Competence Criteria for Engineering Technician Registration

The work of an Engineering Technician (EngTech) is characterised by being involved in applying proven techniques and procedures to the solution of practical engineering problems. They carry supervisory or technical responsibility, and are competent to exercise creative aptitudes and skills within defined fields of technology. Engineering Technicians contribute to the design, development, manufacture, commissioning, operation or maintenance of products, equipment, processes or services. They are required to apply safe systems of work

The competence criteria set out the required skills and knowledge. They are based upon the Competence Statements issued by the Engineering Council (ECUK) as part of UK-SPEC.

You will be expected to base your work experience report on all 13 competence criteria, demonstrating that you are fully competent in at least 60% - 70% and that you have a knowledge and understanding of the remainder. Please note that the 60-70% applies to each subsection A-E.

A. Use Engineering knowledge and understanding to apply technical and practical skills. This includes the ability to:

No	Objective	Range	Evidence Examples
A1	Review and select appropriate techniques, procedures and methods to undertake tasks.	Describe something in your work you were involved in which didn't quite work and explain why.	Explain what building services engineering involves, and how it fits into the construction industry. Work in project teams with other professionals. Take part in a major project, involving several other disciplines. Get involved in site meetings and negotiations. Communicate with colleagues to solve problems Use new products and ideas, for example to improve sustainability or reduce carbon emissions

No	Objective	Range	Evidence Examples
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.	Give examples of your research and /or calculations contributing to specific jobs and demonstrate outcomes. Show how your own work contributed to the success of the project. Do manual or computer-assisted calculations. Research manufacturers' sales literature, and assess costs and benefits associated with various purchase/manufacture decisions about components. Use, and assist in the evaluation of computer software packages

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:

No	Objective	Range	Evidence Examples
B1	Identify problems and apply diagnostic 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.	Take part in short/medium/long-term maintenance activities. Isolate problems, e.g. caused by incorrect operation. Contribute to decisions about resourcing and outsourcing processes or services or operations. Report on cost implications of planned maintenance and different approaches/management systems available. Test and verify results e.g. as part of a commissioning exercise. Contribute to outsourcing and refurbishment decisions. Investigate the operation of a post occupancy review
B2	Identify, organise and use resources effectively to complete tasks, with consideration for cost, quality, safety and environmental impact.	Illustrate how you make decisions about what material, component, people or plant to use or how to introduce a new method of working.	Record (e.g. in a log book) specific examples of actual installations. Use standard reporting forms in different layouts, and explain reasons for data layout conventions. Give examples of differing approaches to e.g. selection of products or equipment to meet project objectives. Discuss the consequences of neglect or error in e.g. design of processes, selection of equipment. Appreciate cost/benefit calculations.

C. Accept and exercise personal responsibility. This may include the ability to:

No	Objective	Range	Evidence Examples
C1	Work reliably and effectively without close supervision, to the appropriate codes of practice.	Your evidence should show how you personally identified and agreed with what had to be done and to what standards on a typical project.	Take part in Quality Circles or similar. Discuss your experience of Quality Assurance processes. Take part in putting things right when QA fails. Undertake analysis and prepare documentation on the commissioning/testing and setting to work of projects and/or project elements. Work to a time schedule and meet deadlines.
C2	Accept responsibility for work of self and others.	Minutes of meetings; site notes and instructions; Variation Orders; programmes of work; specifications, drawing and reports; appraisals. Voluntary work not associated with your job can contribute evidence.	Have some experience of supervising others to co-ordinate activities to meet objectives. Undertake programming tasks and development of spreadsheets. Help to prepare job/person specifications/job adverts. Take part in selecting team members, training and developing team spirit. Participate in an appraisal process. Advise others on RAC careers.
C3	Accept, allocate and supervise technical and other tasks.		Attend site meetings. Communicate with colleagues on site. Have experience of variations and instructions. Contribute to preparations /handling of handover/closing documentation. Be familiar with standard documentation e.g. factory acceptance tests, witness testing on site and appreciate the roles of the regulatory authorities.

D. Use effective communication and interpersonal skills. This includes the ability to:.

No	Objective	Range	Evidence Examples
D1	Use oral, written and electronic methods for the communication in English of technical and other information.	Letters, faxes, reports, drawings, advice, minutes, including of progress meetings, appraisals, work instructions, and other task planning and organising documents. Certificated by colleagues, clients, customers or management. Your application itself will be relevant.	Select and use appropriate communications styles for the range of professional situations, e.g. listen, read and write for different uses e.g. memos, e-mails, letters and reports. Use interpersonal skills effectively e.g. team work, assertiveness, negotiation, flexibility and dealing with conflict. Use different kinds of communication effectively e.g. sell, explain and reprimand.

No	Objective	Range	Evidence Examples
D2	Work effectively with colleagues, clients, suppliers and the public.	Examples of how this has occurred, and your role at the time.	Play a key role in a project involving other professionals and disciplines. Contribute to site meetings, conduct of negotiations, meeting deadlines. Develop an implementation programme, identifying significant dates. Estimate any necessary resource required. Answer client queries. Respond to changes/requests, advise on costs and benefits of different options, and propose alternative solutions. Observe good practice in your area of work including working towards zero carbon emissions and the using sustainable materials.

E. Make a personal commitment to an appropriate code of professional conduct, recognising obligations to society, the profession and the environment. In order to satisfy this commitment, you must:

No	Objective	Range	Evidence Examples
E1	Comply with the Codes and Rules of Conduct of your Licensed Institution or Professional Affiliate.	You will need to sign a personal undertaking. The professional review involves demonstration of or discussion of your position on typical ethical challenges.	Examine, digest and abide by the relevant Codes of Conduct. Exercise all reasonable professional skill and care. Where appropriate, give due regard to the Engineering Council (EC^{UK}) Guidelines. Have a working knowledge of the legislation, regulations and codes of practice relevant to your area of work.
E2	Manage and apply safe systems of work.	Evidence of current safety requirement – examples of good practice you adopt in your work. Will need to show that you have received a formal safety instruction relating to your workplace, such as a CSCS safety test, or an update on statutory regulations such as COSHH requirements.	Participate in safety training courses, including induction, training or coaching of others. Work safely at all times. Monitor others' observation of safety precautions, e.g. within a team. Implement safe working practice in new situations.

No	Objective	Range	Evidence Examples
E3	Undertake their engineering work making and utilising risk assessments, and observing good practice with regard to the environment.	Examples of methodical assessment of risk in specific projects; actions taken to minimise risk to health, safety or the environment.	Know your employer's Health and Safety Policy as it relates both to you personally and to your responsibility for the safety of others. Help to provide information for the Health and Safety plan for projects and to comply with the Construction (Design & Management) Regulations (CDM). Be familiar with safe systems of work, method statements and permits
E4	Carry out continuing professional development, including opportunities for this offered by their Institution, to ensure competence in areas and at the level of future intended practice.	This means demonstrating that you have actively sought to keep yourself up to date, perhaps by studying new standards or techniques, and made use of magazines, Branch meetings, and other opportunities to network in order to keep abreast of change.	Be involved with IOR activities. Read generally, including some technical media. Attend employer and other development seminars. Plan your own CPD. Contribute to initiatives within your own expertise e.g. health and safety. Access sources of information about learning opportunities. Transfer skills between your professional and personal life.