrate how they meet their obligations to CPD
25 and show that they understand that this requires an ongoing commitment.

26 Engineering Professionals should take all necessary steps to maintain and enhance their
27 competence through CPD. In particular, they should:

- 28 a) take ownership of their learning and development needs, and develop a plan to
29 indicate how they might meet these, in discussion with their employer, as appropriate;
- 30 b) undertake a variety of development activities, both in accordance with this plan and in
31 response to other opportunities which might arise;
- 32 c) record their CPD activities;
- 33 d) reflect upon what they have learned or achieved through their CPD activities and
34 record these reflections;
- 35 e) evaluate their CPD activities against any objectives which they have set and record this
36 evaluation;
- 37 f) review their learning and development plan regularly following reflection and
38 assessment of future needs; and
- 39 g) support the learning and development of others through activities such as mentoring
40 and sharing professional expertise and knowledge.

41 CPD has several purposes, which will vary in relation to registrants' circumstances, their needs
42 and their career progression. Very often registrants will undertake CPD to assure their

1 continuing competence in their current job. At other times, CPD may be preparation for a
2 different role within or outside their organisation (which may have more management
3 content, or which may not be a pure engineering role). Equally, CPD may help them follow a
4 longer-term career development plan or enhance their professionalism in a wider context than
5 a specific job role. The focus of registrants' learning may therefore be on different areas of
6 competence at different times.

7 CPD can also take a variety of different forms. At its heart is informal learning through the
8 challenges and opportunities of working life, and interaction with others (e.g. colleagues,
9 customers, suppliers) including professionals from other disciplines. However, this may be
10 supplemented by structured activities such as courses, distance learning programmes, private
11 study, preparation of papers and presentations, mentoring, involvement in professional body
12 activities, or relevant voluntary work. Individual registrants are best placed to determine their
13 needs and how to meet them. Often, employers or experienced colleagues will play a
14 significant part in this, but individuals should be responsible and proactive in seeking
15 professional development opportunities.

16 While most engineering professionals undertake CPD, this is often on a casual basis, without
17 any deliberate planning, recording of activities, or conscious reflection. Whatever its purpose
18 or nature, learning through CPD should be reflective and should relate to specific objectives
19 even if these are only to maintain their professional engineering competence. Having a
20 regularly reviewed development plan will facilitate learning, although there will always be a
21 place for unplanned activities. Registrants must record their CPD activities and what they have
22 learned or achieved through them and relate this to any planned objectives. This process will
23 help them to determine their future needs and plan accordingly, as part of a cyclical process. It
24 will also encourage an outcome-based approach which is more appropriate to professional
25 learning than relying solely on quantitative measures such as hours or points.

26 One of the main functions of a professional body is promoting and supporting the professional
27 development of its members. The PEIs licensed by the Engineering Council advise and support
28 their members on CPD in a number of ways, such as providing guidance, resources, mentoring
29 programmes and CPD planning and recording systems.

30 The CPD code for registrants requires that practising engineering professionals ensure their
31 CPD records are up to date. All PEIs strengthen their support for registrants by reviewing a
32 random sample of their professionally active registrants' CPD records each year and providing
33 appropriate feedback. In this process, if requested, registrants shall submit their CPD return for
34 monitoring as required by their PEI and the Engineering Council. The sample need not include
35 retired registrants or those on career breaks for any reason (e.g. parental leave, duties as a
36 carer, unemployment etc) although such registrants should consider their CPD needs before
37 returning to an engineering role.

1 The Engineering Technician Standard

2 Generic Role Description

Engineering Technicians apply proven techniques and procedures to the solution of practical engineering problems.

Engineering Technicians shall apply safe systems of work and shall demonstrate:

- Engineering knowledge and understanding to apply technical and practical skills.
- Evidence of their contribution to any of 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
- Commitment to professional engineering values.

3 An Engineering Technician must be able to demonstrate their competence in all of the areas listed but the depth and extent of their experience and
4 competence will vary with the nature and requirements of their role. It is to be expected that they will have a higher level of competence in some areas than
5 others, but they need to demonstrate an understanding of and familiarity with the key aspects in each as a minimum requirement and a level of
6 understanding and proficiency in those that are important in their role.

7 The examples of evidence are intended as guidance to help identify activities that might demonstrate the required competence and commitment for
8 Engineering Technician registration. They are intended as examples only and the most appropriate evidence will vary with each individual role. The list is not
9 exhaustive and other types of evidence might be valid. There is no requirement to provide multiple examples of evidence for each area of competence, but
10 broad examples from 2 or 3 projects or tasks would be useful.

Competence		Examples of Evidence
<p>KNOWLEDGE AND UNDERSTANDING</p> <p>A. Engineering Technicians shall use engineering knowledge and understanding to apply technical and practical skills.</p> <p><i>This competence is about having knowledge of the technologies, standards and practices relevant to the applicant's area of work and having evidence of maintaining and applying this knowledge.</i></p>	<p>This shall include the ability to:</p> <p>1. review and select appropriate techniques, procedures and methods to undertake tasks</p>	<ul style="list-style-type: none"> Evaluating potential methods of carrying out an engineering task and selecting the most appropriate Encountering a difficulty and then identifying an approach to resolve it Identifying an improvement in a technique, procedure process or method Defining and carrying out test procedures
	<p>2. use appropriate scientific, technical or engineering principles.</p>	<ul style="list-style-type: none"> Drawing on your technical knowledge to complete a task Performing calculations using standard formulae Analysing performance or test data or comparing performance information with published material
<p>DESIGN, DEVELOPMENT AND THE SOLUTION OF ENGINEERING PROBLEMS</p> <p>B. Engineering Technicians shall contribute to the design, development, manufacture, construction, commissioning, operation or maintenance of products, equipment, processes, systems or services.</p> <p><i>This competence is about the ability to apply engineering knowledge effectively and efficiently to the individual tasks which need to be undertaken in the applicant's role.</i></p>	<p>This shall include the ability to:</p> <p>1. identify problems and apply appropriate methods to identify causes and achieve satisfactory solutions</p>	<ul style="list-style-type: none"> Using knowledge to identify a problem or an opportunity for improvement Investigating a problem to identify the underlying cause Identifying a solution to a problem or improvement opportunity
	<p>2. identify, organise and use resources effectively to complete tasks, with consideration for cost, quality, safety, security and environmental impact.</p>	<ul style="list-style-type: none"> Balancing these factors in selecting appropriate materials Identifying precautions as a result of evaluating risks and other factors Considering how waste can be minimised, recycled or disposed of safely if recycling is not possible Contributing to best practice methods of continuous improvement

