The global network for the materials cycle

Institute of Materials, Minerals & Mining

Guide to Application

Engineering Technician EngTech

Registered Science Technician RSciTech

- Competence & Commitment Requirements
- Forms
- Documentation
- Assessment

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All enquires and questions should be addressed to the membership department:

Tel: +44 (0) 207 451 7300

Email: membership@iom3.org

1. Introduction

Applications for professional registration at EngTech and RSciTech are welcome from engineers, scientists, chemists, physicists, geologists, and technologists including those from the packaging and wood industrial, academic, and related sectors. Applicants are expected to have practical experience and be able to apply the underpinning technical principles relating to their IOM3 discipline.

Engineering Technicians (EngTech) apply proven techniques and procedures to solve practical engineering problems. They also apply safe systems of work.

Registered Science Technicians (RSciTech) work with minimal supervision in technical roles, delivering essential scientific services and support within laboratories, in schools and universities, in the field or on-site, in factories, production and maintenance facilities, and in other workplaces.

There are four stages to satisfy in order to gain professional registration at this level. These are:

Educational Base: those seeking registration at this level require the minimum of a RQF Level 3/SCQF Level 6 qualification or equivalent such as a BTEC National Certificate or Diploma, which may have been gained through an apprenticeship programme

Professional Development (PD): the process of training and gaining experience in a structured way in the early years of employment, which may be through an apprenticeship.

Professional Review: submission and testing of evidence by a peer review process to ascertain whether the applicant has achieved professional competence, and a commitment to professional standards and codes.

Continuing Professional Development (CPD): a commitment to maintaining competence to practise.

Applicants are assessed against the respective Competence requirements for which they have made an application. Applicants for EngTech will be assessed against the Engineering Council UK-SPEC, whilst those for RSciTech will be assessed against the respective Science Council standard. Full details of these frameworks are given in the appendices.

2. Forms

a) Application form

It is important to complete all sections of the form in the spaces provided, particularly those that are indicated as required, even when information is repeated elsewhere in the application or IOM3 already holds the information.

If you require a Reasonable Adjustment to be made to the application or assessment process, please let us know; there is also a box to tick on the application form to indicate this. If you request a Reasonable Adjustment, a member of the IOM3 Team will contact you to see how best we can support you through the application process.

b) Referees and supporters

There are different referee/supporter requirements for the professional registrations offered at this level, these are:

EngTech – one sponsor is required to sign-off the application form.
RSciTech – one supporter is required to complete and sign-off a 'RSciTech Supporter Review Form'.

Individuals suitable to act as a sponsor or supporter should ideally hold the professional registration or higher for which the applicant is applying or at a higher level such as the Chartered level. Please contact the Membership Department if you have any questions about this or problems in finding suitable supporters.

Completed forms can be returned directly to the Membership Department unless it is preferred to give it to the applicant for submission.

c) Academic certificates

Applicants must provide copies of their further education qualifications or other relevant certificate(s) unless these have been previously submitted to IOM3.

3. Supporting documentation

a) Professional review report (EngTech & RSciTech)

The Professional Review Report (PRR) is presented in the form of an expanded CV, which details the applicant's career and professional development. For each position, the applicant should provide a description of their function and responsibilities, giving examples of projects and activities they have undertaken, and materials or natural resources, techniques, processes, and equipment they have become familiar with.

The PRR should link the applicant's career and professional development to the competence requirements of the professional registration(s) they are applying for, which are listed in the appendices. The PRR should ideally be three (3) to four (4) sides of A4.

An example of a PRR excerpt is shown below.

