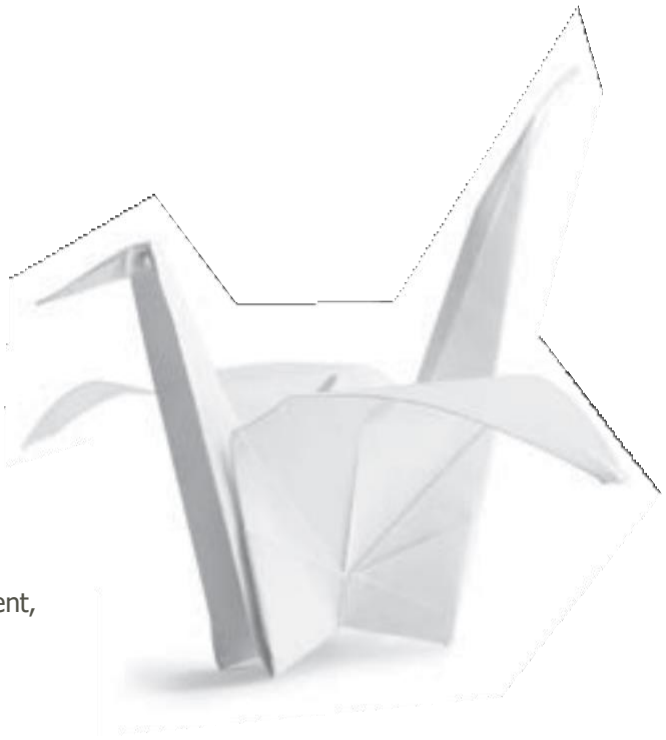
THE ENGINEERING TECHNICIAN STANDARD



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

Engineering Technicians are required to apply safe systems of work and can demonstrate:

- 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.

The Competence and Commitment Standard for Engineering Technicians.

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. Moreover, you are not required to give multiple examples to demonstrate competence and commitment.

Engineering Technicians must be competent throughout their working life, by virtue of their education, training, and experience, to:	Tell us about your career, education, and training. Explain how the experience you have gained has made you more competent.
A Use engineering knowledge and understanding to apply technical and practical skills. This includes the ability to:	**The reviewers will be looking for evidence that you have the know-how to do the job, and were able to go beyond the immediate requirements and use your initiative and experience to solve a problem or improve a process.**
A1 Review and select appropriate techniques, procedures, and methods to undertake tasks.	Describe: • an example of work you did that went well, the choices you made and the outcome • or something in your work that you were involved in which did not quite work and explain why • or a technique, procedure, or method you improved upon and explain why.

A2 Use appropriate scientific, technical, or engineering principles.	Drawing from your direct experience, this might be an explanation of how a piece of equipment, system or mechanism works.
B **Contribute to the design, development, manufacture, construction, commissioning, operation or maintenance of products, equipment, processes, systems, or services.** In this context, this includes the ability to:	**Explain how you contribute to one or more of these activities.**
B1 Identify problems and apply appropriate methods to identify causes and achieve satisfactory solutions.	Show an example of how you have used measurement, monitoring and assessment to: • identify the source of a problem • or to identify an opportunity • or to propose a solution.
B2 Identify, organise and use resources effectively to complete tasks, with consideration for cost, quality, safety, security, and environmental impact.	Illustrate how you make decisions about: • what information, material, component, people or plant to use • or how to introduce a new method of working • or what precautions you took. Describe how you have contributed to best practice methods of continuous improvement, e.g. ISO 9000.
C **Accept and exercise personal responsibility.** This includes the ability to:	**Describe an experience or instance where you have had to accept personal responsibility for seeing a process through to completion within agreed targets.**
C1 Work reliably and effectively without close supervision, to the appropriate codes of practice.	Your evidence should show how you identified and agreed what had to be done and to what standards on a typical project.
C2 Accept responsibility for work of self or others.	Your evidence could include: minutes of meetings; site notes and instructions; Variation Orders; programmes of work; specifications, drawing and reports; or appraisals. Activity not associated with your job can contribute evidence.
C3 Accept, allocate and supervise technical and other tasks.	