Competence		Examples of Evidence
<p>RESPONSIBILITY, MANAGEMENT AND LEADERSHIP</p> <p>C. Engineering Technicians shall accept and exercise personal responsibility.</p> <p><i>This competence is about the ability to plan and manage the applicant's own work effectively and efficiently. It is also about the ability to consider and identify improvements to maintain quality in their work</i></p>	<p>This shall include the ability to:</p> <p>1. work reliably and effectively without close supervision, to the appropriate codes of practice</p>	<ul style="list-style-type: none"> • Completing challenging tasks successfully within your area of work • Identifying issues which fall outside of your current knowledge and seeking advice • Identifying standards and codes of practice relevant to a new task
	<p>2. accept responsibility for work of self or others</p>	<ul style="list-style-type: none"> • Certifying drawings, permits to work, instructions or other similar documents after appropriate checking • Inspecting work carried out by others • Checking the status of equipment, the work environment and facilities and taking appropriate actions before commencing work
	<p>3. accept, allocate and supervise technical and other tasks.</p>	<ul style="list-style-type: none"> • Ensuring that the scope of a task is clear before accepting and/or allocating it to others • Querying any aspect of a task which is not clear and/or providing an explanation if a query is raised by others • Learning from your own experience and/or providing constructive feedback when supervising or working with others
<p>COMMUNICATION AND INTERPERSONAL SKILLS</p> <p>D. Engineering Technicians shall use effective communication and interpersonal skills</p> <p><i>This is the ability to work with others constructively, to explain ideas and proposals clearly and to discuss issues objectively and constructively</i></p>	<p>This shall include the ability to:</p> <p>1. communicate effectively in English with others at all levels</p>	<ul style="list-style-type: none"> • Contributing to meetings and discussions • Preparing communications, documents and reports on technical matters • Exchanging information and providing advice to technical and non-technical colleagues. •
	<p>2. work effectively with colleagues, clients, suppliers or the public, demonstrating an awareness of diversity and inclusion issues</p>	<ul style="list-style-type: none"> • Contributing constructively as part of a team • Successfully resolving issues in discussions with team members, suppliers, clients and/or others • Persuading others to accept suggestions or recommendations • Being aware of the needs and concerns of others, especially where related to diversity and equality

Competence		Examples of Evidence
<p>PERSONAL AND PROFESSIONAL COMMITMENT</p> <p>E. Engineering Technicians shall demonstrate commitment to an appropriate code of professional conduct, recognising obligations to society, the profession and the environment.</p> <p><i>This competence is about ensuring that the applicant is acting in a professional manner in their work and in their dealings with others. An Engineering Technician should set a standard and example to others with regard to professionalism.</i></p>	<p>This shall include the ability to:</p> <p>1. understand and comply with relevant codes of conduct.</p>	<ul style="list-style-type: none"> • Demonstrating compliance with the code of conduct of your Professional Engineering Institution • Having identified aspects of the code which are particularly relevant to your role
	<p>2. understand the safety implications of their role and can apply safe systems of work</p>	<ul style="list-style-type: none"> • Providing evidence of applying current safety requirements, such as risk assessment and other examples of good practice you adopt in your work • a sound knowledge of health and safety legislation, for example; HASAW 1974, CDM regulations, OHSAS 18001:2007 and company safety policies
	<p>3. understand the principles of sustainable development and apply them in their work</p>	<ul style="list-style-type: none"> • Recognising how sustainability principles can be applied in your day to day work • Identifying actions that you can and have taken to improve sustainability
	<p>4. carry out and record Continuing Professional Development (CPD) necessary to maintain and enhance competence in own area of practice</p>	<ul style="list-style-type: none"> • Undertaking reviews of own development needs • Planning how to meet personal and organisational objectives • Carrying out and recording planned and unplanned CPD activities • Maintaining evidence of competence development • Evaluating CPD outcomes against any plans made • Assisting others with their own CPD.
	<p>5. understand the ethical issues that may arise in their role and carry out their responsibilities in an ethical manner</p>	<ul style="list-style-type: none"> • Understanding the ethical issues that you may encounter in your role • How you have dealt with a specific ethical issue • Giving an example of where you have applied ethical principles as described in the Statement of Ethical Principles on page 27 • Giving an example of where you have applied/upheld ethical principles as defined by your organisation or company

1 The Incorporated Engineer Standard

2 Generic Role Description

Incorporated Engineers maintain and manage applications of current and developing technology, and may undertake engineering design, development, manufacture, construction and operation

Incorporated Engineers shall demonstrate:

- The theoretical knowledge to solve problems in established technologies using well proven analytical techniques
- Successful application of the knowledge to deliver engineering tasks or services using established technologies and methods
- Contributing to the financial and planning aspects of projects or tasks and of leading and developing other professional staff
- Effective interpersonal skills in communicating technical matters
- Commitment to professional engineering values.

3 An Incorporated Engineer must be able to demonstrate their competence in all of the areas listed but the depth and extent of their experience and
4 competence will vary with the nature and requirements of their role. It is to be expected that they will have a higher level of competence in some areas than
5 others, but they need to demonstrate an understanding of and familiarity with the key aspects in each as a minimum requirement and a level of
6 understanding and proficiency in those that are important in their role.

7 The examples of evidence are intended as guidance to help identify activities that might demonstrate the required competence and commitment for
8 Incorporated Engineer registration. They are intended as examples only and the most appropriate evidence will vary with each individual role. The list is not
9 exhaustive and other types of evidence might be valid. There is no requirement to provide multiple examples of evidence for each area of competence, but
10 broad examples from 2 or 3 projects or tasks would be useful.

Competence		Examples of Evidence
<p>KNOWLEDGE AND UNDERSTANDING</p> <p>A. Incorporated Engineers shall use a combination of general and specialist engineering knowledge and understanding to apply existing and emerging technology.</p> <p><i>This competence is about having knowledge of the technologies, standards and practices relevant to the applicant's area of practice and having evidence of maintaining and applying this knowledge.</i></p>	<p>The applicant shall demonstrate that they:</p> <p>1. Have maintained and extended a sound theoretical approach to the application of technology in engineering practice.</p>	<ul style="list-style-type: none"> Identifying the limits of own personal knowledge and skills Taking steps to develop and extend your knowledge in appropriate areas Applying newly gained knowledge successfully in a task or project Reviewing current procedures and processes and recommended improvements or changes to reflect best practice Work in a new industry area or discipline
	<p>2. Use a sound evidence-based approach to problem-solving and contribute to continuous improvement.</p>	<ul style="list-style-type: none"> Applying knowledge and experience to investigate and solve problems arising during engineering tasks and implementing corrective action Identifying opportunities for improvements and how these have been (or could be) implemented Using an established process to analyse issues and establish priorities
<p>DESIGN, DEVELOPMENT AND THE SOLUTION OF ENGINEERING PROBLEMS</p> <p>B. Incorporated Engineers shall apply appropriate theoretical and practical methods to design, develop, manufacture, construct, commission, operate, maintain, decommission and re-cycle engineering processes, systems, services and products.</p> <p><i>This competence is the ability to identify appropriate methods and approaches to use to undertake a task within their area of practice and to make a significant contribution to development of a design or process or the maintenance of operations.</i></p>	<p>The applicant shall demonstrate that they:</p> <p>1. identify, review and select techniques, procedures and methods to undertake engineering tasks</p>	<ul style="list-style-type: none"> Establishing the engineering steps needed to carry out a task efficiently Identifying the available products or processes needed to undertake an engineering task and establishing a means of identifying the most suitable solution Preparing technical specifications Reviewing and comparing responses to the technical aspects of tender invitations Establishing user requirements for improvements
	<p>2. contribute to the design and development of engineering solutions.</p>	<ul style="list-style-type: none"> Contributing to the identification and specification of design and development requirements for engineering products, processes, systems and services Identifying operational risks and evaluating possible engineering solutions, taking account of cost, quality, safety, reliability, appearance, fitness for purpose, accessibility, security (including cyber security), intellectual property (IP) constraints and opportunities, and environmental impact Collecting and analysing results Carrying out necessary tests.