Process Technician – Natural Resources Ltd (15 Sep 2020 – present)	**EngTech**
Training undertaken: Completed a Level 3 Certificate in Natural Resource Technology at Euston Road College. The modules studied included: Resource Extraction & Processing; Materials Characterisation; Geotechnical Engineering; Geology; Mathematics; Chemistry; Chemical Metallurgy; CAD; Sustainability; and Ethics. I attended a one-day course run by Schneider Enterprises which provided practical instructions on the use of their testing equipment. I am a Registered First Aider at the company following completion of a 20-hour training course in first aid. **Job responsibilities:** I am responsible for the metallurgical assaying of all ores extracted at our Dragonstone site which include magnetite, sphalerite, and pentlandite and the subsequent reporting. This includes chemical analysis and occasionally physical testing such as X-ray fluorescence. All tests are carried out to appropriate ISO standards, the handling of all chemicals is complaint with COSHH, and the equipment is regularly calibrated to UKAS standards. My work involves liaising with production staff, and occasionally engineers and geologists. I advise them on the composition and suitability of samples that are provided for testing, which is done by written reports.	A1-A2 E4 C1 A1-A2, D1 B1 C3, E1-E2 C1-C3, D2

Applicants should be able to demonstrate their competence in all areas, but the depth and extent of their experience and competence will vary with the nature and requirements of their role. They will need to demonstrate a level of competence in each area and at a level which is consistent with their specific role. It is to be expected that they will have a higher level of competence in some areas than others, however they need to demonstrate an understanding of, and familiarity with, the key aspects of competence in all areas as a minimum requirement while demonstrating higher levels of competence in those areas which are critical to their role. Overall, they will demonstrate an appropriate balance of competences to perform their role effectively at an Engineering Technician level.

b) Competence report template (alternative for RSciTech only)

Applicants for RSciTech may complete one of these templates instead of presenting their PRR in expanded CV form. The template is designed so that the applicant can provide information from their professional experience and achievements against each of the individual competences.

c) CPD record & annual professional development plan

Applicants must include in their application a record of their CPD activities, covering a partial record for the calendar year in which they are making their application and completed records for the three previous calendar years. In addition, they must also submit a plan of their proposed CPD activity for the year in which they are making their application – the Annual Professional Development Plan – a template showing examples is available from the IOM3 website.

It is a requirement of the Engineering Council, Science Council and Society for the Environment that registrants and those seeking registration participate in and record their CPD activities. IOM3 requires its registrants and applicants to undertake and record a minimum of 35 hours CPD each calendar year.

Ideally CPD should be a mixture of learning activities relevant to current or future practice and could include the following categories:

1. Work-based learning (WBL).
2. Professional activity (PA).
3. Formal education (FE).
4. Self-directed learning (SDL).
5. Conferences, Seminars, and Workshops (CSW).
6. Other activities which extend or broaden an individual's professional knowledge, skills, understanding or experience (O).

Information to be included in the CPD record is:

1. Date.
2. Type, i.e., work-based learning.
3. CPD hours.
4. Title & provider for formal activities.
5. Outcome and Benefits, which should be a short but concise reflective statement on how the activity has benefitted the individual's professional knowledge, skills, understanding or experience.

4. Application completion

We require applications to be submitted electronically to membership@iom3.org ensuring that any scanned documents are legible.

Applications will be acknowledged within five (5) working days of submission. Please email us if you do not receive an acknowledgement.

At this stage, all applications will be checked for completeness and applicants notified if any further information is required.

5. Application assessment

Applicants for both EngTech and RSciTech are assessed by a Scrutineer Review Panel (SRP) and are not required to attend an interview. The SRP consists of two trained assessors who are members of IOM3 and hold the professional registration for which the applicant has applied or higher. They work remotely and will not confer on the application. The SRP will use the Competence requirements as the framework for their assessment.

6. The approval process

The Membership Committee will consider the reports submitted by the SRP, together with a copy of the applicant's full application when making their decision. Applicants will be notified in writing of the Committee's decision within 10 working days of it being made.

We aim to complete the approval process within 90 working days of the complete application being submitted, provided that a mutually convenient date for the PRI can be arranged.

Upon election as a registrant, the member may use the respective post nominal letters **EngTech or RSciTech** alongside their Institute membership grade and the title Engineering Technician or Registered Science Technician as appropriate.