D **Use effective communication and interpersonal skills.** This includes the ability to:	**You will need to show you can: contribute to discussions; make a presentation; read and synthesise information; or write different types of documents.**
D1 Use oral, written, and electronic methods for the communication in English[1] of technical and other information.	Your evidence could include letters; reports; drawings; emails; minutes, including of progress meetings; appraisals; work instructions; and other task planning and organising documents. Your application itself will be relevant.
D2 Work effectively with colleagues, clients, suppliers, or the public, and be aware of the needs and concerns of others, especially where related to diversity and equality.	Show examples of how this has occurred, and your role at the time. Describe your role as part of a team. Describe a situation where you put your awareness into practice.
E **Make a personal commitment to an appropriate code of professional conduct, recognising obligations to society, the profession, and the environment.**	**Your commitment will be to become part of the profession and uphold the standards to which all members subscribe. You need to show that you have read and understood your institution's Code of Conduct.**
E1 Comply with the Code of Conduct of your institution.	The professional review involves demonstration of, or discussion of, your position on typical ethical challenges.
E2 Manage and apply safe systems of work.	Provide evidence of applying current safety requirements, such as risk assessment and other examples of good practice you adopt in your work. You will need to show that you have received a formal safety instruction relating to your workplace (such as a CSCS safety test in the UK), or an update on statutory regulations. In the UK an example would be COSHH requirements.
E3 Undertake engineering work in a way that contributes to sustainable development. This could include an ability to: • Operate and act responsibly, taking account of the need to progress environmental, social, and economic outcomes simultaneously.	Show examples of methodical assessment of risk in specific projects; actions taken to minimise risk to society or the environment.

1 Any interviews will be conducted in English, subject only to the provisions of the Welsh Language Act 1993 and any Regulations which may be made in implementation of European Union directives on free movement of labour.

E4 Carry out and record CPD necessary to maintain and enhance competence in own area of practice including: • Undertake reviews of own development needs • Plan how to meet personal and organisational objectives • Carry out planned (and unplanned) CPD activities • Maintain evidence of competence development • Evaluate CPD outcomes against any plans made • Assist others with their own CPD.	This means demonstrating that you have actively sought to keep yourself up to date, perhaps by studying new standards or techniques, or made use of magazines, lectures organised by professional engineering institutions, and other opportunities to network to keep abreast of change.
E5 Exercise responsibilities in an ethical manner.	Give an example of where you have applied ethical principles as described in the Statement of Ethical Principles on page 33. Give an example of where you have applied/upheld ethical principles as defined by your organisation or company, which may be in its company or brand values.

Education

Knowledge and understanding are important components of professional competence. The following qualifications exemplify the required knowledge and understanding for Engineering Technicians:

- An Advanced/Modern Apprenticeship or other work-based learning programme approved by a licensed professional engineering institution

- or a qualification, approved by a licensed professional engineering institution, in engineering or construction set at level 3 (or above) in the Qualifications and Credit 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 approved by a licensed professional engineering institution.

Many qualifications may be acceptable as evidence that part or all the necessary competence has been acquired. Please check the Engineering Council's searchable database of approved qualifications and programmes for information about current approved status: **www.engc.org.uk/techdb**

Many potential Engineering Technicians have not had the advantage of formal training but are able to demonstrate that they have acquired the necessary competence through substantial working experience. Thus, individuals without the types of qualifications described above may apply for an Individual Route assessment. This process, administered by the applicant's institution, includes assessment of prior learning and of current performance. Evidence of employer recognition of competences and relevant skills may be helpful.

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

[†] See document of amendments at http://www.engc.org.uk/engcdocuments/internet/Website/2017_Standards_Amendments.pdf for updates.

Professional development

This is the other key part of developing competence. It is how potential Engineering Technicians learn to apply their knowledge and understanding and begin to apply professional judgement. It can happen at the same time as some of the formal education or training referred to above, for example through an apprenticeship scheme.

Many organisations run well-established apprenticeship or employer training and development schemes. While these schemes are of course geared to the specific needs of their organisations, they are frequently designed to help individuals on the way to registration and may have been approved by one or more of the professional engineering institutions.

Potential Engineering Technicians in organisations without schemes of this type will need to develop profiles of competence and professional activity to help them prepare for registration. In some cases, employers will use occupational standards or competence frameworks in determining job descriptions and staff development, and these may assist in developing a competence profile. Otherwise, aspiring registrants should use the competence and commitment statements and seek advice and guidance from the relevant institution, which may be able to put them in touch with a mentor to assist them through the process and help them address any gaps in their development.

Those seeking Engineering Technician registration should maintain a detailed record of their professional development, responsibilities, and experience, verified by supervisors or mentors, to provide best evidence for the professional review (see page 8).