Competence		Examples of Evidence
	3. implement design solutions for equipment or processes and contribute to their evaluation.	<ul style="list-style-type: none"> Identifying the resources required for implementation Implementing design solutions, taking account of critical constraints, including due concern for safety and sustainability Identifying problems during implementation and taking corrective action Contributing to recommendations for improvement and actively learning from feedback on results.
<p>RESPONSIBILITY, MANAGEMENT AND LEADERSHIP</p> <p>C. Incorporated Engineers shall provide technical and commercial management.</p> <p><i>This competence is about the ability to plan and manage the applicant's own work and the work of others effectively and efficiently and to provide leadership at an appropriate level, whether technical or commercial. It is also about the ability to consider and identify improvements to maintain quality in their work</i></p>	<p>The applicant shall demonstrate that they:</p> <p>1. plan the work and resources needed to enable effective implementation of engineering tasks and projects</p>	<ul style="list-style-type: none"> Identifying factors affecting the project implementation Carrying out holistic and systematic risk identification, assessment and management Preparing and agree implementation plans and method statements Securing the necessary resources and confirming roles in project team Applying the necessary contractual arrangements with other stakeholders (client, subcontractors, suppliers, etc).
	2. manage (organise, direct and control) programme or schedule, budget and resource elements of engineering tasks or projects	<ul style="list-style-type: none"> Operating appropriate management systems Working to the agreed quality standards, programme and budget, within legal and statutory requirements Managing work teams, coordinating project activities Identifying variations from quality standards, programme and budgets, and taking corrective action Evaluating performance and recommending improvements
	3. manage teams, or the input of others, into own work and assist others to meet changing technical and management needs	<ul style="list-style-type: none"> 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
	4. take an active role in continuous quality improvement.	<ul style="list-style-type: none"> Ensuring the application of quality management principles by team members and colleagues Managing operations to maintain quality standards e.g. ISO 9000, EQFM, balanced scorecard Evaluating projects and making recommendations for improvement. Implementing the results of lessons learned

Competence		Examples of Evidence
<p>COMMUNICATION AND INTERPERSONAL SKILLS</p> <p>D. Incorporated Engineers shall demonstrate effective communication and interpersonal skills</p> <p><i>This is the ability to work with others constructively, to explain ideas and proposals clearly and to discuss issues objectively and constructively</i></p>	<p>The applicant shall demonstrate that they:</p> <p>1. communicate effectively in English with others at all levels</p>	<ul style="list-style-type: none"> • Contributing to, chairing and recording meetings and discussions • Preparing communications, documents and reports on technical matters • Exchanging information and providing advice to technical and non-technical colleagues. • Engaging or interacting with professional networks
	<p>2. present and discuss proposals, justifications and conclusions clearly</p>	<ul style="list-style-type: none"> • Preparing and delivering appropriate presentations • Managing debates with audiences • Feeding the results back to improve the proposals. • Contributing to the awareness of risk.
	<p>3. demonstrate personal and social skills and awareness of diversity and inclusion issues</p>	<ul style="list-style-type: none"> • 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 aware of the needs and concerns of others, especially where related to diversity and equality

Competence		Examples of Evidence
<p>PERSONAL AND PROFESSIONAL COMMITMENT</p> <p>E. Incorporated Engineers shall demonstrate a personal commitment to professional standards, recognising obligations to society, the profession and the environment.</p> <p><i>This competence is about ensuring that the applicant is acting in a professional manner in their work and in their dealings with others. An Incorporated Engineer should set a standard and example to others with regard to professionalism.</i></p>	<p>The applicant shall demonstrate that they:</p> <ol style="list-style-type: none"> 1. understand and comply with relevant codes of conduct 	<ul style="list-style-type: none"> • Demonstrating compliance with the code of conduct of your Professional Engineering Institution • Managing work within all relevant legislative and regulatory frameworks, including social and employment legislation.
	<ol style="list-style-type: none"> 2. understand the safety implications of their role and can apply safe systems of work 	<ul style="list-style-type: none"> • Identifying and taking responsibility for own obligations for health, safety and welfare issues • Managing systems that 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, OHSAS 18001:2007 and company safety policies.
	<ol style="list-style-type: none"> 3. understand the principles of sustainable development and apply them in their work 	<ul style="list-style-type: none"> • Operating and acting responsibly, taking account of the need to progress environmental, social and economic outcomes simultaneously • Recognising how sustainable development principles can be applied in your day to day work • Providing products and services which maintain and enhance the quality of the environment and community, and meet financial objectives • Understanding and encouraging stakeholder involvement in sustainable development • Using resources efficiently and effectively.
	<ol style="list-style-type: none"> 4. carry out and record Continuing Professional Development (CPD) necessary to maintain and enhance competence in own area of practice 	<ul style="list-style-type: none"> • Undertaking reviews of own development needs • Planning how to meet personal and organisational objectives • Carrying out and recording planned and unplanned CPD activities • Maintaining evidence of competence development • Evaluating CPD outcomes against any plans made • Assisting others with their own CPD.

Competence		Examples of Evidence
	5. understand the ethical issues that may arise in their role and; carry out their responsibilities in an ethical manner	<ul style="list-style-type: none">• Understanding the ethical issues that you may encounter in your role• How you have dealt with a specific ethical issue• Giving an example of where you have applied ethical principles as described in the Statement of Ethical Principles on page 27• Giving an example of where you have applied/upheld ethical principles as defined by your organisation or company

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1 The Chartered Engineer Standard

2 Generic Role Description

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 shall demonstrate:

- 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
- Contributing to the financial and planning aspects of projects or tasks and of leading and developing other professional staff
- Effective interpersonal skills in communicating technical matters.
- Commitment to professional engineering values

3 A Chartered Engineer must be able to demonstrate their competence in all of the areas listed but the depth and extent of their experience and competence
4 will vary with the nature and requirements of their role. It is to be expected that they will have a higher level of competence in some areas than others, but
5 they need to demonstrate an understanding of and familiarity with the key aspects in each as a minimum requirement and a level of understanding and
6 proficiency in those that are important in their role.

7 The examples of evidence are intended as guidance to help identify activities that might demonstrate the required competence and commitment for
8 Chartered Engineer registration. They are intended as examples only and the most appropriate evidence will vary with each individual role. The list is not
9 exhaustive and other types of evidence might be valid. There is no requirement to provide multiple examples of evidence for each area of competence, but
10 broad examples from 2 or 3 projects or tasks would be useful.