THE GENERAL DATA PROTECTION REGULATION (GDPR) AND DATA PROTECTION ACT 2018

The Institute will hold and use the data provided in your application for the purposes of assessing your application. It will also pass data necessary to complete your registration onto the respective registration bodies, i.e., Engineering Council or the Science Council.

Appendix 1 – Engineering Technician (EngTech) competence requirements

EngTech shall:	The applicant shall demonstrate that they:
A. Use engineering knowledge and understanding to apply technical and practical skills.	1. Review and select appropriate techniques, procedures, and methods to undertake tasks.
	2. Use appropriate scientific, technical, or engineering principles.
B. Contribute to the design, development, manufacture, construction, commissioning, decommissioning, operation or maintenance of products, equipment, processes, systems, or services.	1. Identify problems and apply appropriate methods to identify causes and achieve satisfactory solutions.
	2. Identify, organise, and use resources effectively to complete tasks, with consideration for cost, quality, safety, security, and environmental impact.
C. Accept and exercise personal responsibility.	1. Work reliably and effectively without close supervision, to the appropriate codes of practice.
	2. Accept responsibility for the work of themselves or others.
	3. Accept, allocate and supervise technical and other tasks.
D. Demonstrate effective communication and interpersonal skills.	1. Communicate effectively with others, at all levels, in English.
	2. Work effectively with colleagues, clients, suppliers, or the public.
	3. Demonstrate personal and social skills and awareness of diversity and inclusion issues.
E. Demonstrate a personal commitment to professional standards, recognising obligations to society, the profession, and the environment.	1. Understand and comply with relevant codes of conduct.
	2. Understand the safety implications of their role and apply safe systems of work.
	3. Understand the principles of sustainable development and apply them in their work.
	4. Carry out and record the Continuing Professional Development (CPD) necessary to maintain and enhance competence in their own area of practice.
	5. Understand the ethical issues that may arise in their role and carry out their responsibilities in an ethical manner.

These competences are expanded on the following pages.

When drafting their professional review report, applicants could use the following as evidence to meet the various competences:

A1 Review and select appropriate techniques, procedures, and methods to undertake tasks.

- Evaluating potential methods of carrying out an engineering task and selecting the most appropriate solution.
- Recognising a difficulty and then identifying an approach to resolve it.
- Identifying an improvement in a technique, procedure, process, or method.
- Interpreting and carrying out test procedures.

A2 Use appropriate scientific, technical, or engineering principles.

- 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

B1 Identify problems and apply appropriate methods to identify causes and achieve satisfactory solutions.

- 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 an improvement opportunity.
- Contributing to the design of an item or process.

B2 Identify, organise, and use resources effectively to complete tasks, with consideration for cost, quality, safety, security, and environmental impact.

- 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.
- Improving the quality of an operation or process.

C1 Work reliably and effectively without close supervision, to the appropriate codes of practice.

- 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.

C2 Accept responsibility for the work of themselves or others.

- Fully understanding drawings, permits to work, instructions or other similar documents after appropriate checking, and identifying issues Inspecting work carried out by others.
- Checking the status of equipment, the work environment and facilities and taking appropriate actions before commencing work.

C3 Accept, allocate and supervise technical and other tasks.

- 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.

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

- Contributing to meetings and discussions.
- Preparing communications, documents, and reports on technical matters.
- Exchanging information and providing advice to technical and non-technical colleagues.

D2 Work effectively with colleagues, clients, suppliers, or the public.

- 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.
- Identifying, agreeing, and working towards collective goals.

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

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

E1 Understand and comply with relevant codes of conduct.

- Demonstrating compliance with your Licensee's Code of Professional Conduct.
- Working within all relevant legislative and regulatory frameworks including social and employment legislation.

E2 Understand the safety implications of their role and apply safe systems of work.

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- 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, ISO 45001, and company safety policies.