Competence		Examples of Evidence
<p>KNOWLEDGE AND UNDERSTANDING</p> <p>A. 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><i>This competence is about the ability to understand underlying technical principles relevant to the applicant's area of practice and apply them to develop technical solutions for novel problems or to deal with significant technical complexity, which may involve the integration of a range of technologies and consideration of other factors. This competence requires that an applicant is maintaining and developing their knowledge in their field of practice and not just that required for specific tasks.</i></p>	<p>The applicant shall demonstrate that they:</p> <ol style="list-style-type: none"> 1. have maintained and extended a sound theoretical approach to enable them to develop their particular role 2. are developing technology 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 style="text-align: right;">Unpublished – Consultation Draft June 2019</p> <ul style="list-style-type: none"> • Formal training related to your role • Learning and developing new engineering knowledge in a different industry or role • Understanding of the current and emerging technology and technical best practice in your area of expertise • Development of a broader and deeper knowledge base through research and experimentation. • Learning and developing new engineering theories and techniques in the workplace. • 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 analyses • Developing solutions involving complex or multi-disciplinary technology • Developing and evaluating continuous improvement systems • Developing solutions in safety-critical industries/applications
<p>DESIGN, DEVELOPMENT AND THE SOLUTION OF ENGINEERING PROBLEMS</p> <p>B. Chartered Engineers shall apply appropriate theoretical and practical methods to the analysis and solution of engineering problems.</p> <p><i>This competence is about the ability to apply engineering knowledge effectively and efficiently to the individual tasks which need to be undertaken in the applicant's role.</i></p>	<p>The applicant shall demonstrate that they:</p> <ol style="list-style-type: none"> 1. take an active role in the identification and definition of project requirements, problems and opportunities 2. can identify the appropriate investigations and research needed to define the work required to complete an engineering task and conduct these activities effectively 	<ul style="list-style-type: none"> • Identifying projects or technical improvements to products, processes or systems • Preparation of specifications taking account of functional and other requirements • Establish user requirements • Reviewing specifications and tenders to identify technical issues and potential improvements • Carrying out technical risk analysis and identifying mitigation measures • Consider and implement new and emerging technologies • Identifying and agreeing appropriate research methodologies • Investigating a technical issue, identifying potential solutions and determining the factors needed to compare these • 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, appearance, fitness for purpose, security (including cyber security), intellectual property (IP) constraints and opportunities, and environmental impact.

Competence		Examples of Evidence
	3. can implement engineering tasks and evaluate the effectiveness of engineering solutions	<ul style="list-style-type: none"> 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/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
<p>RESPONSIBILITY, MANAGEMENT AND LEADERSHIP</p> <p>C. Chartered Engineers shall demonstrate technical and commercial leadership</p> <p><i>This competence is about the ability to plan and manage the applicant's own work and the work of others effectively and efficiently and to provide leadership at an appropriate level, whether technical or commercial. It is also about the ability to consider and identify improvements to maintain quality in their work</i></p>	<p>The applicant shall demonstrate that they:</p> <p>1. plan the work and resources needed to enable effective implementation of a significant engineering task or project</p>	<ul style="list-style-type: none"> Systematically review the factors affecting the project implementation including safety, sustainability and disposal/decommissioning considerations Carrying out a task or project risk assessment and identifying mitigation measures Lead 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
	2. manage (organise, direct and control) programme or schedule, budget and resource elements of a significant engineering task or project	<ul style="list-style-type: none"> Operate or define appropriate management systems including risk register and contingency systems Managing the balance between quality, cost and time Monitoring progress and taking appropriate actions when required Establishing and maintaining appropriate quality standards within legal and statutory requirements Interfacing effectively with customer, contractors and other stakeholders
	3. lead teams or technical specialisms and assist staff to meet changing technical and managerial needs	<ul style="list-style-type: none"> 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

Competence		Examples of Evidence
	<p>4. bring about continuous improvement and promote best practice</p>	<ul style="list-style-type: none"> • Promoting quality throughout the organisation and its customer and supplier networks • Developing and maintaining operations to meet quality standards e.g. ISO 9000, EQFM, balanced scorecard • Supporting or directing project evaluation and proposing recommendations for improvement. • Implementing the results of lessons learned
<p>COMMUNICATION AND INTERPERSONAL SKILLS</p> <p>D. Chartered Engineers shall demonstrate effective communication and interpersonal skills</p> <p><i>This is the ability to work with others constructively, to explain ideas and proposals clearly and to discuss issues objectively and constructively</i></p>	<p>The applicant shall demonstrate that they:</p> <p>1. communicate effectively in English with others at all levels</p>	<ul style="list-style-type: none"> • 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
	<p>2. present and discuss proposals, justifications and conclusions clearly</p>	<ul style="list-style-type: none"> • 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
	<p>3. demonstrate personal and social skills and awareness of diversity and inclusion issues</p>	<ul style="list-style-type: none"> • 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 aware of the needs and concerns of others, especially where related to diversity and equality

Competence		Examples of Evidence
<p>PERSONAL AND PROFESSIONAL COMMITMENT</p> <p>E. Chartered Engineers shall demonstrate a personal commitment to professional standards, recognising obligations to society, the profession and the environment.</p> <p><i>This competence is about ensuring that the applicant is acting in a professional manner in their work and in their dealings with others. A Chartered Engineer should set a standard and example to others with regard to professionalism.</i></p>	<p>The applicant shall demonstrate that they:</p> <p>1. understand and comply with relevant codes of conduct</p>	<ul style="list-style-type: none"> • Demonstrating compliance with the code of conduct of your Professional Engineering Institution • Having identified 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.
	<p>2. understand the safety implications of their role and can apply safe systems of work</p>	<ul style="list-style-type: none"> • Identifying and taking responsibility for own obligations 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, OHSAS 18001:2007 and company safety policies.
	<p>3. understand the principles of sustainable development and apply them in their work</p>	<ul style="list-style-type: none"> • 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 sustainable development principles can be applied in your day to day work • Understanding and securing stakeholder involvement in sustainable development • Using resources efficiently and effectively in all activities
	<p>4. carry out and record Continuing Professional Development (CPD) necessary to maintain and enhance competence in own area of practice</p>	<ul style="list-style-type: none"> • Undertaking reviews of 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 others with their own CPD.

Competence		Examples of Evidence
	5. understand the ethical issues that may arise in their role and carry out their responsibilities in an ethical manner	<ul style="list-style-type: none">• Understanding the ethical issues that you may encounter in your role• How you have dealt with a specific ethical issue• Give an example of where you have applied ethical principles as described in the Statement of Ethical Principles on page 27• Give an example of where you have applied/upheld ethical principles as defined by your organisation or company

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1 **Annex A: Professional and Ethical Behaviour**

2 **Statement of Ethical Principles**

3 This Statement of Ethical Principles, published by the Engineering Council and the Royal Academy of
4 Engineering, lists four fundamental principles to guide engineers and technicians in achieving the high
5 ideals of professional life:

- 6 • Honesty and integrity
- 7 • Respect for life, law, the environment and public good
- 8 • Accuracy and rigour
- 9 • Leadership and communication

10 These express the beliefs and values of the profession and are amplified in the Statement of Ethical
11 Principles www.engc.org.uk/professional-ethics

12 **Guidelines for Institution Codes of Conduct**

13 All registrants are expected to observe the requirements of the Code of Conduct of the PEI they have
14 joined.

15
16 The Code of Conduct of each licensed PEI should place a personal obligation on its members to act with
17 integrity and in the public interest. It should be worded in such a way as to encourage members to act in
18 accordance with the Statement of Ethical Principles. PEI shall ensure that they have appropriate
19 disciplinary processes in place to address breaches of their Codes of Conduct.

20 Specifically, Codes of Conduct should oblige members to:

- 21 1. Act with due skill, care and diligence and with proper regard for professional standards.
- 22 2. Prevent avoidable danger to health or safety.
- 23 3. Act in accordance with the principles of sustainability and prevent avoidable adverse impact on
24 the environment and society.
- 25 4. Maintain and enhance their competence, undertake only professional tasks for which they are
26 competent, and disclose relevant limitations of competence.
- 27 5. Accept appropriate responsibility for work carried out under their supervision.
- 28 6. Treat all persons fairly and with respect.
- 29 7. Encourage others to advance their learning and competence.
- 30 8. Avoid where possible real or perceived conflict of interest and advise affected parties when such
31 conflicts arise.
- 32 9. Observe the proper duties of confidentiality owed to appropriate parties.
- 33 10. Reject bribery and all forms of corrupt behaviour and make positive efforts to ensure others do
34 likewise.
- 35 11. Raise a concern about a danger, risk, malpractice or wrongdoing which affects others ('blow the
36 whistle') and support a colleague or any other person to whom you have a duty of care who in
37 good faith raises any such concern.
- 38 12. Assess and manage relevant risks and communicate these appropriately.
- 39 13. Assess relevant liability, and if appropriate hold professional indemnity insurance.
- 40 14. Notify the Institution if convicted of a criminal offence or upon becoming bankrupt or disqualified
41 as a Company Director.
- 42 15. Notify the PEI of any significant violation of the Institution's Code of Conduct by another member.

1 **Guidance on Risk**

2 This guidance, published by the Engineering Council, lists six principles to guide and motivate professional
3 engineers and technicians in identifying, assessing, managing and communicating about risk.

4 For more information, please see: www.engc.org.uk/risk

5 **Guidance on Sustainability**

6 This guidance, published by the Engineering Council, lists six principles to guide and motivate professional
7 engineers and technicians when making decisions for clients, employers and society which affect
8 sustainability.

9 For more information, please see: www.engc.org.uk/sustainability

10 **Guidance on Whistleblowing**

11 The guidance, published by the Engineering Council explains what whistleblowing is and the processes
12 that engineers and technicians should follow when confronted by a potential whistleblowing situation:

13 For more information please see: www.engc.org.uk/whistleblowing

14 **Guidance on Security**

15 This guidance, published by the Engineering Council lists six key principles to guide engineers and
16 technicians in identifying, assessing, managing and communicating issues about security.

17 For more information please see: <https://www.engc.org.uk/security>

18 The Engineering Council reviews its guidance periodically and welcomes comments about this. PEIs may
19 use this to assist them in developing guidance for their members.

20 **Annex B: Table of competence and commitment standards for EngTech, IEng and**
21 **CEng registration**

Engineering Technician		Incorporated Engineer		Chartered Engineer				
<p>Engineering Technicians apply proven techniques and procedures to the solution of practical engineering problems.</p> <p>Engineering Technicians shall to apply safe systems of work and 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 • 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 shall develop safe systems of work and 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 • Contributing to the financial and planning aspects of projects or tasks and of leading and developing other professional staff • Effective interpersonal skills in communicating technical matters • Commitment to professional engineering values. 		<p>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.</p> <p>Chartered Engineers shall develop safe systems of work and 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 • Contributing to the financial and planning aspects of projects or tasks and of leading and developing other professional staff • Effective interpersonal skills in communicating technical matters • Commitment to professional engineering values 				
	<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>			
A	<p>Engineering Technicians shall use engineering knowledge and understanding to apply technical and practical skills.</p> <p>The applicant shall demonstrate that they:</p>	<p>The examples given below are intended to help you identify activities you might quote to demonstrate the required competence and commitment for EngTech registration. These are not exhaustive and other types of evidence might be valid. There is no requirement to provide multiple examples of evidence for each area of competence, but broad examples from 2 or 3 projects or tasks would be useful.</p>	A	<p>Incorporated Engineers shall use a combination of general and specialist engineering knowledge and understanding to apply existing and emerging technology.</p> <p>The applicant shall demonstrate that they:</p>	<p>The examples given below are intended to help you identify activities you might quote to demonstrate the required competence and commitment for IEng registration. These are not exhaustive and other types of evidence might be valid. There is no requirement to provide multiple examples of evidence for each area of competence, but broad examples from 2 or 3 projects or tasks would be useful.</p>	A	<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 examples given below are intended to help you identify activities you might quote to demonstrate the required competence and commitment for CEng registration. The list is not exhaustive and other types of evidence might be valid. There is no requirement to provide multiple examples of evidence for each area of competence, but broad examples from 2 or 3 projects or tasks would be useful.</p>