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

- Recognising how sustainability principles, as described in the Engineering Council Guidance on Sustainability can be applied in your day-to-day work.
- Identifying actions that you can and have taken to improve sustainability.

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

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

- Understanding the ethical issues that you may encounter in your role.
- Giving an example of where you have applied ethical principles as described in the Engineering Council Statement of Ethical Principles.
- Giving an example of where you have applied, or upheld ethical principles as defined by your organisation or company.

Appendix 2 – Registered Science Technician (RSciTech) competence requirements

A	**Application of knowledge and understanding**	
A1	Apply knowledge of underlying concepts and principles associated with area of work.	What we are looking for here is an example of how you apply your knowledge in your day-to-day work.
A2	Review and select appropriate scientific techniques, procedures, and methods to undertake tasks.	This means that you can explain the underlying reasons for undertaking tasks and why a particular procedure, technique, or process is appropriate.
A3	Interpret and evaluate data and make sound judgements in relation to scientific concepts.	This means you can explain how you recognise when your activity appears to have been successfully carried out, or not, and what data, observations, or measurements you are evaluating mean, relating it to the underlying principles. You should also be able describe how you present information in an appropriate manner in order to explain your judgement.
B	**Personal responsibility**	
B1	Work consistently and effectively with minimal supervision to appropriate standards and protocols and know when to escalate appropriately.	We are looking for an example of how you carry out work with minimal input from your supervisor for certain key tasks, experiments or procedures associated with your role and completing them to the appropriate standards and time frame. We are also looking for evidence that you know when to escalate appropriately and that you are able to make a judgement on when to escalate.
B2	Demonstrate how you apply safe working practices.	This means that you can explain the safe working practices applicable to your area of work and describe how you follow them.
B3	Take responsibility for the quality of your work and the impact on others.	This means that you can describe how you take responsibility for the quality of the work that you undertake and its impact on others within defined parameters and timelines – including if an activity does not work in the way that you expect.
C	**Interpersonal skills**	
C1	Demonstrate effective and appropriate communication skills.	What we are looking for here is an example that you are an effective communicator. The example can be through appropriate oral, written, or electronic means.
C2	Demonstrate effective interpersonal and behavioural skills.	This means that you can demonstrate skills that you use to interact with colleagues in a constructive way within the work setting. In these situations, it may be appropriate to discuss these with your supervisor, as an external perspective is often very useful in this regard.

C3	Demonstrate an ability to work effectively with others.	This means 'teamwork', which can be in a large team or on a 1:1 basis. Your example should illustrate how you worked collectively with others, what your specific role was within the team, and what the outcome was.
D	**Professional practice**	
D1	Recognise problems and apply appropriate scientific methods to identify causes and achieve solutions.	What we are looking for here is an example of where you have problem solved or attempted to problem solve.
D2	Demonstrate how you use resources effectively.	This means that you can give examples of work that you have undertaken where the method, procedure, programme, equipment, or materials used was chosen as the best (or most relevant) to use. Your example should describe how you planned and organised these to complete the task, and also how you reviewed choices – why the one you selected was the best compared to others that are available.
D3	Participate in continuous process improvement.	What we are looking for is an example of how you have improved the efficiency of a way of working, for example this could include maintenance of stock levels, improved methods, new ways to increase throughput, health and safety or ways to increase cost-effectiveness.
E	**Professional standards**	
E1	Comply and promote relevant codes of conduct and practice.	This means that you can give an example of how you comply with a code of conduct (e.g., of your professional Body) or how you work within and promote all relevant legislative, regulatory, and local requirements.
E2	Maintain and enhance competence in own area of practice through professional development activity.	This means that you undertake activities to enhance your competence in your own area of practice i.e., Continuing Professional Development (CPD) and reflect on its impact on you and others. We are not looking for a list of courses here but evidence of how your CPD benefits your practice and benefits others. Your CPD may include work-based learning, professional activity, formal/educational, self-directed learning.