Engineering Technician			Incorporated Engineer			Chartered Engineer		
A1	can review and select appropriate techniques, procedures and methods to undertake tasks	<ul style="list-style-type: none"> Evaluating potential methods of carrying out an engineering task and selecting the most appropriate Encountering a difficulty and then identifying an approach to resolve it Identifying an improvement in a technique, procedure process or method Defining and carrying out test procedures 	A1	have maintained and extended a sound theoretical approach to the application of technology in engineering practice.	<ul style="list-style-type: none"> Identifying the limits of own personal knowledge and skills Taking steps to develop and extend your knowledge in appropriate areas Applying newly gained knowledge successfully in a task or project Reviewing current procedures and processes and recommended improvements or changes to reflect best practice Work in a new industry or discipline 	A1	have maintained and extended a sound theoretical approach to enable them to develop their particular role	<ul style="list-style-type: none"> Formal training, post-graduation related to their role Technical training to develop knowledge for a new role Understanding of the current and emerging technology and technical best practice in their area of expertise Development of a broader and deeper knowledge base through research and experimentation. Learning and developing new engineering theories and techniques in the workplace. Learning and developing new engineering knowledge in a different industry or role
A2	use appropriate scientific, technical or engineering principles.	<ul style="list-style-type: none"> Drawing on your technical knowledge to complete a task Performing calculations using standard formulae Analysing performance or test data or comparing performance information with published material 	A2	use a sound evidence-based approach to problem-solving and contribute to continuous improvement.	<ul style="list-style-type: none"> Applying knowledge and experience to investigate and solve problems arising during engineering tasks and implementing corrective action Identifying opportunities for improvements and how these have been (or could be) implemented Using an established process to analyse issues and establish priorities 	A2	are developing technology 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	<ul style="list-style-type: none"> 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 analyses Developing solutions involving complex or multi-disciplinary technology. Developing and evaluating continuous improvement systems. Developing solutions in safety-critical industries/applications
B	<p>Engineering Technicians shall contribute to the design, development, manufacture, construction, commissioning, operation or maintenance of products, equipment, processes, systems or services.</p> <p>The applicant shall demonstrate that they:</p>	Explain how you contribute to one or more of these activities.	B	<p>Incorporated Engineers shall apply appropriate theoretical and practical methods to design, develop, manufacture, construct, commission, operate, maintain, decommission and re-cycle engineering processes, systems, services and products.</p> <p>The applicant shall demonstrate that they:</p>		B	<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>	
B1	identify problems and apply appropriate methods to identify causes and achieve satisfactory solutions	<ul style="list-style-type: none"> Using your knowledge to identify a problem or an opportunity for improvement Investigating a problem to identify the underlying cause Identifying a solution to a problem or improvement opportunity 	B1	identify, review and select techniques, procedures and methods to undertake engineering tasks.	<ul style="list-style-type: none"> Establishing the engineering steps needed to carry out a task efficiently Identifying the available products or processes needed to undertake an engineering task and establishing a means of identifying the most suitable Preparing technical specifications Reviewing and comparing responses to the technical aspects of tender invitations 	B1	take an active role in the identification and definition of project requirements, problems and opportunities	<ul style="list-style-type: none"> Identifying projects or technical improvements to products, processes or systems Preparation of specifications taking account of functional and other requirements Establish user requirements Reviewing specifications and tenders to identify technical issues and potential improvements Carrying out technical risk analysis and identified mitigation measures

Engineering Technician		Incorporated Engineer		Chartered Engineer				
				<ul style="list-style-type: none"> Establishing user requirements for improvements 	<ul style="list-style-type: none"> Consider and implement new and emerging technologies 			
B2	<p>identify, organise and use resources effectively to complete tasks, with consideration for cost, quality, safety, security and environmental impact.</p>	<ul style="list-style-type: none"> Balancing these factors in selecting appropriate materials Identifying precautions as a result of evaluating risks and other factors Considering how waste can be minimised, recycled or disposed of safely if recycling is not possible <p>Contributing to best practice methods of continuous improvement</p>	B2	<p>contribute to the design and development of engineering solutions.</p>	<ul style="list-style-type: none"> Contributing to the identification and specification of design and development requirements for engineering products, processes, systems and services Identifying operational risks and evaluate possible engineering solutions, taking account of cost, quality, safety, reliability, appearance, fitness for purpose, security (including cyber security), intellectual property (IP) constraints and opportunities, and environmental impact Collecting and analyse results Carrying out necessary tests. 	B2	<p>can identify the appropriate investigations and research needed to define the work required to complete an engineering task and conduct these activities effectively</p>	<ul style="list-style-type: none"> Identifying and agreeing appropriate research methodologies Investigating a technical issue, identifying potential solutions and determining the factors needed to compare these 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, appearance, fitness for purpose, security (including cyber-security), intellectual property (IP) constraints and opportunities, and environmental impact
			B3	<p>can implement design solutions for equipment or processes and contribute to their evaluation.</p>	<ul style="list-style-type: none"> Identifying the resources required for implementation Implementing design solutions, taking account of critical constraints, including due concern for safety and sustainability Identifying problems during implementation and taking corrective action Contributing to recommendations for improvement and actively learning from feedback on results. 	B3	<p>can implement engineering tasks and evaluate the effectiveness of engineering solutions</p>	<ul style="list-style-type: none"> 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/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
C	<p>Engineering Technicians shall accept and exercise personal responsibility.</p> <p>The applicant shall demonstrate that they:</p>	<p>Describe an experience or instance where you have had to accept personal responsibility for seeing a process through to completion within agreed targets.</p>	C	<p>Incorporated Engineers shall provide technical and commercial management.</p> <p>The applicant shall demonstrate that they:</p>		C	<p>Chartered Engineers shall provide technical and commercial leadership.</p> <p>The applicant shall demonstrate that they:</p>	

Engineering Technician			Incorporated Engineer			Chartered Engineer		
C1	can work reliably and effectively without close supervision, to the appropriate codes of practice.	<ul style="list-style-type: none"> Completing challenging tasks successfully within your area of work Identifying issues which fall outside of your current knowledge and seeking advice Identifying standards and codes of practice relevant to a new task 	C1	plan the work and resources needed to enable effective implementation of engineering tasks and projects	<ul style="list-style-type: none"> Identifying factors affecting the project implementation Carrying out holistic and systematic risk identification, assessment and management Preparing and agree implementation plans and method statements Securing the necessary resources and confirming roles in project team Applying the necessary contractual arrangements with other stakeholders (client, subcontractors, suppliers, etc). 	C1	plan the work and resources needed to enable effective implementation of a significant engineering task or project	<ul style="list-style-type: none"> Systematically review the factors affecting the project implementation including safety, sustainability and disposal/decommissioning considerations Carrying out a task or project risk assessment and identifying mitigation measures Lead 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
C2	can accept responsibility for work of self or others.	<ul style="list-style-type: none"> Certifying drawings, permits to work, instructions or other similar documents after appropriate checking Inspecting work carried out by others Checking the status of equipment, the work environment and facilities and taking appropriate actions before commencing work 	C2	manage (organise, direct and control) programme or schedule, budget and resource elements of engineering task or project	<ul style="list-style-type: none"> Operating appropriate management systems Working to the agreed quality standards, programme and budget, within legal and statutory requirements Managing work teams, coordinating project activities Identifying variations from quality standards, programme and budgets, and taking corrective action Evaluating performance and recommending improvements. 	C2	manage (organise, direct and control) programme or schedule, budget and resource elements of a significant engineering task or project	<ul style="list-style-type: none"> Operate or define appropriate management systems including risk register and contingency systems Managing the balance between quality, cost and time Monitoring progress and taking appropriate actions when required Establishing and maintaining appropriate quality standards within legal and statutory requirements Interfacing effectively with customer, contractors and other stakeholders
C3	can accept, allocate and supervise technical and other tasks.	<ul style="list-style-type: none"> Ensuring that the scope of a task is clear before accepting and/or allocating it to others Querying any aspect of a task which is not clear and/or providing an explanation if a query is raised by others Learning from your own experience and/or providing constructive feedback when supervising or working with others 	C3	manage teams ,or the input of others, into own work and assist others to meet changing technical and management needs	<ul style="list-style-type: none"> Agreeing objectives and work plans with teams and individuals Reinforcing team commitment to professional standards Managing 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 	C3	lead teams or technical specialisms and assist staff to meet changing technical and managerial needs	<ul style="list-style-type: none"> 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

Engineering Technician			Incorporated Engineer			Chartered Engineer		
			C4	can take an active role in continuous quality improvement	<ul style="list-style-type: none"> Ensuring the application of quality management principles by team members and colleagues Managing operations to maintain quality standards e.g. ISO 9000, EQFM, balanced scorecard Evaluating projects and making recommendations for improvement. Implementing the results of lessons learned 	C4	bring about continuous improvement and promote best practice	<ul style="list-style-type: none"> Promoting quality throughout the organisation and its customer and supplier networks Developing and maintaining operations to meet quality standards e.g. ISO 9000, EQFM, balanced scorecard Supporting or directing project evaluation and proposing recommendations for improvement. Implementing the results of lessons learned
D	Engineering Technicians shall demonstrate effective communication and interpersonal skills. The applicant shall demonstrate that they:	You will need to show you can: contribute to discussions; make a presentation; read and synthesise information; or write different types of documents.	D	Incorporated Engineers shall demonstrate effective communication and interpersonal skills. The applicant shall demonstrate that they:		D	Chartered Engineers shall demonstrate effective communication and interpersonal skills. The applicant shall demonstrate that they:	
D1	can communicate effectively in English with others at all levels	<ul style="list-style-type: none"> Contributing to meetings and discussions Preparing communications, documents and reports on technical matters Exchanging information and providing advice to technical and non-technical colleagues. 	D1	communicate effectively in English with others at all levels	<ul style="list-style-type: none"> Contributing to, chairing and recording meetings and discussions Preparing communications, documents and reports on technical matters Exchanging information and providing advice to technical and non-technical colleagues. Engaging or interacting with professional networks 	D1	communicate effectively in English with others at all levels.	<ul style="list-style-type: none"> 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
D2	work effectively with colleagues, clients, suppliers or the public, demonstrating an awareness of diversity and inclusion issues	<ul style="list-style-type: none"> Contributing constructively as part of a team Successfully resolving issues in discussions with team members, suppliers, clients and/or others Persuading others to accept suggestions or recommendations Being aware of the needs and concerns of others, especially where related to diversity and equality 	D2	present and discuss proposals, justifications and conclusions clearly	<ul style="list-style-type: none"> Preparing and delivering appropriate presentations Managing debates with audiences Feeding the results back to improve the proposals. Contributing to the awareness of risk. 	D2	present and discuss proposals, justifications and conclusions clearly	<ul style="list-style-type: none"> 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

Engineering Technician			Incorporated Engineer			Chartered Engineer		
			D3	demonstrate personal and social skills and awareness of diversity and inclusion issues	<ul style="list-style-type: none"> 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 aware of the needs and concerns of others, especially where related to diversity and equality 	D3	demonstrate personal and social skills and awareness of diversity and inclusion issues	<ul style="list-style-type: none"> 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 aware of the needs and concerns of others, especially where related to diversity and equality
E	<p>Engineering Technicians shall demonstrate a personal commitment to an appropriate code of professional conduct, recognising obligations to society, the profession and the environment</p> <p>The applicant shall demonstrate that they:</p>		E	<p>Incorporated Engineers shall demonstrate a personal commitment to professional standards, recognising obligations to society, the profession and the environment.</p> <p>The applicant shall demonstrate that they:</p>		E	<p>Chartered Engineers shall demonstrate a personal commitment to professional standards, recognising obligations to society, the profession and the environment.</p> <p>The applicant shall demonstrate that they:</p>	
E1	understand and comply with relevant codes of conduct.	<ul style="list-style-type: none"> Demonstrating compliance with the code of conduct of your Professional Engineering Institution Working within all relevant legislative and regulatory frameworks, including social and employment legislation. 	E1	understand and comply with relevant codes of conduct.	<ul style="list-style-type: none"> Demonstrating compliance with the code of conduct of your Professional Engineering Institution Managing work within all relevant legislative and regulatory frameworks, including social and employment legislation. 	E1	understand and comply with relevant codes of conduct.	<ul style="list-style-type: none"> Demonstrating compliance with the code of conduct of your Professional Engineering Institution Leading work within all relevant legislative and regulatory frameworks, including social and employment legislation.
E2	understand the safety implications of their role and can apply safe systems of work	<ul style="list-style-type: none"> Providing evidence of applying current safety requirements, such as risk assessment and other examples of good practice you adopt in your work. Applying a sound knowledge of health and safety legislation, for example; HASAW 1974, CDM regulations, OHSAS 18001:2007 and company safety policies. 	E2	understand the safety implications of their role and can apply safe systems of work	<ul style="list-style-type: none"> Identifying and taking responsibility for own obligations for health, safety and welfare issues Managing systems that 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, 	E2	understand the safety implications of their role and can apply safe systems of work	<ul style="list-style-type: none"> Identifying and taking responsibility for own obligations 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, OHSAS 18001:2007 and company safety policies.

Engineering Technician		Incorporated Engineer		Chartered Engineer				
				OHSAS 18001:2007 and company safety policies.				
E3	understand the principles of sustainable development and apply them in their work	<ul style="list-style-type: none"> Recognising how sustainable principles can be applied in your day to day work Identifying actions that you can and have taken to improve sustainability 	E3	understand the principles of sustainable development and apply them in their work	<ul style="list-style-type: none"> Operating and acting responsibly, taking account of the need to progress environmental, social and economic outcomes simultaneously Recognising how sustainable development principles can be applied in your day to day work Providing products and services which maintain and enhance the quality of the environment and community, and meet financial objectives Understanding and encouraging stakeholder involvement in sustainable development Using resources efficiently and effectively. 	E3	understand the principles of sustainable development and apply them in their work	<ul style="list-style-type: none"> Operating and acting responsibly, taking account of the need to progress environmental, social and economic outcomes simultaneously Recognising how sustainable development principles can be applied in your day to day work Providing products and services which maintain and enhance the quality of the environment and community, and meet financial objectives Understanding and securing stakeholder involvement in sustainable development Using resources efficiently and effectively in all activities
E4	carry out and record CPD necessary to maintain and enhance competence in own area of practice	<ul style="list-style-type: none"> Undertaking reviews of 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 others with their own CPD. 	E4	carry out and record Continuing Professional Development (CPD) necessary to maintain and enhance competence in own area of practice	<ul style="list-style-type: none"> Undertaking reviews of 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 others with their own CPD. 	E4	carry out and record Continuing Professional Development (CPD) necessary to maintain and enhance competence in own area of practice	<ul style="list-style-type: none"> Undertaking reviews of 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 others with their own CPD.
E5	understand the ethical issues that may arise in their role and carry out their responsibilities in an ethical manner	<ul style="list-style-type: none"> Understanding the ethical issues that you may encounter in your role How you have dealt with a specific ethical issue Giving an example of where you have applied ethical principles as described in the Statement of Ethical Principles on page 27 Giving an example of where you have applied/upheld ethical principles as defined by your organisation or company 	E5	understand the ethical issues that may arise in their role and carry out their responsibilities in an ethical manner	<ul style="list-style-type: none"> Understanding the ethical issues that you may encounter in your role How you have dealt with a specific ethical issue Giving an example of where you have applied ethical principles as described in the Statement of Ethical Principles on page 27 Giving an example of where you have applied/upheld ethical principles as defined by your organisation or company 	E5	understand the ethical issues that may arise in their role and carry out their responsibilities in an ethical manner	<ul style="list-style-type: none"> Understanding the ethical issues that you may encounter in your role How you have dealt with a specific ethical issue Giving an example of where you have applied ethical principles as described in the Statement of Ethical Principles on page 27 Giving an example of where you have applied/upheld ethical principles as defined by your organisation or company

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Glossary

APEC: Asia Pacific Economic Cooperation	An agreement in place between a number of APEC countries for the purposes of recognising substantial equivalence of professional competence in engineering. www.ieagrements.com/apec
Chartered Engineer (CEng)	One of the professional titles available to individuals who meet the required standard of competence and commitment. www.engc.org.uk/ceng
Competence	The ability to carry out a task to an effective standard. Its achievement requires the right level of knowledge, understanding and skill, as well as a professional attitude. It is part of the requirement (along with commitment) that must be demonstrated in order for an individual to be admitted to the Engineering Council's Register at the relevant level.
Commitment	A set of values and behaviours that maintain and enhance the reputation of the engineering profession and the individual.
CPD	Continuing Professional Development. The systematic acquisition of knowledge and skills, and the development of personal qualities, to maintain and enhance professional competence. All members of Professional Engineering Institutions have an obligation to undertake CPD, and to support the learning of others. www.engc.org.uk/cpd
Credit and Qualifications Framework for Wales (CQFW)	Credit and Qualifications Framework for Wales (CQFW) covers learning from the very initial stages (Entry 1, 2 and 3) to the most advanced (Level 8). It is managed by a strategic operational partnership comprising the Welsh Government, Higher Education Funding Council for Wales (HEFCW) and Qualifications Wales.
Dublin Accord	An international agreement among bodies responsible for accrediting or approving engineering technician programmes, recognising the substantial equivalence of such programmes for entry to the practice of engineering. In the UK this is at Engineering Technician status. www.ieagrements.com/Dublin
ENAAE	The European Network for Accreditation of Engineering Education.
Engineering Council	The UK regulatory body for the engineering profession that sets and maintains internationally recognised standards of professional competence and ethics, and holds the UK register of professional engineers and technicians. www.engc.org.uk
Engineering Technician (EngTech)	One of the professional titles available to individuals who meet the required standard of competence and commitment. www.engc.org.uk/engtech
Exemplifying qualification	An educational or vocational qualification that exemplifies the knowledge, understanding and skills to meet, or partly meet, the education requirement for registration in a particular category. Other qualifications may be permitted if they achieve (or exceed) the same level.
FEANI	The European Federation of National Engineering Associations of which the Engineering Council is the UK member. www.feani.org/site
Formal Learning	Organised and structured learning with learning objectives
Incorporated Engineer (IEng)	One of the professional titles available to individuals who meet the required standard of competence and commitment. www.engc.org.uk/ieng
Informal Learning	Self-directed learning or other experiential learning including from work-based learning, for example mentoring or shadowing in the workplace.
Information and Communications Technology Technician (ICTTech)	One of the professional titles available to individuals who meet the required standard of competence and commitment. See separate document Information and Communications Technology Technician (ICTTech) Standard www.engc.org.uk/icttech
International Professional Engineers Agreement	An agreement in place between a number of countries for the purposes of recognising substantial equivalence of professional competence in engineering. www.ieagrements.com/ipea
National Vocational Qualification (NVQ)	Qualifications developed and accredited according to criteria set out nationally, and that are achieved through assessment and training. In Scotland, they are known as Scottish Vocational Qualification (SVQ). To achieve an NVQ, candidates must prove that they have the ability (competence) to carry out their job to the required standard. NVQs are based on National Occupational Standards that describe the 'competencies' expected in any given job role.
Professional Affiliate	An incorporated body/engineering institution which is closely associated with, but not licensed by, the Engineering Council. It may enter into an agreement with a Professional Engineering Institution to process its members for registration. For a list of Professional Affiliates see www.engc.org.uk/affiliates
Professional development	The process by which an individual gains professional competence. It may take place through formal and informal learning, and workplace training and experience.

Professional Engineering Institution (PEI)	Membership organisation which is licensed by the Engineering Council to assess candidates for professional registration. Some PEIs also have a licence to accredit degree programmes and/or company training schemes. For a list see www.engc.org.uk/institutions
Professional registration	The process whereby an individual is admitted to the Engineering Council's Register as an Engineering Technician, Incorporated Engineer or Chartered Engineer based on the individual demonstrating, via a peer review process by a licensed Professional Engineering Institution, that he/she has met the profession's standards of commitment and competence. Award of the Engineering Technician, Incorporated Engineer or Chartered Engineer title permits the use of the relevant post-nominal.
Professional review	A peer assessment process to decide whether an individual has met the requirements for registration. It is a holistic assessment of the applicant's competence and commitment against the relevant sections of UK-SPEC. For candidates seeking IEng or CEng registration, this will include a professional review interview (PRI). Some PEIs include an interview for EngTech candidates.
Professional review interview (PRI)	Part of the professional review process undertaken by registrant peers who are trained and competent to do so. It is mandatory for IEng and CEng candidates. For EngTech candidates, the interview is at the discretion of the institution.
Quality Assurance Agency for Higher Education (QAA)	Safeguards standards and drives improvement in the quality of UK higher education across all subjects. The QAA works closely with the Engineering Council and Professional Engineering Institutions to support the Engineering disciplines. www.qaa.ac.uk
Regulated Qualifications Framework (RQF)	The Regulated Qualifications Framework (formerly the Qualifications and Credit Framework) is a framework that applies to qualifications, diplomas, certificates and other academic awards granted by an education provider in England and vocational qualifications in Northern Ireland
Royal Academy of Engineering (RAEng)	The UK's national academy for engineering that works to advance and promote excellence in engineering. RAEng provides analysis and policy support relating to business and education, invests in the UK's research base to underpin innovation, and works to improve public awareness and understanding of engineering. www.raeng.org.uk
Royal Charter	A formal document issued by the monarch granting rights and powers to an individual or an organisation.
SCQF	The Scottish Credit and Qualifications Framework. For HE reference points see www.scqf.org.uk
Sydney Accord	An international agreement among bodies responsible for accrediting engineering technologist degree programmes, recognising the substantial equivalence of such accredited programmes for entry to the practice of engineering. In the UK this is at Incorporated Engineer status. www.ieagreements.com/sydney
UK-SPEC: The UK Standard for Professional Engineering competence	The UK standard which sets out the competence and commitment requirements for registration with the Engineering Council as an Engineering Technician, Incorporated Engineer or Chartered Engineer. www.engc.org.uk/ukspec
Washington Accord	An international agreement among bodies responsible for accrediting engineering degree programmes, recognising the substantial equivalence of such accredited programmes for entry to the practice of engineering. In the UK this is at Chartered Engineer status. www.ieagreements.com/Washington-Accord

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